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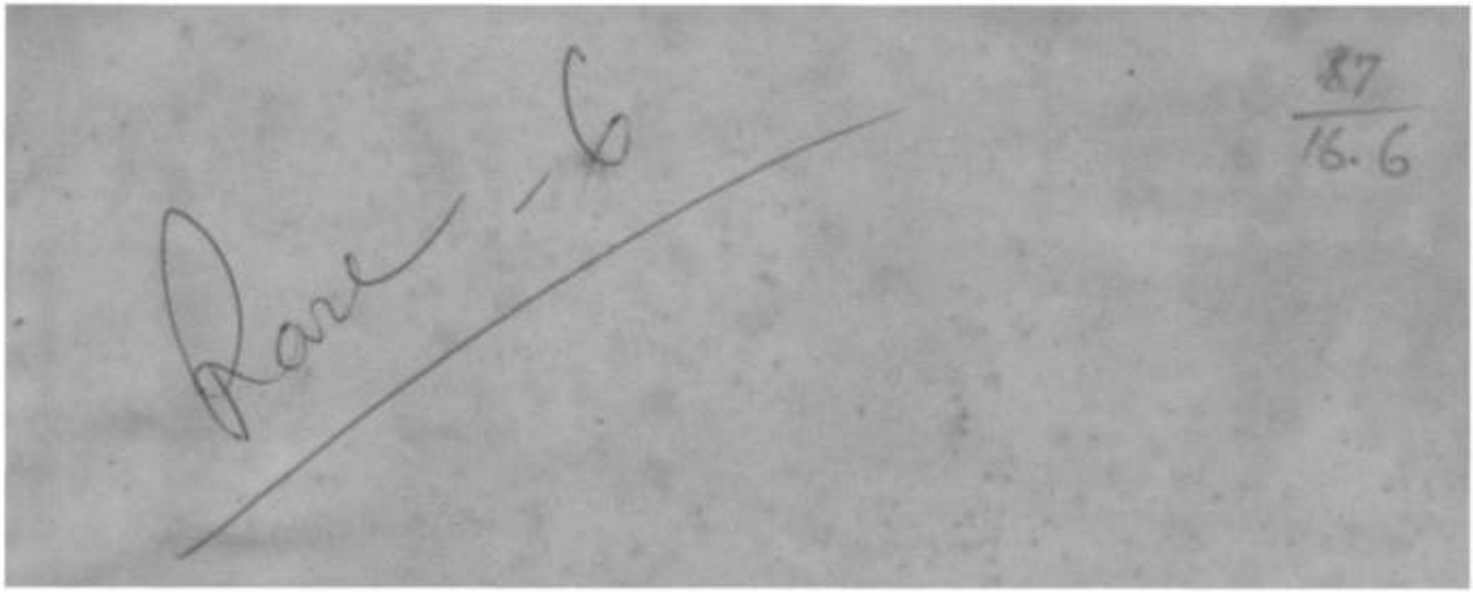
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INDIAN BOTANIC GARDEN
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A

GENERAL SYSTEM

OF

GARDENING AND BOT

CONTAINING

A COMPLETE ENUMERATION AND DESCRIPTION

OF

ALL PLANTS HITHERTO KNOW

WITH

THEIR GENERIC AND SPECIFIC CHARACTERS,

[illegible] OF GROWTH, TIME OF FLOWERING, MODE OF CULTURE, AND [illegible]

IN MEDICINE AND DOMESTIC ECONOMY.

[illegible]

FOUNDED UPON

MILLER'S GARDENER'S DICTIO

ARRANGED ACCORDING TO

THE NATURAL SYSTEM.

BY GEORGE DON, F.L.S.

IN FOUR VOLUMES.

VOL. IV.

LONDON:

[illegible]

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The Proprietors take this opportunity of explaining the circumstances under which they find themselves reluctantly obliged to close the Work at its present stage. At the commencement of the undertaking the Editor arranged with them to complete it in *Four Volumes*; but when the present or fourth volume was printed, he informed them for the first time, to their surprise, that his materials had proved so much more voluminous than he anticipated, that the descriptions of the remaining plants would fill *more than two additional volumes* of the same extent. They are compelled to add, that the circulation of the Work has hitherto been too limited to afford them any prospect of reimbursement of the large additional expense which would be incurred if they proceeded to complete the Work; an expense which they had not originally contemplated. As, however, the Work has been compiled upon the *Natural System*, the description of that division of the science which is contained in the four published volumes is complete, and the volumes are consequently not, in this respect, rendered imperfect by the absence of the remaining two, since they contain a complete account of the *Dichlamydeous* plants. In justice to the Editor they feel bound to add, that he has spared no labour to render the Work as comprehensive and perfect as possible; and they are confident that no publication has hitherto appeared in this country which contains nearly so large a compass of valuable information upon that division of Botany of which it treats. They can only account for the confined circulation which the present Work has hitherto met with in the altered taste of the day for treatises of a less recondite and extensive nature.

The Proprietors would be ready to complete the Work if they could hope for

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sufficient encouragement from the Public to induce them to proceed in this unusually expensive undertaking.

At the end of this volume new title-pages for the four volumes are added, in accordance with their contents, as a "*General History of the Dichlamydeous Plants*."

Kew, February, 1838.

INDEX TO THE FOURTH VOLUME.

SYSTEMATIC AND ENGLISH GENERIC NAMES, AND THE ENGLISH AND SYSTEMATIC SYNONYMES.

INDEX TO THE FOURTH VOLUME.

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THE

GARDENER'S AND BOTANIST'S DICTIONARY.

a simple fluted pitcher; when found they are strung by the heads, and by the natives put round the necks of their children to prevent evil. The nuts only of *Nelicus* go to compose, and are dressed in the same manner and fill the upper end.

Var. (S. glaberrima) (Wall. cat. no. 4415.) spike compound, downy. ♄. S. Native of Silhet.

Acute-leaved Symplocos. Tree or shrub.

22 S. RACEMOSA (Roxb. fl. ind. 2. p. 528.) leaves oblong-acuminate, serrulated; racemes axillary, generally simple; nut 3-celled. ♄. S. Native of Burdwan and Midnapore, in Bengal. *The Sanscrit name of the tree is Sirees and Lodhra, and the Bengalee one Lodh.* — Myrtus Race. obs. 4. p. 26. Leaves 2-4 inches long. Flowers yellow. The bark of this tree is a superb strong dyers' drug in Calcutta, and is met with in the markets of that town for a trifling price. It seems to be used as a mordant only in dye with Munjeet (a species of *Rubia*), in which the bark called *Lodh* is an ingredient. The shopkeepers of cloth take *Lodh* and the bark of *Bera Hur* (*Terminalia Chebula*), of each one chatak, in two ounces, pound them together, and wet them with water, and steep the cloth in it; then dry it. Take one chatak of alum, dissolve it in water, and boil it; put the cloth into this solution, and let it boil for an hour, then wash and dry it. Then take *Hil* (*Morinda tinctoria*) one chatak, Dhawra flowers (*Grislea tomentosa*) one chatak, Munjeet half a seer (nearly a pound), separately rein them with lukewarm water, and boil it. Then put in the cloth and let it boil for 30 minutes. *Dhawr*, the red powder used by the natives during the Hooley holidays, is made about Khyrpoor of the bark of this tree.

Racemose-flowered Symplocos. Tree 20 feet.

23 S. CAUDATA (Wall. cat. no. 4413.) leaves lanceolate, or elliptic-lanceolate, tapering to both ends, long-acuminated, obsolutely denticulated; racemes simple, axillary, downy; calyx downy. ♄. S. Native of Silhet.

Tail-leaved Symplocos. Shrub or tree.

24 S. LUCIDA (Wall. cat. no. 4414.) leaves smooth, shining on both surfaces, somewhat elliptic, or elliptic-lanceolate, entire at the base, and serrated from below the middle, acuminated; racemes downy, branched. ♄. S. Native of the East Indies.

Sharp-leaved Symplocos. Shrub or tree.

25 S. PYRIFOLIA (Wall. cat. no. 4442.) leaves elliptic or oblong, acuminated, shining, coriaceous, quite, or denticulated towards the tops; racemes simple, downy; glabrous, twice the length of the petioles. ♄. S. Native of Silhet.

Pear-leaved Symplocos. Shrub or tree.

26 S. PIRIFOLIA (Wall. cat. no. 4416.) leaves oblong or elliptic, acuminated, denticulated, shining, smooth; racemes simple or branched at the base, downy. ♄. S. Native of the East Indies. — Myrtus laurina, Herb. madr. Eugenia laurina, Rottl. herb.

Laurel-like Symplocos. Shrub or tree.

27 S. HAMILTONIANA (Wall. cat. no. 4420.) leaves elliptic-lanceolate or oblong, sparingly denticulated; racemes simple, downy. ♄. S. Native of the East Indies. Dentella racemosa, Hamilt. herb.

Hamilton's Symplocos. Shrub or tree.

28 S. ACUMINATA (Wall. cat. no. 4420.) leaves oblong, coriaceous, still, quite entire, or repand, obtuse; racemes long, downy, simple, or branched at the base. ♄. S. Native of the Burman empire, at Martaban.

Long Symplocos. Shrub or tree.

29 S. ROXBURGII (Wall. cat. no. 4413.) leaves elliptical, acuminated, sparingly denticulated; spikes compound. ♄. S. Native of the East Indies, at Amherst and Tavoy.

Many-flowered Symplocos. Shrub or tree.

30 S. CRATÆGOIDES (Wall. cat. no. 4424.) leaves ovate-lanceolate, quite entire, sibling-obovate, glabrous, tapering to the base, shining; spikes simple; lobes of calyx rounded, ciliated, obtuse. ♄. S. Native of the East Indies, on the Neelgherry mountains.

Blunt-leaved Symplocos. Shrub or tree.

31 S. LAWSONIANA (Wall. cat. no. 4425.) leaves oblong-elliptic, or elliptic-lanceolate, acuminated, thinly-coriaceous; racemes axillary and lateral, simple, and compound. ♄. S. Native of Nepaul, on Sheopoor.

Many-branched Symplocos. Shrub or tree.

32 S. RAMOSISSIMA (Wall. cat. no. 4422.) leaves ovate-acuminate, lanceolate, tapering to both ends, long-acuminated, nearly quite entire; racemes compound, downy. ♄. S. Native of Penang.

Gland-leaved Symplocos. Shrub or tree.

33 S. GLANDULIFERA (Wall. cat. no. 4418.) branches, racemes, petioles, and nerves of leaves on the under surface clothed with rusty hairy; leaves elliptic, acuminated, quite entire; spikes compound. ♄. S. Native of Penang.

Cloved Symplocos. Shrub or tree.

Sect. III. PAIDIA (meaning Unknown to me). Corolla 5-parted. Stamens disposed in a triple series. Ovarium inferior.

Species native of Nipaul and China.

34 S. SERICA (Ker. bot. reg. 710.) leaves elliptic-oblong, attenuated at both ends, remotely serrated, downy on both surfaces and wrinkled; racemes compound, terminal, and axillary; calyx somewhat 5-cleft. ♄. G. Native of Nipaul and China. Flowers white. (fig. 1.)

FIG. 1

Silken Symplocos. Fl. Mag. Cl. 1812. Shrub 3 feet.

35 S. CHINENSIS (Hamilt. mss. ex D. Don, prod. fl. nep. p. 113.) leaves ovate, acuminated, villous beneath as well as on the branches; panicles racemose, terminal, villous; calycine segments roundish, membranous. ♄. G. Native of Nipaul, in the Great Valley, near the town of Thankot. S. paniculata, Wall. Polura odorata, Hamilt. mss. Flowers white, fragrant. This shrub hardly belongs to *Symplocos*, and has the habit of *Prunus Mahaleb*.

Heath-like Symplocos. Tree or shrub.

Cult. The species of *Symplocos* grow well in a mixture of loam, sand, and peat; and cuttings of them strike readily if made under a hand-glass; those of the tropical kinds in heat.

Order CXII. STYRACINEÆ (this order only contains the genus *Styrax*). *Styracineæ*, part. Richard, anal. des fruit. 1808. *Styracineæ*, part. Rich. in H. B. et Kunth, nov. gen. et sp. 3. p. 296. *Guttiferæ* part. Juss. gen. 256.

Calyx permanent, campanulate, 5-toothed (C. P. e.). Corolla monopetalous, 5-cleft, rotate; deeply 5-cleft, but usually 5-cleft, valvate in estivation. Stamens 10, exserted; filaments connate-perigynous at the base, adnate to the tube of the corolla; anthers linear, 2-celled, dehiscing longitudinally inside. Ovarium superior, 3-celled, warty-pubescent, erect. Style 1. Stigma obsolescently 3-lobed. Drupe nearly dry, coriaceous, 1-celled, 1-3-seeded or not. Testa of seed double; inner one ribbed, outer spongy. Embryo inverted, with

ledons, Mtd • thtck •uptruit ra>: bumrn l[1] shy.—Elegant trees or tlirubt, u»u»llv *cluv* < tMRWtMt. Leaves entire, alternate, exstipulate. IV<I«MW* axillary or terminal, one or many-flowered. Flo> rrt *taamtme,* br*ciM white or cream-coloured. The *St* jtas < * W , , aSbrd. th. offlotul .tores of Asiatic Turkey, aad 5. *Bnrii** iK< fra^fjn: rcm of that ntm. This wdcr H »^ry wmrly »l! «»» :'«*« H*' decidedly »ui»r,,.r i,«4r»nti. in U»- uwrr ilrrpU rU-ll rofulU; anil * f* from *Symplocineæ* i ovarium, and entire or slightly that 11 lobed calyx, and ti tbc «j*n«>f fo«B«kil *id> ihr •*« wr I. STY'RAX (*στυραξ*, the name of *S. officinale*). Lin. gen. 595. Tourn. t. 3 •1 m tbt mipfM toeing *tnnttai* toaxUlpbow. «««ul tu l>« /«»*. Juss. gen rtn. fruct. 1. p. 284. t. 59. ; w , ofTlwoofefMiut MMJ 1> i. geo. i. 49. UMIWI

Lin. syst. *Decandria, Mon* that of the order.

* *A species native of Europe.*

FIG. 2.



1 S. OFFICINA'LE (Lin. spec. 635.) leaves ovate, clothed with hoary villi beneath, shining and green above; racemes simple and axillary, 5-6-flowered, shorter than the leaves. ♄. H. Native of Italy and the Levant. Cav. diss. 6. p. 238. t. 188. f. 2. Woodv. med. bot. 197. t. 71. Church at Stev. med. bot. 1. t. 47. Andr. bot. rep. 631. Lodd. bot. cab. 928. Plench, icon. 341. Mill. fig. 260. Lob. icon. 151. Leaves about 2 inches long. Flowers white. Drupe ovate, globose.

The *S. officinale* is chiefly remarkable for producing the very powerful and fragrant balsam called storax. It is a native of Syria and the Levant, and is not uncommon all over Greece and the Peloponnesus, being known by the name of λευγοράλαι in modern Greek. It is naturalized in hedges in some parts of Italy, particularly about Tivoli. The finest tree of this species in Britain is in the Apothecaries' Garden at Chelsea.

The best storax comes from Asiatic Turkey, and is obtained in a fluid state, from incisions made in the bark of the trunk or branches of the storax-tree. It is brought from Turkey; but is so adulterated that it is very fafrl)(I (MM with in a pure state. Storax is bitter and pungent to the taste, and has a strong fragrant odour. Two sorts of balsam are found in the markets—storax in the tear, and common storax in larger masses; this has been called "storax in the lump," "red storax," and the separate tears, "storax in the tear." The former is very rarely in separate tears, but in masses, composed of white and pale reddish tears, or having a uniform reddish-yellow or brownish appearance, being unctuous to the touch, soft, like wax, and free from visible impurities. This is the *στυραξ καλαμιτης* of the ancient Greeks. According to Galen it was formerly brought from Pamphylia, in hollow canes or reeds, whence it was called *Styrax calamita*. It is preferred to the common storax, in larger masses, which are lighter, less compact than the preceding, and have a large admixture of woody matter, like saw dust. Although the impurities of this kind of storax render it less valuable, it is not less useful, and when purified, its medical qualities are no less potent. Storax should be chosen of a reddish brown colour, rather softish, unctuous to the touch, yet brittle and friable, and of a pleasant sweet smell. On account of its yielding a pleasant odour of Benzoic acid, when ignited, it is much used in Roman Catholic countries for incense. Spirits dissolve it entirely; it consists principally of resin, with a small portion of Benzoic acid. The directions of the London Pharmacopœia for purifying storax are:—

"Dissolve Balsam of storax in rectified spirit and strain it; then distil off the spirit by a gentle heat until the balsam acquires a proper consistence." It may not be improper here to observe, that storax of the Pharmacopœia ought not to be confounded with storax of commerce, which is a liquid balsam, obtained from *Liquidambar styraciflua*.

Storax is stimulating and expectorant, and was formerly prescribed for asthma and chronic affections of the windpipe; for cholera, &c. It is so far discarded from practice as hardly ever to be used, and is justly designated by Dr. Thomson, as "an article in the list of Materia Medica."

..xx. Fl. July. Clt. 1597. Tree 12 t.. 15 feet.

** *Species natives of North America.*

2 S. GRANDIFO'LIUM (Ait. hort. kew. 2. p. 75.) leaves broad, obovate, acuminated, green above, but clothed with hoary tomentum beneath; lower peduncles solitary, 1-flowered. ♄. H. Native of South Carolina. Lodd. bot. cab. t. 1018. Wats. dendr. brit. t. 129. S. officinale, Walt. fl. car. 140. S. grandiflorum, Michx. fl. bor. amer. 2. p. 41. Flowers white.

Great-leaved Storax. Fl. Jul. Cult. 1765. Tree 12 to 15 feet.

3 S. LÆVIGA'TUM (Ait. hort. kew. 2. p. 75. Willd. spec. 2. p. 634.) leaves oval-lanceolate, acute at both ends, glabrous on both surfaces, toothed; peduncles axillary, solitary or twin, 1-flowered. ♄. H. Native of South Carolina and Virginia, in swamps. Lodd. bot. cab. 960. Wats. dendr. brit. t. 40. S. ovatum, Pursh. stirp. nov. 2. t. 17. S. glabrum, Cav. diss. 6. p. 240. t. 189. f. 1. S. lævis, Walt. fl. car. 140. S. Americanum, Lam. dict. 1. p. 82. Stamens from 6 to 10.

1 MM »

LJk

Smooth-leaved Storax. Fl. Jul. Aug. Clt. 1765. hi...r M | M 4 feet.

4 S. PULVERULE'NTUM (Michx. fl. amer. bor. 1. p. 41. Wats. dendr. brit. 41.) leaves almost sessile ovate or obovate, obtuse; clothed with powdery tomentum beneath; flowers axillary and nearly terminal by threes on short pedicels. ♄. H. Native of Virginia and Carolina, in woods. S. laevigatum, Curt. bot. mag. 921.

Powdery Storax. Fl. Ju. Aug. Clt. 1794. Shrub 4 to 6 feet.

*** *Species natives of South America.*

5 S. TOLUIFE'RUM (Hu.. l et Bompl. pl. aequin. 2. p. 72. t. 101. H. B. et Kunth, nov. gen. 3. p. 204.) leaves oblong or ovate-oblong, acute, glabrous above, but clothed with white or hoary tomentum beneath; racemes axillary, simple, 3-8-flowered. ♄. S. Native of Quito near Malacates. Pedicles, peduncles, and rachis clothed with whitish or rusty tomentum, and the calyx with white tomentum. Flowers white. Leaves 3½ to 4½ inches long.

Tolu-tree Storax. Tree 30 to 40 feet.

6 S. PUBE'SCENS (Pohl. pl. bras. 2. p. 54. t. 134.) leaves oblong-elliptic, attenuated at both ends, glabrous above, but clothed beneath with greenish-hoary down; racemes axillary, simple, erectly spreading; calyx clothed with rusty tomentum. ♄. G. Native of Brazil, in the province of Goyaz, among bushes in mountainous places. Corollas yellowish-white.

Flowery Storax. Tree 10 feet.

7 S. FERRUGINEUM (Pohl. l. c. p. 53. t. 133.) leaves oblong-ovate, acute, rather attenuated at the base, glabrous above, but greenish-grey beneath, and dotted from tufts of rusty tomentum; racemes axillary, very short, few flowered; peduncles and calyxes clothed with hoary yellow tomentum. ♄. G. Native of Brazil,

•MM

MM)

in 11 province of linit OtnM, about Villa Riak Corollas yellowish-white.

Rusty Storax. Shrub• *S* feat.

8 S. CAMRÒSUM (Pohl. l. c. p• St.. I. 13.'.... leaves oblong, acuminated, somewhit atu-nuaipd at U>» ba»e, shining and glat mu» above, and clothed <l with gnwrowh hoary ton* I ra- MI :iii; |ic.i uncles and calyxes clothed with hoary MBBW IIHIH HHiiii. .'ll Co* fall.

Field Storax. Shrub 5 feet.

9 S. CAYMORUY'LLUM (]'..lil. l, c. p. 57. t. 187.) lctvpiobtong-lanceolate, acuminated, quite glabrous on both surfaces; racemes axillary, very short, about 4-flowered, and irc, •• w«-ll «• the y calyxes clothed with white or greenish tomentum. ½. S. Native of Jain Ilt.i/il ai K>" Jain itit, among)ni«!ifi, about Agoacin. Corolla* yellowish -whitr- mb.

Ice-leaved Storax. Sh

10 S. r*ai >m oblong. ovate, or oblong-elliptic, "MUMT, glabroo* above, ami rlotbcd with greenish canescent tomentum. axillary, compound; calyx clothed with yellowish down girding the pericarp to the middle. ½. S. Native of Brazil, in the province of Minas Geraes. Cor illai win

Small-leaved Storax. Shrub 7 to 8 feet.

11 S. ACUMINA'TUM (Pohl. l. c. |>. 58. i. 138.) travel oralr, ins r'UIV ^'lotlH'M Wltn ^Jfirtli'M ri.i.ltV l''i'.i tii-.jm acuminated, glab beneath; racemes axillary, simple; calyx girding the fruit to the fourth jurt of its lnijftli, atwt !•, a* in ll aa UM prtlunrlra, dothwl i* • h yellowish tomentum. ½. S. Native of Rio Janeiro, about Marambaia. C •rtiiU* grectiiah-w l twiro, i n o t t H

Acuminated Storax. Shrub 6 to 8 feet.

12 S. CHRYSA'STRUM (Pohl. l. c. p. *r.v.* i i3».) I M oblong, acute, glabrous and shining above, but clothed •PWI greenish hoary tomentum beneath; racemes axillary, sim| le, many-It'' ered; calyxes and peduncles clothed with white tomedium. ½. G. Native of Brazil, in the province of Goyaz, MMMgbn '. , tin- idgCl o f r i r m anil ttrltN.

(hide starred Storax. Tree 10 feet.

13 S. LATIFÒLIUM (Pohl. l. c. :••(to. t, 140.'i IMTMlarge, oval' ventricose, acute, gbbrava above, clothed with rusty tomentum bffMMh; racftM* axillary and terminal, compound; calyxes and peduncles clothed with rusty tomentum. ½. G. Native of Bnail, in the nun ce of Minas Geraes, in shady mountain-wood'. Corollas yellowish-white, downy.

Broad-leaved Storax. Tree 15 to 20 feet.

14 S. MACROPHY'LLUM (Pohl. l. c. p. 61. t. 141.) large, oblong-ovate, acute, rather cordate at • hr baar, gUbtnu* above, clothed with greenish-white tomentu >n ltrnmll. : with rvtlilu -brown tillotia vrin*; raivmc* Ulllary, «luifi, few-flowered; calyxes . j.,.1 |.. .!,,,,, 1., cttiilird witl mi.!i»h bmwti villi. ½. S. Native of Rio Jaodtv, a m m biukr* about Pillar. Corolla yellowish-white.

Long-leaved Storax. Tree.

15 S. A'TRUM (Mart, in Spreng. syst. 2. p. 284. Pohl. l. c. p. 62.) leaves oblong-ovate, acute, glabrous above, but clothed with white t wnentum braratli, a* »ell as stellate rusty tomentu"» on the veins and nerves; calyxes and branches clothed I Mith rusty villi. ½. G. Native of Brazil. liowrr* (tlnti.li.

White Storax. Shrub.

16 S. RETICULA'TUM (Mart. r••i«. bra ex I am, 5. j» 1 |,t leaves ovate or obovate- nMong, anit , glabrous above, but clothed with white tomentum beneath, and reticulated with parallel veins and cross nerves; calyxes clothed with white tomentum, about equal to the corolla in length. ½. S. Native Brazil. Leaves at length repand.

Reticulated Storax. Shrub.

17 S, At «r. M(Mart.l. c j lcavci oratr.armc, b « « » • stellate tiifu of tomrnliim abovr, but at IniRth •Inninc. rl< null . olden yellow tomentu ii bcnraih. « wr.ll aa the lit achlets and calyxes, whic lt arc a little thurtvr titan ibe corolla, t? • G. Native of Brazil.

Golden-leaved Storax. Shrub or t

lt C TITIFOLIUM ; k«n> es oblong-lanceolate, quite entire, hoary beneath; laomwa pan>- . *tomnUHf.* ½. S. Native of Jamaica. Cléthra tinifólia, Swartz. prod. 74. Tinus occideniili*. l.in. l| ec. 550. \ .Jkarm-na. 1*. 1 rowne, jam. 214. t. 21. f. 1. Sloan. jam. 2. p. 86. t. 1 'S. f. 2. L M « dark «rrrn abi ve. 1 fruit containing a s e l mealy pulp and a hard •tottr. Sl.ntvr . lls it the bastard Locust tree.

naH*4a«acat Stoms. Shrub 10 to 1* fret.

* * * * *A rfrcnt nnttttstf A/rnt,*

19 S. GUINE'NSE; glabrout, leave* nbl<«. , entire, ending in an obtuse acumen, on short petioles; peduncles many-flowrrrd, coryinb^ se, axillary; calyx nearly entire or a little toothed. ½. S. Native of Guinea in the island of St. Thomas. Flowers very fragrant, white; anthers t-ombincd mm a tube. Stigma lar e ovate. Corolla of > •ml & petals.

Guinea Storax. Shrub 6 to 10 feet.

aj ar ^ v • i lu'^if A a^^a^aa^a ar L ^T ^t A^UH

*" S. AGRE'STE; bavn ovate, acomuuuil, a lc< e serrated; glabrous; peduncl •<•• n»fiy-flo«rfrt!. n tiital; calyx 5-toothed. ½. H. Native of Cochin Chin i, among bushes. Cyrta agrèstis, Lour. co ill. *tit.* l ••» iif coroH. equal to the calyx in le •_•<" l*rtip* oblong. curved, aofMatnms • i rrowed nut. Flowers white.

Field Storax. Shrub 6 to 8 feet.

21 S. VILLÒSUM (Blum. bijdr. p. 671.) leaves oblong, acumi|»:r ed, acutish at the base, unequal sided, rather villous beneath; racemes simple, shorter than the leaves; flowers with C, in ely wit i 5 tUmen*. ½. S. Native of Java, in woods, on Mount Salak.

Fillous Storax. Fl. Oct. Shrub.

-* S. JAVA'NICUM (Blum. bijdr. p. 671.) leavca < oblong acute, rounded at the base, glabrous, uhrr tomtntoae on il.. rib beneath; racemes crowded, many-flowered, mo habortrr than the petioles; flowers hexan <lrod». ½. S. Native • Java on the Parang mountains, in the province of Tj "jor; atv! it) «<«M)l en Mount Burangrang.

Jmm St^r Aiu. I ree 40 to 50 feet.

23 S. VIRGA'TUM (Wall. cat. no. 4400.) branches downy; leaves ovate->lilong« acumwat" , denticulated; calyx and co- 5. Native of Silhet. Calyx obsoletely 5- <ooth*d. Bea-nMrntaofeort. la lanceolate.

Twiggy Storax. Shrub.

11 S .. PORTERIA'NUM (Wall. cat. no. 4401.) .rait,lwa, calyxes, corollas, petioles and young leaves, downy; leaves ovate-oblong, acuminated, almost quite entire. ½. S. Native of Penang. p*[y*_ ''' tire. Corolla 6-parted, with elliptic-lanceolate acute segments.

Porter's Storax. Shrub.

ti ** I INLAYSONIA'NUM (Wall. cat. no. 4403.) downy like the laatt leaves elliptic-acuminated, quite entire, canescent beneath. ½. S. Native of the East Indies. Flowers fasciculated, terIVnnal rarf'TntMM', IM . ves, green above. Calyx obsoletely 5-toothed. Corolla 5-6 cleft.

Finlayson's Storax. Shrub.

26 S. SERRULA'TUM (Roxb. fl. ind. 2. p. 415.) leaves oblong •< m m j> '' • l. M f t lat< i gl L I ..'''''''', H F I H I un i t'al, simple, villous; branches pubescent at top, as well as the young leaves beneath. ½. S. Native of Chittagong. Cyrta, Ham. mss.

Koom-jamera is th«• Bengalee** name of the tree. Leaves 3 inches long. Corolla «-oleft- Drape I *i* seeded,

Serrulated-leaved -u»r*x. Shrtib.

27 S. Benzoin (Dryand. in trans. roy. soc. 77. p. 307. t. 12. I'oodv. ni p. 200. I. 7*.) leaves ovate-oblu>if. MUM* nated, glabrous above, but clothed with leprous (amentum be- neath, a* t\l as the calyxes; racemes compound almc- the length of the leaves; (lowers with 7-9-10-stamens. Native of Sumatra and Java. CMircfa. A Stev. med. bot. 3. t.11 : Blum. bijdr. p. 671. Flench, icon. t. 342. Benjûi, riu». exot. Bare m ad. nil. cur. i-/. 2. ann. 1. p. 370. f. 31. Benzoin, Radermacher, in act. Soc. batav. 3. p. 44. 1 Laurus Benzoin Houtt. in act. harlem. vol. 21. p. 265. t. 7. | Benjamin or Benzoin, Marsden, Sumatra, p. 123. Luban is the Bengalese name of the resin. Leaves a hand long. Corolla white, downy outside; segments linear. —Tho Garcias, Grim and Sylvias were acquainted with the reaHrw from which Benzoin is collected, their description a uv MI imperfect that succeeding botanists have fallen into many ron concern- ing it; and it is remarkable that, although this dr tg was always imported from the East Indies, most of the later writers on the Materia Medica have conceived it to be collected fr wn a species of *Laivrmt,* ii <n this erroneous supposition, 'ley have given the trivial name Benzoin. Linnæus Mant. p. 297., seems to think that the drug is furnish cd by the *Croton Benzoe,* an I af'U r w i ; .plementmn PUataran, p. *4* Ji, 1 «ante plant again under the name of Terminalia Benzoin. Jjcqi n. that il was called by the French, Bienjoint, may have occasioned the mistake, from the similar sound of the word. Mr. Dryander, however, in the year 1787, clearly proved it to be a species of *Styrax.* i The tree is deemed in Sumatra to be of sufficien ; age in 6 years, or when the trun *k* it about 7 or 8 inches in dia- meter, to afford the Benzoin. The bark is then cut through longitudinally or somewhat obliquely, at the origin of the prin- cipal lower branches, from which the drug exudes in a liquid state, and by exposure to the sun l *nd* sir i soon concretes, when it is scraped on. 1 imd to »ui The trees are not found to retain the effects of these annual incisions longer than 10 or 12 years. The quantity each tree yields never exceeds 3 pounds. The Benzoin which issues first from the wounded bark is the purest, being soft, extremely fragrant, and very white; that which is less esteemed is of a brownish colour, very hard, and mixed with various impu- rities. In Arabia, Persia, and other parts of the East, the co »rser sort is consumed in fumigating and perfuming temples, and in destroying insects. The Benzoin which we find here in the •hop* i« in large brittle masses, compos -.-d partly of white, partly of yellowish or light brown; that wh • h is clearest and contains the most white matter, it accounted the best. This resin has very little taste, impressing on the palate only a slight sweet- ness: its smell, especially when rubbed or heated, is extremely fragrant aml agreeable. It totally dis «J»ii in rectified spirit, the impurities excepted, into a deep yellow-red liquor, ami in this state discovers a degree of warmth and r, 1 pungency at well as sweetness. I impa l>y d digestion, to water al to, a considtr- able share of its fragrance, and a slight (magcacy : t the filtered liquor, gently exhaled, leaves not a res (K.iin or mucilaginous extract, but a crystalline matter, seemingly of a salin nature, amounting to one-tenth of an eighth of the weight of Benzoin. Exposed to the ftre io prop seels, it yields a quant ity of white saline concrete, called Flores : ; . [. / . . , ttl "III ii'nil:' Ml« tn.l., and grateful odour, soluble in rectified spirit, and in water by the assistance of heat.

As the trees which afford Sto TM' and Benzoin, are species of the same genus, tt eir products are very similar in their ex- ternal appearance, and not widely different in their sensible qualities; it is therefo rew nonable to awppoer thai they are ana- logo us in th if madjctnal effects. Benzoin, however, though T»rrl\ in | !• • \ t • l :II I •llt!]>lr »' i!r tu» IMtII ltri|UriiiI% pre- scrib •d a* a pit^nral. and is recntamended I or inveterate cought, asthmaa, obstntctiona of the lungs, and all phthisical complaints, avnttended by nnscn fr % er ; tt baa also noMl used aa a cosmetic, and in il e way of famigation for the i resolution :i di'I'ii'. t' mours. I''. \ ullefi C W H i ixhi'^Ji i*itit the sti- mutanis, and *n** lhat the/brri •roatv* , which i • the only] prepsrat on employed, are mantte»i)y a saline tnbttaner, of a* l Kin- iMtderable acrimony and tttmalant po*« | and ahhoufth it has been recommended aa *m* pectoral, be few* it heating am! hnnl'ul in atdMattH U'ri n, • •!•>•« nt hall > .Irachm In the Pharmacopœias the flowers are directed in the nwcfMra epii camphorat., and it i« oidered in substance in the i *ctura benzoes composita.*

Benzoin Storax. Tree.

Cult. The hardy species of *StvrmM* are proper plants for snruooeTieAf oetng very natHtsonje wnew in HUWT*. *\ ••B'" «MI suits :brmbeat. TUe bast way of aieirasing them ia by f layers put .Sown in I In- I autumn or spring. The stove >»d greenhouse species will grow freely in a mixture of loam, peat, and sand; and Mil tx* *t* easily propagated by cuttings planted in sand, under a hand-glaas; tho** <.' the tropical species in heat.

OabtaClAII. HALESIA'CEÆ (this order only contains the gen<< *Halesia,* or Snow-drop trees). D. Don, in edinb. phil. journ. dec. Ihift. Symplociaew, part, of authors. Goata- *amr. part. Joss. 1&6.

Calyx small, 4>loothed. Corolla mnnopeulout. rentrkoacly campanttlate, with a 4-lobed, rrrct b order. Stamens 12-16; filaments combined into > a tube at the baas, and ad« ate to the i Ua; anther* oblong, erect. t*celled, dehiscing lengthwise. Ovarium inferior. Style 1; stigma simple. Drupe dry, corticate, oblpng, with g-t-winged angles, lerminale*! by the , permanent style: containing a t-4-crlied pnttmtn, whi- ch is acute at both ends; cella l-«e*dcd; seeds attached to tb» bottom of the celb}; testa of seeds simple, ver> thin. Kwbryo length of albumen, with linear-ob •long cotyledont; and a (oog, linear, compressed interior radicle. Albuaes fleshy,—Trees with alternate, serrated Uares; and Utrral faaeiclee of pedicellate, drooping-, white flow' >« order comes nearest to *Symplocinea,* from which it differs in the inferior o • .num, in the fruit being a hard, dry, niagM nut and in the corolla being more decidedly monopetalous.

I. HALESIA (so named by Ellis in honour of the learned and venerable Stephen Hales, D.D. F.R.S., author of Vegeta- ble Staticks in 1722). Ellis in I in, gen. iw. *i'J'* Gaertn. fruct. 1 |. 160. t. 32. Juss. gen. 156.

Lin. a m. /JoAcaatfrM, *Mvmmgfmim.* CharacUf the same as the or der.

1 I. TETRA'PTERA (Lin. spec. CM, I Ellis in phil. trans. I. p. 931. t. ft. f. A.) les> es ovate-lanceolate, acuminated, •l.ariily srrrat< les glandular . fruit » ith 4 wings. b. H. Native of South Carol •a, along ihi bank s of rivers. Curt. bot. mag. 910. L dd. but cab. 1173. Cav. diss. 6. p. 358. t. 186. I am. ill. 405. 1 . Leaves acuminated, with the middle depressed. i flowers pure white, 9-10 in a fascicle, drooping, resembling tbose of the tnoW'drvD. Tbe *nt»* 1 ami rrintil bark is of a darki«h rok««r, witb *• ny irregular fissures.

twwtmg, Haleaia, or tooMnori I. April, May. Clt. 1756. Tree 15 to 20 feet.

2 H. PARVIFLORA (Michx. fl. amer. bor. 2. p. 40.) leaves

• ing, acute, nearly an ; flo *nm* octaodi ; fruit clavate, slightly 4-win ed. . Native of Florida. Ker. bot. »e«. tt. 95f.. **Leaut-a downy, glaueooa tx-twaili.** Itac«tpea panicled. Flowers white, drooping. Calycine teeth ovate.

tlt'Jhm,id Snow-drop-ir. i Fl. May. Clt. 1802. Tree 10 f, et.

11. bint ft* *iUn.* epec. SS8.) 1M vn ovate, >ruu-, Mil ted ; petioles unootlt ami even ; pedirela eloitg ; fruit with h *t* large opposite *mttfpt* and * ..Uolele onn. b,. H. Native of Georgia and Carolina, in sh mly place* on the hajik» of rivers. Cav. ii»-. 6. p. 5 .18. i. |67. IXHIII. bot. cab. III 2. Flowers oc- tUHlroiit. Lean* much larger tluui tiio». of either of the pre- ceding species.

Two-winged-fruited J Snow-dru; -tree. I Fl. April, May. Clt. 1758. Tree 10 feet.

P far t The species of Snow-drop-tree are well fitted for shrubberies and lawns, on account of the profusion of early white drop-like 1 IUMOBM wl) ich they bear. They will grow in any common soil, and are by seeds. »MH>I Q be mcrcMcd by »'i|" <>f tb« root and

Oaoia CXUII, M>RSINEACEÆ (ihia order contain* plants agreeing witli *Myrsine* in important characters). Myrsineæ, R. Br. prod. p. ASS. Alph. I' <. in Lin. trans. 17. p. 100. Aidiaiiccar, Jnaa. arm. tnu*. 15. p. 34!). 'Ophiosp roue, Vent. cel«. p. 80. Sapotar. part. Juaa. gin. p. 168.

Calyx p rmaneni 4-5-lob id (f. 3. a. f. 4. «.). Corolla ga- mopeuloo. (f. 4. & f. *S.* *.). rarety polypetalou*. reg>< lobw or petal* - qual in number to the lobea of ih. calyx. Sta- mam equal in num bef to the lobea of the corolla. inserted 1 <n its base (f. 4. *b.*), .in.I oppoaitt ttte lobe*, free from i ach other or combined. Pollen ovoid-Rloboae, amooth. Ova< ium free or adhe- rent, t-ollcd ; orula ttnmerwd rn tlie central j>lac>i it- 1. ipe or berry I or inan\ => aded, Albumen Imruy. i conforming j{ to UM wed, or Ion* »!»• i deficient. Cotyledons it. Plumule inconspicuous or wry short.—Tree., «!irul)». or rabahntba. Leo ves alternate, rarely almoat oppo* te or subverticillate, simple, entire. *at* loot). : I ..raaiilUt y, pedunculate, 0T aeaa.i e, Imitr o •••.;., timatiun. All the p.»n» *tto* more >>< 1<«* *Uir-* uulif.l . with r sinous rears in tint*. The haira «» *>m]>lf or ati u*g from celli, generally - ery ahort: on ihc peduncles, ealysea, and lower aurface of the leavra they are moat frequent; m *mttM* uf tU • species the situation, form, and number an ran.i ble.

The planla oootaioed *in* tl order arc root tly inhabitants of the farmer region* of Aaia and A erica, but never beyond the 39th degree of latu <. The ord< > is intermediate between *Sapoteæ* and *Primulaceæ*. *Sapoteæ* differs from IH it in the whorl of stamens be »j alternate > ith the lobes of the coro !la; and from *Primulaceæ* in the fruit being indehiscent, and in hcbit. The •VfMkgM have more <ir leaa a di>)osition to prod Ml resinous wibaunee, «h.eh appear* a. doti in [wru of plant, chiefly on the leaves, flowers , and berries, It tnay be i al> wn, reddish, size, shape, and position in different species. Alph de fi «re dark *ot* light bro styptic taste .rang*, or yellow j t! r m w taate of liar quality, depend

• pry much U(«KI the quantity, and tome ptcu- af thia reatnotu •ubaiam-e.

Synopsis of the genera.

Tatt I.

XM: CE'RER. *FUmmt peiamerem*. Filament* connate ai tkt base. (Hitmm ntperior, manyieiHtJ. Stigma simple. Drupe long, eyln drical, fo 'ticultir, \-K<iiiiA. Albumen none. Embryo erect.*

I £oi'cKR4a. <haracte n ihe same aa the tribe.

TaisR II.

A«DrtU*. *(olyr and eurolla 4~&-lobrd* (f. *3. a.* b. f. 4. *a. b.* r •, #. 4). *Vte ten* miuttlly free. Oranum* aap *pe* or *berry globote, l-Kf.l„i A (burnt * hvmjf. trmmmerm.*

* ^ ACEA'NIA. Calyx and corolli i tuliular, i-lobiil ; filaments ww i baae j anther* ovoid. St iftni dot -formed.

3 ^ ELIOCE'LTIA. Calyx and co olla •parnd. I filaments free ; anther* ovoid. Style short.

4 Cono!>'>arna. Caljr* and corolla I -cleft, funnel-shaped ; filament! fi< , inserted in ih* upper part of the cor i orate-triangular. Stigma «IH ple.

• CYRILLA'CEUS. I alyx and coro U t-rl. ft, rotate ; filament* very short ; anthers oblong, o | • ninjt hy *t* \< ores at top. Stigma acaaile, tub'* apitate.

6 MY'RSINE. Calyx and corolla 4-6-lobed (f. 3. *a. d.*). Fila- mem s short, free. Stigma fri ,*ed, lotx d, or simple (f. 3. *b.*).

7 BA'CULA. Calyx 5-lohed (t 4. *a.*). Corolla 5-cleft (f. 4. **.). Sttgma thick, capitate, or obscurely lobed ((. 4. *c.*).

8 OXCOC^*i*. MI « i Calyx and corolla 5-cleft. Stan nn coni- Md into a ma**, or into a 5-toothed tube. Sti^ma fun nel- atiaped, marly entire, or denticular d.

9 \KUiiU. Ctlyi and corolla f. *i. a. o*. Fila- ments free ; anthers triangular, free, or combined, Slignw simple, I >te, nibwlatc, *or* tl ot-formed.

10 EMI'LH Calyx ami corolla 5-ji:. rted. FiamenU I free ; anthert ovoid. Stigma capitat e,

II Cawun VALUM. Calyx 4-cleft. Cor !.% 4-peuUed. Stamens con ibined, and with the peula at the ba*< . Style fili- form.

TRIB. HI

MA'LEE. *Calyx 5-lobed. Cor Ha* J-fcW, *,mdn^Hu* te in aestiv *alum. Stamen> 5, free. Ov irixtn adherent, ha'/ mferior,* mang-ovulate. St *tUmmWtj ihgmaoU„* rely 5-5-lobed. Seeds numero *i, tmati, magulmr,JU*d tv >k* central placenta. E *brmv* transverse.

It Mil*. Character t <• aame •> that of the - ribe.

† *! (mm liombtjmt mltthrr irtongtmg to to* pntent order.*

19 <ORYNOCA'RPUS. Calyx of 5 concave «epat« for.ilia *ot* 9 round i»li petal*. Stamen* I, Troin tbe cla« s of the pet •»** Dru (weUvate, conuimng a l^aeeded M t.

Tri at I.

ÆGICERE'Æ (this tribe contains onl I tWg*ti *Egiceras*). Lin. trans. 17. p. 100. Calyx 5-parted ; seg- ments obliquely imbricated. Corolla 5-cleft. Filaments con- nate at the t>a«e; anthera free, aagrtUle. having the cells burst-

1> rupe i >r, 1-seeded. Albu* men none. Embryo erect. Habit of th• genera of *Sapvittr.*

I. ÆGICERAS (from aig, aigos, a goat, and keras, a horn; form of fruit). Gærtn. fruct. 1. p. 2 L6» L 4o, Kœn. ann. bot. 1. p. 129. R. Br. prod. |. 534.

Lin. svst. *Ptntfadn* 2, *Monogynia.* Character tbt «une as that of the t' 'be.—Snull trees, native* of tb»c sea-shore, among mangrov...

1. FHA'O»AK» (Kern, in arm. b ot. 1. p. i *iO.* with a figure. Hook. bot. misc. 3. p. 84. t. 21.) leaves obovate, repand, veiny; um[1]bels pedunculate. axillary, ai d terminal; fruit cylindrical, subulat L, a little arrl ed. b. G. Native of New Holland, Moluccat, Java, Bunnan em| ire, Penang, Delta of I iangrs, and Malabar, bj the M-aaide, aroongU m angroves. Æ. majus, Gæ -in. fr rt. 1. p. 216. t. i 8. •. obovàtum, Blum. bijdr. p. 6 93, Æ. floridum, Rœm. et Schultes, syst. 4. p. 512. Rhizoph >r» cornic jlata. I in. spec. 635.—R imull, an b. 3. t. 117. \ <iuui milky •arab, - superior surface of leavta covered with aaline excrescence. Flor r«n while, fragrant, in trrminal umbels.

Fragrami .ttficcra*. Clt. T Trie «mall.

i J&. ra'aai 1.) leaveatmall, *i* with sutirifurvtt! iry and tcrauna •ht- east •hore of Java, *m*\, ailed *h'afrmwfum,* Manl(iu .tjjicera

Cult. 1 la- specie* of thi* grnua grow Wei) in a mixture of sand, loam, ami peat; and ripened cutting* will mike root in 1, under a hand-glaat, in heat.

fWfcfl II.

ARDISIEÆ (this tribe contains thrbb* agreeing »ttb the genus *Ardisia* in important characters). Alph. 11 C. in Lin. trans. 17. p. 101. Calyx 4-5-lobed. Coroll• gamapeukMn. Stamens usually free; cells of an then burning lengthwise, or at the apex. Ovarium superior, m any-seeded. Drape or berry globose, 1-seeded. Albumen ho rny. Embryo Iran*u>se.

It. WALLE M V (M named in memor of Matthew Wallen, a nativ e of Ireland, many years resident in Ja luioa, KU <ultivated both indigenous and exotic plants there, at con «iderabbj expense, and much assisted Patrick Browne in his Natural ll istory of Jam >»ak»). Swartz. prod. 1. Þ t l. >1. 'iid. occ. l. p. 248. Schreb. gen. no. 1722. p. 789.

Lin. svst. *Tetrándria, M* in^yiti.i and corolla I lobular, l ii the base «(the corolla; filaments combined at the b iw. frr« at top and • xserted; anthers ovoid, much shorter r than the filaments, ilhiscing lengthwise. Style short; stigma dot-formed.—Small tr Ma. Leaves alternate, nearly ppo- m a whorl, oblong, tn or less obtuse, entire, coriaceous, glabrous. • nnmal, naked, many-flowered; pedicels forming umbellets at the tops of the peduncles. Lobes of calyx and corolla <btnae, ioibrtcaie in æstivation.

1 W. LAURIFÒLIA (Swa ru. BrmL j> II. M. md. ore. I. p. 248. t. 6.) calyx and corolla covered with gl ttdular dots, t; . S. Native of Jamaica, Hispanio U, and < Cuba. Peteioides laurifòlium, Jacq. amer. 17.—Sloane, jam. 2. p. 234. t. 145. iJ, Flowers yellow. Berries scarlet. Glandular dots orange-coloured. Jacquin describes lt« Uavra a* 6 inches long, and greasy; and the flowers as white.

Laurel-leared Wallenia. Tree 10 to 14 :

2 ANGULA'TA (Jacq. hort. «twnbr. I t. a thicker; calyx and corolla without gl induUr ttota. Native of the East Indies? Cultiv .IMI in tha gnrdVnt of ihe M ritius. and tn those of Vienna.

u

Angular Wattciua. Tree 10 t • lt fret.

C• *t.* 8e« *Ardisia,* p. t for ruliurr ahd papafaVnV

HI WEIGÊLTI \ the j»l< *htramtrui, Mvmgihum.* Calyx ,nd corolla 4-parted. Stame rted in M 4. ina. -K« ba«c of the ronilla; nla» meMsfnv. filiform, shorter than tht lobes of the eurnlta; anthers ovoid, much shorter Han the fttanmt*, bonwMlal; having the cells dehisci '»« ImgtbwtM. Style acuminated, 9 tune* short** than the stamens. This genus differs from *Wallnia* in the ooreaeme* ; in ibe caly* and corolla being dV ply divi Ird : » the tilameni* bring fror. A c.

1 U SYRIA STROS (Alph. D. C. l. c.). Þ. S. Native about Surinam. Wallènia myrianthos, Rchb. in W >«>It. pL exsic. sur. Branchvs glabroos. L*.. i es obovate, more or leaa *cute, glabrott*. IM-« long, btaet with red pellucid .1. t« w ' • -i w»anniM-'i by a Inn. Peduncles numerous, alternate in the axils of the leaves, rather velvety. lit acteas alternate, oblong. Corolla white, dotted with red.

Myriad-flowered Weigelia. T ra* small.

Cult. See *Ardisia,* p. 20. for culture and propagation.

IV. CONOMO'RPHA (from χωνη, I MM /M>pf<i, *mvrpiu,* i orm; in reference to the shape of the corolla). Alph. D. C. in Lin. trans. 17. p. 102.—Wallenia i|*c. Mart. nov. gen. bras. 3. p. 89.—Condylus, Pohl. in litt. to D.C.

Lin. svst. *Tetrándria, Monogynia.* Calyx a •d rntuHi 4-cleft, funnel-shaped. Stamens 4, oat hall shorter than the corolla; filamcnlt inasrted in the tipper part of the tub corolla, very *) anther* rrect, ovate- trtanguUr, incloan), fiwil by the base; having ihe alls dsahring lengthwise. Ovshum cooical is the aburtive rtowrrs, awl nearlj globoae in ihe JertiW Aov ers. S > *U* short; stigna limwla Drupe I-seeded.—Entail, Atmttcan trees. Leaves alternate, entire, full of dots, coriaceous, varying in size on tl«« aa«W t*rai Racemes axillary; pedicels alternate, abort, in tr. axils of the bracteas. Flowers probably (iol;w amous, the ovarium not alway* brtny perfect.

1 C. ORTHOSTÌCHA (Al ;i l» < l. c. p. 105.) leaves nSza ...les shorter than the miolvs. i. . > N ,• .. .. sostylus oblongifòlius, Pohl. ined. BrnMbai slen brous. Leaves oblong or obovate, J-4inchr* tang, ur«i»«l, obtuse, or acute, beset ilh blackish dot*. IVdwtrles many-*fU>>* ered. Dracira* >U% and C' rolla wh liab, fniwal s b f d

t Mill leavts oboval* or oblong, bluntish, cuneated towards the baa* i racemes nearly equal, length of . leaves, pendula w; bract*** liti ear-lanceolate, acuminated; • alyitur srgmenu UiangaUr. a little ciliated; corolla campanulate, h itintl the lobes rrfl xed at the apex. Þ. S. Native on Ihe hanka of th, river Amazon. Wallènia laxiflòra, Mart. nov. gen. 3. p *tO.* Flowers white?

{•«' niiinnrpba. Tree su «U.

Cult. See *Ardisia,* p. *li>., tot* cvltar* and propagaiMm.

V. CYBIANTHUS i from cybe, Iviws. a square, and anthos, flowrr; square form of eurottns\ Mart. r*>t. gm. |, p. 87. Alph. D. C. in Lin. trans. 17. p. 103.

Lin. svst. *Tetrándria, Monogynia.* C ity» dWply «.«U CotolU » cleft, rotate, flat, lahmg the cut umtVrrtKt- near '1 *s the csJya inarkiil with dots and immersed glandular lines. IOMM M i . lrl»r,. , • .. • . »lH.ft anthers nearly sessile, oblong, erect, opening by 2 pores at apex. Ovarium superior, m •MM (•!>• rtive?), vi. j.«».•..!!>

*

bose. Stigma sessile, auh~cs| itate. Ovula erect, probably •MTn us. I'rpe 1-seeded.t—Small Irtrt, nauvr« olBrajtil. Leaves scattered, but ap 'Xtm*!r towards the extremities of the branches, , etiolate, be*rt with (tlan.i •mall, tmihrarteate. dupoaed in axillary . rectish or drooping *•*«*». Lobes of corolla, but pariicutarK tlir ca fringed with hair*.

1 C. I nov. gen. bra*. 3. p, 87. l. 236.) m oblong acute at both ends, glabr< >les pilose at the a w t racaawa looae, pendulout, abou: equal in length •« the WIVe*. ilowtiy < of Hraul, Il the province of Rio Negro. I)am 's white. tsnllnit. I rri*.

. 88.) leaves broad-lanceolate, acitr. tapering much to the b w, glabrous: p< >«e; raceme* spread i g, downy, i time* thortt-r than the leaves; calycine segments ilunti.h. *tf* s- Native of Itruil, new Saaiion* *Am.*

»'*to-/r«rr</ Cvl l l>. G in l.»n. traaa. 17. p. 104) leaves >t the apev aud bluti< >h; panicles axillary nninal, abortrr than the IM ig, anflow«n aomewhat f.i«t u l<il »• the apex; asgi «>rnl obtong, rcBexetl. » . S. Native of Braz l. at i the river Ilheos, where il * >• collet by Prince Neuweid. W illi ma angustifólia, Nees. et Mart. beitr. zur. fl. bras. in DOT. ac ct. bonn. 11. p. 87. Flower* «tl ite.

Prince Neuweid's Cybianthus. l Tree.

4 C. 11 • . 11 . l leave* oblong. inunate, undulately ciliated, glabrous, shining above; panicles terminal, simple; flowers disposed in fascicular umbels; segments of corolla oblong, obtuse, revolute. ½. S. Native of New Granada, on the A l<le«, abotii Quindia, at tlic alt itude of about 1200 hexapods. Flowers pedicellate, 3-5 in a fascicle. Berries dlsia tetrándra, H. B. et Kunth. nov. abit of *Ardisia crenàta.* Urn. ainer. 3, dit's Cybianthus. Tree 15-20 feet.

Cult. For culture an

II. MYRSINK *f/tup*>,tf, mynmr,* (l., Greek name of rrh). Lin. gen. ed. 1. p. 54. •ft 269. JUM. Brn. l.'i*. rtn. fruct. t. 59. R. Br. prod. p. 533. Alph. U l in Lin. M ll .. i i: . . >im crrmi: p. Ut.—CabaJleria, Ruiz. et Pav. prod, t! per. p. ltl lOla. JUM. (ten, I *Si.* //••./«./.(l. ii, |37.—Athrutophyllum, Lour. coch. 148.— Sideróxylon, Scleróxylon, Samàra, Rœmèria, Chrysophyllum, authors. •pvetci of *a* I pro|»agatk>n *ce Jtduta,* p. 20. *O'kem* Calyx and evvolla » -5-6-lobed (l. 3 • *m.d.)*\ tobm of corolla imbricate in æstivation. Sta luW« of the corolla, free; ftlam. than, n< inserted in the tube of the corolla; anthers usually almost sessile, erect, acm. having the cells dehiscing lengthwise. Ovarium wi li an iod*At number of ovula, 4-5, ex R. Br. Style hurl, mually lueoua; stigma fringed, or lo '«*•<!, or •implf. Drupt, or berry, pea-formed, l-»i'-<-il<-i!.—Trees, or amatl »htnl»«, w tli alternate leaves. Flowers po vgamotM or hcrm sphrodite, sessile, or on very short pedicels, in fascicles; faanrlf* axillary, more or less covered by imbricate, obtuse, permanent bracteas. This is a very p lymorpbous genus, distinguished by its peculi- «r iafio> rescence i< adier than by any other charactcr.

\-Htt*mirim ', or *fg*

* > < • «M *fringed or lobeJ.*

1 M. Uavillei (Alph. D. C. in Lir. ir»n« 17. p. 105.) KUbrous; leaves ovate, obtuse, entire, full of pellucid dots; flo *OTt almost sessile, fascicled, pentandrous, polygamous; lobes of

v iniall. tnoth-formed; aniheri setule, ovoid. w Zealand, in Tannm'a Bay, an. Cook's Strait t <tar. and somewhat cn> arginate, membranous, covered with yellow dom. Itracteas a little ciliated. i s-|wrt. il; j(labruu>, hardly a line long. Berry avoid

M \rajt* w* *(Um.* ipac. ISJ) ni:ilinm»; li-ave* ellipiir, serratwi. a Him* r- ., pentandrotis, >u* : W8 OMMH ilo' • .. corolla full of twtt- Natitc of the Cape (it Good Hope. M. glàbra, Gærtn. fruct, 1. p. 282.— Comttt hart l. p. \X$. Lai i. f. 5.—B• «-yn. cent. 9. t. 5. l «rr« on abort p dicels, pale. Berries blue, dotted. Htifirma panic led.

FIC., 3.



in l.in. tram. 17. p. 103.) leaves ob..» ate, obtuse, cmargtnatrly toothletted at top. ½. G. Mfttive of the Azores. M. reitkaa, Ait. hort. kew. I.p. 171. \ ent. cels. t. 86.— II. trahra, *d,* rtn. fhict. l. p. 102. Btt ries size of red currants, rugged from •mail tui bercles, with a straw-coloured rind. Cultivated since 178(1, ami floMers tn l une. (f. 3.)

Ai< Myrsine. Fl. Mar. May. ' it. l«tl. Mirul. *3-0* feet.

9 M. Mil t (in .II. tm Roxk «. iit.l t. p. 1M.) „ . « « . anil petioles villous; les - M •mail, lanceolate,cuMMoWty *»r i ated, cuneated and entire at the base, glabrous, dotted; flow eraaltnoM sessile, tetrandrous, polygamous, in axillary fascicles; calycine segments lan •eolau*. nliaiftl; filinrnm v ery short; .«ntlwn large, exserted. ½. J. Native of Nipaul, from Eeto the valley, an l an lhe •ufroi,,.,|NI(I m^,rt>mt |, „ x|w „ native of Kama ur. A l 3rge .hrub. with hardly any defined stem. Leaves b •rarious, coriaceous. Flowers white, tinged with pink, 5 or 6 in a .ascicle, besprinkled with copious brown elevated dots. Stigma warted. Urnpe round, *TM* .' bout the size of a ntrmiult r »<, .vcd Myrwne. Fl. Dec. March. Oil. 18« I K, H Int.

• • l • Don, prod. fl. nep. ! 17.) Wave* lanceo- Kiir, acuminated, stif • nlUbroua, •pinukwrly •rrrat*d f Bowers dioecious, tetrandrous, in *c*»il«- axillary utnUlUn *i owny fascicles. ½. . Native of N l pan), M SaramWity. wh< l is called *Mina* / *artiiAi h*\ the natives. Samara 'ubspinòsa, Hamilt. mss. ex D. Don. l. c.

Cubressus-leaved Myrsine. Clt. 1M3. l Tree 20 feet.

5 M ssillis (D. Don, l. c, p. l •.) leaves elliptic-oblong, acuminated, glabrous, shini nf, dmitrMlatrd at the a|» i flowers hermaphrodite, te rrandroua, tn ataaikt umbellal* Millary— cles; stigma t-lobed. •; . G. Native of Nipatd, in wood*. Narainhe «t)r. Kamara aeaailtt, l l-unili. maa.

Sessile-flowered Myrsine. Fl. Oct. Shrub.

6 M- semiserra'ta (Wall. in Roxb. fl. ind. 2. p. 293. tent. fl. nrj>. l. p. .11, with a figure) leaves dense, linear, or linear 'MIIoeolate, nharply •errulated from the middle to the apex; flowers tetr drous, polygamous, pedicellate, 6-12 • « a .indrous and uanlaa cle; teeth of calyx lanceolate, acute, ciliated; «Uu'"ia |nifee lateral, fringed, 5-lobed. ½. G. Native throughout Nipaul, where it is called, in Newar language, *Bilase, Bereise,* and *Kali-Uttm.* \ branchy tree. Branches dotted. Leaves besprinkled with reddish resinous dots, coriaceous, from 3 to 5 inches long.

Corolla pale pink. Drupe (* *»« of a pea, round, amooth sad shining; Ocsh aoft and pulpy. The wood of 0 is of a chocolate colour, radiated, compact, and bear) ; it is made die*, termed by the hill people for rariuua carpenter* work. Tb»y rat the ripe fruit.

Serrated-leaved Myrsine. Fl. Dec. March. Ch. tftff, Tree 30-40 feet.

f M. VARIA'BILIS (R. Br. prod. p. 532. - «b. j.l. ex»ic. nov. h»H- u" e< leaves obovate, oblong, entire, *r* toothed; flowen in umbellate sessile fascicles; uioia gtabrou*; flowers tetrandrou* and pentaodrou* i»u»; amber* aetttlc. l; . G. Native of New South Wales.

Variable Myrsine. Fl June. July. CU. 1824. Shrub.

S M. *mam* A'TA EL Br. l. c.) leave* lanccolate-obiong, quite entire; Sower* in axillary tetailc tttnbcla; pt• flowers letrandroua, polygamous; corolla of the nale flowers urceolate; aumena WCIOM G. Native of New Holland, within the tropic.

*UrteUttt*town

If. cajuv ROLIA (R. Br. l. c.) leaves obovate, coriaceous, entire ; flower* aggregate, lmoat attailt. l . G. Native of New Holland, within the tropic; and of Norfolk Island. Endlicher, prod. fl. int. oorf. p. 48, Bauer, 81. ma. norf. t. 124. I• avct *i* or *2*\ iorhealong.

Thick-leaved Myrsine. Shrub.

10 If. lSttVai l> l > n, prod, fl, n. :) Wave* lanceolate, acute, *JUHC entire. gUbrotta, attenoaied at thebaae; riJIO* " be* of stigma oblong.

TV JO-+0 f« H M tLL»T* (Wall, in Ko*b. fl. tod. l. p. t*5.) linccolaU, quite entire, eonaceoua', flow. **fto ^aitKHu, aaaai ad*, from ibt wuk of tHe fallen leave*, m »Indi caw they appear o«tc acute; anthers oblong. Urge . an(ry, ar. l Leaves 5-7 inches long, copiously dotted. Flowers «'f nish, with copious resinous elevated brown dots; «atiTatton te. Calyx urceolate. Corolla with lanceolate-recurved segments ami abort tube. K igma slightly t-lobtd. 1>l.ll tuo*c of M. n *wiarrrata*, but smaller.

Var. β, parvifólia (Alph. D. C. in Lin. trans. 17. p. 106) leaves smaller; heads few-flowered. ♄. G. Native of Silhet. M. lanceolata, Flowers scattered, 3 inches long.

Small-headed M 0 feet.

12 N1 LUCIDA W.J). cat. no. 2299.) W«ve« Li t, tflabrout, M »li.: polygunoua ' cal niinan I Taoog Dong. Branch** brown. L. aves 4-| ,m|>e* loog, acuminau-il or bluutiilt. coriaccou*. Berrtea globoac, (W«p purple.

Shining-leaved Myrsine. Tree tmall.

13 'A i'omn -- -, lish. D. C. in Lin. trana. 17. p. 106. glabrous; lea:,., Unratiliiii both rtuU, ft tire; flowers sessile, glomerate, few, pentandrous polygamous!; calycine lobes ovate, acute, cili ttetl. t; . (}.' Native of Penang. Hrancbi l.rto dot*, leafv . l. eaves 1½ to 2 inches long, beset with depressed dots beneath.

Porter's Myrsine. Tree •mail-

14 M. WIGHTIA'NA (Wall. cat. no. 1900. Alpli. ; . C. l. c.) •Ubrotu; le- wlate. acme. « t. », Kabro.. froaji (•cnUHidrotH. polygaMee* * ttveof th* Eaat lodtm.

Branches Aatcd at the <*igtft of tbc IMVWUHI Betttn. LM« » approximate at the top* of the touch**, *t-3* mebe* long, unmobt'.. coriaceous, beset with elevated dots.

Wight's Myrsine. Tree.

15 M. LINDA'NA (Poir. dict. suppl. 3. p. 709.) leaves linear, entire, flat, shining, crowded at the tops of the branches; flowers pentandrous, in fascicles. ♄. G. Native of Cochin China, in wo . M. athurophyllum, R. Br. Athurophyllum Uoeire. Lour, coc! p

ii- i tall 16 M ft acut* at both *in&n* flowtra l ' uitlrotu: lobr* of ca!) \ rnimlbt with oblung. obtmc, cone ofOoadHop* p. 193 Jacq. coll. 2. p. 249. Ceylon mite, Willd. spec. l p. I Oil*. Sderokjlon mu W i, M I Ckr I MB I

u 1«H. Shrub «.fc*t. labtoa*. u •oblomt. Uumiah; flo««. IW >phli<ai. lin. want '«ci{. hott. t ind. l. p. 5£ Haaf netanopbUo*, Pera, catch, i phleun.. Lam. diet, ScWayUw •ilaauufcli u». W |». *WJ.* Rarnkftm Mi ImiMat Thuab. aov. tm arcb. *l.* 11 p. 1. t < l ^nib, l !Wi«ltr* • p*t»ua>dr«n»», in tmall •mall. 1•••-ct*»[i Von *mrm* M ID 'l ..» Mt ITT* Shrub. ewirr, coriacooua, glttonwa, t> Waa ; ft' and Latrtal bade > acute. Java, on the lop of Mutant fUnHgung ArdW.

I re* to *fan.*

ft M. MADAGASCARIE'NSIS (Alph. D. C. l. c.) oblong, obti> k, Wwt br»eaih | ft* cio* lube* mat*, a intU- ntaa*. BL Natr e of Madagascar. Leaves 2-4 inches long, emarginate, attenuated into the petiole. Pedicels three lines long.

Madagascar Myrsine. Shrub or tree.

11 M. RAFA'NEA (R. Br. . prod. JU, R«m - Schulten. syst. 4. p. 509.) glabrous; leai,. .4*. leaves ovate, entire, full of excavated dots on both MT&Ctf B.»«f« i»nl*n.lf"«*. male and hermaphrodite, in axill •it *vU* Uural tkandr* white; calycine segments of French Guiana, Island of Babia, in M O* rrtntnad; HHl aNMW Guiana. l. 21. t. 46. -warta, fl. ind. 1. p. 269. Lam. ill. t 121, f. 1. Samara pentandra, Swarta, descr. 262. b • I MM of Ait. S*aa*kU * ribunda, Willd. spec. 1. p. 665. Caballeria cu '«**C««. ' Meyer. essq. p. 118. Berries globose, tmUc ous, size of a grain of pepper. Flowers white. Leaves 4-5 in

Rapanea Myrsine. Shrub 5-6 feet.

tt M. CORIACEA (R. Br. prod. p. 533. Roem. et Schulten.

syst. 4. p. *60$.)* leave* oratr-laiKTola(e, acui K-coua ; i, in mountain gravts. Cabal le na frrniginea, Unix, et flowers IIlmawliuMi. hurnianli lira inchca long, ruaty and dotted befxra: jritcr. deacr. «••!. WtBd. apee. 1. p. centra nerve rufoua and velvety. Calyx amoolhiih. Barrj

Coriaceous-leaved Mvratar. Fl. Nov. Feb. Clt. 1770. Tree. *f'<* Shrtil> i

23 M. i u>aiDA*A (Alpfc ft. trana. 17. p. 107.) i i m f e m (AW.. D. C. in Lin. trana. 17. Dbtong, entire, coriaceoua, b] branclx-a and nervt-a of lravea dolled willi rufeaceel fascicles few-flowere it, but nnmeroua; (low down; lr,. g-UnceolaU', acu-

glabrous; leaves oval- pentandrous; l*iKtt>- l*ea*ea *-3 i no, pale ami dotted bene atb. calyx 5-parted. G. Native of Florida. Sideróxylon *M* the bane of the branchea. 1 punctàtum, Um. ill*, no. t460. ? Bu inctata.lt full of alaaaH ka,

Schultes, syst. 4. p. >8.f llranrlr beset with ovate white *Hi.* at. Shrub. warts. I*eave« - vfloboae, apotlrd. Allird lo M *Manglill*,i, ! ra in the Ur^- . which but the kavea are more oblon«, and on at>urt«r j- >lUK«- . ; oval-obloog. not cuncate-obtong, &e.

Florida Myrsine. iuli. «• M. Maxgillta l. - - — -i. 4. p 509. « R. Br. prod. 533.) glabrou • ; lcavp« ublong, olttuar. v- i axtllji . itaral, on »k< fascicle Native « Peru, about Lima. Sider- óxylon Manglillo, Lam. diet. 1. p. 14 M >• 151. M insuila I eruviàna, Gmel. syst. p. 598. Scleróxyl«n M —Klill 'ulianicli Willd. mag. 3. p. 59. Manglillo, Dombey. Cab Ilvria oblunga, RUIM. < Pav. syst. fl. per. 1. p. 280. Mang |)1U Juaiicui, IVr s. ench. 1. p. 237. •Chrysophy llum Mang —a, Lam. ill. Z. p. 45. Bumèlia Manglilla, Willd. spec. 2. p. 10 t*7.

M•t^ttlta Myraine. Shrub or ire*.

25 M. Tar ram. 17. |», 108 u • leaves elliptic, acute at both ends, glabrous, entire, dotted neath; fascicles few-flowered; flowers small, pedicellate, pentandrous. ½. S. Native of Trinidad. M. coriàcea, Sieb. pi. exsic. trin. n 2. Extremities c <>. *BO.* and *S* if the branchra ruaiy, and ratli< '. <• 1-2 inrlit* loti|t, patir nntl ilntted uti. <alycine lobes amall. I i his species differs from *M. coriace* •i in Uu- acute leaves and smaller g Ubruu* flowers.

Trinidad Myrsine. Tree or sh tub.

'•'• *e.)* laarta elliptic, entire ; petioles pilose; fascicles many-flowered; flowers pentandrou ia t calycine lobes ciliated; berrie • globoae, mark n^ spots. ½. S. Native of Guadaloupe. llunit: Bert. ined. in herb. Balb. Branches dotted, velvety at top. Leaves 11 to l inches long, firm, paitf and dotted Wnvath. Calycine segments ovate-oblong, marked with yellow oblon i spots. Style short, obtuse. Very nearly allied to M W *TnnUOttt.*

Willow-leaved Myrsine. Tree or shrub.

27 M. Baxte'su (Alph. D. C. l. e. p. 10 •>.) nranche* pube* rulous; leaves oblong-lanceolate, acutish, entire, glabrous above, puberulous beneath and on the petioles; flowers nearly Mrawle, rather velvety, pentandrous; lobes of calyx and corolla obtuar. ½. S. Native of Hispaniola. Sideróxylon Mastichodéndron, Balb. in herb. l• ». l branches ind petiole, aa if *they* wrre covered with powder. l leaves 2 inches lons, narrow into the c petioles. Flowers 4-5 in each fascicle. l j gtuboar. gla- brous, terminated by the truncate style. 1 his sp • ci»a oomea very near *M. salicifólia*, but the leaves are a little smaller, less acute, and are downy beneath, as well as the branches, petiol drub o r tree.

28 M l aUgma tlobvd. *b* • Native

f'< Shrtil> i

i i m f e m (AW.. D. C. in Lin. trana. 17. branclx-a and nervt-a of lravea dolled willi rufeaceel down; lr,. g-UnceolaU', acu- l*iKtt>- l*ea*ea *-3 i no, pale ami dotted bene atb. *M* the bane of the branchea. 1 full of alaaaH ka,

Hi. at. Shrub.

30 M. Latifòlia (Spreng. tjajt |. p. wit.. I M V « obV >lUK«- . ir&cea; - drova, eaaf >

Munaand IMlao. CaUallrria latifòlia, Ruiz. et Pav. ayat. l p. 279.

Broad-leaved Myrsine. Shrub or tree.

31 M. rsi lia'cida (Spreng. l. c.) leaves obovate-oblong, dotti dots pellucid, roundish on the upprr aurface. b»r linear on the under flowers pentandrous, aggregate. ½. G. Native t !'• <, on the n •ontaira, in wood*. Cabalkria prtlucida, Ruiz. et Pav. l. c.

Pellucid-dotted Myrsine. Shrub or tree.

31 M denta'ta (Spreng. l. c.) branches dependent; leaves crowded, orale an cordate, upper ones dentated; flowers race- mose, pentandrous; style long; stigma depressed. ½. G. Native of Peru, on the mountains. Caballèria dentàta, Ruiz. et r av. l. c. p. 281.

Tooth-leaved Myrsine. Shrub or tree.

33 M vehosissima (Spreng. *earn,* l. c.) learea o '>ruli or ijutu- . arcus. ½. i G. \ ative of Peru, >n the muuir tcnoaiaeima, B uiz. et Pav. l. c. p. 282.

Very veiny-leaved Myrsine. Shrub or tree.

34 M. inn sdens (Spreng. l. c. i branchra di 'null vri y; leaves crowded, broad-elliptic, retuse or mucr ted, ri tire, ciliated, shining above, full of dots beneath; •lu» axtllari , solitary or twin, on short pedicels, tetrandrous; calycine aegmeti- ovate, acute; lobes of corolla oblong, twice as long as llw c.i lyx. ½. G. Native of Peru, on the higher mountains; and or Silla de Cararcaa. < Caballèria depéndens, Ruiz et Pav. aj*i. 1. «. £s\. CaJball ria myrtifòlia, Deless. herb. ex Ruiz. et nw< *M* yrsine ciliàta, H. B. et Kunth. no .gm. n 245. |^aves 4-6 lines long. Stigma rapii.>i> . l'. globoae, apoUtd with bl erry ovate-

Hanging-branched Myrsine. Shrub or tree.

35 M. Popaye'nsis (H. B. et Kunth. 'ng, uprring to both end*, blountish, quite entirv, rttolute at 1»MT hftae, glabroua and * th fine down • araadt ovai of New Granada, near i Popayan, in mountainous places. Sa- tnara n yricoides, Rœm. et Schult , -, mai l. p. ft in Linnœa. 1830. p. 367. Branches downy, clothed with rusty < a, KMIX II i u m « hile young; segments of corolla marked with black lines, oblong, acute. Flowers white. Anthers yellow.

Popayan Myrsine. Tree 20 j^

36 M. ami

olgra, aaaooihiah and ahmmg • >t p^k>r *>eneath, and dotbed with aoft down ; tiervM praanioBM braeath, and

the pH»olr

c l

well aa the petioles, young branches, and buds, beset with more denac ratty down; flowers aggregate on snort pedicels. I eo, at JaUpa. Leaves 3-4 inches long, and HO lines broad. Ubose, bluntly mucronate, seated on the 5-cleft stellate calyx, marked with lines, brownish. Calycine segments slightly ciliated. Stigma pentagonal.
nine. Fl. March, May, Mirub.

* * *Stigma umpU,*

37 M. AKDtftioloKt (II. l), ct Kuntil, nor. gen. amcr. &. p. leaves oblong, somewhat acuminated, cuneaied at the base, quite entire, membranous, glabrous; corymb* axillary, sessile, few • nWen •!; pedicels glabrous; flowers protandroua • calycine •cgments ro—aid but*?, dotted with glaml Branches glabrous, brown. Leaves 4-i tines kmg. Fascicles $>7*flowcrrd, Corolla white f, with rcvolut«, ovate, obtiue segment*, which ue full of glandular dote. Berries dry, depressedlv globuac.

Atditia-tiie My rune. Tree tmall.

38 M. rtMi et Sessc, icon. A. mex, ined. Alp p. 110.) glabrosja; train blunt isli. entire, narrowed into the petioles ; umbel* aiillary, (JUS, ooe-balf shorter than the petiole* ; flowers nin.lau.ilii. ON > x orate, acute, small; lobes of corolla ovate, acute, rgc ai the ealya ; antbers lanoeoUie, sessile, maenad m t» u middle of the lobes of tbe corolla, and shorter than them; style acute, inclosed; berry globose, *j , O. Native of Me&ico. Leaves an inch long. Flowers either solitary, or *t-i* in a fascx Corolla pale red.

ue. Tree or shrub.

89 M CAMAUI nng. ivst. l. j>. *6uS.)* leave* ovat- oblong, bluntuh, almost *c»*ilc, large, glabrous, coriaceous, enure; flowers axillary, in fascicles, sessil. -6.tot>d corolla 5-6-clcft: having the lobes linev-UnceoUte t it—ina Kjsed. inserted tbe middle of lha oaroUa i anthers acute; ••nsrinV !. mag. berol, n«i. fr.uod. 3. p. A9. Is Canai p, *0 i. : avea 4-0 inches kmg, and 1*4 broad. Lanw>< ltttla i ulobose. There of this e leaver more or less full of IWIIIKHI dots, which are IIMI or oblong.

Island Uymne. Tree 30-40 mat.

ITIA'UDHA (Wall, in Koxb. fl. tnd- H. p. 197. cat. inches velvety ; leaves lanceolate, acuminated, glabrous above, rsther pilose beneath, having tbe irehed ; flower* fasoclcd, pedicellate, twrmai MvifOvM | cmlycine lobes otatr, ciltaled: cotollme lobes 'lanuular. connate at the unw of ie arummatt < •« of Prnang and * an anomalous spri dot* on the - and flowers are more like tbo- >WM \tyr,,m, • iut the inflorescence is that ol alabastnun M ir»)l> liriaiad, and Ute nibricaie. Perhaps a new genus.

s;-*amtkitrtd* MyTtior. Tree small.

† *Species* MJUOWH, *or* very *imbtfmL*

i>. *tit.)* i] . G. Native of the Cape of Good Hope. i laps the same as M. *Africana*, var. *β, retusa.*

Scabrous Myrsine. Shrub 3-6 feet.

42 M. LA'TA (Alph. D. C. in Lin. trans. 17. p. lit) Uaves ovate, obtuse, ei l anceolate-elliptic, even on bntfa IHWI, laasatg fascicled, pedicellate, hardly longer than the ,*i,«les. *;, S. Native of the West Indies. Saaaira 1st is, LSB. 159. $« cjUm ajyL no. •••.». Barm. wd. 97. I ae>

Myrsinc. Shrub 6 10 fcVet.

43 M. MvaTiroLia (Arp' '.) SM*rS rll ptic • of BOSBWB AflWuTICwt* myrtiMta. B.*^». et . want. s. p. tto. Thai mtrety unknown to Kwmb, ma LinnaM* I UML p. 77 f. •' >• perhaps the same as M. sVpriMsr«A whteb ia marked Cilafnun *myrhjUui* m Deles*, herb.

vrtU-Umtcd Mynme. Shrab or trre.

44 M. .*U- I. oleai btunttsh, narrowed at the base, clothed «ntb | tbe trwiaie M f n aa w«tt aa the petiole* i p t Samira aa%aa, Willd. maa. *r%* ROM*. « Bcamliav, ttO. Tin. *proe« is ilw unknown to Ktinth se« p. 367. FVmen

my MjnsMT. Khrub or tree.

Cmtt. TW specie* of ibis gesaw grtM *ny tight o«m, pcM. aad sand i asJ e-ros^s, »o« too root r. d M a pot of with a uUcrtlovrr them of iha tfopswal ri>juire a little kaat.

MI BA'DULA ns»* used by Buimu, hthts Front Zee- Unica.) Jus*. *g>* tcJusiee withe syn. Bans. aeyl. A h k I), f. m U>. train. 17. [>. lit ltejrtheam, Camw. in herb, asm

K AnguiUana spicsts. Lam ill. Myrsm* specie*, Rom. et tultes, sy*t Lin *rmttrndrm Atnfjmim.* CaJy* 5-lobed CoroIU *•«! inwns 4. shorter than the eoroUa; anthers aU*o.t .,t«rlted(f. 4. «.); nUs i* ab am i or ubsewfaly4oWd ** or *brub>. Leave* aHerwa like that of */4'Ju*m.* th. peoatmate or umbsllaie ai the » > •pecteaare • '>unu«s • i Lin. iraa*. 17.

w "TI" J * PTWwTw) a*« v^Hgf **JnffVtjaiwJ|f tntWaTf a m i ^ W I | lirairaaf, pyramid it, maay-ffoweted, kmger thaw the small, velvety; alal re of the Island of Uvurbua and the M . to f inches loag, dotted. Loba* of calyx small, the corolla ovate, owtaa*. Htigtm owtim*.

fmaHA.sje.rrf Bad.1 b or tree.

BAMHI'SU (Alpb. D . C . Uk p. i late, acutwh. tapcrmg a long way at the base. gUhrous. ths», dotted ; peduncles racemose, nanj flo«* red. rather stwrtrr than the leaves ; ilycme lubaa obtuse, riuatsd j anther* acsrte ; stigma eaptU! M ttsw. Barthssia, (oenm. m herb. sans. par. lUdul*, Ju»» gew p. t*0. An. MaVv. CoroUa w hit*.

9b

obi'. altemair of the Isle of Bourbon or the Mauritius. •chteru* cduuedslitlle.

/•*•». BaduU. Snruwaetrrr.

4 B. STRAS'AIA (Alph. D. C. l. c. t. 5.) Ua»e* oboraic, o»t«*e,prtjoU» pedunrlrt * i l*ry, 4 lin*e* ahwrter than the ***, 4-ft*Rowrtrtl: alabaatri obbM; caln lobe* <> •ttte, ft liidr ited; aj>' I not of R»m. et > 3-4 iacbee long, full *at* the ton* of tbe branch**. Peduncle* velvety. CorolU wtittc. dotted; lobe* obtoae. pel tar r, or MMnewh.i'



FIG. 4.

SteUrt Hadula. Shrub or tree.

« 11. i^+uroLiA'Alj. 14.) glabroua; leave* ovate, acute at both rwU. mrmbraoou*. full of black doti'. pe- *mm* ahorter than Uta leave*; alabutra ovoid, full of dots; antheri nearly aceail*; «yl* abort, obtuse. ^ •- tive i of tlw Maum'iu*. Leave* 3-fi incbr* long. Peduncle* dotud like the flower*. Calycinr atgmanta uinplr, amir. Lobe* of email* o»*t.. acute.

"•Irarraf I lad u la. Shrub or tree.

6 B. CRA'SSA (\lph. I > C. l. c.) ftlabroui f branch** thick; leaves i rll.pl it, or oblong, obtuae, cotMKooat t peduncles shorter than the leaves; pedicels alternate, •liurt. ' N Saliva of the laic of Bourbon and ib* Maui, l^ave* 3-i indie* long, full of prll«. Lobe* *of* calyx obtuac. Berry globose.

7Ai< A-branched Badul*. Shrub or It l t d lanirolair, acote at both end*, nei •ttrd, |(lahrou» ; t«tlunrln v« Ivrty, stiff, rather longer than ihr Ir ves. of llourbun. in the more elevate<l placr*. Hrancltc* nttfy. I<rav<-« It-1A lines long, shini UK abo*r. •omctiroc* irrcfrttlarly tootbed on one side, towards the tpts, Calyx rather ptloae : triih antU lobe*. .•nta obtutr.

Berry globose. Badula. Shrub or ttee.

Cult. For culture and propa|nuaa aee *ArAmM,* p. *0.

VIII. O^« (ISTKMI'M (from n« ^. «an, • aaea E and er«fM»r t *ttcoum,* a at*men; the lUmrtn are combmrd into an tfg-formed mata in the Arat apecie*). Adr. J a*, aim. mtii, i>. 136. t. II. A!

UK SYST. *JruM Momagfmtm.* Calyx and corolla 5-i-Wfi. BaWWM oomMaMJ lino ait »»<><»J <>r <\l.i..!t.<«| amjH. » • - <be of the corolla at the baa* ; or t* Smoothed at the apex 0 varium superior. Style le M*M>1< •• IIMMMI- shaped, nearly I entire, o I denticulated, &c. SlimU, aative* of Madagascar, with tl.< habit of *Ardisia* and *lUdmtt,*

I O. COMMIT TIA'NUM (Andr. Juss. l. c. t i t.) leave* lanwD' late or ublirfttf-OIKI* au . antl bluntly acumtitairdl prdunrlc* and pedicels quite slabr ous; calyx 5- < W(t: •lanien* conlerrmmaated into an *IU foroted maaa. > . S. Native of Madagaaow.

Commerson rtm't OiKiMtrninm. Shrub *or* tree.

• t «'. CAPELLERA'NUM (Juss. l. c. p. IS7.) leave* Uncroiale. or oblon«obovate. and bluntly anifninated j peduaclea and |««1K>1« bairy. •• «rll •• tU calyxr* ; calyx 5- >-p*rtcdi Mamma combined into a 5-toothed tube. ♄. S. Nat reof Uadafuear.

Capelier's Oncostemum. Shrub or tr • r.

Cult. See *Ardisia,* p. 20, for cul turr ai..| propagation.

IX. AHIH ^1 \ tr n i . . *«/«, a point, in r. -tJi* acute, spear-pointed anther v.) RwarU, prod. p. 48. Schreb. Rrn. no. I 1755. R. Br. prod. p. *A*33. I Roxb. fl. ind. •• P- iG*- Alpa. h I . in I irajaj. IT. p, 116. An«udli' I. p. *37t** t. '. Schreb. gen. p. 823. no. 345. 1 fl. tap. p. 7. IN run Lour. och. p. ifO,

Lin. SYST. *Pentándria, Ac.* Calyx 5-cleft (f. 5. a.) Corolb .'>'<-left (. 5. b.). lobe* imbrieatr in aestivation. Stamem 5. « lilammta ; anther* fir< with free filaments, rarely combined, equal or lone. to the filaments in length, erect, triangular, acute or mated. f-«elled: >mcu>*H* D y a lonu acuminate; cells dehiscing longitudinal chink. iiti irloboae. Style filiform, permanent, ionorr thai Ovaries the atnmeoa. Stigma airoplr, aubulatc, or dot-formed. Ovula 4, n R. Br. or more. Berry globose.—Trrw throb* and subkhrub*. Lratr« alternate, rarely almoat oppoaite, or I in a whorl, dotted, Flowers i• more or leea pamcled. Panicle* »omeumea manyiowered at the e>tremities of the branch*-*, and loa«er than the leave*; aometime* few Aowerrd, and in thr axils of the v leave* t pedieeb raider umbellate at the top* of the peduncles. I *nmrt** **rgrt* than thoae of JafyVWv, al«*y> nennaptiroditr, while or rae*coloarrd, and often doit ed.

Sect. T. t. Aftuin \ VE'AE (this sectio .n ronuin* the legtiimau' apeeie* of tbe iirnM.) Alph. D. C. in ! Lin. trans. 17. p. lid. Antheri frr«, loagrf tl.au tl the filaments. Style subulate, longer than the ttamnu. llnrtww n> ach shorter than the pedicels.

} I. *t.rattt rntirf, gUbrv*i.*

1 A. ACUMINA'TA (Willd. spec. 2. p. 1062) les — . oblong, acuminated, attenuated •t the baa* ; panicle* terminal and axillary. nu y-flowered; lobes of c*Iyx •mall, acute, dotted. ♄. S. Native of Guiana, in cultivated fields. m t, bm.t ag. t. 1078. Iracorm Guianen**. Aubl. Rutan. *uppl. I. t. 368. <Corolla nearly w>> te.

,fYMi*i>Mtr«Mfavrd Ardnia. Fl. July, Aug. Cat IW5. >b 6-8 fr.

2 A. TINITO rti, prod. 44. fl. iml. ocr. I. p. 468.) i dliiMK-, nerved t pa miiul ; calycine segments »uUui of J»nnir». on the mountain*.— Sloane, jam, *2.* p. *9**. i. 105. *l*»ve»* dark greet) long, and I broad. Corolla* ml* n d, revolute. • *itrano* Ardisia. Fl. Jul. Aug. Ch. 1820. Tr. 20-30 ft.

3 A. LAURIFÒLIA (Alph. D. C. in Lin. trans. 17. p. 116.) leaves ovate-lanceolate, oblong, coriaceous, glabrous; racentr* simple, axillary, and terminal. ♄. | Native of the Antilles. A. latifòlia, Rœm. et Schultes, syst. 4. p. 514. Anguillària laurifòlia, Lam. ill. 2. p. 109. no. 2741. Very nearly allied to '. coriácea, except in the thapt- uf ihc 1. i ves and the disposition of the flowers.

Laurel-leaved Ardisia. Tree.

4 A. *MI* CULA'TA (Poiteau, in herb. D. C. ex Alph. D. C. in Lin. trans. 1 r. f>. I It.. > aMvee oblong, obtuse, coriaceous; paruck terminal, branched, many-rV ered, pyramidal; calycine lobe* oval, obtnae, large | b. rry spotted. ♄. S. Native of tlwpaaioU. A. Domiagln- vRojm. ei8d Willd. herb. e ults, syst. 4. p. 80 |.! | . . . j i » t | hrhe* lutin

Spotted-berried Ardisia. Shrub or tree.

5 A CESTRIFÒLIA (H. B. et Kunth, no are. awr. T. p. tU) bram hes rather ngular i leave* ^ labrous, lanceolate-oblong, acuminated, cuneated at the base, quite entire, dotless. panicl«« a*»llaf\ and terminal, arvaile, crowded, nlal' • i r*remo*e t 4-^-an<iri>u* ♄. S. Native of the Andes, about Quindiu. Calycine segments ovate, bluntish. Segments of the co nJla oblong. MM

Castrum-leaved Ardisia. Shrub.

6 A- CAIMIIIH* *(Mac.* et Inn, icon. aWI ined. ex Alph.

Lm. tram- 17. p. 116.) W*vca lanceolate, acute at both ends, shining; panicle tamtnal, compowtid, longer than the leaves: peduncles alternate; pedicel* umbellate; lobra of corolla ovate, acute, < t-flexed. • time* a* long a> the calyx. I Native of Mexico, where t u called *CmptJtim.* Bractm cada* cous. Berry jrlpbowr, wine-coloured. Flower* of • pate t o w colo r.

Ca,-/fci» AnliiM. Shrub or tree.

i B. M Kuntlt, DOT, gen. amcr. 3. p. S46.) glabrou* ; leave* I mbranou*, oblong, obtuae, runrwii d at t|,« bate and I volute; panicle* terminal, simple t tirdtcrU foci umbellate ; lobe* of caly* b glandular dot»; berry Marly fcloboae. ly. *ti*, on the if«Mta ilcclnmn of the mounums near La Vt-nta d« wiera, in oak wood*; and in woods near Jalap*. Leave* •ante colour on both lurfmw*. foil of glandular dota, *i'* me he* long. ! lowers white. Berries dry, about the *ue of a peppar-con wrinkled, glandular.

/nfe-lca* ed Ardisia. 1 ree 30 to 40 feet.

M H .il • - Kunih, n«>». urn. imr. 3. p. «*J.) glabrous ; brauchc* comprt>«acd ; leave* obovate-oblong, abort* acaminat< I panickm terminal, Mib-raoe- moae; pedicels i •niballatf faacirU* ; lobe* ovate, obtuse; lobes of corolla oblong, obtme, mulute, glandular. »- •* B Saute of New Awialaaia. tn trmprratr placea, near the monastery of Caripc. * Branch™ prndaloos. Lt>avt > metnbranou*, full of pellucwl dot*, paleat beneath, 5-fi inches lo ig. Corolla white. Berry dry, amooth.

9 A. Mtl .7. p.f14.) bnmfcM i.rit,-, gJabTOai; iMMi i.bi»*ilc-fihtong, obtuw, and •omewhai I inaJBf into the petiole* at a(h(nanar,rrwvbkde /!/»**>• Bowrt*d Ardiaia. Mi rub or trrc. on fitted^ e, heart with ataly dou beneath, aa wrll a* ill. |anicles; flowers r .(tnniN. Sattvr on ibt Ande*, ab ut Quindiu. Flowers white. Calya caiypuaw br- *xpan*ion, *4* >n»«aal atgnwMa. Corolla .[•euloo* i petali oblong, rwolMt*. ralvata M >. p. tM.) Uavea oblong, acute; panicles term naal and lateral, simple, crowded with short bfuwt'« ; pedicels in umbellate fascicles; lobe* of calyx and corolla elliptic, obmae. *?. N. Nativ* of South Anvrica, on tbr banka of the river Magdalena, near Tenerilfe. BtunMia mtcrintl • *tt wtth linear purple dot*, f ttbuulnlar dott, S-6 tnchea long. Co- *ion* trun-

Smttli-JkmereJ Ardtsi.

\. O«tsiKi*u« (II. B. el Kiittth, I. c. p. 144) leave* paaiejaa trrtniiiai aad lateral, absaat umplc ; padt* eel* in • ubellate fascicles; lobes of calyx ovate, >btu*r. a •liat>hanoiia margiti ia (ivale-roun Pj. 8. us UM banka of the r . W lr»f th of ataitna. utd the uiwn j*. Uraaehaa rnvmbraaoua, palrr banVath, I . toM Corolla white. full of glandular dota. Vary like *A.*

I . nov. |pm. amer. 7. j>. IIS.) •ml tr*»*. Uhroua i Bg, acute at built racnaa* terminal, solitary, always simple, glabrous ; fruit)<rdtcellat«. 11 of tiowth *:)\e* Orinoco.

tl 11 • et Kunth, l. c. *.p.t44.)

petiolaa, and panicle* clothed with maty i w a t a t w. l**»r* oblong, awpwnaml, gUbroua aad attaint; above, and clothad N ith l.iaeaacmt down bvarath: pa**!** trwit.il, aln. pedicel* in umbeUata favoclta; lobea of caly* ovate, acute. along «ith the preceding, Ltwtr* aarrowtd at the base, membranous, full of glandular dots, 4| inches long. Berry glabrous. Habit of *A. cren •ita.*

Rusty Ardisia, Shrub.

-• Don, prod. 0. iwp. p. US lanrmbte; panicle* tl.tr*>*), terminal; a n y taw of coroll roundiJi-u*au, acute ; anther* ala>a*t ar***)*. •$. 8. of Nipaul.

Thjffjkmrrnt Ani • • Clt. 1M4. Stii

ted *t iiioth rrxli, r|i* '• " • ff, i iiFi;Wt~*'U», ^' » <1•'U» . paflt<"K taranaal, p\ rarnntal; nedktla *ubuml •oa rovadad. '- Iftttta »n< wood*, wbrra it ia caUrd *Kilampasi.*

Purple ArdiatB. II. ytar.

16 A. M .lam. bijdr. p. Mi) lrt»e» tmnated at both end*, MWrt«iat*ly awnrd at the a|- rntirr. cooafOaB, gUbrotw; patucW unawial, abort! LWIUW* aegnaax ia dw province of Krawang, i i pradjas, in mountain woods. *Mtu* rp»ai*.lra«rd Ardisia. Shrub or tree.

17 A. lltunw, I c. but not of WaO.) leavaa naard. acute at the baae, <}ttite r«t gtabrowa; pantclr lermittal, divartcat* ; jprdireU ui i* teeth acute. r of Jan oa tltr Paraag aaountaioa. Nrarly allied io *A. speciosa*, Bl. but tlir flower* are much tmal!

II A K \ ph. in Lm. uaa*. 17. loas, obtaar. atlawaatrd at both rada, glabroaa, racime terminal, pyramidal; peduncles alternate, compressed, ln.) stem arborcous. Native of the East the .yh, ill ('•< . 'Thi. *xhr* kave* b»ta« Ardisia. *Roth's* Ardisia. Shrub 5 feet.

19 A. Pr'aocs (Rœm. et Schultes, syst. 4. p. 518. ex R. Br. prod. 533.) leavva OTM»-lanceolate, h ib hl i f«rrn I r l o w m rwk

Tt Ardisia. Shrub 5 feet.

4. lad, *t* • i. no. *ttlH.* tfUi.t. t iiaaifln tat n Ml»I - - .• I- >>.. Ard . lajitai carolU >ngoag at> account of tu Urga rcrt »r.J *Um%r*. aad van W*. Sim., bu4 m*«. t J* *f*«m* 6-<o iachra long, aad ft the cada of tba br »i> ' \ im M.,,ibl

A. I.KJ. *. p. *«0.) gUbroua; »bttg, i-edjred ; lea* •led ; pantcWtcrmm tl»u«t»ed. nearly •roooth tiooa ; teginrnu '<• con Latvaa A-10 inchea long, cortaceotu. I'cdicrU »ubu

t3 A. 'COMPLANA'TA (Wall. in Roxb. fl. iftd. «. p. »8' ao. M77.) brancl { fea*e* obloog-lanceolatr, acuminated glabrous . paniefci axillary am) tenti rieate, fjrxuou* ramificattora; lobe* of calyx triangular, acute, ciliated, dotte• I. *i • ~. Native of Penang and about Chappedong. A. polyrarpa. Wall. cat. no. X2B5. A rait li. Urancbe* rather lorortitoM at young. Leavea coriaceous, fl-8 inch** long. I'edicels in umbttlate fatcidi s. I low*wn* •mall, pink. I berries dark purple. p but is readily diMJngimhcd by in terete branches.

Flavo-rufescens Ardisia. Clt. 1824. • <w*f-peduocled A -lirt.b cl.

24 A. SCABRIDA (Blum. bijdr. p. CM>. > leavea oval, roaanWd at thru; ex, acute at the haa*. quite •ntire, g tbrnui; |>anicte« 1 ' minal, drooping ; pedicels raermoar ; « alycine teeth acute; *tem climbing. ♄. S. Native <>f Java, in mountain woi where it is called *Oj<M Kmtjmmlxtmg* and *tCttmrmUUi* I am.

Climbing Ardisia. Shrub cl.

25 A. BAVAN (Alph. in D. C. Lin. Iran*. 17. p. 117.) leaves oblong-lanceolate, acuminautl at both ends, obrtpaad, glabrous, fru-ly dotted benea' lary and •erminal, short; pedicels • •ubumbcllate j aalycine teeth rooiv ish ; branchlets 2-edgvd. ♄. S. Native of M Mtand of NUM» Kambanga, wh< e it is called .ViAafMM. A. ancriM, Ilium. Injdt. p. I 85. bat not o i \Nall.

Utumc'i At riibcl.

<S A. rLoititi'niit (Wall, tn Roxh. fl. ind. 2. p. 272. cat. no. t£63.) young alioota at»! tender leaves covered on both sides with den*e, aral), ; irplr, |txM# tonM'ntum; lea* es crowded towa•d« lite top* of (bo branch?*, nhloag lanrrnl arintiif •t both rml*. very obtcurrty - renulated, coriaceous, shining above and glaucoui beneath; panicles terminal, ov .1; pedicels umbrllatr ; calj * dotted : «l T watiwiiila of corolla ovate, 'acui*. ♄. I •. Native of Nipaul, on Sheopore, and of NoakiXc. I>a\es 5-6 in .In•!<>*» g. Flow. r* tmall,red.

JU-Jhwrrtfi Aril,MA Shrub 10 feet.

X7 A. attwioKU (Wall. cat. i o. 6524. Ugi D.C. in Lin. Iran*. 17,]. 117.) glabmua; Iran* oblong-ltncvolatt; | panicle terminal, loose, length of Irarr* ; lobea of calyi ovate, acute. ♄. S. Native of the East Indies. Leaves crowded at the extin nity of the branches, 4-5 inches long. Peduncles axillary, remotis", 3*o-Bt>werrd. Lobffa of corolla laiim>lair, aenn ated.

Minium Ardisia. Shrub or tree.

28 A. in MILK (Vahl. *ymb. p. *Hi.* ltlum. b jdr. p. 687.) glabrous ; leave l '-loniclanceouite, acumittatnl at both 11 fl brous, veined, shining ; umbels si npte, axillary, pul inculate ; 1 lowers drooping ; segments of calyx short and rounded, ciliated ; lobes of corolla lanceolate, first recurved, then revolute. ♄. S. Native of Coromandel, Nipal, Ceylon, Sumatra, Java, Penang, &c. A. s ..luoiiv*. Roxb. cor. 1. i 22. t. !7. Srnw, bot. mag. l(.77. Wall. cat. JfB-i \ littorälis, ladr. ». t. rep. 630. V döma, • all. cat. '•". **»3. v olerâce 5, Wall. cat. *it^* 3. G. A. umbellâta, Roxb. fl. ind. 2. p. 273. l . . cab. 531. Wall. cat. no. 2283. i\ ta4na, Wall, cat. no. »f 83. l. ' Leaves deep green, 3-4 inches long aad abotit *t* b«n l uncle* «• •Nib*) of many prrttr, lar,

Aowrn. Adthcrt untieJ -rad* into a eooe. of a pea, *lt*T^gj W <ne taya the racetnea arc C'MIMM.Ull t atnl divjrujir, i IIIIIIIXIK(I aj aajMH M li"v«ir».

Var. β; lcavea mor* ar< • ; pcdyncl— a»^ racteaa m A. frrandifldr •<• no. 8 ' <* >r|{?r, Uiininf on both »urfarc« ^ ll. cat. no. 2,130.

Var. γ; flowers large; b ore ample. ♄. S. Native of the Nelligherry mountains. A. •olonacra, Wall. cat. no. K.

IlumhU Aidiau. . Clt.

t& A. i> MIIIIU. I> IN ulilontf-laitcrolatr, acuminated at l panicle* umbclUtrly racvmoac, ajull rouodrt! Native of Java, *oa* *w* wcatern ntounum*.

'US. A

SO A. Kinn.au (Wall. cat. no. *UTS.* Alph. 1'. '. in Lin. trans. 17. p. 118. t. 8.) leaves ob long, acumtn.v d, and lal eral, shorter than the leaves ; peduncles aml pediaaw rather » lvety ; calycine augiuiMa amall. acn[1] iminated; •tylr cxaertrd ; «• <if Stlhel. Pvdwncln sometimes elongated and ci- rhose.

Var. β, **o*in*v* (Alph. D. C. l. c.) '• leave* oblong-Uwreolate, alabaatra - mall, acuminate 1. ♄. S. A. neriifolia ? β. Wall. rat. nn. .'i78.

Nerii-folia Ardisia. Shrub or tree.

31 A. EaC4LLU* *899.)* glabrouat leavo* cuacatrd-oltoratf beneath, rixlmg in a blunt acumen . |>* nicle terminal, formed fron dense-flowered erect racem< , pyramidal ; calycine segrunt* <lii|«iir, obtuae. ^ . G. Native of Mexico, in woods at Papanib I eave* • utilirt long, Mith the pi' oles. Flowers white. Berries black.

/ nalLmia I *3i* A. wva> tf<9.) glabrotH; branchr* diverging: lt attenuated at bo' almori *> '».) filabrou*; l- ves ovate-lanceolate, oblong, acute, ample, imcaualh revolute on the nuvgttM bvm peduncle* nuntvrtiua at tL tops of the branrhe*. compressed, one hall shorter than the la»ji es ; flowers densely racemose ; calycine lobe* obtwat: aiabmatra ac ute ; style inclosed. ♄. S. Native of the East Indira, <M tt« banks of the river Atran. Leaves 5-7 inches lo -it. 11 and f inches broad, coriaceous. Pedicels incurved, approxi •itafe at i the tops of the peduncles. Lobes of corolla acuminated, t berry black, striated.

Mimfkindtd A Ardisia. Shrub.

34 A. TUBERACULA'TA (Wall. cat. no. 2274.) leaves ovate-acuminated, coriaceous, dotted everywhere; racemes axillary and terminal, many-flowered, shorter than the leaves ; peduncles rather compressed, glabrous ; calycine segments ovate-scittr, a little ciliated. ♄. S. Native of Singapore. Branches angu- l,, ly compress il at tbr ap x. Leaves 2-4 inches long, narrowed at the baa». full of resinous dots. Pedicels umbellulate. l |a«]

Tuberculed Ardisia Shrub or tree

35 A. ATTIHCATA (Wall. cat. no. UM.) glabroiu ; It*WM •bloag-Unceolatc, acuminated at both end*, modi dotted on the cdcea; peduncle* • raeeraoee ; pedi wf* ami peduncle* gUbroua; cal jcinc lobes ovate, amir,.. c of ih* But-roan empire, about Ta*oy, Leave* S-8 inchr* long Pi i i rla thiclwoed a little it the ape*. Berry atnoothUh.

t 30 A. ELLÍPTICA (Thmb. nov. geti. pt. 8. up*. 1795. *ex* 4. p. 51 :.)gUbrou» ; branch** angular ; lcavi « lateral I Native of Crj loo. Leave* a band long. Stem terete,

/i/rftt-leaved Ardiata. Tree.

.17 A. w r m u i (Wall. eat. no. tttl.) fbbrawi: Ware* M both end*, much dotted on tbe nwrmn*; pe- *et* terminal and n >rtrr than tbe U looaely m .cine a*giatpta ovate, a i lobe* of curolU Uru **J. i '"' '-• '-« long, .dff, I like that fof#A.Waaaia, but tbe flower* are'aawaWr and k*. •»"'

M ' EUGENIKFÒLIA (Wall. at. no. St76.) leave* oblong-lanceolate, acute at tbe bear, and acuminated at the apeft: baring the »<- . and arched near the aurgm; p*dwa«*w • abort, pmicied, oaaay-Bowered, swath ahortar tban the ; pedicel* and calyx velvety ; aaywat' ^ - ite-amt*; atylo exacrted. "-ilbet, on tat nw..)ri(, i . 1 ,.. « M irx-lK". tonj{..)'»Hrd.

Eugenia-leaved Ardisia. Shrub.

39 A. aaani .11. rat. no. fl»9.i glabrotM; Wave* oetoag.binceoUte, acute, conaeeoaa; pedW •oar, shorter than th , Mag; cahciae lobe* ovau, acute *; man lawiirr, on Mount Taoag Doag. Leaiv«a 5-7 inchea long. .. n . . .nij.r. ««. .1

Arduna. Tr*e.

to A nantti n Lin. traaa. \'. P. \ ; peuaaclai tcraviaal. and are, a* well a* > umbellate ; nbtu*e, rtltated. Tttlvtrty on tbe back ; lobea of corolla ovarc, am <• inesoaed. t; . 8. Native of the province of Mar- utban, ne«r tb* town of Amberat. *a. Wall, rat.no, *HHi* part. HraocKc* silky at top and fuKou*. Leavea «-s • .•• lotiff. Mower* numerous.

Lady Amherst's Ardwta. Shrub.

41 \ PAUCIFLÒRA (Heyna>, herb. Roxb. fl. la*V *. p. »79, rail, cat- Ut.rou*; Wave* tan. I oblong* acuminated ; petiole* abort. illary, t-3-Bowered. b. 0. Nan*. Noting braacbe* clothed with rusty dens* acalv >nch*a long, tapenng into a Wuniwh . acumen. Flower* small,

Few-flowered Ardisia. Shrub.

42 A. TENUIFLÒRA (Blum. bijdr. p. 686.) leaves oblong-lanceolate, ntish, quite entire, glabrous; panicles divaricate, axillary, and terminal; pedicels racemose; calycine teeth acute; stem scandent; flowers very minute. i A. in wooda. tiled A *ttjam* .unded at tb* ba»«. * at tb* F1. year. Shrub cL

Fine-flowered Ardisia.

43 A. NU'TANS (Alph. D. C. in Lin. trans. 17. p. 121.) long-Unrrotatc. bin, «l-br..t.», aoOa. taMatk. rlathM * aroas towmttttn while young, M -ell M taa awbeU wd terminal, nutaiti; atga of the »Urwi of Now in *il.ai\\ yitrr** of mulct*. A. pmw . p. U7. ««t flowered Ardiaa. Shrnb.

Drooping-flowered Ardisia.

44 A. MARGINA'T. acun]inalrd at both ends, quite a m , giabroa*. nnrly aVtatai *hn-* ih parallel ira—»rm •• *•• nawfia b> th* appfomaaatiow of **iaa and atrip*a i uwi» coryatboar. •»ilUr> . calyoat tr*t» at i Java, oa Mount Bur an** am. in tW

Marginate-leaved Ardisia. Shrub.

45 A. LÆVIGA'TA (Blum. btjdr. p. ••<>.) feat** obloag. •» avaated at bod* ratl< *<mmm* rrtne* aiitlary aad banal, aawple ; calyraw ua thr top

Smooth Ardisia. Shrub.

46 \ OBOVA'TA (Blum. bijdr. p. 688.) leave* or oataar at thr top, qwite rwurr, tanacewu*. gaaaroa*. with Ha* parallel am; -mbelbtrl* latiio.t, ax- Ulary ; calycia* aajai of the taUnd

Oborate-leaved Ar l...a. II Sept p.M9.) Wa^ nuatrd at th* a* .nchlet*. aad pwltitle* bra. • '«wtjr. iaea tnaiptiaadv axillary, aad trrunnal. prdiceU umba-lUt*; teeth of ralyx ante. in tb* proTtac* of &*mt

Cymose-flowered Ardisia. Fl. Aug. Shrub.

48 A. OBLÓNGA (Alph. D. C. in Lin. trans. 17, p. 121.) leaves oblong, acuminated, dotted; peduncles nearly terminal, much shorter tban the leaves; pedicels umbellate, few-flowered, and are, aa well aa • ovate, obtttM, a Hits* ril«*uJ. %. B. attaauata •>. » M . part, a** no. S». iaebvaloag. \ *OUmg*-leaved Ardwx or Irre.

4» \ ONYA'NTHA (Wall. i». *WS.* \1 |. Wave* lanceolate, acuminated at both ends, ihm ; flontu tr«, na, about rt|M*l in In <• |»""1 *eg*n*ata taacavt' <d; l"*1 lun«-aruimn*ir< i of t on the tnouat* rather v.

t f. *L*mn rntirr. fmUtf,*

50 A • ,0, t»g|. Alpfc Lin trana. 17. p 1 bloag, ante, gUbraaa abos downy bmeath; pcdwiriii aeaity trrmina: »*«"« thw* o* £rMM, d • tnaWlUt*. dratly P"*1^' •» segaatate o«ate, arair. <» of Martabaa. Braarbe* brown rbe* hong ; iMtioWl hiap«d. Hbraa.

•MfUatrl * MI meau l.v 1 . '« iW Banaaa " M . bat ant of Blaa*. Lea baring th* central nerve ktapid Warata, aad tat lateral

pilose. Hairs on the branchlets and leaves silky and purplish. Berries ovoid, glabrous.

G ,,*i* Ardiaia. Shrub ·tf tT·"·.

M A. MACROPHYLLA (Reinwdt. ex Blum. bijdr. p. 691. but not of Wall.) leaves rather large, oblong, acuminated, obtu*c at the base, quite entire, coriaceous, tomentose beneath, li, a> wrll •• the umbels, which ire subcorymbose and axillary. ♄. S. Native of Java, in the w •«tern provinces, on the mountain i, where it is called *Lampasie.* *tt*<L*k.*

Lemfltatcd Ardwu. Shrub or tr*».

\ *S.* /.<«««•• *glmhrotu. tr*<-*at*t*t* CMIAMI *or* a m - ted.

53 A. **mli** MMaaktr, ·rrraird; racrttw* !· ••• , l. mm pound, '; **. Vi li*. of South Amc rio, near Santa Cruz. A. Cavanillesiana, Idem. .t Schultes, syst. 4. p. M£. Angitiilaria serràta, Cav. icon. 0. p. 2. t. 503. 'Leaves 6 <»eb« long' P«IM:I« pyramidal. Bfimtuta of corolla ov*t*-U»rrt>l tnouotaiai. fillri! >lti)U. l eaves 4-5 inches long, dotted. Pedun- cl« often rrflrx. (l. llunrri « small, in loose fascicles.

Serrated-leaved Ardisia. I r« 15 *totO Ctrl.*

64 \ PYRAMIDA'LIS (Pers. l. c. but not of Roth.) glabrous; Irarrt l anceolate-ovate; racemes terminal, cdBip»«'! of tunbcl- bearing compressed peduncles; segments of calyx *onxt, a* ciliated; corolline lobes lanceolate. ♄. S. Native near Cru guillària pyramidàlis, Cav. icon. 6. p. 1. t. ianta Leaves nearly sessile, a little toothed, tapering into the petiole, /. Ar **•• 6 inches lo naf l'' lra ampli pyramidal. Calyxes rufescent. Cotolla red. Drope conaeeut.

Pyramidal lisia. Fl. July, Aug. C Ar. l U. IBIS. T w M w 25 feet.

55 A. SYLVE'STRIS (Blum. ; iilf. j». < "bl<mg, .. \ i l 184.) leaves cu- mina ttenuates obsoletely denticulated, led. ratbrr .> l lt tin ba*> coriaceous, glabrous; panicles terminal, divaricate; pedicles subumbellate; calycine segments rounded. ♄. S. Native of Java, in mountai • wood*. «)'< ' e it is called *tamptak.* Allied to *varicùta.*

Showy Ardisia Shrub or tr ret.

I A. dkai t A'TA (Swartz, prod. p. 48. fl. ind. occ. 1. p. 4 11.) glabrous; lcarct lancmUtr, • uminated, wrinkled, serrula <•*), beset with riiity ili>t% 1* in at'l; panicles terminal; pedicels umbellate; segments of the corolla ciliated. ♄. S. Native of i li»- paniola, on *xhr* lutik* ol rivers. Plum. icon. t. 80. ltranrbra downy. Pedicel< and nl yxes coloured. Corol >* deep rrd. Berries blood rW.

Far. ß, *Krytopk^iUt* tltn m. et Bcbu1tr«, «y»l- 4. p. 515.) panicle terminal; leaves ovate-lanceolate, acuminated, golden yellow beneath. ♄. S. Native of St. Domin •o. AiwuilUria chry "iphilla, Um. ill. t. p. lOt. DO. X74.1. Flowrn rtoLcrona. Berriw i.

Serrulated-leaved Ardiiia. II. July, Aug. CU. ISM. Sh. 2 to 3 feet.

47 \ FULIGINO'SA (Blum. bijdr. p. ••0>.) leavr* obloof-ara- minated, cuneated at the base, obsoletely denticulated at ike apex, glabrous in the adult state, but clothed with rusty tomen- turn MI.|U \nutiK. a* < well as the branchlets; umbels subracemose, axillary; calycine teeth acute. ♄. S. Native of J 4»«. ID mountain woods. Allied to *A. solanàcea.*

Fuliginous Ardisia. Fl. year. Shrub.

58 A. GLABRA'TA (Blum. l. c.) leaves oblong-lanc • oltt^, n cu- minated at both ends, with rather crenulated subglandular mar- gins, smooth on both surfaces; tirabrlt corymbose, termi >al; calycine segments semi-lanceolate, obtuse. about equal to tl* corolla in length. ♄. S. Native of Java, in the province of Bantam, «li< re it is called *Lampasie.* l . the prtwdiog.

Smooth Aril isia. Shrub or tree.

5 i A. MACROCA'RPA (Wall. in Roxb <1. ind. t. p. i n .) gla- VUL. ir. broti*; lr*VM ablon^. acutr, tapering downwards, glandularly crenated, dotted; rmcenm trrnuti «r|ttn«ir ilr, obtuse; berries large. ♄. S. Native of Nip lUI, oa mu«l <>(tlir inlU n bout the great valley. Branches greenish. Leaves approximate, coriaceous, 0-8 ii t tl·Mll c lll. ches long, paler beneath, veinless. Racemes slightly oionrrd, a« large •« • gow*«t Flowers flesh-coloured, dotted. Pedicels clavate. Berry vermillion- erry. This is a beautiful shrub.

Large-fruited Ardisia. Clt. 1824. •Vak 5 to 6 feet.

00 *A.* MKMBaAKACtA (Wall. Olt. no. 2783.) glabrous; leaves apprmimaH', obliMig-laoc< olate, acuminated, tapering a long way at tlir lUM, irregularly crenulated, membranous; peduncles axillary, 4 times shorter th*n tin- 1 eaves; pedicels short, approx- •mat* ; alabtwtn obittar ; aUycine «cgi ments ovate, acute, about equal in length to the lobes of the corolla; style inclosed. ♄. S. Native of Silhet, on the tnouotaiai. Branches thick,

\f> *mhrnitottt*]< 4\«<l Arditia Shrub 2 to 3 feet.

01 '. WALLICHII (Alph. D C. in Lin. trans. 17. p. 123.) leaves ob M(»ai«'. arutr, ur obtuM-. nai rowed into itn niif^.natt petio •tr*. rrp*mll\ crenula . <J; pr<l uncles axillary, one half shorter than the leaves, and are, as well as the pedicels pilose; flowers in kioat racrmr*; cal> cine segments ovate, acute, a little ciliated; lobes of coro • la it»att. actimanat ed; anthers nearly sessile, blunt- i*h . style inclosed. ♄. B. l Native of the Burman empire, on the banks o i ihr lrawadd) am the Atran. A. sanguinolénta, Wall. rat. no. *'t?X7.* but no* of Blum. A bumble shrub; with thick k, hardly wo. dy branches. > ,ng branches and leaves full of blood-coloured jutor. L M Y « 4-5 wdia* looa;, and itoa.l. thickish.

Wallick's Ardisia. Shrub dwarf.

(!t A. JAMAICA (Blum. hijdr. p. 690. l Hornstedt, dis *t.* nov pi. jfi'ii. pt. 1. p. i-7. mill a figure. ltiunb. tl. jap. p. 95. t. 18. under *Bl* .Y*t4 i itiabruui ; U<a*ri marly ••p(>><iir. or 3-5 in • •l ·orl, on short petiole'. mrwatc-obltnii.', acute, .labrou», *u* rmt.; pedicels subumbell ar, tveund,.looping; calyx 5-toothed; tinTtH i timplr, ixill.it \ ♄. G. Native of ' <pan, on the mountains irtwmg l ushes. Sankits vulg i JanmiA]'». l hanna, Kaempf. amoen. 5. p. 775. Root cr ' «p>ng. L T A V M a hand long. Pedicels red. Corollas white.

Ardisia. Shrub 1 foot.

6S A <i» BSJ (Al|,i, D C. in Lin. <ran«. 17 p. 123.) glabmiui ; leaves nearly opposite. M-trat. l, ovate-acuminated. ♄. G. Native oi Japan. iUidbk gUbra. Thunb. tl. jap. p. 350. l-III tr. Stem frutescent, articulated, simple. Lravv* approx.imau at thr top of the stem, 1½ neb long Berries red, size o •(tuiill | eas.

Glabrous Ardisia. Shrub 1 foot.

04 I RU'BELLA (Blum. bijdr. p. 688.) stem suffruticose, pro- cuitibrat at ba*r, - ooting; leaves lanceolate-elliptic, acute, war* ro*»i d into the petioles at the base, obsoletely crenulated, marked with transverse stripes, glabrous; flowers subumbellately tacr- mose; calyx 5-toothed; wgoMMs of corolla cntui ate. ♄. S. Native of Java, in shady places on Mount Salak.

/' *warf* Ardisia. Shrub 1 foot.

05 A, c*M»« M_t,! 11. |'. l. c.) glabrous; lravn < oblong- laoftolalr, A ttenuated at both ends, with repandly crenulated gland ulat edges; cymes terminal, usually solitary, often com- ponnil ; pedicels amootli, finely >nnrd. < mbellate, drooping; segments of calyx and corolla obtuse. ♄. G. Native of Pe- nang, Singapore, Japan, and Clnti Bl·dhia crispa, Thunb. fl. jap. p. *91.* ltatika, icon. K a m f. t. 7. Art!*•« elegans, Andr. but. rap. t. 163, A. craa^u Hokb. <1. md. t. p. X70. Wai)

cat. no. *U6l.* A. glandulòsa, Blum. bijdr. 690. but not of R... es bluntish. Ra- cem... ea generally aotttary, from the extremities of ... ito ew) mbi- form lateral branchlcta. Flowers •mall, drooping, red. Bertie* red, size of peas. (fig. 5.)

Var. β; corolla white, dotted with red. ½. C. ... Sims, tot. nag. t. 1**0 A. lentiginòsa, Ker. bot. r*y. t. 553.

Var. γ; e ... ½. S. A. crenulàta, Lodd. bot. cab! t. 2.

Curled-leaved Ardisia. Fl. July. Aug. Ck. U0». SWub«to8i 6« A. ri«T406«* (Alpb. D C. l. e.) l..,« lanceolate, acu- min... >d at both end*, otouletrly cmtUtnl. glabrous; umbels simp... P, lateral; calycmr teeth acute; fruit depressedly penta- gonal. ½. G. Native of China. A. quinquegìna, Blum. bijdr. 8W.

Fine-angled Ardisia. Fl. ... lArdiaai 11. ytw. Shrab* 67 A- K ... '«*, reg. t. ft lanceolate, ... coriaeeowt, rrpandly vrveuu d, tipaiia; to tl pedunc... umbellate, terminal, and atilbry : «»toU two!*." crated ... by deciduous bractta*; iitgajiawli el botatr. obtuse; fl... •wen subcampamilMe, *tmtvmA.* l China. Fl... *mm* grvyiab •hue, betel with dark dote . •M) the pedicel... l with dark line*.

Dotted Ardisia. FLitase, Aug. Clt. 1822. Sh... <ib«io|i) feet.

I 4. *Leaves pilose, crenated, toothed, or serrated.*

68 ... INULA'TA (Vent. choix. t. 5.) leaves lanceolate- ova... •, tapering ai butb «nd», repai dly crenulated, pilose; pani- cle* i ... terminal; pedicels umbellate. ½. G. Native of P... to Rico, Mexico between Tam... l»ico an<! I! cal del Monte, Antilles, &c. A. lateriflòra, Swartz, prod. p. 46. ft. ind. occ. 1. p. 472.! Anguillària lateriflòra, Poir. dict. suppl. 7. p. 687.! Ang. crenu- làta, Poir. dict. 7. p. 689. Flowers of a reddish violet colour. Berries black, size of currants. There are varieties of this with more or tarn repand and bairy Wave*.

... ui« >Tn J ... J«avea eoriaorooa, wrtbowt pallncid dota. very *|v f >ran/afrrf-kaved Ard'.ut. M, in. Sh... , A ... fin*. K.|>. v« oblong, blunts, undolaird. tUbro* abovr. rattor^ ptW toneaih; paniclea terminal, brancbnl, abiMii tqual «tih tto travn ; peduncle* itttui •* '<ea of ila linear-Unctwlatt grading. Cuba. ... are braactot and pvdaa iiwtw-t liiuif. "bu«e or arut*h . hair . me braactoi and peda . I iiutufliuiir obniBeuT aruuh . hatra ateJLlr *xuutiiiii.* ti«m which ipr< tfrn, mte*« M the trtuar, Ua« renaadleax' ... inua*led •* '••..**« (••••••» »hut#, IMll brarl With fuaty d»«n and bUck iota tooeaib. mth ero*»fy minLiiii • • as* thurter tbtjO tto ka*e*: cwrolla •—•» *mmm,* at length revolute, with a short tube and narrow segments. ½. G. Native of Mexico, in woods, between San Salvador and Jalapa. Flowers white. Anthers cordate at the base.

Black-dotted Ardisia. Shrub or tree.

71 A. ica'na (Wall. cat. no. 2264. Alph. D. C. l. c. t. 7. p. I ...) leaves oblong-lanceolate, acuminated at the base, acute ... ex, denticulated, rather pilose above, but glabrous and paler beneath; panicles branched, nearly terminal, about equal to the leaves; peduncles umbellate; pedicels and flowers vel- vety; calycine segments subulate; lobes of corolla ovate, acute. ½. S. Native of Bengal, about Bhatgong and Matamba. Leaves 6 inches long. Hairs simple. Umbellets surrounded by whorls of bracteoles.

Icura Ardisia. Shrub.

72 A. ... (Wall. cat. no. 2279. Alph. D. C. l. c. t. 6.) leaves lanceolate-oblong, acute at both ends, on long petioles, sharply toothed, puberulous; racemes axillary, much shorter than the leaves; pedicels short, alternate, and are, as well as the peduncles, velvety; calycine lobes ovate, acute, cili- ated and downy; corolla deeply parted; with ovate, acute lobes. ½. S. Native of Bengal, towards Silhet, and about Gualpara. A. p... iml—. liaaaili. torb. Braacam ••« ... ending, filled with medulla. Leaves 4-6 inches long.

Toothed-leaved Ardisia. Shrub.

75 A ... (Blum. bijdr. p. 689.) leaves oblong-lanceolate, acuminated at both ends, crenulated, dotted, rather villous be- . «, », , «to». a».H«7 .*« ... terminal, simple; calycine segments «n, Uj... ito awiawrrf ••• «—. in length to the corolla. ½. S. Native of Java, in ... on the aajaaMaaMi Allied to *A. glandulosa*.

Soft Ardisia. Fl. Feb. Shrub.

74 A. ... (Alph. D. C. l. c.) extremities branches downy; leaves oblong-lanceolate, acuminated at ... t b glabrous above, pilose and much dotted beneath, ... r*tWf cre lated, thin; peduncles lateral, simple, velvety, rather ... r >>' ter than the leaves; pedicels umbellate; ... »t,.Itl< ..-tr,!! ... MBWoaalav aaaa ... ninated, pilose outside. ½. S. Native ... Tavoy, in the Burman empire. A. villòsa, Wall. cat. no. 2280. B. ... itrini ftOMt A. t ... villòsa, Roxb. in the leaves being larger ... M IMP ... Pa^^aatf«a» +. ... rah,

Tavoy Ardisia. Sh... •d. t . | 75 A. ... laac—lale. arawinalid. nlUw* bra* i ... •a;Siu|a *i* dhabta*«»(,. -.-^ ... ,to» l.«nc, taprtmg in ito baat. IWft- ajlaiil ate eleWyTrart tirthltoi' ... l'itfaaj A H ... A. ... (Alph. D. C. l. c. p. 126.) stem filiform, ... i»^ leaves opposite, ovate, acute, serrated, villous; pe- ... W M M I 1 ... ^t . .___L^A^N^aakl J^,, ... M. Baadtoa ttftaaa, TaM» i. ka» ». ••• ... »i » ... Ra»b, I ... 1 *p> branch™ iknwli *i* i. »rvl toary| !••'•« ... i, ... ^ ^^ ... Z ... . -/ i i ' - 4 4 t m . i '

Clothed Ardisia. Shrub.

Sect. II HTMH*'«MU<fMH» *h*"> *jr-«. * mrmbraiw,«d p£a«r «a<r aTirfrc*. a male ; the. anther» are membrane- ill the 6r»t •»» P- ''*• n«;

DIMh »l,i»rt«r thaw til*" jx*<jic« l».

\tA\vt < cspriait wt J vtitire downw.ii a], leafy from larjftr bractr i-orolla n jr linear, (one; o i m b m . ! i < ii 8, Na- twU on Ih* Jui> Walt. pL rar, asiat. l. t. :75. Branches marked *•<!« callous tubercles. Leaves scattered, approximate, subverticillate by threes or fours, 6-10 inches long. Corymbs rising from the vestiges of the fallen IMTB*, compoaed ol approximate spreading umbels of lar p flowers. Peduncles flattened. Calycine segments lanceolate, slightly ciliated.

Ma a4rntHHaia«rW Ardisia. Fl. Ma. July.

Shru i 6 loS fret.

79 A. QLIXM'LOM (I- oxb. fl. ind. 2. p. 276.) gl abroua; leaves lanceolate margi.« MJBHMJ and vl>iidulaf ; itmbclt few-flowered. on lon. peduncles, globular, r and round llH< lop* of the branches ; corolline segments round and emarginate; anthers united. ½. S. Native of Silhet, where it is called by *rulalee.* Leaves 4-6 inches long. > birtfl nil, whftr, oi) short pedicels. Calyx rusty from dots.

Glandular-leaved Ardisia. Shrub l

Sect. 111 MKUI THE'AA (from *μικρος*, •mall, and *ανθηρα*, unfAf r<i, an atnli' ; in allusion to the anthers being much shorter than the filaments.) \ljtli. 1 • I C. in Lin. trans. 17. p. 120. Filaments elongated ; anthers free, much shorter than filaments. Style subulate, not longer than the stamens. i*Ct than

I. *Style about fttat in Unglh to the itammt. Old antktit nxQutal, I visted.*

80 *h.* tout* CEA (Swartz, prod. p. 48. 'I. mil. ore. l p. 470.) glabrous ; leaves oblong, bluntish, quite entire, coriaceous ; panicle terminal, pyramidal, rather longer than the leaves ; ily- cine lobes ovate, bluntish ; lobes of corolla v>tatr, acut*. re- flexed ; tilaniti.[1] s almost combined, inserted in the top of the tube <•l f\l< <• rolls, rather longer than the aniliT*. > . S. Native of Guadaloupe and I:spaniola. nguillària coriácea, Poir. diet. suppl. 7. p. 685. The flowers and inflorescence agree with *Wallènia.* Corollas red, rather large. l

Viktwi

81 A. II MILLÒNIÀ (Alph. D. C. in Lin. trans. 17. p. M.) leaves obovate, bluntish, coriaceous, veined *«rnratli, arul ob- scurely so above, do tied on bo< h surfaces ; panicles terminal, rather crowded ; racemes undulated, jointed. ½. S. Native of St. Domin--" \. obovàta, Hamilt. prod. '!. ind. <" c. p. 26. but not of Blum. Desv. herb. ex. Hamilt. l. c. '< rkapa diatwci from *A. Hamtttm* Ardisia. Shrub or tree.

82 A. EXCE'IAA (lit. bort kew. 1. p. 261. Chr. Smith, in herb. D. C. et Deless. ex Alph. D. C. l. c.) leaves ovate-oblong, blu dak, middle-sized, entire, glabrous ; peduncles axillary ; pedicels umbi- i-IUlr, longer tlwn ibr pcrdunrlra ; > lycine *«f nwota • ute, glabrous ; alabastra acoici Uibt • of coru 1U lan- ceolate, 3 times longer than the calyx ; filaments subulate, t aW as long as the anthers. ½. F. Native of Madeira. •. on tbe mountains, where it is called *Adorno tree.* Ueberdènia excélsa, IbnU An. guillària Bahamènsis, Gaertn. fr »< l- I 373. t. 77. f. 1. ? My rsine beberdènia, Rœm. et Schultes, syst. 4. p. 508. acebera Bahamènsis, Lam. ill. t. 136. f. 1. ; eduncles very short, therefore it c rs red. Mnniwii lit thr feaiu *Nf'mnr.* Plowi

Tali Ardnia or Ademo-In*. I Tree *0 to *0 • ret.

§ 2. *Style one half ikorttr tkmm Ike tlamrnt. Anther t erect.*

93 A. I.iiunKTA (Alat n. ir*n- 17. p. 1«7.) |{Ubrot»; Iravr« obti>> .!.." <1: nuticlr* ter- minal and axillary,many-flowered. cl« oiolx i funnel it(i lobr* raiil, »t ing, full if* ftpotted HIII. yellow.

LkottLy't Ard «>.

A. RJ g. •y»i. l, p. GGljiravos ubovi- ot, shiniof on both •uifacr*. j»ai- lcll\ ll P(JJMU ; rwttnra amtllary, •train

m.

brat i. amrr. *3.* p. acuminated, i 3 . ff< vale, acti

Lepidotted Ardisia. tree.

• iifub or

Sect. IV. T t i i i * (raejuiinw unknown lo ua). Alph. . D. C. in Lin. trans. 17. p. •l»| ltracteaa lat^t, raducou- l .»cn alrrr- 111 «g, Mad - ; bractta* Oirair, M f calyx and corolla ovate, acute ; anthers ovoi l, ltoriaonul, Una l filaments ; style rather longer than the stamens. ½. G. Na- tive of Mexico. Tyrbœa, Moc. et Ses•*, tcon.* on x. ined. Uranclii j.4 mdws lung. Co- rulla of » <• Int 1*1] t<»». *Bracteate* Ardisia. Tree.

• ; 1 l, r. p. 128.) leaves ovate-oblong, acutish, entire, coriaceous, glabrous, dotted ; petioles margi MPll pan icles longer than the leaves ; Uracira* ovaaf, blmtnli j rmlynnr lobe* •> vate, acute, ciliated ; aiiilwr* triangular, »n.i*. lot««t ib>n tt. filaments ; style subulate, inclosed. ½. S. N ative of South America. l eaves 3-4 inc r« long, full of miaou* bU < dots. Panicle slightly velvety. Lobes of l ttrolla obi tin-, .(«»tt. 1 Hardly distinct from the prec •linn •prc*r«, nrv< rtlickrM tbc stamens are very different. Berries esculent.

Esculent Ardisia. Tree or shrub.

88 A. ro'r Ha (II m. et Schult , fffal. 4. p. MM) Ir.Vt. oblong-l.., vate, acuminated, coriaceous, shining above, MHl nearly veinless ; spikes panicled, terminal ; br inn , obvolute ; calycine segments ovate ; lobes of corolla revo- lute ; anthers connivent. ½. ative of South America. Wood white and fetid. > •• «. pale roar-«oloured. t'otolU camjunulately rotate. Style longer tan e urotla. *Fetid*-wooded Ardisia. I,., 1 0 to 15 f.,t,

† Spaniat nof tajaramlft t w w.

8» A ». ½. G. Native of the Bahamas. Heberdènia excélsa, Banks. herb. ex [1]• rrtft Anguillària Bahamènsis, Gœrtn. fruct. 1.

p. 372. *t.* 77. t 1. tawom Bahamensis, Lam. ill. t. 15*5. f. I. Pcrhapt the MIM aa *A, txttU**.

Bahama Ardisia. Tree.

90 A. LINZA'TA (Rœm. et Schultes, syst. 4. p. 804. < herb. Willd.) leaves ob loog-o«»te. parallel ly vaioed, gUbrooa ; panicle terminal, diva i ic*t*. ♄. S. Nati l of So«th At unib. et Bompl.

/iwri-leaved Ardisia. Shrub.

91 A. »IV*»K*'TA iHorn, et SrfaultM, I. e.) leaves lanceolate, tapering into the petiole* ; flower* paiucted; branch** of inide divaricate. *. S. Native?

Div rK-atr-panttled Ardtaia. Shrub or tree.

92 A. ' M l f D t i u (Rcrm. et Schultes, l. e.) leave, ovate* lanceolate ; cymra tnfid, a&illart lumb, et Boopl. Calyx traaJl, & tooched. Corolli, aalver-shaped, luting the tube inflated at tbe apex, and the limb 3. parted. Stamen, mcloacd. SnJe inclosed. Stigma u Drup* o*a(e. clammy. l-celled, l**ecd#£

SnuiH-Uttttd Ardtaia. Shrub 6 fret-

93 A.r PA* 4*. g. iaj. oc, <m\ leave* lanceolate, ovate, lined, sessile; ra-Hary, simple. rj . Jv '* ative of Dominic .. on the trunks of trees, among the mountima. Any illária parasitica, Poir. dict. suppl. 7. p. MT. Branches •lenJi r, brittle, tetrago-nal. t*a ilrr beneath, with b ackish veins. Pedicels abort, bracteatr at tbe base. ' • eoluwfed: » ovate, acu ••• lobes. Corolla whittah purple, •wbrotate, dotted inside. Fil •menu abort; amber- nargtna«e, diverging. Styl *t* length of atamen*. Stigma obtuar. Drwp* glokoac. dotted.

Parasitical Ardisia. Shrub par.

94 A.? ANOU'TA (H. B. et Kun in, nor. gen. imer, 3 p. l 47.) branches and under aide of leaves covered mih inwll, rusty •rale* •, leavea elliptic -oblong, acute, »harplj (WHIM lanceolate. Flowers lateral, much branched; flowe •» pedieaUafe, rather r acemose. ♄. S. Native of the province of Popayan, on the burning mount Purace, near El Primer i «jonal. Leaves 5-fl inches long. Panicle beset wit lt raaty aæaW> Caly « 3-parted. having the segments dotted with glands in the mid tie. Stamen* 3*4. opposite the lobes of the corolla. t lament • •lmt; anther* oblong-lanceolate. Ovarium ovate-conical, ittabroiH. StyW filiform ; •ligmaot. i rnua, although it has the h •bit and iJ.

*SA*ir^-tooth '•aved Ardisia. Tree 15 to 20 feet.

95 A. OVA'TA (> hrub. nov. gen. pi. *- M 1795. ex iUrm. et Schultes, sy •t. p. *m* leaves ovate ; stem compressed, fur-rowed. ♄. S. Native of the East Indies. Stem sing ,.le, a span high, gtabrou*: bearing *1-3* prtiolate, COri attrou* tea*e*. «i- l margins, a hand long. n*r>NMl pan

*thatt'i*n*td* A >hrub l l are lismWrne. and of easy culture. Any light rich soil answers them well, or a mtxiur* of loam, peat, and saml. *Cuttings, either of the branches or r •*"«. strike freely in a pot of MHid, in hr •• pieces thmild b« pi the mould, and they should not , inches, be placed under a hand-glass, a* they ar< apt to rot.

of a te*prcte«). *Harm.* <i t. -3 Jus*, gen p. «*< Ruxb fl- it»d. Alpb D. C. tn Lw>. trsns. 17. p. 1 ffc—Ribeswide*. L»• fl. *«>t.

Li» •».? *pfwtdmdrm* rolUS-paned; Wbes lather *al»aU in »*« Yl L •bout equal to tbe lobe* of the corolla in length. *Amhtn* ovoid, much shorter than the fttaaaeuu, whsta) are free. Mm aontal at tbe trme the rt<. pen. O*annoi saaet ovumte *rx* vVall . H .1* ahofter than . j W w , (••enied.—1 natives of Aata ; petiole* Hl or temMMl, aisnple or branched. Flowers small. Alabastre . Ata or *elrely.

* *Panicles or racemes terminal.*

1. E. sixxs (Roxb. fl. ind. 2. p. 285. Wall. cat. no. 2304.) scandent; tender shoots and peduncles hoary : oblong, entire, glabrous ; panicles terminal, hoary. ♄. S. Native of Silhet, Ceylon, Penang, Singapore, Golgipori, &c. Ribesioides. Lm. fl. aevt. o. *4* 03. Ribes, Burm. prod. 62. t. 23. A large timber Leaves 2-3 inches long. Flowers numerous, very •mall, of a greenish yellow oolasjr. 11 MtM g ii i -L_____^. ^aa^^a^Haaaat j Btmri Mae of Mani proper, <«<>-wi tbe vicintty of HllhM. «Wr« the plantt g t w abunda. l «he« dry »tl theea lo the asnall trader* w blach "1 ,* ' ajaTJJy W unpnaiiMf to waMagMMl lajaaa, oy «jm ^ arular name of the tbrub is *Bmhtrmmg.*

CVr«Mi Kmbelta- 0tVr»>

Jaca. e* Wall, in Bomb. fl. md. f. p. *ft.* .•at. rw>, tall^brancU. ..lU~.: lea*r*ova«».oblong,ac*t-minatrd. retwee at tbe base. *•»'•«» bears -d RlamluUr margiaw i pattirit tenrawl, eonai. -ry lut.. .ranches ; petals villous. *tf.* w of Penang, • here it is called .tfiMej-tfei**). m the Malay ' abraaoti. language. Leaves mo with revolute edges. : lobes of corolla lanceolate. Flowers white. Very like *E. ri* •are.

Casearent Embelia. Shrub cl.

* * *Racemes axillary.*

2 E. FRANCOISIA (Wall. -at. «». t310. Alpb l> l youM branches and p< roum •rMKVoaa, gtaWoaa atmve. awl dottsv! wWl r« beneath. 'Native of ta* Barman Empire, on th • bank* of the Irrawaddy. l^a*r* 5 inches long, velvety on the net «esabove: patiolea pilose, not winged. Berry blackish.

Rusty Embelia. Shrub cl.

4 E. VILLOSA (W ,11 m Rokb a. tnd. t p, f»». cat. no. tSl» > climbing or rambImg; branchrs tiUoti*. a* •*»; le/i or rmindwh o**l. at the base. VIIUNM tiiaaaih; ! « TM*Jt. slendir, ajkd vdlows. hated. •-» i near £. *n&iitm,* \> .. »t«l m the long faaoclrd slmdrr ranram broadly ob>>tai*-ro«ndialK ««ry aahaa* laaM*; or «*<

Fillose Embelia. Shrub cl.

5 E. riera (Wall. cat. no. 4»ol) Wawrhw and prdtMwlea rel-vety and fu«n. Waves oval, saauuthtih, rsmaaely dsnlifaaaW it > raceaiea anll.ry. aiwtple, laa*)ev tha* the har*e*t ra) roHat. of ibe Eaat InaWe, *m* cbara and Goalpara. Samara pi. pAne. and spotavd with wbate. Learea S-* *m* broad. gUbroits above, remotery marked *mt*

R1151

6 E. FLORIBU'NDA (Wall, to Ro*b. 0. mil. *t.* p. 191. cal. no. 2305. A.) climb ng.gl.bfou.; branch** almdcr ; (r a w oblottji- lanceolate, finely-ac UMte*l#d, wtlb - traight margins; panicles •sill.. y, of m; *,ar* ton* deader I M M M. h • v, ' . Native of Nipa .1, oft Ctiundragiri, fttawpnw, ami at Thankotc. A braut ilul Hiwliit. Ur.ncbM acabrmw froaa dots. U i m 6-*> d long, with entire revolute edges; dakk green ahor<r, and pale underneath. Flowers fragrant, dense, yellowish ||IMIl.

Var. β; (Alph. D. C. l. c.) li tVWlOMgl f *h* S. Native of Silhet. I floribúnda, Wall. cat. ;.,.. MO*. I>.

Bundle-flowered Embelia. Shrub cl.

f B. Txa-riTA *{Ho%U.* ! ind. 2. p. 288.) lloiw. scandent, very much branched i !*«**• oblong- aetoUt*. '« d, sub- serrated I nwrnc axillary. Tb* shrub is uncommonly well-furnish d *mkh* liranchr* ami foliage. The ftowrn are paiOcularly sma l and <M»eatr, collected into little, UUOIIK, ml.* »....>. illary racemes.

<*W Kmbrh.. Shrub cl.

8 E. SU'TAN* (Wall. in Roxb. 1 JwL t. p. Z90. c«t. no. 2303.) ahrub nutant, at lragth pea .nit tin kUmlrf dtttae branches; leaves s.>mr»hat bifarious, approximate, lanceolate, acuminatrd, •mootfe aad ahi »cn»K* nuiiirrt*u«, short, 2-3 together, in l ax.ll ty laacicW. ♄. S. Nati 'f of bark of branches dotte l. »»liilc)UUI»K downy. Learn rather coriaceous, entire, pale, and mi nutely dotted Wmuh. reenish, *tth a duagrt—hl« •m»H. I in i >.-\ . . UM kW«b: iu *Aen*m* Mid Vritdutuut habit rrndri- it a dcwrabU omainrm in tropical gardens.

Drooping Embelia. Shrub 5-6 frrl.

9 E. SOSU'ERA (Roxb. fl. ind. 2. p. 287.) ramblin leaves, smooth, from OIIIMHJ to «»»tr : racvntr* axillary «in! terminal, solitary. *tf.* > Native of the 'ast 'odies, on the ltajinahui bJUa, Young liranchcv, and Malar *urr*cr* i >ny, the tn ck>thrd *itli ni«t-ci»l<- trd ami ftlandiilar lor • arc Ue»rt «nh sou, »b art clr»atcti tut ihr la! er. 1 tuwen greratah white, Calyx oaa.

R9im>$ KmV >robltng.

•mall, - no. <3O7. Alp), i l obtiw at the brou*, *littitii|t, n m n r i aaillary, thortrr than xlluUlr, pr> uncles velvety. ♄. S. Native of Sill •rt.

Var. β, major (Alph. D. C. l. c.) leaves oblong, acute at both ends, larger, a little toothed. ♄. S.

Small-flowered Embelia. Shrub.

11 E. VAGHUY'LLA (Wall. cat. no. 2309. Alph. D. C 1. c. 131.) quite gla ovate i liwflihli ••—iiilil ll both ends, entire, coriaceous, shining; peduncles simple, elon- gated, about equal in length to the leaves; pedicels very short. ♄. S. Native of Singapore. Leaves 2-3 inc ha* tong. cuspi- date. 1 lowers small.

*Tm*ti,i>* ed Embelia. Shrub.

It I ! SZE'RIAM-CÓTTAM (Alph. D. C. l. c.) leaves ovate .it elliptic, quite entire, thickish, evergreen, paler beneath; racemes small, axillary, shorter than the leaves; lobes of corolla roundish. ♄. S. Native of Malabar. Tejériam-Cóttam, Rheed. mal. 5. p. 21. t. 11. Basal, No. 2. Lam. dict. I. p. M I rdisia; Tejériam-Cóttam, Roem. et Schultes, syst. 4. p. il»- Hionaea solitar MIL akafBM gtoboa*. lowers greenish-bro Berr round, reddish, rather acid.

Tejériam-Cottam Embelia. Shrub or tt*e

13 i ! BARA'AL (Alph. D. C. l. c.) le» » n ovate, acutr, quite entire, aggregate, terminal; racemes •mall, I. lateral, shorter than the i N t n i aegn • nts of .on illa MM ♄. S. Native of MaUbar an. Cochinchina. Ardisia? Basal, Rœm. et Schultes, »y»t. 4. p. 517. Baaaal. Khcrd. *v* l. p. M I. L w m gUbrom, dark green 'lo • * • • • " i numerous, white, a«rrrt-«crotrd 1 berries small.

Basal Embelia. Tree middle-sized.

Cult. For oliurc and propa|rilmn see *Ardisia*, p. 20. rV climbing species answer wrll for tra ming up *tiu* rafters in st »*«•

XI i I CHORIPE'TA I \n \| rrota χωρις, *choris*, separately; and πετηλον, *petalon*, a petal) ba, a jwial | the petals are separate, not joined lugrtl" r a» in OUKT rrnrta of the order.) Alph. D. C. I I-<» trat. 17. p. 181. \\ yrsines dùbiæ, Wall.

I .. i*»T. *TtIrindt* 4-pcullcd; peialt f.ll.ny off aepi the petala, and an t-baar. Ant) than tlir filaments. Style filiform, shorter th ,T| thr pr tals. Ovarium superior, perhaps sometimes abortive, tberpfow the flowers are sometimes polygamous. I Drupe globose, 1-seeded. —Woody plants, natives of Asic :. |* aves alternate, entire, gla- broua, o*atr at tt e base, and narrowed a long way into the petioles. Flowers racemose; peduncles axillary; bracteas per- nvMKtu, a tlorrac alternate, small; the in ence is therefore that of *Emt>ritm.* Tin* j< i :»g the. con ills composed of separate prtalt, \ri>;r» lo» lds *Rhamnaceæ*.

1 C. AURANTI'ACUM (Alph. D. C. l. c. p. 131.) leaves ovate- lanceolate; peduncles spike-formed, simple, 2 times shorter than the leaves; petals lanceolate; filaments longer than the petals. ♄. S. Native of the Indian peninsula. Myrsine aurantiaca, Wall. in Roxb. fl. ind. : p. 300. cat. no. 2199. Flowers yel- lowish. A large rambling shrub.

Orange-like Choripetalum. Sh ' nit rambling.

2 C. UNDULA'TUM (Alph.]• < l. c. p. 132.) branch** full of elevated callous protuberanc r« ; lt•«»(•• iii-au- or lanrmlatr, acute at both ends, a little undulated, thin, full of pellucid dots; peduncles 3 times shorter than the leaves; petals lanceolate, acute. |>tanilu i.il l ♄. G. Native of Nipan 11, oti Sheopore. Myrsine undu jta, Wall, in Roxb. fl ind. 2. p. 299.

Undulated-leaved Choripetalum. Shru bcL

(mil For rulturr and propagation ae« </n/iai, p. tO

Tt,h III

MA'SUA (this tribe only contains the genus *Ma'sua*) Alph. D. C. in Lin. trans. 17. p. 132. Calyx 5-lobed. Corolla 5-lobed, in- duplicate in æstivation. Stamens 5, free, inserted in the base of the corolla, inclosed. Anthers ovoid-cordate, equal in length to the filaments. Ovarium adherent, half-inferior, many-ovulate. Style short; stigma 3-5 lobed. Seeds small, numerous, angular, fixed to the central placenta Embryo transverse.—Shrubs or trees, natives of Asia and Africa. s alternate, sometimes full '.. pellucid dots, v.nalilr <» the same specim rfi. Racemes usually asiltary, » mple, or branched, many-flowered; flowers allrrnat*-, o,t • hort pedicels; bracteas 2, almost opposite, near the ban- uf | M calyx.

M I M I M (maas, the Arabic name of one of the species.) Forsk. desc. is «ft. A lph. D. C. in Lin. trans. 17. p. 133. Bæbotrys, Forst. nov. gen. t. II. Blu nt.brjdr.M4. Rtbouratia, Pet. Th. nov. «eo. mad. p. II.

LIN. SYST. *Pentándria Monogýnia.* • haracter <br itmf as that of the tribe. This genus joins the present order to *Pri ni- lácea*, through *Samlda*.

MY1 E.€.

* *Pmmxka m rwermet t*

1M. <».*«0. Alph.1 • t
Iran*. K Jabrou* ; leave* broad el!
raceme* minal,
elongated »lmdcr. * •
Burman Empire. Lravn 6 inches loop:, and .1 broad, meat*
branoui, aliming, a little dotted. Flower* ap|trotioale- Stigma
3"'S C<1 *J a* -i
Jr. p. 944. i
Moag, loag-acuminated, raihrr
" M the bfandiWu, |..HIKU-» *
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i. year. Mir
. oaoVr Bar6bottv
• >blonK, HUMh arununatril, ftanoularlv oVntteuU
the baar, glabroa* oa both t* tbe braadik'tt i
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oos, UMMJJ actuMMted. |lam)«W1y dttn
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brow*: wrm* • axilUry, aimple.
le.
M«r*a. Fl. *ymi.* Sbrab.

* * *Raetmn*

•lt. nt.no. Mfl. Alph. I
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iatag on both aarCicm t n m w.
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M .MM
lonreolate, »ruinitiated, entire, uttooth ; pani< l <
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Flo«rr* unall, *T> Bernea anall
e. p. 144.) glabrou*; lt-
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fwmiii M « M . Sarah.
1* Jkl. »< «J l. <> !*..»!>. (1. MM). l. p.
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Vndcr raceaaca. Ho* >MU.
iJ/J Mtu.
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braactiM <IIWHM. oM one* <'
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tuiaifi
Branch— nthiraaimi. !-«•*<•• *.-* inrlm kmg.
d»*tt> • havmg a *U*•• altrrnatr btaoche* at la* baaa,
the appcanaet
not) —nh wh
M*aa. Fl. Apt.!, Mat. l*.
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j^ ^raWo, i

XIII. **COR**NOCA'RPUS (fr«><«»f»r,.«wy*' a club; and »w»f, *karpe,,* . fniit, .o r<(. rrtu. to (he ahape of lb« f. uit.) Forster, gen. t. 16. Schreb. gen. 394. Juss. 288.

Lin. syst. *Pentándria Monogynia.* Calyx of I concav. sepals. Corolla of 5 roundish petals, narrowed at the base: alternating with as many petal-formed scales, which are furnished each with a gland inside at the base. Stamens 5, ri *mK from the «Uwa *n(the- |« uli, Klb tMlp> •bort; stigma obtuse. Drupe terbinately clavate, containing a single 1-seeded nut.—A shrub, with alternate, stalked, obovate, d, sub-emarginate, quite entire, glabrc and i terminal, large, sessile panicles of white flowers.

1 C. levíga'ta (Forst. l. c. Lin. syst. 242.) ♄. G. Native of New Zealand.

Smooth LJWIHUF Fl. ? Cli. 1823. Tree. 20 feet.

Cult. For culture and pn>|Mgat M, p. «0.

† *Shrubs belonging to tht My sineácear, htit d*mb*fuJ to wkkh of the •r*frtt* lAry *ttpprrlam.*

* *Natives of Asia.*

1 Embe'lia ? lûcida (Wall. cat. no. tIK. Alph. D. C. l. c. p. 134.) branches grey; leaves oval, alternate, 2-4 inches long, •cute at both end*, ntrtarron , entire, with revolute hardly dotted *dgw,)•«*tii)i ilir lairrsl mri ves arched near the margin; peduncles spike-formed, axillary, solitary or twin, 4 times shorter than thr ! eaves, velvety: covered with ovate-acute, imbricating bracteas their whole length; ovarium sessile, •«MI<], 1(1 the •xils of ibe bracteas, terminated by a 2-3 lobed stigm.. ♄. S. N: : on cmgapore. From the ovarium, stigma, s.... bracteas «tMMt lh« t«>e of the peduncles, it agrees with *Mýrsine;* but from the flowers being alternate on secund peduncles, it agrees with *Embélia.*

Shining Embelia. Sh

2 Embe'lia ? coria'cea (Will rat. no. K3U. Alph. I'. C. l. c.) branches blackish, striated; leaves lanceolate, acute, In lf • foot lut; g, entire, glabrous, c aucescent beneath, having tli* Uirral nrhit liarclty r»iiiri>r, bcijiDitklnl »itli umall dots on both surfaces; panicle terminal, elongated, locwr, Iraffth of leaves; peduncle • and pnlirrU piloa*; calyx tflabrou*; lx rries round, dotted, glabrous; style shorter than the berry; stigma capitate. ♄. S. Native of Penang. Leaves and inflorescence those of *Ardísia,* but the stigma is capitellate.

iriacroui. v[1]

Coriaceous-leaved Embelia. Shrub.

3 My'rsine? umbella'ta (Wall. cat. no. M U. Al(.h. I. C. l. c. p. 133.) branches glabrous; leaves 2-3 nrhra Uwijt, oblong, obtuse, glabrous, a little denticulated, with revolute margins, thickish, slightly dotted; flowers axillary, on a common short peduncle: covered by ovate, acute, concave, rather ciliated, short brac ; pedicels umbellate, f lifnrm, i-fi in numbrr: caK I Ufa |parted. ♄. S. Native of S ng«|mf*. lalkmanNM* ttia* of *Mýrsine.*

VmtUrtU late-flowered Myrsine. Shrub.

4 A rdísia ? spica'ta (Wall. cat. no. 2273. C. l. c.) ghblMM ; Irat s on long petioles: petioles 5 inches long, dila . . . •ml nH^haMI * hing at the base for the •pace *v(* •ne inch: lw»b o*atr, act te at both ends, 3-4 inches long, 1½ to 2½ inches k»o«d, t pandly crenulated, coriaceou*, ftlll of pellucid dots, havi of lb* nr rvation very singular for the order: the lateral nerves e numerous, parallel, and very distinct, even to near the ma n, with «mallc», ha dly perspicuous, transverse nerves; peduncles axillary, 1-3 inches long, and are, as w lt aa tb« pedicels and flow .h r downy: bMfMtg lateral, tnatty-flower*d, or l flowered, alternate branchlets; pedicels usually umbellate at th* t»»« •>' the branchlets, 2 lines long: bracteas subulate, caducous; calyx deeply 5-cleft, with slender, subulate, erect\y inctirrtNl kib«: corolla and «tamrn» Mnln»*n j oraHum •apt* lobow. ' thick, 1-seeded, as in *Ardisia.* . S. Native of Singapore. The inflorescence is that of *Chorip*K,tum.* The p. tioles, being dilated at the base, are 1 ery like IIMMC of .*/«.«wi, and it will therefore form f, tlc„ genus.

Spicate-flowered Ardisia. Shrub or tree.

5 Ardísia denticula'ta (Blum. bijdr. p. .) leaves oblong, acuminate d at both null, l.lur.t.li at llii a; ex, denticulated at top, glabrous; umbels sub-cory nbtwe. T arely solitary, terminal or .i xillary; calycine segments obtuse; flowers for the most jiart •tetrandrous. ♄. S. Native of Java, on the Scribu mountains, and about *U ompien.*

Dentic "HrrMr.. ved Ardisia. FL W arch. Shr lb.

6. M IA TaffmA*»M (Roxb. fl. ind. 2. p. tU.)loftvc«i natc. oblong, entire; rurcmri axillanr, »'owers tetrandrous. ♄. S. Native of the Moluccas.

Tetrandrous Marta, Shrub.

* • *Natives of Africa, amd probably Utomfftng to tkt genus* Btfi'a,

7 Ardísia *microrhy'lla* (Roem. et Schultes, syst. 4. p. 304, ex Pet. Th. in. herb. Willd.) leaves obovate, acutish, quite entire: peduncles axillary, 1-flowered. ♄. S. Native of Madagascar.

Small-leaved Ardisia. Shrub.

8 Ardísia floribu'nda (Roem. et Schultes, l. c.) panicles axillary, divaricate; leaves elliptic-obovate, quite entire. ♄. S. Native of Madagascar.

Bundle-flowered Ardisia. Shrub.

9 A rdísia pyxidíòlia (Roem. et Schultes, l. c.) peduncles racemose, terminal; leaves obo »alr, coriacrou>(quitr enure. ♄. S. Native of Madagascar.

Pear-leaved Ardisia. Shrub.

10 Am ísia erythroxyloides (Roem. et Schultes, l. c.) flower* b teral, sub «|>icate at the topt of the branches; leaves lanceolate-obovate, coriaceous. ♄. S. Native of Madagascar.

Erythroxylon-like Ardisia. Shru

" * ' *Natives of imfTM-a.*

It Mi sine? spica'ta (H. B. et Kunth. nov. gen. amer. 3. p. 250.) leaves obovate-oblong, rounded at the apex, quite en[1] tire, glabrous, glaucous, pruinose and shining above; spikes axillary, about equal in length to the petioles; flowers sessile; corollas 4-5-parte! *; , S. Native of the province of New Guiana, in inundated places on the banks of the river Atabapo. Leaves coriaceous, 3-3½ inches long. Segments of calyx ovate-acute, full of glandular dots. Corolla yellowish, with bluntish revolute segments, full of glandular dots. Stamens, with very short glabrous filaments: and erect, lanceolate, and tetragonal anthers, which dehisce lengthwise inside. Style filiform; stigma simple. Ovarium ovate, glabrou*. I'trlajin a species of Weigéltia; but, nevertheless, it differs in the for m 4ni| »ir e of the anthers. Inflorescence not that of *Mýrsine.*

Spicate-flowered Myrsine. Shrub « to If I feet.

12 Ardísia Brazilie'nsis (Spreng. syst. 1. p. 662.) leaves lanceolate-oblong, tapering to both ends, membranous, entire; luti i. les lateral; peduncles umbelliferous. ♄. S. Native of Brazil.

Brazilian Ardisia. Shrub.

* . . . *Native country doubtful.*

13 Ardísia multiflòra (Roem. et Schultes, syst. 4. p. 304, ex herb. Willd.) flowers racemose; leaves oblong, attenuated

al hoik end*, wttrt
try unknown.
MmwfJUwwni Ardaw. Shrub.

t t *PUuUt rt/trr*4 to the «r4er Myrtmt+ct*. which mght* to ir

t*Ti»»- H. B. et Kunth. ,<*». rrn. sntrr. 9
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ft «<-» • la jMr.1.«

I O. ^ii-, Prrrrt. et OaiD. N.
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lleJUUfat.

3 J. BERTE'RII (Spreng. syst. 1. p. 668.) leaves attered, sub-spatulate, (BI utish, coriaceous, quite glabrous; corymbs trim mat, few-flowered. ♄. S. Native of Hispaniola.

Bertero's Jacquinia. Shrub.

6 J. MACROCA'RPA (Cav. icon. 5. p. 55. t. 483.) leave« lanceolate or lanceolate-obovate, macro iialr, glabr.. us; flowers racemose. ♄. S. Native of Mexico, by the sea shore, •i far from Panama, Acapulco, &c. Bark violace *otu. U* -iraiig leaves 2-3 inches long. I lowers i orantff- -coloured. Berry -coloured, cherry-shaped.

Long-fruited laufhii I Fl. May, Sept. Clt. 1825. Shrub 6 to 8 feet.

7 J. AURANTI'ACA (Ait. hort. kew. 2d ed. vol. 2. p. 6.) leaves obovate-lanceolate, acuminated, ending in a |ungent point, glabrous; flowers racemose. ♄. S. Native of the Sandwich I«lan Si *m,* l«ii. «•*. 1*699.* Hranr hr« «ub verticillate. i <*m oraiuM-cotoum]. (f. 6.)



Orange-coloured 1 flowered Jacquinia. I l. \pril, Sept. Clt. ITW Shr b *3* to I feet.

8 J. k ESCITÒLIA (Jacq. amer. 54. ed. pict. t. 57.) leaves lanceolate, verticillate, glabrous, ending in i spiny taper point; peduncles 1-flowered, drooping. ♄. S. Native of South America, and of Cuba, *in* mountain-woods. Medèola aculeàta, Lin. spec. 9SU__tltll. rill., p.] l«. l. l 23. f. 119. Branches dichotomous. l eaves 5 » ina whorl, an inch long. 1'lowrr* white.

Ruscus-leaved Jacqui n». Kl. Clt. I7<9. Shrub 2 to 3 feet.

9 J. FERRAVOINEA (Spreng. syst. 1. p. 668.) leav < • attrrnatr, linear, Knight, cuspidate, rather coriaceous, ru*tv IHTH»III, veiny; peduncles sub-rec xillary, few-flowered. ♄. S. Native of Hispaniola.

Ru tti, larasinia. Shrub.

10 J. LINEA'RIS (Jacq. amer. 54. t. 40. f. 1. ed. pict. t. AS.) leaves 1 near, acuminated, pungent, whitish beneath, n»u»lty twisted, with revolute edges; pedicels soli owered, pendulous. ♄. S. Native of St. Domingo, on the sea-shore; and of the Cayman ulawrta, nnil shore, within reach of the tide, where we 'ave seen it in great profusion. 11 ibit of *Andrómeda polifólia.* Flowers red. Segments of corolla reflexed.

Linear-le itctt Jacquinia. Fl. May, Sept. Clt. 1823. Sl.rub 1 foot.

I J ? VENÒSA (Swartz, pro I, p. 47.) leaves ovate-lanceolate, veiny, rather membranous. ♄. S. Native of the West Indies. Swarf/ has omitted this plant in Flora Indiæ Occidentalis. It is probably the *Pychótria* >i *mcftatatpt rma,* VaJit. and tK>t a species of the present genus.

Veiny Jacquinia. Shrub.

Cult. Jacquinia is a MMM ui \. • . i , MV **lituti«, nlirit* in blossom, and are, therefore, very desirable in every collection of stove plants. A mixture of sand and peat i l l | ood soil for them; and if they were watered occasionally with salted water, they would probably grow and flower more freely. Cuttings will strike root in sand, under a l l U ss, in HM

Jl < I \\ I JA (named by Bi il ami Pavon, iflcr J . Clavijo Faxardo, a Spanish HtajffJiajlJ Kuti ct NV. «>»< fl [«*• Ip. VOL. IV.

254. •Hk r. N D l>oo. tn rJmb. phil. journ. j«n. 1831.— Theophrásta species of authors.

LIN. SYST. *Monadélphia,* nearly orbicular, concave, finely and crosely firuUtrd. Corolla -nts fleshy, with finely crenul Crown .»r IIM throat 10-lobed; lobes obtuse, fleshy. Filaments combined into a pyramidal tube; anthers trigonal, c nil.lin <1 iniw a starry disk, with the cells hardly drawn out at the b >»*, »t length 4-lobed behind. Style attenuated; sti mi •null, truncate. Berry globose, crustaceous, 1-celled, usually many-seeded, rarely 1-2-seeded. The rest as in *Theophrásta.*—Shrub^ with simple, unbranched stems: furnished with a ruft of long, spiny-toothed leaves at top, somewhat in the manner of palm trees. I Leaves alternate, crowded so as to appear verticillate, spreading, oblong-lanceolate, coriaceous, glabrous, reticulately-veined, with spiny-toothed or quite entire edges; petioles callous al tit* base. Flowers terminal, racemose, white or orange-coloured; they are hermaphrodite, but never dioecious, as said by the a ii tin ~ of *Flora Peruviana.*

ire edges.

1 C. MACROCA'RPA (Ruiz. et Pav. syst. fl. per. et chil. 1. p. 284. gen. t. 30.) leaves tpatulat -oblong, acute, stiff, dotted beneath; petioles hardly an inch long; racemes very long, pendulous, glabrous. ♄. S. Native of Peru, in the forests of Cuchero ai»*l I Muna, whe 1l> it •• commutii y called *Lucuma de Monte.* Leaves 1 to 1½ foot long, with cartilaginous, sub-reflexed edges. Hat. in, from a span to 1 foot long. I lowers large r tban (.. her apr. ies of the genus. Berry size of a crab-apple.

Large-fruited Clavija. Clt. 1816. Shrub 10 to 12 feet.

2 C. LONGIFÒLIA (Ruiz. et Pav. syst. fl. per. et chil. 1. p. 284.) leaves spatulate-lanceolate, acuminate, n ather membranous; petioles 3 inches long; racemes erect, downy. ♄. S. Native "I l'. ru, in Pati and Macora. C. lancifólia, De in imuv. ann. ntii». |. p. |O«, t. 14. Lrarn \\ t 2 feet long, and a h *nd in tiri-mltl.. lt. rry size of a cherry.

Long-leaved Cla riji I i *mm* 5c jit. Shrub * lV#t.

3 C. SPATULA'TA (Ruiz. et Pav. l. c. p. 285.) leave» oblong-spatulate, obtuse; petioles 1½ inch long; racemes erect, smoothish. ♄. S. Native of Peru, in the woods of Pozuzo and •: Muna. Leaves rather membranous, a foot or more long, and 5 inches broad. Racemes 3-4 i irhc* k«w»((. Berry tier of a cherry.

Spatulate-leaved Clavija. Shrub 6 feet.

4 C. FE'NDULA (Ruiz. et Pav. l. c. p. 285. D. Don, in edinb. phil. journ. jan. 1831.) leaves lanceolate; racemes lon it- 1" """ lous. ♄. S. Native of Peru, in the forests of Pozuzo.

Dro /•njf-iaccnW CUvija. tihru 4 to 6 feet.

§. 2. Leaves with spiny-toothed edges.

3 C. OBNA'TA (D. Don, l. c.) leaves long-lanceolate, acute, spiny-toothed; petioles a nail in length; racemes drooping; berries usually 2-seeded. ♄. S. Native of Caraccas, in woods. Theophrásta longifólia, Jacq. coll. 4. p. 136. hort. schœnbr. 1 116. ! eaves 1½ foot long, acute at the base. I Racemes 3 to 4 inches long. Flower• orangr-coloured. Berry size of , unall cherry.

Ova ,IW»Ifl/ I Clavija. Clt. 1828. Shrub 10 to 12 feet.

6 C. UNDULA'TA (>' C. l. c.) leaves cune •« latiiiiilatr. •*•- minated, spiny-toothed; petioles half an inch, |,HW I».g. N-' ive of Guayaquil. Clavija, spec. nov. Ruiz. et Pav. in herb. Lamb. Leaves hardly a foot long, acute at the base, with the margins sionlatel i toothed MM tMMlulaittl. I In • ers not seen.

Undulated ub.

Cult. Shrubs very like *Theophrásta* in habit, -hich see, p. 26. for culture «d prnpagMi—.

i tmni Cbvfi ••

III THEOPHH\ BTA (to named from Throphrtstus, the Jallwr of natural history. Ju»- M. #

|LIN. SYST. *,iamdntt. Momagifmm.* Calyx, campanulatr, cartilaginous ; Mgni' tilong^ with ir.»cly-tothrtl edge*. Corolla earnpmnulatc. with a start tube, a dilated pentagonal throat, and a spreading limb; throat girded by an elevated, angularly-iobrd, fleshy,arched ring. Stamens 5, roiulxnrtl with tbc tube of the corolla; antl> td with a beak-fanned, obuiae appendage. Style attenuated . ttigma rjp.tatr. Berry spherical, rriistareotts, manytecded, burning irregularly ; ie«dt half immersed in the placenta.—This it a small tree, with a tuaple, unbranched atem: furnished »ith a tuft of long, c* rrgreen leave* at top, somewhat in the manner of a pal Lcavea alternate crowded to as to appear somewhat n tutilLiir, thnott sessile, oblong-lanceolate, eonaexuu*, stiff, gtabrou*. pal* green, a foot or a foot and a half long, with undulated, dentatcly Bpinoae margin*, usually trunratr at the base and path, very smooth, with a very thick midrib : bV t hardly evident, except in the dried state. I inal, raectnoac; racenu* numerous, raany-flo ig the leave*, very short, hardly S inch* long. Corolla white. Berry me a crab

I I. Jiuiiti (Lwd. coll. t. 26.) . S. Native of St. !>.»minui), on the mountain- Th. Americana, Lin. spec. 1. p> Slt.T

Swam, «»ba. p. 58. I t. prod. ft. ind. occ. p. h. Henrici, Hamil • •is Colin •nuiKflii k>tyi- ! (ti. gen. p. 8. t. *tt.* icon. *Jmttiemt* Theophrwta. I tit. Tree 10 fa

Cult. A small tree, handsome on account of it* long, holly* like leave*. A mixture of prat, loam, and tand. armvere tt nd cutting*, having the learn remaining on tntirr, ».ll ,il, under a '

l\ DM TNUS (from eye,«(.(M*M<M1abook; • reference to the _ Menu of the corolla being ho • WT, eocl I «i>fv«>« iKular, i-notrhrd. • Corolla I |>ed, Seal •II I T marginal*; crown A-«lt •, in the }i of the tube I filaments fixed to the middle of the tube, anther* stmpl Ovarium globose. Style short. Stigma acute. Berr\ globose, large, ihtmntf, 1-celled, n many-seeded. Seeds '1, roundish, *m* I riaatblag shrub. Leave* ovate'•lanceolate, *tt* i -, tn long, racen»os*, lersshaaj rurymbs. I !ibW, .ml somewhat Mraaeai

1 O < Theophraata Cochinchinenus, Spreng, »y

'u»-<-Ai»-> • cl.

*TheupltT&Mt** above for culture and propaj. v

\. IEONIV named •• promoter of the •cw-nce*. whn .ing out some titlinm • of the Flora Peruviana.) Ruiz. et Pav. fl. per. et chil. 2. p. 69. t. 222. Mart. nov. gen. bras. 2. p. 86. t. 200. f. 1. in letterpress. Steudelia, Mart. l. c. in tab. 108 and 169.

LIN. SYST. *Pentandria, Mtmoffimut.* Calyx •mall, *> l.*bed, ||,.n,|,,,iu«, with w»rn" mis, «-celle<! Utr. Stamen* 5. eom' • a pentagon • ,.a»etal plaeM- \l i l r "\ n> ''l' l ' ' * * . ' " ! laiain..... •Ubteo* llowert rrrafll colOBretl, lull »t gMMMaw aota, das* " *i* madlary raoaa or rymei.

L. i a. P-M. l^ai •. oblong, radiag » • abort, acuie point: aggregate raceme*. *; S. of llf.nl. oftib* *m* \ • .;.,., jt Serat MM Of 1 f f U< law ([IjTf ICaVfp** •9. t. *tit.* Corolla yelkm, wtta *»U, concave segments Seeds obovai*.

• e 30 to 40 CMI.

l«9. ander ^»*Wl»n in lah immated at both end»j o>mrt of Aowm Uhd, • rect. of Bra*il, in the proviaw of Rio Negro, at I *... in wood*. Seed

For culture and prepagaajaa see *Theophrdsta* above.

ORDER CXLV. SAPOTACEÆ. E. Bapotar. iaat. ga*- II. It. Dr. prod. p.

Flowers hermaphrodite. Calyx divid«4, regular. Corolla munnpetaluu*, bypogynoaa, regular j bavotg tl «)ual in number to the divntona of the calyx, ra/ely double of that number, *4m* Staawaa eprpetaloaa, d»*tmi***' t« oar* fOjanl m smmbev to ibe srg—rau of the calyx, rarely more, and oppoein them, bat aJteraaunf wtlb the segments of tbe corolla; atenle oaea etjaal in number to tar lentie ones, ana aiiemwmg "i»n incw, VSMSSSSSSJ nj usually bel. ' >>*a«aBl many-crlW; OtvJi an gma w divided, sometimes lobed. H .ti.ty I-celled from abortioa. ajaettBBM eonbiurd into a many-crlWd pata- > bony, shining, with ibe front more or boa arraptd away, and opaque Embryo etect, white, Urge, aaaally iackw <h aJbsjaara. and Aeaky m those wnawat, coamaie ; with a abort straight or a lUtfe tacUaed radicle, Iwoktmj towards tbe hilum. and an wtonapiraaai plumule.—KIMK *t r - ot* sbrwW, the greater part native* witbm the iraasn, most of which are *m* • MM altrrnai law, quito *m&i*** •• roui, Inflore*eence aadlary.

•.* more aearly allied to £4Wn*Vr« than to any other, but dtflen from it m tbe apeciMbeuag mtlky, ta ibe arood being toA, in the naawaa being deflnit*. in the flowers Wiag bvrmapbrodit*, M the style bring andivided, in the cells uf tb# ovariam bring always l-sredvd. ia the ovuU betog rt ll.r testa of ihe seeds beiag bovry, and m m*ny otbrr cbaracMrr*. iitawwl m tht* order an cbtefly valaaab for fruit, whirh m many eaar* eoatrtbaMe richly tn the dew» arr all of this desniptMNi, aaaaVa of tb- pradace of several <p»rie« *<4 (ktftwfkfttmm,* and par- »/». are leltimidaVaoows *i* and ibe maatlars. luotmaM, and aaaoi <tuino«ial Ametira. all tbe frait of rat kim) laaj are aaMMsg iU most valuable areduetiom of ih» Wrrtera wwld. Tbe sewd* of ait th» order are thoae of *Atkrm* mpkm* tii xtuwaUd «Var*Ue and apr neat. Tbtw oil ia awl laid, bat aa raannii a* to bar* the appearance and waiiatear* of batter, waanre tbe aama of aaitef- trv* bat beea aptolieJ lo dilWaat Mtin. bmh la taJb and

Africa. THt most famout d this descriptic * «• llu> l»»«d»«n *Mas«, Mif«, or MtuUmm, the Bássia htijrActa,* and the Afr•can *Skra-trt*. BAtiia I'árkii;* the *(*&* of (he former are so oleaginous, that a single tree has been .. nown to produce three i|u ntalt of oil; <IM dried flow <r» of the »nw trrc are mixed by v MHM Indian* »»th their f<*»d, am) » «j»«rit it distilled from them by other.. The juice of all iW aapol.. milky, but not acrnl and poisonous, like "»»« <• most other h d n n m order*, but. 01 the contrary, yiel:'"B • wl>ole*omc bevcragr or *fowl.* According I Mr. R. Brown, (lie bark of •ORi. species of *i'eh'a** am) /,«r*awt it *o aatnngent BIK) I fttgal a* to be uibaiituird for qujpq*)*—. <••• M t«»rk. Peruvi

.Vyioptt *of ike gentra.*

, . HtatAti SIA. Calyx 5-parted. Corolla A-clrft. Stamen* 10, 5 fertil• ami 5 atrnlc. Stigma undivided. Ov >rium 5-celled. Berry 15-•ceded. B -Hiumm. jrcmtt.

* AXOAKIA. Calyx 10-parted. disposed in a double *erie«. Corolla 5-cleft ; •egmrnt* •ub-emarninair. Stamen* 10, & fertile, and 5 »: erile, petal-like. D rupe containin r a 1-3-cellnl nut, •otnc of the e»IU usually «bo\e, marke'1 hy a* many furrow* a* there arc cell*.

tyx .'.-parted. Corolla 5-cleft, *m* tiliculttii cl loaa at the ba> 1» *egmertt. Stamen* 5, alu-rmitiiiK wnU the 5 teeth or sterile stamens. |erry 5-celled; celli 1-aeeded, not all f< rtilc ; *ee<i» exalbumiiiou*, bony.

4 Hi'Mi'Li*. Calyx and corolla A-parted. Stamen* 1". alternating with 5 mrmbranoiti Mr rile our*. Ovariutn 5-celled. |) •»<< <k« d, Seed* album inoaa.

titioji. Calyx and corolla 5-pai tmrm *5,* fertile, without any »t< rile *oan.* Ovarium -celled i cell* 1-seeded. Stig tna obtutr. Se. alliumii. ds bony,

6 CHRYSOPHYLLUM. Calyx and coro lla A-p«rt«>d. Stamem *S,* fertile, and no *ierile ooei. Simula obsolete !y tO-tobcd. | 10-celled. Seed* bony and albm minous.

\ n»,.. Calyx '-parted. CorolU <•< left. Sta ucnilf, sterile fertile. Ovariu -celled, 12-6

awl I in 194 -*ceded. •da albuminou*, bor

*»4, Calyv ilai-clcft. St*men» I md 5 »t*rile, wale-like. Oranum I !> .-crllptl. Berry Sactla bony, exalbuminuua.

!yx X-clrft. CorolU 5-rleft, lonir an.t »r» . n» 10, Uwertnl in a ilouble row. Stigna eon. at**. i tji* eontprewed, ova?' iai at top, eontainiag ihry rrticuUted nut. Embryo rxalbuminott*.

x 8-0• parted, ill a twin order. CorolU M»mrn« 6M fer< «.), and 6^ rmm «-»-«U«l. Berry few. •MOtd from atw< ed* albumin- >ua.

II UaairAfeiA. I a trijJe .1 •ntmriK.. Sumen* I al*ril« and « fcmlr. Ova- II Kcellrd, » .rrtled Bet' • abortion. Seed* albumin nawitacaon*.

II O a n u a u ' u .lyx manjr-parud, cotercd by 11-11 concave •caWt. Corolla 6-7-clefl; urgment* alternatinft with a* many fringed wale*. Stamen* 30-40, dUpoved in unequal •en.. i ruit solid. woody, umbilical*, many-cclle.1, many-seeded.

13 HA MIA. Calyx 4-5-pantil, Corolla »• parted. Stamen* 16, diapo*ed in * double row. B a n j ti-M.retlrd ; cell* l-*fcded. 8a without all omewha(trigonal, bony.

II LA»VI:<. Calyx 4-partrd, the 2 outer •egment* the larfte*t. Corolla +-t .inrn* S» 4 atcnle and »<ale-formed, and 4 ftrtile one* tnaerin] in tl the corolla. Btrry b«r<, roughish, 4-celled, rarely *t*-celled 4-*eedetl. Scedt exalbumim>u*.*I*

1 x and corolla 4-cliTi. Stamen* 8, 4 U- au.1 btiattl if an anlUte aht >>ed

16 Pin LLIXE. Calyx 4-toothed. Corolla 4-par ed. Sta- iiM'tik 4, firiilc. Capsule 4-relled; celUrorky, dehiscing inwde. Seeds solitary.

t grni,i hardly ifurttn.

17 MoNTA'atA, Calyx tubular, «uh *5* unequal segments. 1 orolla funnel-shaped, wit 'i niu i|iul x (tun IIt». Nrctary monopliyll- ous, or tanwii* i-8 combined, fti ed to the superior part of the tube of tin- comlla, A-tootlied at i op, wit> an anther betMcen each of the teeih. wbti ably abortfi stamens. Shfrma gl obose, obtuse. I Wry 3-J-crH.-*!, 3-2-»e«ded. Seed anllatr, utnbilicate on one -de.

I SI RSAI I .t> .nnnoryo salt*, a Ni ajMhtati .c l. v; I p. 518 —Sideróxyl ii apaMa of autl rolla A- -tameii* : <nng ant Inn, alt<-niaim^ *»' <fnaa UIHIMI<!< ili i'laibunuimu*, with a crustaceous testa, and longitudinal hilum.—Shrubs, withoborafcf leaves, and axillary. ^*Inif tiiiM.Tt. i are ll>(ne of *Sideróxylon,* and the fruit aln KMH ili«l ..)' *Hum. dm,* .»»» ovate or oboval "ding tl DM at ibe blue. NV p. -i«.», i. fej |n i. a liltlr kiirnuati baaatth ; eaJy&e* nti> <IMI» : witl rhicaUr acgmetit*. whtca ami •• flUIII.'lit* ; »(lr 1 »ithtn (he in.) •m, peal, and wu«l •• a good aoti ft* the species of *Sersalisia;* and rutting* Una* root freely ia *aod, with a hand-glass over them.

Il . ARGA'NIA (*Argan* . ilw aboriginal aaa>< le*l!rt>, "i l ather scales, roundish, concave, disposed in • double a t

series. Corolla cup-shaped, 5-parted, with ovate-lanceolate, sub-emarginate •ego*' '0g ^ JM't-jl- MFgmenia, adhering to the K olli, and alirmaitnf with it< »i-jr' nents. Stamens 5, filiform, length of ••sroUa, and, adiuir to tta ba»e; «nthers incumb. back. Ovariurn conical, Jw labrow*; length of •tatnena; nipma »tmjilf. *Vt ny* ttvl, 2-3-celled; cells 1-seeded. Seeds hard, smooth, having a longitudinal l

1 \. mibtmoxTt

ȳ. H Matmoftl

rocco; abuodani in woo>l

l

bort. kew. ed. 2. vol. .' p. 11

ITU, in aim. n.m. 8. i l ,

ob,. 6. p. 28. W

Bliamnu. prntaj[1]

1

ldl«- »)w, with a bttthy hrad. Brar^Se* irr- rty itroag ipiti. Lea*r« bacvol *m,* Waatiah, itbliMHi*. paler brnrath ; the lower one* ia faancl**. Flo* l roDamwf of • plttOl, full of

from *m>».* 1 July. C 1. 17U. Tr. 15 to 20 ft.

Celt. The tree will grow against a KWIh * all. b.it will require the protection of a mat in severe wi iihcT in wtf •er. It is to be propagated by cut tng* ia Mnd. lWMITr a haod -|(la»«.

in sim

«II *""I»«"H. *uJrrtt,* ifon, and . dlWM Of ih. I

t. p. R*n no. Ml. Ju». «• Oar l. ||0. Vrtil choix. t- M.

Lin. syst. *Pentándria, Monogýnia.* Calyx small, 5-parted. Corol roundish, concave segments; havi ig a lobe in each recess. Stamens 5 (in one species 10), length of corolla, alternating with the teeth inside the corolline segments, which are probably sterile stamens; anthers oblong. Style length of stamens. Stigma obtuse. Berry 5-celled, 5-seeded, but some of the cells are usually abortive. Albumen sube ••MIU- l Embryo obliquely ascending.—l Evergreen trees, with axillary and lateral fascicles of flowers.

Shrubs unarmed.

1 S. inv'xnx (Lin. in Dill. hort. elth. 337. t. 265. f. 344.) spec. p. 278.) leaves oblong-ovate, obtuse, glabrous; flowers in lateral and axillary fascicles. ȳ. G. Native of the Cape of Good Hope. Jacq. coll. 2. p. 250. Mill. ill. t. 299. S. Argan, Lam. dict. 1. p. 243. ill. no. 1455. t. 120. f. 1. Roemèria inérmis, Thumb. in Rœm. arch. 2. E>. f. 1 eaves coriaceous, shining, 3 inches long, attenuated at the base. Flowers small, with a green calyx and white petals ifi'l •l.invfii* S?i : li tiljii.tii'i lAll eolate, acuminated, M.l. ., IK .

Unarmed Iron-wood. Fl. July. > lt. l » t . Kb. 5 to < ft.

2 S. cnx'nxvm (Lam. dict. 1. p. 244. exclusive of the synonymes) leaves obovate, flat, reticulated with veins beneath; flowers axillary, |«4 tn a faaricle. > . S. Native of the Isle of France.—Burm. afr. t. 84. f. 2. Uranehe* rufrwewt. Leaves coriaceous, glabr ,u«, ,d •"«••' '"'"' 1-1 '* r " Mnall, WVM(«.

Grey-barked Iron-wood. l*n*<'(> 10 feet.

3 S. sirinem (Blum. bijdr. 675.) l •vn oWong. MICWMIMI

at both ends, shining; flowers crowded into axillary racemes. ȳ. S. Native of Java, in the province of Buitenzorg, in woods oa M Mount Sulin, where it is called *Njads.*

A*i«mf In -wood. Tree 80 feet.

4 S.? xvoosum (Rœm. et Schultes, syst. 4. p. 501.) leaves oblong, acuminated, glabrous; flowers in axillary fascicles; fruit wrinkled, acuminated. ȳ. S. Native of Jamaica, on the htgbrr rm.un ains. Chrysophýllum rugósum, Swartz, prod. p. 49. fl. ind. occ. 1. p. 484. Willd. berl. mag. 3. p. 60. Leaves l**tf»\ p» er beneath. *atutk* to-ctrft, 5 of ll e segments obtuse and 5 very short. Fruit size •f a Afb* -, yellowish brown. Seeds ovate-oblong, compressed.

M *rinkled-fruited* Iron-wood. Tree.

5 S.? Cantoxia'nse (Lour. coch. p. 122.) leaves palmate, glabrous, on long petioles; peduncles solitary, axillary, many- l «rb«< Bow err MM »|aHbr Shrub climbing. Calyx a small, lanceolate, decidu Corolla 5-cleft. Nectarium acutely 5-cleft. Stamens obtuse. ... . ry roundish, 4 d, 1-seeded. Root a large round tube, tapering at the ase. i ! his is certa nly rnrf a r*jnalaa), nor does it appear to belong to the order.

Canton Iron-wood. Shrub cl.

6 S.? ATHOVIARNS (Willd. enum. suppl. p.) 1 j Utw. late, acute, smooth, pale beneath, approximate; flowers «•>! •« all, racemose, axillary. ȳ. G. Native? An erect, branched I shrub, with greyish white branches; petioles blackish, brown. Flowers white. Perhaps the same as S. stroviréns, Lam., or probably S. nigricans, Dum. Cours.

Dark-green Iron-wood. Shrub '. 11> III I et.

7 S. Guadalupe'nse (Spreng. syst. 1. p. 666.) unarmed; ate-oblong, blunish, coriaceous, quite glabrous, parallelly veined beneath; peduncles solitary, 1-flowered axillary. ȳ. S. Native of Guadaloupe.

Guadaloupe Iron-wood. Tree or shrub.

8 S. tomentósum (Roxb. cor. 1. p. t. 28.) leaves oblong, Mn J ulated, downy; flowers in ax latjr f»- cicles; berry 1-5- seeded. ȳ. S. Native of the East Indies, '« tW top* « .....wan Bark ash-coloured. Leaves smooth in the adult state, but clothed with rust-coloured down while young, 3-5 inches long. Flowers small, dull white. Berry ovate, size of an olive. Seg •M of enroll* an ish. S. Wightiánum, Wall. no. 4154. appears •> W only a gUbtMM »•(• ety of *S. tomentósum.*

Tomentose Iron-wood. Clt. 1818. Tree 8 to 10 feet.

9 S. oaxvoisóicum (Wall. in Roxb. fl. ind. 2. p. 548.) leaves obovate-elliptic, i>m«r or acutitu ated, tapering downwards, smooth, crowded at the tops of the branches; flowers globular, in numerous axillary and lateral, crowded fascicles; segments of corolla obtuse; ovarium densely bearded. ȳ. S. Native of Silhet. Branches angular. Leaves 6-12 inches long. Flowers small, pea-green. Stigma truncate. S. régium, Wall. cat. no. 415. (a native of Pegu) does not appear to differ from this.

Great-leaved ! Iron-wood. Tree large.

10 S. Wallichia'num; branches, petioles, . «l Ml midrib of leaves clothed with rusty villi while young; leaves , ellip- tic-oblong, or oblong-obovate, acuminated, on short petioles, largr rr""il. ◁ * :. the tops of the branches. ȳ. S. Native of Penang- •Vl .- • om, Wall. cat. no. 4158. of Rœm. et Schultes.

Wallich's Iron-wood. Tree.

b«t M S. rravósum (Wall. cat. no. 4159.) branches, petioles, and midrib of ' vouag leaves, calyxes, and pedicels clothed lit* rusty villi; flowers ra *tbet kr ge, in crowded, close, axillary lateral fascicles; leaves large, oblong with a short acumen, on tK ort thick petioles, rusty Uii_ut' ȳ. S. Native of the tUnmrw rai, .t l . -, on the banks of the Saloon river.

Nerved Iron-wood. Tree.

• • *Afwtdtkrmbt.*

12 S. ARMA'TUM ('Rolh. w»*. *if**** P 67.) prickly, about equal in length to the petioles; scales ... both ends, downy beneath, tomentose while young; pedicels •Ml; ary and lateral, crowded. ♄. S. Native of the East Indies. Very like *S. tomentosa* in the leaves and flowers. '4 1(1 1 The flowers are scattered without order.

Arm Iron-wood. 1'ee.

13 S.? DECA'NDRUM (Lin. mant. p. 48. Willd. spec. 1. p. 1091. rrol. mag. p- 55.) spinose; leaves elliptic, deciduous, glabrous; flowers in axillary fascicles; stamens 10, fertile, length of nrriafy. ♄. S. Native of South America. Spines axillary, solitary. Cor ...sel-shaped, with concave segments. Segments of nectary or abortive stamens serrated. Anthers sagittate. Berry black, 3-5-celled.

Decandrous Iron-wood. Tree.

Cult. For cu ...tion see *Sersalisia*, p. 27.

..... liurc andpropag,. the Greek name for the common •»)>) Swartz, prod. p. 49. fl. ind. occ. 1. p. 493. Schreb gen. 1756.—A'chras species, Lin. Poir.—Sideróxylon species, *hum.* »i. others.—Chrysophy i'"m species, Aubl. and others.

LIN. SYST. ... Calyx 5-parted. Corolla with * IIHKI tubr. and a 5-parted limb, furnished ... »ith I scales at the base of each MV'lirtil, Stamens 5, inserted in the tube of the corolla, and opposite its segments, having i* many membranous scales or sterile filaments alternating with them. Ovarium 5-celled; cells 1-ovulate. Stigma simple. Drupe oval, 1-seeded. S. . i! iitniin-t. '. . — l r«i •, r»r« IT »linil>» l ·· .'> > » scattered, entire, permanent. Peduncles axillary and lateral, 1-flm-. ered, usually crowded in fascicles. Flowers whiliah.

• *(tunmrd tkrubt • trees.*

I I . SIONA (Swartz, prod. 49. fl. ind. occ. 1. p. 487.) leaves oblong-lanceolate, glabrous, with undulated margin ... • • | liranchleta twiggy; flowers 4-6 in a fascicle. ♄. S. Native of Jamaica, in mountain woods. A'chras nigra, Poi ... 6. p. 532.—A'chras, Browne, jam. p. 201. Sideróxylon nigrum, Gærtn. fil. c irp. I. f»« 3. p. 125.† Bark blackish. I leaves crowded at the tops of the branch,*c»*, dark green, drooping. Segments of corolla and calyx ovate, concave, white. Sterile filam rota lantwoUu- undulated. Drupe glabrous, roundish.

Black Bu ... 6. Tree 50 feet.

2 B. PA'LLIDA (Swartz, prod. p. 49. fl. ind. occ. 1. p. 489.) leaves ellii ...tic, obtuse; pedicels crowded, lateral; branches erect. ♄. S. Native of Jamaica, in fields. A'chras pállida, Poir. suppl. 3. p. 533. Sideróxylon pállidum, Spreng. syst. 1. p. 668. Very nearly allied to *B. nigra*, from which it differs in the smaller stature, whitish bark, and stiffer branches. Two of the calycine Mip, ...ents are larger than the other three. Corolla yellowish white, divided even to the bur ; ujjim i ...ts without any scales at the base. Scales or sterile filaments trifid at the apex.

Pale Bumelia. Tree small.

3 B. RETU'SA (Swartz, prod. p. 49. fl. ind. occ. 1. p. 490.) leaves cuneate-ovate, retuse, stiff; flowers in axillary fascicles. ♄. S. Native of the west of Jamaica, on the mountains. n. fil. carp. 3. p. 126. t. 202. f. 3. A'chras retùsa, Poir. Mlppl 6. p. 533.—Browne, jam. 201. no. 7. ! Leaves alternate and opposite, shining above, white beneath, IIM! full of blark dots. Calyx white, roughish. Sterile filaments lanceolate, Ultdolated. Drupe ovate. Ba ...lls this *Bastard Bully-tree.* IMTM (-- »rf.

Retuse-leaved Bumelia. Tree d ...

4 B. FORTIDISSIMA (Willd. spec. ...) leaves lanceolate-oblong, >ub-miargtnair; !In»rti in BMllar)[1] fa*rtck«, *: I ... , I. p. IORA.

Native of St. Doming', on the mounuinv r. |». njiji I ill. dirt. no. *1.*† Tree not lactescent. Leaves shining, nearly opposite. I flowers white, fetid. Calycine segments roundish, obtuse, concave. Corolla rotate, mtlt »vate, Aai •gments. Sterile filaments serrated. I»fn[>, roundish, depre««ni at top.

Very fetid-flowered liucitrlia. Fl. Jut*. Aug. *Ck.* 18U0. Tree 12 feet.

5 B. PAUCIFLORA (Rœm. et Schultes, syst. 4. p. 493.) a\« lanceolate-oblong, alternate, obtuse; flowers spreading, axillary, 3-4 . in a fascicle. ♄. S. Native of St. Domingo, in »i«»lnm ihc moui ...tains. Sideróxylon pauciflórum, Jacq. amer. *LSS** BMnafi ...nts of corolla concave at top. Flowers white, ... fetid than the preceding, to which it is very nearly r *l'ft'*-*flowered* Bumelia. Tree 20 feet.

6 B. MASTICHODE'NDRON (Rœm. et Schultes, l. c.) leaves lanceolate, acute, and obtuse; flowers in axillary fascicles. ♄. S. Native of St. Domingo, and the Bahamas. Sideróxylon mastichodéndron, Lam. til no. 2456. t. 120. f. 2. Jacq. coll. 2. p. 253. t. 17. f. 3. Gærtn. fil. carp. 3. p. 125. t. 202.—Catesb. car. 2. t. 75. Branches long, flexible. Leaves shining above and paler beneath. Flowers yellowish. Corolla rotate, with ovate, obtuse, concave segments. Sterile filaments HI till Ut ...e. Drupe yellow, ovate, obtuse.

Mastick-tree Bumelia. Tree 40 to 50 feet.

7 B. SALICIFÒLIA (Sw Jtt«, pro ... l. p. 50. fl. ind. occ. 1. p. 491.) leaves ovate-lanceolate, acuminated; flowers in axillary and lateral fascicles. ♄. S. Native of Jamaica and St. Domingo. Willd. spec. 1. p. 1085. exclusive of Mastichodéndron, Jacq. Sideróxylon salicifólium, Lam. ill. 2458.† Gærtn. fil. carp. 3. p. 124. A'chras salicifòlia, Lin. spec. 470.—Browne, jam. 201. I. 17 . f. 4.—Sloane, hist. 2. p. 95. t. 206. f. 2. The tree is ...d in Jam ...-wood, or from the bark *White Bully*-call- Leave ...lira *(lahmnflii* ...lyx clothed with rusty down. Corollas white, i Fruit small, oblong, often 2-seeded.

...leaved Bumelia. Clt. 1820. Tree 20 feet.

7 B. MONTA'NA (Swartz, prod. 49. fl. ind. occ. 1. p. 493.) le ...long, obtuse; flowers solitary, or 3 o ... fascicle. ♄. S. Native of the south of Jamaica, on the hi ...ntains. A'chr»» mnntin* • Poir. suppl. 6. p. 533. Branches a little WSt Calycine ...HMII 5-8, concave, roundish. Corolla l»««it. ...g the tube ventricose at the base; and the segments of the limb undulated. Scales or sterile filaments acute, connivent.

Mountain Bumelia. Tree.

9 B. SERRÙSA (Vahl, eclog. p. 28. Willd. spec. 1. p. 1087.) leaves elliptic, of a different colour beneath; flowers tomentose, disposed in lateral and axillary fascicles. ♄. S. Native of Cayenne and Guiana. Chrysophýllum Cainito, Aubl. guian. 1. p. 234. Chrysophýllum macrophýllum, Lam. dict. 2. p. 44. Tops of branches rather angular, and clothed with rusty tomentum. Leave ...rul* a! the base, and Bluntish at the apex, 4-5 inches long, shining above, but of a rufescent glaucous colour b ...iicatlt, t ...ardly downy. Petioles clothed with rusty tomentum. Calycine segments ovate, acute, length of corolla. Sterile filaments subulate. Ovarium tomentose.

Nerved-leaved Bumelia. Clt. 1820. Tree 20 feet.

10 B. RETUSIFÒLIA (Swartz, prod. 50. fl. ind. occ. 1. p. 493.) leaves nearly orbicular or elliptic, rounded at the apex, acute at the base, coriaceous, glabrous, shining; flowers in axillary and lateral fascicles. ♄. S. Native of Jamaica, on the mountains among bushes; and in the province of Bracamoros, on the banks of the Amazon, at the confluence of the Chinchipin. B. obtusifólia, Willd. herb. ex Rœm. et Schultes, syst. 4. p. 502. A'chras rotundifòlia, Poir. ency. 6. p. 534. Leaves palest ... Calyxes clothed with silky down: having ovate, ob-

batmtli '

i concaTc segments. Corolla wh.i*. »Uo clothe •ith silky dor*n, Lann; roundish-ovate segments, «iih < subulate scales at the bair of each segment. Drupe roundish-ovate, glabrous. Th« plant of tlumboldt iln« not diftVr from that of > » » Ml, unit-*, that the oaly* and brarx-hlru «f t»t former »f.

Romrnd-Uwttd Humrlw.

l l l 3. CUNEATA S nrta, ll. md. ocr, 1. p. (K.j leaves cuneate-obovate, jUbrotM ; flow tr* m Uttiil au<i axillary fascicles towards the tops of the b madwi ½. S. Native of Jamaica, and other west Indian islands, among bushes on the seacoast. Sideröxylon obovatur cent. 1. p. 125. A'chras cuneifolia, Poir. MM 6. p. 554. Leaves sometimes as if t were in he* .wcU and rather emargi- .ale *l th* •[*«. t ... (ne McmmM roundish, concave. Coro.a sma ll. «tU, irum-Mid wgtnrm hardly longer than the calyx; tntwr M-«lmsmall,*ci;

Cuscate-leaved Burmlu. Clt. 1825. Tree.

* * *JrmeJ tkmbt m trtt*.*

It D. r«LA>n»A (ft. B. ci Kintih, no*, *gn.* $fl: uwt. 7. p. 212.) ipiny) I n f i i obovate-oblong, rounded at mt the bnv$_t$ quite entire, rather coriaceous, glaucous- native of Mexico, on the western declivities of mountains. .eaves in fascicles of 2-6. Calycine segments 4, roundish elliptic. Peduncles solitary or twin, rising from the fascic •1 0 1 k .ves.

Ce Bumelia.

13 B. BUXIFÒLIA (Willd. herb. ex Rœm. et Schultes, syst. 4. p. «0- ll l; M K»mh, n.,r. g 6c) 7> p t t f spiny erect; leaves flhfrt.c, r«indrd' it (apex and cuneated at the base, or obovate, quite entire, somewhat cori MKM*$_t$ jlj> brous, shining, l h d ih lk clothed with xlky .'own bnMMh wt». ½. S. Native of the Spanish Main. Bumuxa, wher r» is called *Pejoso* by the itihabttani • l.. .,. • i! ,uch long. Calycine segments roundish-elliptic, somewhat concave. Corolla hemispherically campanulate, 5- •»-pa»twl. Flowvn iimBwHauly CTO wded, small, white.

Box-leaved Bumelia. Tree 40 feet.

l l l LYCIOIDES (Goertn. fil. carp. 3. p. I t T . i i f O I ^{1} - . »< «octi. 1 p. 237.) spiny; leaves broa il-U iprr- mg in i ln- K. ½. S. Native of Carolina, in shady woods. Sideröxylon lycioides, Dob tm. irl> 2. p. 260. t. *6H,* \\ illd. spec. 1. p. 1090. Ait. hort. kew. ed. 2. vol. 2. p. 12. Pursh, fl. amer. sept. 1. p. 155. Sider. la've, Walt. fl. caro l, jt. KM)) ycioides, Lin. hort. cliff. 488. Spines subc inches long, decli liioui ; a ittle silky while young. Flowers greenish whi Segments of cor •lla irifii: perhaps from the 2 scales inside each segment.

Buxhorn-like Bumelia. Fl. Aug. Clt. 1758. Sh. 8 to 10 ft.

15 B. TE'NAX (Cham. et Schlecht. in Linnæa. 6. p. 392.) rly glabrous in every part, with strong flexuous branches and spreadir l leaves coriaceous, glau- cescent, on short cuneated, obtuse, spato late, •tl •pimawnt brutdiWtat urttnLa lair-lanrf- bovate; flowers aggregate, axillary, calycine segments ovate-obtuse, unequal. ½. G. Native of Mexico. Leaves 1-2 inches long. Pedicels 1-flowered. Segments of corolla a little longer than crenulated. Stamens «qwl m lsogih to the corolla; steril „. ,^w% tfmUi late, lanceolate, with dentately . — *%••• Ovarium 5-celled. Flowvn •!• ite.

Fierce Bumelia. Shrub or tree.

16 B. RECLINA'TA (Vent. choix. t. sept. 1. p. 155.) sp .injr. bwky, dilT«wry lliHm leaves small, obovate, quite smooth; flowers in axillary fascicles. ½. H. Native of Georgi s of rivers. Sideröxylon reclinatum. MK»K. A. bor. iwr. l p. lit Yow| branches terminated by a long spine. Leaves alternate or in fascicles. Flowers small, white. Corolla and scales serrated. Sterile filaments subulate, entire. Drupe ovate.

Reclinate-branched Bumelia. Fl. Jan. Clt. 1806. Sh. 3 to 4 ft.

17 B. TE'NAX (Willd. spec. 1. p. 1085. enum. p. 248.) leaves obovate-lanceolate, of a rusty silvery colour beneath, silky; flowers in axillary fascicles. ½. H. Native of Carolina, in dry situations. B. chrysophylloides, Pursh. fl. amer. sept. 1. p. 155. Sideröxylon tenax, Lin. mant. p. 48. Jacq. coll. 2. i. 252. i am. dict. 1. n. 243. Sideroxy. chrysophylloides, hrysophyllum Carolinense, Jacq. ob». J p. 3. t. 54. Chrys. glabrum, Jam. Sideroxy. sericeum, Walt. fl. car. p. 100. Branches very tough. Bark white. Leaves deciduous. Calycine and coro ne segments ovate, obtuse. Segments of nectary trifid. Stamens length of n rorntU. hnp»i«>i Flowers white.

Tough-b ' «wtw*4* Bdwrfca. l Jul. Aug. Clt. 1765. Tr. 20 ft.

l» U LANUGINÒSA (Pursh. 1. .met. a*pc l. p. *M.)* rather spinose; branchlets spreading, downy; leaves ovel-lanceolate, glabrous above and woolly beneath, silky; flowers in axillary fascicles. ½. ll Native of Carolina, Georgia, in humid si WH MM » n* ti ulMMM MK«f hwillW. BlJltiiiy MW b M f * " ' ' • Michx. fl. bor. amer. 1. p. 123. Sideroxy. C fl. l*- p. I 00. Very nearly allied to *B. lanuginosa* differs in the leaves being wo it« Un»«th, • t silky, often obtuse.

Woolly-leaved Bumelia. Clt. 18

19 B. PENTAGÒNA (Swartz, pro d. p.** « NMl. <xr. l. p. !• « leaves lanceolate, acuminated, shining; flowers in axill * l... ral fascicles; drupe pentagonal. ½. S. Native o i St. Domingo, on the mountains. Sideröxylon «yloa pMnflorm. *l*m* ill. 2459. as is seen by the i'dir. Mipi \ chras pentagona, Poir. ency. 6. p. '. 1 - Hnncl warted, cinereous. Segments of the calyx roundish, villous. Corolla white, hardly !»., I. ength of the tube of the calyx : h segments ovate, concave. Sterile filaments lanceolate. Drupe ovate, glabrous.

Pentagonal-fruited Bumelia. Tree tO *Urt.*

20 B. OBTUSIFÒLIA (Nutt. **,n* Wft. l. p. 1M.) spiny; leaves smooth, ob «Mg. oMmr, .»'-«lu..i,i irly sessile, very IWUWWMW ; »f *k« ..r ..erile filaments trifid. ½. ll Native of N rth Alnrrwa, o» lk Mississippi, near mines of St. Louis; it is a far down the river as Natches. Tree, with '«• «IWMUMI aa' branches. Calycine segments ovate, concave. purple. Wood fetid. •'Mp«

Oblong-leaved Bumelia. Fl. July, Aug. Clt. Tree 18 to 20 feet. DMWIM 1 • mi

21 B. STRIGÒSA (Spreng. syst. 1. p. 665.) somewhat spinose; leaves oblong, obtiMr, »ht«Miy al ove, but pale and clothed with adpressed bristles beneath. ½. S. Native country unknown. Sideröxylon strigòsum, Willd. enum. suppl. p. 11. Flowers whitish.

Shrigose Bumelia. Fl. July, Aug. Clt. 1818. Tr fl.

22 B. CREN ULA'TA (Spreng. syst. 1. p. 665.) leaves M M late, attenuated at the base, quite glabrous on hat* •• ' " faces, crenulately serr .i»! l branches gl roux, subspinose; peduncles 1-flowered, usually solitar ½. S. Native of Porto Rico.

Cren •J-i,V int«J Bumelia. Shrub or tree.

† *Species not sufficiently known.*

23 B.† MULTIFÒRA (Rœm. et Schultes, syst. 4. p. 498.) spiny; leaves obovate-cuneated, obtuse, gla rous, coriaceous; peduncles divided, fasciculate, lateral. ½. G. Na b m • / tM Cape of Good Hope. Sideröxylon multiflorum, Lam. ill. no. 2465. Poir. suppl. 1. p. 446. no. 16. Habit, flowers, and fruit unknown.

Mmmm-JUmtrt4 llium Li. I r.< or throb.

f 4 |. PUNCTA'TA (Rœm. et Schultes, l. c.) unarmed ; leaves
<tMofi^-..v»l, bluini'l.. J il't>.it,, tu-«l »M i.. .l'K ; (!.•»• al,
almost avMil. ♄. II \ ,•;>. of (Carolina. Sideróxylon OS
punciatum. Lam. ill. DO. tl 60. I oir. suppl. 1. p. 446. Drupes
rOUftdtlll. size of . |» |>|« r< ••rn. l-u-edrtl. The rest unknown.

u B.r mi ...NTEA (Rœm. et Schultes, syst. 4. p. ...9 0
1; Wie*m> ...te, retuse, tomentose; flowers pedunculate,
racemose. ♄. G. Native of the Cape of Good Hope. Side-
róxylon irjfonrnm. Thank. prod. p. 36. Will.•• »j*c l. p.
1090. Rœmèria argéntea, Thunb. in Rœm. arch. 2. {i. !•—
Burm. dec. pl. afr. t. 92. f. 1. I. ..< ...es ovate-oblong, emar-
ginately cleft, clothed with white tomentum, especially brnraih.
Perhaps a species of *Bádula*.

Silvery BultiM'llJ. Shrub 2 to 3 feet.

26 B. ? LU'CIDA (Rœm. et Schultes, l. c.) unarmed; leaves •»«
ovate-oblong, ...MJ*. ljllltt lilrfllll ...ous, shining above; flowers in axillary
fascicles. ♄. S. Native of America. Sideróxylon lúcidum,
Sol. in Lam. d... :. 1. |>. II ...6. no. 2. Sideróx. nítidum, Lam. ill.
p. *». no. tiJ7. LMVM cot ...aceous, 2 inches long. Flowers
small, white.

Shining-leaved Bumelia. Tree o• tltrub.

27 B. ? AUZU'BA (Rœm. et Schultes, 1. c.) unarm< ...d; leaves
otlonti, a i ...tenuated at both ends, shining, veiny; pedicels asaV
lary, 1-flowered, alternate; fruit ovate, yellow, fleshy, nil of a
clammy juice, containing(a inil I ...ery like an olive. ♄. S. Na-
tive of St. Domingo, where it is called *Acomat*. Sideróxylon Ion
Auzúba, Plum. mss. vol. 5. p. 124,

itatnioa I ...umelia. Tree.

i» I ...? CUNEIFÓLIA (Rudge, pl. guian. 1. p. 30. t. 47.) ...,\e%
...tli«-atr-Uii<-i-<>l.ti-, ...m ...l. ...uiuiiiatol. ...). ...l.itu ...< ...\ ...)
the nerves, which are pubescent; flowers in axillary and lateral
fascicles; anthers ovate, cuneated. ♄. S. Native of Guiana.
Branches clothed with rust I down> 1 ...lowers ttuali. Calycine
segments ...rnentoar. Scginenta of cotoila ohtu*r. Stanraa
shorter than the corolla, sessile, obtuse c.

Wedge-leaved Bumelia. Tree t.11.

Cult. The hardly «)>rcK'* nl tin* |(rim» tin ...ive very well ill a
sh... i iO^IB^LBBBV or aaiaiaat a wall where the? can becorered
with a mat id severe 'ntit ; and cutting* uf them, platid in
sand under a hand-^la»«, »ink ...root re...: \ It •he culture
and |tro|M|tation of the ctute and grretiboute »pet ...ies, see *Sersa-
lisia*, p. 27.

V. NYCTERISI'TION (from ...^c. afrtrri*, a DM, and
...•r, MtMHl, food . flowers). Bull et Pav. ge'. ti. Jtcf. rl
chil. p. 300. t. 5. fl. 2. t. 187. i. B. et kunth, nov. gen.
amer. 3. p. 238.—Chrysophýllum species of authors.

LIN. SYST. *Ptmlimdri*, *Monogynia*. Calyx 5-p...,*tut\. O-
rolla Kith a »lwn tubr, and a 5-parted limb, without any acal...
inside the segments. Mamvtw 5, ...wrrint m tl ...e top of the tube
of the corolla and opposite to its segments ...•mil OMI ...um 5-celled;
cells 1-ovulate. Style short; stigma obtuse, slightly 5-toothed.
Fruit fleshy, 5-celled, 5-seeded. Seeds albuminous, bony. Em-
bryo erect.—Trees with the habit of *Bumélia*. Leaves scattered,
entire. Flowers disposed ! in aulU ...y, umbellate fascicles; pedi-
cels 1-flowered. This genus hardly differs from *Chrysophýllum*,
unless in the '--celled i ...varium, and in the almost entire stigma.

1 V Aaut »t ...EUM (H. B. et Kunth, nov. gen. amer. 3. p. 238.
t. til.) on, ...chlets downy; leaves elliptic-oblong, pale green,
and shi...'tm above and silvery beneath. ♄. S. Native of New
Granadi, near Jam •le Bracamoras. Chrysophýllum Grana-
ténse, Spreng. syst. 1. p. 667. Buds silky. Leaves acute or
obtuse, a little cuneated at the base. Flowers 6-9 together,
about the size of those of the *Alatérnus*. Ovarium hairy.

Silvery Nycterisition. Tree.

2 N. FERRUGÍNEUM (Ruiz et Pav. fl. per. 2. p. 47. t. 187.)
Invn obloni wr ! acumen, itttnintf above,
but clothed Midi silky rusty down beneath, a i H 111 (u (he calyxes
and branclitrim. fc. S. Native of Peru, a ii IHMI* at I, • IN I«
Chincao .<ul IMIaO. Chrysophýllum ferrugíneum, Spreng. syst.
...Corollas whitish yellow, clothed with rusty down.

*vf*V ...Nycterisition. Clt. 1823. Tree 30 feet.

a N. LANCEOLA'TUM (Blum. bijdr. 676.) branchlets Mai
with rusty tomentum; leaves oblong-lanceolate, obliq IMIV at-
irnuati tl at the ...se, tomentose on the midrib beneath. ♄. S.
Native of Jar*, in woods on the mountains, where It !• called
A ...4atang.

iUi ...ceolate-leaved Nycterisition. Tree 60 to 80 feet.

CVr For culture and propagation see *Chrysophýllum*, p. 33.

M M ! ...RYSOPHY'LLUM from XP^X. rAr.Mt, ...old, and
φύλλον, phy//.«t, l. ...af; the leaves of me«t of toe aprciet art
clothed I Hith jrrllow tiUy down *l*-nt»*th). Lin. gen. 263.
Schreb. gen. 355. Juss. gen. 152.—Cainito, Plum. 9. Jacq.
amer. 51.

LIN. SYST. *Pentándria*, *Mono...* . CaJj ...x 5-parted. Co-
rolla campanulately rotate, with a 5-parted spreading limb.
Stamens 5, inserti cl in itn- IUIM- I.I tl..- *,.f..lta ami opposite in
segments, without any scales inside the segments. Ovarium
10-celled; cells 1-ovulate. Stigma i aliiMMt am>ile, somewhat
peltately depressed, obsoletely 10-lobed. Fruit globose, 1-10-
celled; cells 1-...€-rdrU : tndocarp boa). brittle. Seeds albu-
minous.—Lactescent trees. Leaves •licr ti..te, quite entire.
Flowers disposed in axillary umbellate fascicles.

* ...MM *ilotkfd m-ttk ttliy, nitrnt. or guUm (omnium btmtmth.*

It'.*' ...INITO (Lin. spec. 171. J«...q. amer. p. 51. . 37. C I.
ed. pict. l. p. 50, t. 51.) leaves oblong, acute at the ...». and ;<...pex,
<|t) ...te glabrous above, but silky and rusty beneath. ♄. S. ...\»-
tive of the West Indian inland*, and .ilmoii ihrou^bout Soulh
America within the tropics. Cainito, Laet, amer. 390. Plmi.
gen. 10. t. 69. Sideróxylon Pacurèro, Loefl. itin. p. 204. \
tall treewith a...LarM bead. I Branch** cloitud with »ilky rualy
down. Leaves 3½ t> I incbn long. Flowers Hinall wit...
Fruit btg>. rather deprr»-...ed, rose-coloured, mixed with green
and yellow, having the skin smooth and glabrous: the flesh BO(1.
clammy, sweet, and i in »i |tn! The American» air Vi-ry food of
ti, bui it is seldom eaten by Europeans.

L... β, *Jamaicénse* (Jacq. amer. l. c. t. 52. pict. t. II.) fruit
{>'...rple, sub-ovate. ♄. S. Native nf Jamaica.—Brown. jam.
ID. t. U. f. 2.—Sloane, hist. 3. p. 170. t. 229. Fruit with a
green or purple rind; the pulp also purple, and rather better
t! ...avoured than the species. It is called Star Apple in Jamaica.

Var. γ, *cærúleum* (Jacq. amer. l. c. t. 37. pict. t. 52.) fruit
blue, globose. ♄. S. Native of Martinico. 1 ...oth pulp *mi*
rind of the fruit entirely blue, of the same taste as the latter.

Var. δ, *microphýllum* (Jacq. amer. pict. p. 31. t. 53.) leaves
smaller. ♄. S. Native of Cuba, about the ...ii.lta. The
tree scarcely grows above 10 feet high, aii'l tin ltaiea ii« not
exceed 1½ inch long.

Cainito, or Common Star Apple. Fl. May, June. Clt. 1737.
Tree 30 to 50 feet.

2 C. AQUA'TICUM (H. B. et kunth.noT.«cn.an> ...er. 3. p. 236.)
leaves oblong, acuminated, obtuse IM »(tin tisse, quite iflabrtMi*
and shining above, but clothed with rusty silky down betwaiti.
♄. S. Native of the Missi... KU of ||M (...rinoco, in inundated
places on the banks of the river Atabapo, betwixt San Fernando
and Javita. Branches angular, silky, brown. Leaves 4-4
inches long. Flowers and fruit unknown.

./?««/;« Mar Apple. Tree.

3 C MnNorut (Swartz. prod. p. 49. fl. <xL occ. I. p. 480.) leaves oval or •JUIHIJ. «hort-•rawimiil. C(M1HM1 with golden-silky to DrtKum l»r.r»l ; fruit ovate, 1- •wM. ½. S. Native of J, Jamaica, Martinico, St. Domingo, &c. among buih< s. Hook. bot. mag. 3303. C. oliviforme, L am diet. 1. p. 552. no. 2. C. Cainito, Mill. diet. no. 1. C. Cainito, β, Willd. spec. 1. p. 1083.—Burm. amer. t. AO !!«···· LI • i flexible, clothed with rusty tomentum. Corolline segments ovate-acute, 1 fruit bluish, obtuse. Wood resembling that of box. Bark rufescent, dotted with white. Style crowned by 5 rufous stigmas. Called Damson plum by Browne.

One-seeded Star Apple. Fl.? Clt. 1812. Tr. 20 to 30 ft.

4 C. ACUMINA'TUM (Lam. ill. no. 2469. Poir. diet. su 1L,j >. p. 15, but PV· of Wall.) leaves ovate, acuminate, with parallel stripes: pale, shining, and tomentose beneath. ½. S. Native of Cayenne and St. Domingo. Branches terete. Leaves rlothi «I » tih nat> • shining tomentum beneath. Calycine segments ovate, concave.

Acuminated-leaved Star Apple. Tree.

itnimittil

5 C. NICOLOR (Poir. MNML -' t' I ') leaves ovate, rather •fumiru ted, clothed with golden and silvery silky down beneath, but glabrous and shining above; fruit pear-shaped. ½. S. Native of Porto Rico. Very nearly allied to *C. acuminatum*, but »h, *i,!* ,t,, l,. » an n».,rr 1 i K»»r oftr i.»it %,li, (\ and the other golden y aw vaajaaja » r . it size of a small nut, pulpy.

{•riwo/uh *red*-leaved Star Apple. Tree.

6 C. ANGUSTIFO'LIUM (Lam. ill. 2. p. 44. no. 2470.) leaves lanceolate, shining, with parallel stripes, clothed with rusty silky down beneath; fruit olive-formed. ½. S. Native of St. Domingo. Poir. suppl. 2. p. 16. Allied to *C. monopyrenum*; but the leaves resemble those of Olive or Privet, and are, therefore, much smaller. Fruit usually 2-seeded, irregular uilw ha .rfu...

Narrow-leaved Star Apple. Clt. 1819. Tree 20 feet.

7 C. ARGE'NTEUM (Jacq. amer. p. 53. t. 28. f. 1. ed. pict. p. 31. t. 54.) leaves ovate-oblong, fe acuminated, glabrous and shining above, but clothed with silky silvery down beneath; fruit round. ½. S. Native of Martinico. Fruit of a dirty purplish blue colour, size of an ordinar . plttm: riwiaiwiag a - ll, bluish, edible pulp.

Silvery-leaved Star Apple. Fl.? Clt. 1758. Tree totm.

8 C. MICROCA'RPUM (Swartz. prod. 1. p. 49. fl. ind. occ. 1. p. 482.) leaves ovate, acute, glabrous above, and downy beneath; fruit oblong, oblique, 1-seeded. ½. S. Native of His paMtOa, on the banks of rivers. Distinguished from *C. glabrum*, in the higher stature, in the leaves being downy and paler beneath. Corolla with a white tube, silky outside; with concave, obtuse segments. Fruit size of a gooseberry, fixed obliquely to the pedicel, of a very sweet, delicious taste.

Small-fruited Star Apple. Tree.

9 C. MACROPHY'LLUM (G. Don, in hort. trans. 5. p. 458. Loud. hort. brit. p. 69.) leaves large, oblong-lanceolate, clo •>w«l with rusty silky down beneath. ½. S. Native of Sierra Leone. Leaves long and large. Fruit large.

Long-leaved Star Apple. Clt. 1824. Tree 50 to 60 feet.

10 C. OBOVA'TUM (G. Don, in hort. trans. 5. p. 458.) leaves obovate, tapering to the base, and acuminated at the apex, shining Baal i.c • • l afc<n • t '•"' clothed with silvery silky white tomentum beneath. ½. S. Native of Sierra Leone. A small branchy tree.

Obovate-leaved Star Apple. Tree 10 to 12 feet.

11 C. A'RBIDUM; leaves elliptic-oblong, coriaceous, acuminated, shining above, but clothed with white down beneath; fruit roundish-ovate, pointed, 5-seeded. ½. S. Native of the African island of St. 1 ' <• 1 M W whitish. • Perhaps a species of *Nyctericistus*.

White-leaved Star Apple. Tree 50 to 60 feet.

12 C. HUMBOLDTIA'NUM (Roem. et Schultes, syst. 4. p. 813.) leaves •.*»**. acavaaaajaa% an> i'»i«i.i'l> nil i .-, • iki ; «u'« ——— Willd. of South America. Humb. et Bonpl. C herb. This species <• a«tka«<* to Kunth.

Humboldt's Star Apple. Tree.

ii r 1* V i •* «1W. at' . ihxWil • * • " • *' v^tK \ ' • .. "" tb * H at et Bonp. Unknown to Kunth. Perhaps *C. equatoriense*, Kunth.

Blustish-leaved Star Apple. Tree.

** *Leaves* ifcr—i M WA

14 C. MICRINO (H. B. et Kunth. nov. leaves obovate, blunti ir JU at iW UM ^Uaraaii •••» ••(tW < me colour on both surfaces. ½. S. Native of the province of Bracamoros, near Cavico and Matara, where it is called *Michino* by the natives. Branches terete, glaWow- ' .*** l Leaves approximate, 2-3 inches long. Fruit , ..m «a*ai«^ whitish and clammy inside; very grateful, edible.

Mo lav haj \p,.lr. 1 r.. to< . >« U I. M

15 C. ? STOCKSII (Swartz. prod. p. 49 occ. 1. p. 484.) leaves oblong, acuminated, glab both surfaces; fruit nearly globose, wrinkled, acuminated. ½. S. Native of the west of *Jamaica*, on the mountains. Leaves large, r.-M MI ^aarfaaaaav Mat* dulated, i » < f 1J« <»» *•!•. ' .* "" * |"' leaves rusty. Corolla with a very short tube: and ovate, obtuse segments, furnished with 5 m» secondary ones, between the others. Fruit size of a nut, yellowish brown; containing many oblong, compressed seeds. This is certainly not a species of *Chrysophyllum*, from the corollas being furnished with scales inside, as in *Bumelia*, of which probably it is a species. It differs from other species genus, in the leaves, flowers, and fruit.

Wrinkled-fruited Star Apple. Tree.

16 C.? MACROCOUS (Aubl. guian. 1. p. 232. t. 91.) leaves glabrous on both surfaces, ov •W-oaaaHg. arwaMM*t4; (an i shaped, yellow, glabrous, and smooth. ½. S. Native of Guiana. Lam. diet. 1. p. 552. • pyri «a». . f» Willd. spec. 1054. Bark greyish yellow. Wo J bar white. Leaves pale green. Fruit by twos or fours, the whole length of the branches; having a fleshy, yellowish, thick rind, covering a nut, which is mtwli excavated on one side, edible. Perhaps this, with *Bumelia* im m ria, and *C. regiense*, will for •• ta the genus named *Fitellaria* >tlt 111 Gaertn.

Mocoroco Star Apple. Tree 50 feet.

17 C. POMIFE'RUM (Bert. ex Spreng. syst. 1. p. 667.) leaves oblong, attenuated at both ends, and quite glabrous on both surfaces, opaque, finely and parallelly veined, cor •d i •Mow p**!1* cels very short, sub-aggregate; fruit apple-shaped. ½. S. Native of Jamaica.

Apple-fruited Star Apple. Tree. naiiaf ft win J Btaf At>i4*

18 C. SERICIFO'LIUM (Poir. suppl. 2. p. 16.) leaves coriaceous, glabrous on both surfaces, obovate: with distant, alternate nerves; flowers sessile, fasciculate. ½. S. Native of Cayenne. Form and size of the leaves that of *Bumelia serrata*. Leaves shini •* *Wt», aa4 p«l» Wa»» h. Flowers downy outside, sessil a, ». • aaMaV<

Sessile-flowered Star Apple. Tree.

19 C. OLA'RIUM (Jacq. amer. p. 52. t. 28. f. 2. ed. pict. p. 11* t. 55. Lin. spec. 278.) leaves ovate-oblong, quite glabrous on both surfaces; fruit elliptic s >! i w u h. ½. S. Native of Martinico. Mill. diet. no. 2. 1 leaves hardly 2 inches long. Fruit e, seldom eaten except by cha

[1] M«v. (MIB aaal ••• » ««* a aaaH al aaaW».

Var. β; jMW$Dr«* (Um. ill. no 2475.) leaves ovate, acuminated, a surfaces; flowers few together.

Glabrous Star Apple. Clt. 1823. Tree 15 feet.

20 1. Roxburghii; leaves lanceolate, acuminated, glabrous on both tuti lobuar, 5-ar« ed. ♄. S. Native Silhet, where it is called *Pitakura*. C. acuminàtum, Roxb. fl. ind. 2. p. M«, but DM i nd»« of Lam. Leaves with parallel veins, 5-4 long. Pedicels recurved. NujrmaM.,1- d. Fruit size of a sm crab, yellow when ripe, smooth, andtagrcyd ly eaten by the n tives of Silhet, although insipid. lt »be |>- pulp is tolerably firm, but excessively cla iitrnv, adJwrwf ' ;•* « ka to the l grrai life with tenacity.

Roxburgh's Star Ap,4*. Trw mkWW-aiird.

21 C. sirinum (Meyer, essq. ,.. llfi.) 1 eaves oval, drawn out at tlw BJWX. obUfcW .«i..i i marginal.. glablW ' • .urtar«-«, shining above. ♄. S. Native of the continent of America, about Essequibo, in wo...|.. Bra ches terete, clothed with rusty, ..iprr.w d, silky tumentum, »hen young. Leave• 5 bmloiv Calyx totwnt- se, with roundish segments. Co">!'• downy: wit> oral*, obluM-. *t*• ber concave segments. I >vanttm villous. Stigma crowned by ll of li |«U. Utf\f\ll MJI \; ;-l>- I r»».

Cult. The species of Star Ap Je atr crown in ho -houses, only for the sake of their beautiful foliage, which are either clothed with golden yellow, or silvery, silky, glossy down, beneath; for they cannot be grown for their fruit in this country, as they never bear until they attain to large trees. A mixture of sandy loam and peat is a good soil for them; and cuttings taken from ripened '-glass, in a strong moist ht*t.

VII. S » lilt \< *(*xf*n. otArmt,* • k tttnt* of ihr wihl pear.) Lin. gvi no. 438. Schreb. no. 558. J»n|. nm r. p. 50. JOM. p. K*. 2. R. Br. prod. p. 530. H. B. et Kunth. nov. Urn. « M T. 8. p. *tS9.*—S»j>6« a, Plum 4. Gærtn. fruct. 2. t. 0<

Lin. syst. *Pentándria, Mo* . Calyx 6 rarely 5- jw»ftni Corolla '.-«!< ft. SianM-iu If, 6 t»1 »' l. an *»:<t,*\. • • i ajaa]a»fbnMd, alti rnat ny nithibi other 0, wltkb are frrtilr. Ovarium 12-6-celled. Style filiform; stigma «.»»m.. I fruit 12-6 seeded. Seeds or nuts compressed, bony, scraped lengthwise in front, albuminous.—Lactescent trees; with scattered, coriaceous, quite entire leaves; and ..ellow, 1-flowered pedunc- •4HMIT, •-»«• cles. 1fruit large, e I.M.

1 A. Sapòta (Lin. spec. 470.) leaves oblong-lanceolate, ob- tu*, ». • ,,]-},-, ; flowers solitary, hexandrous; pedun- cle « am! calyxes clothed with fine tomentum; calyx 6-parted. ♄. S. Native of South America, on the main land, within the tro About Cumana it is called *Nispero.* Jacq. amer. p. 57. t. 41, ed. pict. t. 41. Sapòta A'chras, Gærtn. fruct. 2. p. 103. t. 104. Mill. dict. no. 1. A'chras, Browne, jam. p. 200. t. 19. Loef. itin. p. 186. Pleuck, icon. 277. Leaves 3-4 inche « law, Flowers white, scentless. Bark of tree full of cracks. Fruit elliptic or globose, bigger than a quince, covered with a thick, brown, scabrous rind, which, when the fruit is ripe, becomes tough and yellowish; the flesh is yellow, it smells well, and the jwrt. \ . •*• W avfrrcaUr to in any.

Var. β; sapotilla (Browne and Jacq. l. c.) fruit roundish. ♄. S. Native of Jamaica, and many parts of South America. hist. 2. p. 171. t. 230. p. 172. t. 169. f. 2.—Catesb. car. 2. t. 87. Fruit about the size of an apple, when ripe of a deli- CHUM mviloM *H* , our. The kernels of the seeds are bitter, ami miv tir tivi.1 aaaaaaaioHi hi MMMMhaaiMl * '"«<••«>••• I »llt«l Sapodilla tree, or small Sapota.

Common *Sapota* Tree. Fl.? Clt. 1731. Tree 10 to 50 feet.

2 A. sessilifòlia (Poir. ency. 6. p. 531.) leaves cuneate-oblong, ob MM« BIH! emarginate, coriaceous, glabrous; flowers

altnott «r.«U>, M>l«urv. •; S. ? Ww of the Mauritius. Calvx rathrr downy.

Scarlet-flowered Sapo <a Trw, Tr*«.

3 A. coriàcea (Endlicher, prod. fl. ins. norf. p. 49.) leaves obovate-elliptic, bluntish, ribbed; pedicels and calyxes pilose; flown ttmUndruut . sterile filaments linear, subulate; fruit 1- l aajidtd ♄. G. Native of Norfolk Island. Bauer, ill. pl. ins. norf. i. 101. Fruit about the size of a walnut.

Ribbed-leaved Sapota. Shrub or tree.

4 A. australis (R. Br. prod. p. 530.) leaves elliptic-oblong. otabroin at well aa th< calyxes and peduncles; sterile filaments un*«r~«ut> ulate; ovarium 6-celled. ♄. G. Native of New South Wales. Calyx, as wel l aa corolla, oArn 5-cleft.

Southern Sapota Tree. Fl.? Clt. 1827. Tree fOfwlt *Cmh* For cultur raAdpropagat.. yMpAyV/m, abo*r

Mil l UCU'MA (th>«INMM0f0M. in*- gen. p. 152. Gærtn. fruct. 3. p. 129. , i. B. et Kunth. BO* gen. amer. 3. p. 239.— \ chras species, Lin. Jacq.

Lin. syst. *Pentándria Monogýnia.* Calyx 5-parted. Corolla 5-rlrft. Hftfft« 10, 5 of which are sterile and scale-formed: the other 5 fertile, alter ••ling » ith sterile ones. Ovarium 10-5 i .rtlrd; l uts or ><-*tU l by a largr .1 arrola. without albumen.— l , lactescent trees, with scattered quite entire coriaceous leaves; and 1-flowered axillary or lateral padwwclaja, nliuli an • either solitary or 2-3 in a fascicle.

1 L. mammòsa (Gærtn. fil. fruct. 3. p. 129.) l avoa obovate-lanceolate, an •1 toblung, cu.pi date, glabrous; flowers solitary. ♄. S. Native of So iiih Anwrica, in many place within the tropic* ; »ml di* many ofthtt ^^ est India Islands, where it is also cultivated. A'ch m itiamtmi- a, ! n. spec. 1. p. 469. A'chras Sapòta major, Jarq. a amer. 56. t. 182. f. 19. ed. pict. p. 32. t. *59.* Sapòta natnrtm a, Mill. dict. no. 2. Gærtn. fruct. 2. p. 104. About Javita it is c .ill«l *J»k* sco.—Sloane, jam. 2. p. 124. t. 218.— Plukn. ala p. 59. t. 268. f. t. A ull t ree, with a spreading head. l leaves 1-2 feet long, shi - - Flowers atniill, *»! ish. Steri •' filament* > ubulate. Fltc Mainmr *h* • browniwh, roup L > .• Sapota, or American Marmalade, is a large oval or top-shaped fruit, covered wi n, under which • a aoA pulp, of a russet colour, very luscious, which •a eallnl natural marmalade, from its likeness to marmalade of quinces. In 6 West Indies, and parts of the main land of South America, tree is commonly planted in gardens for its fruit. There >a a variety of this t called by P. Browne, the Bully tree, or Nisberry Bully t se it generally grows the tallest of all the trees in the woods; its fruit is small, and «W callr- re, brca | all esteemed one of the best timbers in)>• wood Jamaica,

otnon or *Tnttd* Mamam tiaipoia l -,o to 100 feet.

la^Ma^a • <A1\V tfIftltFIMta '• i I ,.^jl

2 L. Caimito (Rœm. et Schultes, syst. 4. p. 701.) leaves obovate-lanceolate, glabrous, coriaceous; flo ..ate, te- 1-seeded. ♄. S. Native of Peru, on the Andes. A'chras Caimito, Ruiz et Pav. fl. per. 3. p. 18. t. 240. A lofty tree, with a frondose head. Fruit softer, with a better flavour than the preceding; pulp soft, yellow. Corolla ovate-tubular, yellowish. Calyx 4-parted, fulvous. The fruit is called *Caimitos,* and 'l* trw *Caimito,* in Peru. Th.« MOOil is yello «, ami uar.1 for var lam useful purposes.

Caimito Mammee Sapota. Tree 50 to 100 feet.

3 L. Bonplandii (Humb. mss. ex H. B. et Kunth. nov. gen. p. 240.) leaves obovate-oblong, obtuse, cuneated at the base, papery: having the nerves and veins, as well as the petioles and calyxes, downy. ♄. S. Native of Cuba, cultivated about the Havanna. Branchlets pilosely t inrttliMT. l,' aves 8-9 inches

baft Mai l iSr.>3.l. C.U» Ml \»<*4. onM, im- »Wtt M nmrtnl **fa reticulated fibres. Albumen none.—A
rtt, pflo** oataid*. Stank ataa tree, with long, alternate, veiny, quite entire leaves; and axillary,
aa**d • wdiM long. spicate racemes of flowers.

*&mpl*mft* Mwaaw* Sapota. tit. Iftti. Tn* «0 ftm. ... «. Ua. ty*. IO». »«nuL l IMM»
li B Kuath. 1. c) *It*n** afcloaf, aaavi north-
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bnxta, tbuuo*; «<>•«« S ia a faiddU; raUxa* ami piaWl ia tW Saw* Seat t aW* of Aadama a* IJU*.-**-[1]
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—Breyn. cent. 20. t. *V_B«rm.»e)I.S7. FWtun *miiiU* aiaej, drooping, white. •MTfmmto of corolla lancrolatr. and a little torn at their tips. Berry ov*te, with a «ligru groove on on* tide, do.wwbranpe. A'-r*^ bar wow of (bttrw | /.' *Imt* ia the lU-t.galcac name; *MmUmn* » the Hiadot-

lAUCV i..iit r ; *i*o^tttt' •f i*l H r J i >n ^* i».

Mis I r*» 1* frel.

t M .. obovate, wffjr blunt, hardly J Urne* aa long a* tbt petiole*, crowded ai the rod. of ibe braocfcc* t l o w r i fcaoelad, hewn-drous. *of* the Kaat 1nd>M and S «n)»n thr i , I p. M.—Rompo, amb. £ lroopiog, •dible.

•opt. tit. t ;W. Trt» M (art. „.. ISG. Ilium, bjjdr. «7i.) leave* otal-oUong. obtuaa and u mail, ball, attamaMad a little at ik* baw. conacoMM, with revnlotr edge*, h of J*\.> !ena.wnct *thanf Tamjomg*; and of tltc Ma>< !tranche* tin « apodaa of

• af-/nm« • M.i I. i>. 10. t. J •!« < |-l\ • tii.ir^iii.tt4'. ((Tc<-b» aii't thtititig <«i twilh M M i I jiedirel* aa kwaT as the ttetiole*, which are atnooilt. *tt,* among tl. I .iiul I (» *i* broad* • alj ᵛ ft^njBtmaV CnHmal •etpnenU6, and tht onter 1*. An and abapt of an ot» •naciaa being timailtahly heavy, it much oaed

.. t. vol. S. *ex* Blui C7S.) leaves obovate, sub-emarginate. .p.. FUJuU I K llr. prod. p. 330) leave* ohms' t<l, tengtb of prtioiet, Native of ihe i»lat>d of Tonga* no. Ifl. A. aiut about the aise of an

P

vr.edil.1. II in .V. *Ucjumira,* Uo»U Ova-im «-crlled. Flov rrtrrf-fluwrnti ^1 Cll. 1S04. Trw fO toSO aWt. 9 M nit; I tale, obtoae. glabroiw, on pr-Mamma. ntal. 4. i inch indiarnrtrr. Tl d »n Malabar thfl form and aice of an olive, §i *he pnlp of a iwec ontamMat only I or t arada. Tk« leaic are «aed for rataplatma In mm ailed *M* with the root of *< «>< vmm* and the bmvea of gmger. all MI jieobaUy aUo grew* abrotw, ruatv beneath, dark green am! •Unceouar, »• an obtaw aaawM* ; pcdkwk aidlary. aggrrgate; ral) K havmg h and iuwV»tcat#, aborter than i

M IMI-llh \ R| \ *inm* iikMi Oom *mt* .jftwa: hoain). Jfal ijiti, ill. t v>o, K. Or. peod>

Lt«. .TIT. *Gcfdmdnm, Mwmmym*** Cal; <«d, aorott* : the arfmettU diupoacd in a twin t» rnUa hav the aegmeot. • I in 3 row*, thoae in tlw middle row epoai MM 16, S aiilltrnferoiM : an. -mi. inrtrunl, alt. attng with tlw jrrtile one*. Fra« Urge, gtobular, »>-«!. t^aeedad, many of the c. ooming abor: arly crettcd towards the umbilicus.—Trees, native* ; le of Bourbon ati< aoriaoroua Uate*; aad axillary (aacidaa ••'

1 1. CaaaVaaatmt leave* broad, obovatt, raaty •ceoua, rmarginate at apes, pal* gracn and ahnuny padaaaai ihu-k, aagwkr, aggifaUr -1live tl.r Nt.nitKiLi, mai)**!>. (n gardaaa. M>n U».IJ.» taat «c 1. p. 326. IHum. b.j.

Cammtr$on i Imliftran* I Tree.

Cmit. For culture and propagation *m» Cirfopkyiitm.* p.

Ml "Mill «Ff«W.o>rnA«a**.attavel. ami -. a f> prrwx^l awl hottowad at tv 0.

•¥«. r^iaaaVia, *Nvmtfym**. IMMMM| acalca 11*18. imbricated, obrt Corolla with a abort ttiU-" having the rowm thoae of the oattr roweoual, • of the mner raw frwfrd and alternating with ihoat ia the row. .Stamen* 30-40, datpoaed in unequal aem*. Sty I. *tm* | stigma Minnie, %ub-ra|<itate. acabrou*. I Milid, w-oody. rouitdub, nmbdi njUa I aradioiL A tal ihlanoavlati aeaaile, a g y g a l e, or • olitary k Aovrvra

krftgdon tr. ' npnalocar|)ti v large < *tt,* Si I *krytapkfUwm,* p. 33. for culture and propaajal*

Mil BASSIA named by Komg in bowmr Baa*i, Curator of the botanic garden at Bologna). K UL gen. ed. Itr.rh. no. 645. Srhreb. lOi. J«** im, f. I.

runarrou*. ComlU camnnnukte, with an f wflatrd. ovale, fi* **•*. Statmti* 16, dr«poanl " mmu *u(.t tk» baa* : atither* linear. tilloM out... riutn ovate, a-s^elled. -style subulate ; •Itgvna arutr. *,hy,* ft.a.celled ; eell* l-*eed< obaoMg. aomvwUt tn-«„«l. e>albaaiiiium.—Ln •|iuie enure, amaoth, eoriaorom Wvr* -, and at tary, or aggregate, flow i

tt. 44. m m. pp. 551. and oratvlaaceolal*, amootb ; pedtrrU at ill.. the md« of tbe brwaebiMa t aiame •M gibbou* tube nf tlie rorolU »f .Md.lat. tofoman -, the fcrmer eaUed */U^,* ml „«. ft* «tir\rd bianrtii* ladmt loaf. fcthJaoaa. IVIwnrW « :,.! naajai it» ««««!• . the T The oil pressed from the fruit is used far Una, ,."ibe priaoipal ingredient in making Wimiuy aoap. It u to the canwnon peiyU- a «nb.i of ghee and cjna am ail b ^rrtea aad othtr cWte*

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mtkc aaVw of it, and many of Ott poor gtt tb<
thcar »w«*t oil cake*. Tht cake, Wft afar th*
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i article of trade u» ihow cmimnra wher* UMMT
to *it** found. Thr (ower*. *k*cb Ull in Ma?, are fathered
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•-crlWd. Mtaa wtta a taata aMaaaaBBBM i^« •tisrhad)
rr*" trtaa. Laataa »it> •licrnati'i
ct>»wd#d !••«at rta,
l»kb •» aitacb*. by
M ni^Llt- I • ••'• •""•U. •*.IUf». •««„,.„» a_ .i „,. ,—t,.

•urn obkMM taootnlat* t «•»•«• on abort *f n h h* from i».wt|. *iae» of Hib N«rro, da iW abady t»n> <han tbe calyv »be rricr J^m Corolla wtiltr, h«.llj bb U

*L*rgr.Jt*,t* :3. (I. ii> >• P> arumtiiatr*]. »ti»iry, tutt "I *a* «°Wrn adky coloar'tM tht young aUt«t Aow*t* amall. acwailc, usually solitary, in the axil. of llMT lravva on th« older braoenw. Iltapaniula. Flo*' • white.

e jtomtrtti Lab* 11. Shrub 6 feet.

Cult. For culture and propagation aav *ClrpopltfthM,* p. *iS.*

XV. POUTERIA (called in Gu,iana /"batrajaaai./^aWm by the Caribs). Aulil. |«Mll. 1. p. M. t. *B3.*—Labatfa aptctra, Swartz.

Lin. syst. *Tetr*Amdrim,* JfoaayvM. I Calyx 4-parted. Corolla inserted in ib* bottom o l the calyx, t ibulany vtntricoar, 4-cleti. furniahad with a briatlti (abort n each of the incisures between the lobes. Stamens », inM-rl'd in the bottom of tl.o corolla. Stigma 4-cleft. Capsule ovate, bis !""< 4-valved, *v* «rJi % alt r rooutmntf an klmnn —A trr. furnished with tufts of leaves at the tops I <Kc b branches. {-low«n •fsn(U«>, Mtllary, pcdkallau, uoajly 1-5 together.

; !• i . 1 c). Native of Guiana, lafertata bv tbc mn Sinrmaii LajMtJtj (itn.iiin.iiv »<.••. lJark wni.kW. Wood hard, map 'foblonaj. fi> ^ in a blunt potat . i>< i : Trw 40 ' eet.

Cult. Fur culture and |Wnjiaafiltiia tat *Ckry*MpAa/Mm, p. 35.

XVI. PHILLI'NE (*frU<*% from -MX-W. /^«»». fork; btvautv of the crh« of ib* c»j»ulr lH-U. Labill. arrt. cal. 3l. t. 38.

Lin. syst. *Tetrándria, Mono*•A-ntvyiin. Caljrs naal jthod, permanent. Corolla subrotate, 4-parted. Stamens 4, inser i*d in the bo torn ol i corolla. Style short. Stigma 4-to tajkrd. < apsule 4-crllol ; cells corky, dehiscing inside. Seeds solitary.— A ahmb, »ill linear-lanceolate, sub- •pa4ui»tr| alloma leaves, which are crowded at the tops of the branches, acuminated, a little toothed, glabrous, glaucous beneath, and with thickish reflexed edges. This genus is nearly •llied to *P* afrrM, A«bl. and *La*hatM, Swartz.

1 P. comosa (Ubtll. l. c). Ij. O. Nuit* of Nr* Caledonia.

Tufted-leaved l»brll.nc. Shrub 6 feet.

Cult. 1o r culture and propagation see *Sensitiva,* *f* IT.

XVII. MONTA'BEA (Aimoot-Abou is the Guiana name of the first species) Aubl. guian. 2. p. 680. t. 274.—Mutabea, Gmel.—Cryptóstomum, Willd.—Acosta, l uis Pa*. u«o. pi per. et chil. p. 1. t. 1.

Lin. syst. *Pentándria, Monog*|«M. (,'alvx tubular, v. rtinose at the base: with 5 uM«|ual obmar aagawirta. CoroUa funnel-shaped, *WM* a very short <ubr, n»<-d to ibt mouth of the calyx; segments 5. uiMtMt, oblrmg, obttM*, ii iary tnowopayllou*. cloaina; tltr corolla, or ata* •wraa 5, combtwd in« tn* tab* of iba t .. ••> antbrr cm r* ,ina u'1"*1*** 4*«rlW, J-J-HtiUil. S«rd* lj>. aitlUir, itmbiUtaw, °> «• . , u u , wnb a! lab. vaadaavtaa, l •>wll. •rwr. «arm«-tnow, unarnol padaBjclea •!>' •*n* awl Cayaaac, ay«t p. loci l. SJCW and 11 broad. • Flowers small, white, smelling like those of *Lilac.* Berry yellow, 3-celled, 3-seeded.

Guiana Montabea. Shrub 6 feet, rambling.

2 M. Aco'sta (Rœm. et Schultes, syst. 527.) branches aarmentose, prickly; prickles recurved; leaves oblong, acuminated, glabrous; authers 8, combined; fruit ".-crtU'J. 5-seeded. ♄. S. Native of Peru, in groves, at Cuchero and Chincas. Acosta, Ruiz et Pav. fl. per. 1. p. 5. t. 6. Spikes it aruW, crowded. Flowers white. Fruit yellow, size of an apple. Seed• fulvnti*. Frwa ih. similitude of the fruit to that of */ttkrmt* Caaaal ..tmfd «V .l/<nlr, ami •• edible, ami grateful to the taste.

Acosta's Mon <al>«a, 11. May - aartarataaftv Shrub. *Cult.* -.«• < Ary. *.f>i,y (lmm,* p. 5S, far coltttrv and propafa-

Order CJ J \ I EBENA'CEÆ (so called from containing ihf I- .« Ebon;. *Ebenus*, the tr.) Vent. tabl. 445. II- ' p. 4X4. (iuiiKmur, |MM I. p. *Hi* i ♄. prod. i- -.pyrr*. i' ' D ir. aro. Tribe et Flowers po s^aiTv.h- >airly brrotapkr< or dioecious, v 3-0 |iari.il. *• al, (wnnaaaat. Corolla aw Calyx equ mtpeiakmtt, hypugyaMMa, rrguUr, ralrwr rori«cw«i», for mott |ian downy outaid*, and plabrova iaatdr, decwln limb -1>ll-|>arlcd, imt>rii-*lr in aralii atioa- cptpvtaiou* or hypna;]rnotui ; tilamrnta dotililr ib<- uumbrr of tlic u*t«TiMfii< of lt»r rorolla, •oiiwiimr* 4 t'.at number; sometime* r«)t!al in n amt allrmainiii with itirm; in licrm >rr» the fllaflSHtta an* »implr; in polyitat»oaa aad dtoecioaa onra, lb»y art doublr. hatiaa; both tb* aqrmrnta hiarinf awtbiri, th* inner aajaaaju u*u«ll) m<>f ir(titan ibr outer on* ; attlber* ftxrtl by ibr bam. lancrolatc, t- tig kngtl inrtiaMi giidad by a diak . crlU l>t aawdod; ovoia banging from tb< *ti* ibr i.tl. >ui«tl. rarrly atatpkp ; atiajaMa b«6d of trifid. Berry .UtbcMv or oral, usually *fem* naaad. by ahotuoo. hating ibr l> .4 »nattia»n »rparatitig. Tvata of acrd amabraiMMia ; proprr wnqWaw ebaolgU. Alhtiaaia *confttttm* ing to the seed, cartil(mots »l> '. I Embryo slender, rather obliqae, atratgbt, MHUF, waaalljr lonyrr than half ih* Lnajtb of tb* allititiini . . \..!··· i !iaceous, rather vr vy, lyntg OH earlt indrt, •omrtiritc-t a little arpari i».t. or kiag. tondtoa] t" iba uaal — Son-Uctracmt tr*ra aad al iba. «nh wood baat? aa tbr Ebony. L M V M alurnat*, •x-stipulate, *ft*H« rtitirr, rocia- Crutl«. '»f• i.' •' lajefcaal armasbM. lalurcarrtata .«t b«ariag tbr taalt flow. f. divtdad. aad la ««HV *V>Nrr« tiMtally naapla * M l 1-Aow*t*d, all aaaviaaly brartr*' b tiKich it agrrri • «aWj but it U ibr U H H bt.ng altarnat', in the sta-

mens being dMtbie, Ac whde the flower* of ate her* maphrodite, md the HimrtM uraplr.

Some of the order arc hardy treea or ehrub* Waves and white Sower* native* of wood*, of atreaoM, m North America, Europe, and Hew Holland. Othm are tropical wergTeeae. Of dM latter. «n*y of the />• ,*Uland«. which .. a. Urge ...poach; and *K*k>* of Jipan, which memhhie an apricot* All d*ae trmtt are lt fee ilwv eatmne aajetcnty heflare maturity, and dM of letting thew decay Bfce the medhiri Wnwe thry are (be tabW. T W * are aUo dMrngnafeed be the of their wood, and for dM Work colour it sometimes acquire• *IHI» old, at the Ebony. The bark of *Diospyros Virginiana* ie aead ia North America hi iattrwMHaot been.

Synopsis of the genera.

1 Dio m'naa. Flowers polygamous. Calyx deeply 4-cleft, sometimes IIDM »*« deft. Corolla aimilan., with dM numWr of divisions as in the calyx. Stamens in the male flowers, twie* the number of the HgnwnU of dM corolla.

t Eu««vt>rTia». All «• in *IhotpjrM,* except in the stamens of the male ftWm being 4 tiawa the dumber of the segments of the c*»ri>lU.

S rifcVti*. (»lr* 4-rlefi. CoreJU thtci. wnh a »hort Mhe aod a 4- a, Staiacaa in the male Sowm 4 rimet the number of the •rgwjenU of the corolla. » the hrriaapqrodiai Sowcn about *I,* and ibe ovaiiam oKawrd, •• 4 R THM genus differs from *Diospyros* in the flowers being 1.. rmjijilir.Mit.-, and usually 5-cleft, in the filaments being simple, and wthe ovarium being 4-6-8-celled.

5 DIPLOSTE <*. Tlowen potygamoat; warnene ia dM onle flowers 4 time> the auraher of the afgawnu of the coroUa; Mamem* dooMe; andtm hteedtd.

6 DICLIDANTHE'AE. I lowrre hi ramphi tulite. pewtawerooa. Corolla fttanet»thapod; »ntbm tewwlr, t-ialved from the boar, probably double- Berry Swelled ; cell* 1-eeeded ; MM uf the rriU aburt

I>«wer»polyg*ne4M. Calyx tenw *I tMk.* Co• •-ck-ft baxb. Xiamen* *9* \ fiawenu double. Ora* nun 4 •relied.

5 M*'i*. Flo* HHI*. *Caly*\ *r 1-<Wfi• Stamen* 3-4; lPawent* eunple. or dw •ltevnate onaa are lwtr i« 3>ceUrd.

1. DIOSPYROS i from .*-<. dm*, dmae; and wheat; eatkd hy i *Miht* <rn «»• Hoi. Jwet. gen. 1 :»a. Uarto. rVwct. prod. | ChewM, *Ommm* - Gtt»iac«JM Ml- i(K"M«, *I>mn*m.* Fiow«n natymmnii !*ft. •umirinne • or o-deA. Corolla m. . . . >, raritmre) o ' '" '* nontr* havmg the eta* the haw of the walfa. twice ihe i double or twm ntiwunti. and dM •faaaMii M ;. . . . *tmimt)mmmd* .tam.tMlHar.uH. »•1fuelled reJU 1•eiodeJ K•.

globose, with a spreading calyx, which is at length reflexed. Albumen horny. Trees and shrubs. Flowers white, or pale yellow.

* *Lmttt* downy beneath.

| |) (Liw. -pc 1110. 9 downy . wfba h jtw r of c.....• l.*—uo rr the JJ °*M£^ Wd a. l.p to M. f. «. I. HI J. *t X.* rVnrerm UCr > of* aaa ewe far . Late*, or 'naiWIH Uote fwa*. *V* UtC Tree to to 30 bet.

t D. i Patak. t. aaate. orpc ' p. M :.***«. »O.lr. .L~n, Wm«h ; (.in.!,. J-^ " Settee of Sorth Anwmn. tn dw lower ewwatwoo* » pma, CeMlnw. nad UeorfM. Tnnngh Mteb*. « hjoiy-J' atahea dn* at only a variety •• jpawoao •ider* ii a dowmet ifiun> ne« owly on arewm of the *i»* ^ m dM ottouio of dM fruit, but *m* dM ihoBe and dJowaawiea

Ptwn| hiaiad UOM Waaa, Ft Aprl C»i. IMt Tree*0 aaMta

• 1' katee ohkenf.^*J* at dM haae. acwnwV at the earn, glnhiwi aboee, aod cWi «.ti. *§m* - •• • -» brnr.th »- H S»i..« nfnWlnwllawW Oruo l>ate Plum. Tree. ”

<od. «. p- I ' teW ICfntWf ^w>f tw) QDVtiJ | wM *•*% #^fnVntnM 4tw»U U d M t tfnnlnW MffaMMMIPB • »fw*WPPHJfJ J MH rnwttfi *UWJ- lt; i«rry »-eeed* - of the not• ltengalt and »• the Kt-my of dul eowatry* • the tinnril name; and Ay Berry ain* of a pajioai't eajg, yottoer when npr, and AnVl a aoft edthW aodpv renMNjear Dale Flank. Tree uil.

VIK. awptd underaide of laaee* eilloni ; l«a»et rliiptir, ontew : aggregnta. aeawJe. K.S rdly tmrt tram iteyeaw.

iitMtry i*aie I lam, IJt. Ilifl Tree SO bet.

ft D. rttia* •*••• oral. vuUoehrainth. <eofdwEa>- eoaat wf Cirnnniiilij, aawmg lh» l with atroaf mm Malt towen «nd dM huwntilinnhle ont. I**kw4. Betry «»Mee«Val Tne if •« Tvnnga**

Green-wooded Date Worn. CW. |«|» Tree.

7 D. CORNERIAE (Roxb. l. c. t. 50.) spiny; lanceolate, e«deu, dwwwy heavntr* Vnjnea iliwam, taaaalty Wenr* with t dewbaj Haaanahi . InwnmfWeaVl* •— we of ih* »t ooeAmrro w rtn> Te*w§» wwvee T»te- 1 ^wwlww «nnW ••nTTaV^BJBJBJBV eVATnwnWpwJ

Hmri Imimd Ifcate fhem Cli. i;»< ^ 4 1**4 knf*oUi*.' •*. a »••» 'iniafh. noary ••>•*• |uB>*' Mauee wf ftW ITtlbv.LwW |)w* IW i » i e«r. rorh. |

Schizandrea (Roxb. fl. ii. 637.) leaves ovate-lanceo-

l « * Woolly («O*wrt* qtt> of Cochin Chin*. Hrriy Urirr, nearly lU inset! » c*», wiih a duafirrcal boWriff. ratcn ami aold in t l * mark nonb«ra | •a. Tbr trood, when of ranirtvot a**, ta bmct and all *Wgant work, br mpt »* a compact, fin* •iaek at th* lirm t.

Decandrous Date Plum. Tree 30 lo 40 f. et.

10 D. *r%.* rnch. S, p. of 5.) lrate* linear-lancto. late, downy beneath, as well as the branchca. l . S. Native of the Cape of Goot. Hope. 1). band Pers. I ha laavaa of this, and *D. lycioi* :>*, arc »mall and aab-faactculatr, and tbar»> fore have not ibr babti of Utr other ipecwm. Tbry art doaeljr allied to *Royena*.

/ferity D M * Mum. Tra*.

11 D. id- p. 3- leaves elliptic-acuminated, t inmtoac lwiwaib. and a littW wnnbkid, simple and blantish at the base; flowers quadrifid. ♄. S. Nativ- o f New Holland, within the tropic.

Wrinkled Date Plum. Clt. 1823. Tree.

12 D. > I I I et Kunth. nov. gen. ,mcf..l. i» 254.) leaves obovate-oblong, •'•umlrd at ilic aj[1] x, acute at the base, glabrous and shining above, clothed with fine down beneath; flowers trifid. ♄. S. Native of Peru, near Guayaquil, on the shores of the Pa iftc Ocran. Laavo* 4 inchc* long. Fruit solitary, at first yellow, then red, edible, with an ungrateful smell, and an insipid d taata, C-c*l)*d ; an inoh in • liameter.

Guava-like Date Plum. I 11 to to I W I.

13 D. Acapulca'nsis (H. B. et Kunth. l. c.) leaves obovate-lanceolate, acute, M 1 K unlit. 1 c.) leaves BMsantvd at lb» baav, hairy on both turfana, but more particularly b' ncalh; ll lowers trifid. ♄. S. Native of New Spain, MM Acapwlco, 1'. salicifölia, Willd. sp <r. 4. p. 1112? Leaves canesc - t brnorti, *2*\ iiichca lixtg. Berry »n|i« tary, size of the preceding, nearly i(lobo*r.

Acapulco Date Plum. Tree 12 to 20 feet.

14 D. coriifolica'ta (H. B. et Kunth. l. c.) leaves elli pt>c- oblong, obtuse, •rutr at tlw baar, cooduplirratr. aaMOthiab »t- but downy beneath, especiall y on tlic *MT\V»* ami vrtna ; lkwrn trifid. ♄. S. Native of Paw, near 1 iuaya^uil. l-. «tr» 4 to 4½ inches long, paltr brnraih. IVdunrlr« .1-tlowrrrtl. 'Corolla greenish, clothed with silky hairs. •nan* 3-H, unequal.

Conduplicate-leaved Date Plum. lywiim feet.

15 D. macrophy'lla (Blum. bijdr. p. 670.) leaves elliptic-oblong, ^•mtnatad, mwnilad at ibe baa*, and laaxtian aub- cordate, wuoeoiw, gktbnya, HMnmioae on ibe nwlnb baaweih, as well as on the branchlets; 'trrmi* axiiUrr. rarely supra- ax • ! ! . , ; . few-flowered ; lower female flowers almost so 11 ^ 1 V a v * cleft. ♄. S. Native o l Java, mi the S#nbu and Harang mountains, &c., called *Kitjalang* by [1] hr natiVM,

Long-leaved Date Plum. Fl. Feb. Tree 6 I- :• Jfrrt.

16 D. pilosis'cula (Wall. cat. no. *Hit.)* lcatr» obot lanceolate, acuromair. rovnoWd at tbt bnaa. twloa» on tb* r»» and margins while young ; pedicels lateral, solitary ; calyx pilose : segments 4, lanceolate, acuminated ; young branches villous. ♄. S. Native of Silhet.

Rather fluty list* l'litm. Shrub or trra.

* * *Leaves glabrous.*

17 D. MI ATIFÖLIA (Willd. spec. 4. p. 111!. I l. B. et Kunth. l. c. t. 247.) leave • oblong, oht •»•«•, am IF and r w d at the base, glabr «««•. abintng abofr t Aowvr* iiutnt)uHU. Native of Mexico, near Cawraarara. «br< 7«I< it is called *Negro*, by the natives. Leaves 4-5 inch ,nltK><. SiattwmlO-H. Fruit edible. ihftaandlf globoav, J.4 iacbta in diameter, W» >

Obtmtt'ltmrt. Date Plum. Tree tall.

19 I>, t u > t TA < llamili. MM. CK 1). I'*[1]*[1], prod. m*. i» ; P- US.) Iravr. for*. late, acuminated, serrated, glabrous; petioles short, •nd arr. a* well ;> the branchlets, villous; pedicels lateral, aggregate, •lmoping, and are, u *> well as the calyxes, hairy: stigmas *S.* long, *mcutt*; *An*, r» quasaavfU. ♄. G. Native of Nipaul, at Narainhetty, where it is called, by the Newar people, *Yekang*. Termstrœmia bifaria, Hamilt. mss. Leaves 2-4 Ov ded. Perhaps a distinct genus.

Serrated-leaved Date Plu <n. Trw larfr.

19 I. ERRATIFÖLIA (D. Don, pro •d. lt. iwp. p. 144.) lratr* elliptic, acuminated, gla br.. ; petioles short, and arr, as well as the branchlets, downy ; pedicels lateral, drooping, aggregate, and are, as well as the calyxes, downy ; stigmas 3, acute ; flowers quinquefid. ? ♄. G. Native of Nipaul, at Narainhetty. D. fœminea, Hamilt. mss. This species agrees in character with tbe preceding, and will proUU. , with it, onnaWnt« a new genus.

Cherry-leaved Date Plum. Tree.

10 I D. fruticscens (Blum. bijdr. p. 668.) leaves oblong, acuminated, :>ated. acutM at the base, glabrous, shining ; fascicles of flowe n crowdrd, axillary a< lateral ; flowers 'jtiattrifid. ♄. S. Native of Java* on tU bat - of the river Tjiseelanic, near Komptro, in ttw provkx* • l Buitenzorg.

Var. β ; le' » « at—in I A I I W. 1,1 (tUM, quently acuminated ; ult branches downy. ♄. S. Native of the Island of Nusse Kambangs, where it is called *Tallak*.

Shrubby Date Plum. Fl. May, Nov. Sh rub.

21 D. Virginia'na (Lin. spec. 1510. ovate-oblong, acuminated, glabrous, shining above, and paler beneath, reticulately veined ; petioles short, and curved . ami at. as the branchlets, downy ; leaf-buds glnbroa ; flowers quadrifid, rarely quinquefid. ♄. H. Native of Virginia, Carolina, and Pennsylvania, it woods ; or from New York to Louisiana. Mill. fig. 126. Wjti. /\. ndr. brit. 146.—Park. par. 570. t. 569. f. 6. Guajacana, Catesb. car. 2. t. 76.—Plu k. aim. i . 4. f. 5. [1]lowers pale yellow. ' Fruit f ..itir aai • /r <i • date, oc onaawi plum, golden yel l»w *!wt> rt|»c. lt i. austere when fresh, like the medlar ; but »bm mrlltiwnl l by the frost, it is then very swee •• and gluiii*' us, with very little austerity. In North [1]America it makes a palatabW lkfnM *mUk* • salt ; there is «U. a spirit distilled from it. l i.t «<«».i is very hard, but brittle and white : it is very good for joiners' tools, such •» plant-1. A e., bu l il anoi rots if exposed to *b** »rail er. It i. known in North Awatrica by tb* namr of *Pinkenia* or *Prunus*.

Virginian Date Plum. Fl. July. Clt. 1821 ». I rr«. fO Art. 22 D. Lourei'ria'na ; leaves ovate-la •uwlatr. Mnootl. •NkfM (fofiui.. l,l ni.t |a)Bj»ti r>, t, rmmatiiHt. 'l'l'ti solid, rarely quadrifid. ♄. G. Native of Cochinchina. Dnapyro* l tos, Lour coch. p iff. Flowers pale. Fruit dotrny, balfan tneb m dtamrtrr, rotwd, 8 aewfad, with « very little pulp.

Louvieria a*i |>atr Plum. Sbrab 8 (Wt. fS D. »«*»» <J«««|. acbomb' aVH «». kMHt, iratf at both m l i , gUbroua; Au«. s. p. 35. t. 313.) le rs digynous, drooping ; corolla much longer than the calyx. ♄. S. Native of the

Digynous-flowered Date Plum. Tree tOfcri.

24 D. calvistöma (Blum. bijdr. p. 668.) l . . . * . oblonv lanceolate, acuminated, acute at the base, glabrous ; male flowers ••wary : hrraaaaaroii ite ones digynous, crowded into lateral faarirlr* . A.. ers semi-quadrifid. ♄. S. Native of Ja»«, on calcarrous mountains, where it is called *Prelbk*. [N]early allied to *D.* Art"*.

XtmjLmnd Data PUm. Pl. Ja»», July Shrub.

Uaxb. cor. 1 p. 37 t. 47.) Vare* oblong or oval, i acute at both ends, glabrous; female flowers trigynous, erect; corolla of hermaphrodite flowers iboul equal *m* Wngth to the calyx; berry 8-seeded. ♄. S. Native if the K*»t "Indies, among the Circars. Corolla * I '• IS tingle anthered t'i»iu<nt« *TrIta-goJ* it iheTeiaaga nanir nf the tree.

Wood Date Plum. Clt. ISIt. Tn

6 D. MTKOL U12.) W»te* o*»ic or Fkmeti qtudnIM «td mi e, obtu»*; rounded at the bate. ul.throw and •hin>n« <« lwtli surface*, coriaceous, t od beneath; caly&aa riUom

<ir«/tj/r<Mi'4\e<I Date Plum. Clt. IS24. Tree tO (evt. D. t 5. p. S3.) W.i I u t I oval-oblong, coriaceous, glabrous on both surface* i bb gU* brous; fl m wooda, ib' • (' .' iii.i, Amboina, &c. n. Mjppl. 440. Hebenister, Rump p. I i. t. S. Kerry yrllow when ripe. The wo<- II(I Kea«\, whitinh next the bark, but tu . hlacknr» gradually tingn the M!K>IC >> tnaimrr M t. ukI to be the true Ebony, but Ihcr* » no but ilte Ebonyof connere* *t* the wood o f w t m l •?*«#*. m. or Common Ebony. Tf. Tf ee 40 feet.

28 I LI'INOA (Wall. cat. no. 41X4.) leave* oblotig-umreolate, glabrous, on shor , acuminated; W• aggregate; catyx S-clrfi, vitl Penong. I). i>on<lu«a, anil 1*. n«t\ -.», V. no. 41J5 ^ +1TB, hanlly appritr to >> trietje* of tbia (pr.

M^-lrfl»«l Dale Plum. Sl • rtt* (Koxb. fl. - bifariows, xrtb mafe ibadar, with a few -*po DOV. «' I, IS, ami In. ▷ orange. Introduced by ibe l ate Hyder Ally, >uto his garden at M rwaiiuauui.

Sepota Date Plum. Tre«.

1 1 - !: •n«eoUte, ulo»«y; hcrmaphrtMlitc *mi* largo ww> wood, U'»vi Howrr*, but tlte nuIn ait still unknown. It i» probably a •pecirt of *Embrf6ptcr*

ob- *r,* ami obtute at the ipt-x, nearly > > ! .«r»ie* 6* «tr>it it I t am I inale How«rs «by *f, m I).* (ow< • *hmm,* «i. •l i ami i na* an a*t r, ind)MUat,i.• »«fin|fBt; pi«.drred

m D M * Pfaam. Ch. 11 i_f_iiliiM. ,«,Bıu(Bot..l1.^.!p» I I M M ^ l«7sl»pW. • ; ' " ' > . r of MhTt. •*•».\« * ' *GimitU,* afljd ob#re it fum ahr* the •• ' iba cooMfwrlmai of t

I.HTf.U«t< «•. TrM buy. tt l ite ov obloMr. anaaaMattMl* hairy ; tnatk So«««n *mA-ntcmtn* mapWodM* (l<H»rr« ocUKMlrtMM. f Cr y ton, m liafn. t. p. 11 /.ft.-** Dste PUi 54 ». M artitnb at ihe ' » ». aod f u n u U ^ vital f *<l*vi* baaw brarath. n»»iU-, male t*^, • >tiqwrj 4 S^Wfl. i> •OUIB tlton. •all 1*1, W 1' oblong, rounded • fh«Wa»i s OVMU. filaments ; herr *f* »-M« W. »:• •; -of Ihr K**t !«!».. amoni the < • '*"* 4^«Jo by the ! . • • •*«•« * Tile •lamtfM.

M.mitu Sfi !> «... K.p.41 : Lb^-mt o>rp W dtopiMni m scvatrd, *pair yellow, silky outside. I •t, a b w brwiow*. obovale J, glabrotts on both w f* .i<i!Mlnt».i, MMaal I *et.W. >>: S. Jamaica am) Corolla w n g i tufamxl. n, *Unit* i' b f *m* • ' II MSV obteaa. MVawaaird. MI •hen Vnterm atilUry, •himol, ' *m. tihtuh* or I N * . *99* 1 . «-liut», ciotKwt *mnhrmuj* dowi' l»ai» num. ttbrabM < or ihr mulJU- m I.fcmrrwt.

Sea-•all Date Plum. Fl. Oct. Nov. Shrub.

MOSTA'TA (Roxb. cor.l. p. 37. t. 48.) leaves ovate-

male flowers with s OVMU. filaments ; herr

Native of the Mauritius. ♄. S. Native of

Yeraa Date Plum. Clt. 1822. Tree.

Tile fruit called *Mabola* is brown, with a pink-coloured, fleshy ri•t, a b w the size of a quince: its flavour is said to b' airtreablf, th* pulp i» tirm an* white. The tree is cultivated in the Isle of France, for its fruit.

Mabola Date Plum. Clt. 1822. T M S-10 t

37 D. OBOVA'TA (Jacq. i i t H BJHW

Native of the eastern frontier of Bengal, where it is called *Oori-Gaub,* also *Goolal.* It supplies the natives with a strong, hard

Howrr*, but tlte nuIn ait still unknown. It i» probably a •pecirt of *Embrf6ptcr*

Undulated-leaved Date Pl *m. tihtuh* or I N * .

40 D. ANO'NA (Wall. cat. no. 4139.) leaves l or oblong-lanceolate, acuminated, glabrous; flowers lateral and axillary, sessile. ♄. S. Native of the East

Pleasant l»ai» num. ttbrabM <

40 D. EC

oblong-roundish or oblong, rusty beneath; peduncles and axillary, trichotomous, downy; lateral branches 3-flowered.

Elaetia-lide Date Plum. Shrub or tree.

II ▷ ANA'TA (Roxb. fl. ind. 2. p. 559.) leaves ovate-lanceo-

R 1151

late : male pnlunclr* 9*&>flo«rrml; imk *torn* i S • lamma. onaconv ex receptacle. ♄. S. Native of Tipperah. A tall, slender tree, wtthattr ight trunk, as in firs. The finru e is unknown.

Straight Date Plum. Tree tall.

4K l' BRACTEA'TA (Roxb. fl. ind. t. p. 5:'. lone, •fttU t Mjrlc 4-clci l-••«•.!«>,! ♄. S. N.<.« of Dooab. I ba timlc uw hat. ,• • '• . . : • <<!

Bracteate-flowered Date Plum.

l ras.

43 D. LOBA'TA (Lour. cochin. p. 2 leaves ovate-lanceolate, oth surfaces; peduncle owered; ber quadrifid. ♄. S. Native of Cochinchina. Corolla wh red tube. Sti Berry pale ^ma eter, having a sweetish austere pulp, with about an inch m dkn irll.

Lobed-fruited Date Plum. Clt. 1822. Shrub 8 feet.

44 D. DENSIFLÒRA (Wall. rat. no. 4140.) lrate* oblong, RU- brous, coriaceous; peduncles r«, m»»iy- flowered; fruit c!obu*r, t; . S. Native of Moal nync Mnd Martaban. leaves 5-8 inches iung, anJ *J broad.

Dense-flowered Date Plum. Shrub.

45 LYCIOIDES (De mus. cab. 36. p. 448.) leave • tmall, lancrttlatr. fl.;' obtuse, glabrous, smooth, subfasci- cled. ♄. G N tive of the Cape of Good Hope. Flowers hermaphrodite. Hardly distinct from *Royena*.

Lycium-like Date Plum. Clt. 1806. Shrub.

46 D. VACCINOIDES (l indl. ex Hook. exot. fl. 139.) leaves ovate, obtuse, shining above, villous beneath, and on the edges; ers solitary, axillary, quadrifid, tetrandrous; fruit ovate, 3-celled, 3-seeded; calycine segments ovate, subulate, pilose, with coloured edges; corolla sub-campanulate, with ovate, undulated segments. ♄. G. Native of China, Penang, and Singapore. Lodd. bot. cab. 1549. Perhaps a species of Maba, with quadrifid flowers. Stigma quite simple. Corolla white.

•0 A small i vergreen shrub.

^ '*> ortle-berry-like I »ate Plum. Fl. April, May. Clt. 1823. Shrub 2-3 feet.

47 C. HETEROPHY'LLA (Wall. cat. 4) 38.) leaves variable in shape, roundish c obovate, emarginate, smaller than in most other species: calycine lobes obtuse, re tatd. ♄. S. Native of Ava. Allied to the preceding.

Variable-leaved Date Plum. Shrub.

† *Species* i 4«r^7y iwwR.

48 D. MELANIDA (Poir. ency. 4. p. 431. > *t.* p. 625.) leaves ovate, petiolate; berries sub-globose, depressed, 10-celled; calyx pent 'lf«>nal, « th a reflexed mouth. ♄. S. Native of the Isle of France. l.tx*nu» me'an id*, Caanacra,

Black-wooded Date Plum. Tree.

49 D. LEUCOMELAS (Poir. l. c.) tra» i s ovate-elliptic, sub- cordate; calyx 6-toothed, girding the berry one half of its length, which is 2-celled. ♄. S. Native of the Isle of France.

White and Black-wooded Date Plum. Tree.

50 D. MONÒSA (Poir. l. c.) leaves ovate-lanceolate, .-l.br. w; flowers quinquefid; fruit |fc»bo«. •olitary. h. H S. t;,, „f the Isle of France.

Knotted Date Plum. Tree.

51 D. CHRYSOPHYLLOS (Poir. l. c. p. 433.) leaves oblong, shining and rufescent beneath; f ' ' ' ' l»M««ll l; .alp hairy; fruit pear-formed. ♄. S. Native of the Isle of Fr MkM

Golden-leaved Date Plum. Tree.

52 D. ANGULA'TA (Poir, l. c. p. 436.) leaves ovate, obtuse, coriaceous; flowers quinquefid; fruit angular. ♄. S. Native of the Isle of Fran. «

Angular-fruited Date Plum. Tree.

53 D. EBE'LIS (Lodd. cat. p. 9. 1830.) nutbintf i* known of this plant but the name.

'ir-fruited l)>tr litttn, Trc*,

) *man of tHom/nt grow U** larvr alirub* *it* *ihry* thould br pUnttd m ibl ftbrubbrnr«; tbt>]r «r* *• auU it»rtra»nl boJi by Uyr« and • ' "f dfwft«hon»r and ato*« •prrn utnr lrratntrnt aa •d gncohov*.

'Item; and tlM-varr rradiU "«««.. „n uDd undrf • ba«dfU«; Urn* ol •1«M- species •hoyfd br ,.l«vd ma moist heat.

11 EMBRYOPTERIS (*spil* ,-,. .«4r^hM«Bfc r»»f», a «ma { m rrftrmcr l brint K«ib. «. |. p.4!». - y/r««M, *Dtairm* (1(W, diftr. aionr laaclw S.4-fl^rrrd. a«d tiic fewa!.

1 E. GELATINÍFERA (Roxb. cor. 1. p. 49. t. 70. W.IW. c. 4. p. 836.) leave • HMtol ate; stamens 16-20 in the •A flowers, and 1- ; in tb> female flowers; flowers quadrifid; styles 4; berry 8-seeded. ♄. S. Native of the East Indies.

Embryopteris, Gærtn. fruct. t. p. 145. t. 29. Cavanillea, Philippénsis, Lam. dict. 3. P* vM. 8*t JuM. Mill. It)(ll Diospyros Embryópteris, Pers. riK-h. t. p. 6X4. K er. bot. reg. t. 429. D. glutinòsa, Korn. A middle-sized tree, with long leaves. Flowers whitish. Stigma cruciate, sessile. The fruit is «t*nbytn*i, l*. b«i ••«,. on account til f'l iim B'ritikif - -«"T— - . . . -»i/ .min^. ll, ». >u « j,,,,,, | a t j. i , • is generally known in Bengal by the name of *Gaab*; and that the Sanscrit name is *Tindooka*; and that the astringent, viscid juice 'f l i * i \T ." of the fruit is used over that country for paying the bottoms of boat*, I i unripe fruit o OOtwtM a rrry l i m propurtH<t tannin. I he infusion is employed <> »IIHII lulling i*u in. to make them more durable, M probably atlili tu il ir strength. Tar wood ii l ^ 9 U out of ..... Embryopteris. Fl.Jul. Clt. 1818. Tr. 25 ft.

2 E. DISCOLOR; leaves oblong-lanceolat r. tnilf, t.uin. tl»r base, of a silky Uucowt colour brnratb, aftd do*' flowers quadrifid; stam ld m 14. 1 . of Uw l pine islands. Diospyros discolor, Willd. spec. 4. p. 1108. Stigma sessile. P . rbapa only a ranrty i»l the preced ,$. Berry 4-6-seeded. *xhrm* ami roruUa tdltnM. LNTM aJakcat a tool lung.

Two-coloured-leaved Embryopteris. Clt. 1823. Tree 20 feet.

3 E. RACEMÒSA; leaves fr n oblonf to 1—wwUlr, obtiM* glossy; both male and frfnalc flo«r«n in a&itl.ry *amK*r* racemes, the former w ill to-io wawwii, tin- Utt. stigma 4-cleft; berry round, smooth, 4- <vd<>d !•. B of Silhet, where it is called *Goodi*. •/. and – are the fruit is eaten by thr naim < l)to»(iyrot i. tad. f

Racemose-flowered Date Plum. Tree small.

4 E. LOURE'IRIA'NA; leaves broad-lanceolate, l ; lowrn aiwdn- fid; stamens 20; berries pea-shaped, 8-seeded. ♄. G. Native of Cochinchina. Diospyros dodecandr r^ 1 Corolla white, with a sub-globose to '(•« Iti Ml Mlf, «lth • sweetish, astringent, ljbW, but pkaaaM tHil,< *Thm* w«d i» like that of the "jSf* «*«?. />-*p^«» ft*«d»««r. hitkMini the black veins. •he im, ar, mtwb «Md a* Mpportt to thr Black Pepper plant.

Loureiro's Embryopteris. Tree large.

5 KA'KI (Lin. syst. 918. Thumb. jap. 157. Lour. coch. 226. Roxb. fl. ind. 2. 27.) leaves bifarious, ovate-elliptic, acuminated, elliptic-oblong, or obovate, cotdaU at the base,

ilo»ny on boih surface*; branches tomentosc; male peduncles usually 3-tlnwered; male flower* with about 20 stamens, and female 8; flowers quadrifid; ityl« 4-ckft; aiigmaa bifid. • of China, Cochincliina, and Japan; and is also UivalfJ in those countries, as also in Bengal. D. Chineiui*, Blum. cat. bolt. buit. p. 110. and act. soc. baUv. 9. p. 167. Kouit or Kaki, Kcmpf. amu-ii. t. 10G. Fruit globose, filled, siie of a small orange, yellow when ripe, abounding in yellow, fleshy, edible pulp; it is tolerably ph-asant, but by no means equal to a good apple; eau-n plentifully occasions diarrhea. They arc preserved in the same manner as tb* fig, by aprinkling meal or mgar over tbem. There i* a variety of tliit species with an ovate fruit.

KairiEn bryopteris. Clt. 1789. Tree 12 to20 fccL

Cult. See *Dutpjfrot,* p. 41., for culture and propagation.

HI. I'M; \ *LKAtParala* is the Caribbean name of the *tnr).* Aubl. guian. 1. p. 576, t. 231. JR Br. prod. p. 526.

LIN. BIST. *Potyguma, Dierda.* Flowers polygamous. Calyx 4-toothed; teeth acute. Corolla flesh*, wjih a shot-tragorwl tube, and a 4-parted limb; segments acute. Stamens Msrted within the tube of the corolla at its baa*; anthers small, roumii»h. Ovarium wanting in the male flower*, I. placv re is a villoiu, rufous corpuscle. Fruit and seeds unknown.—A tall tree, with a branched top. Leaves alternate, re, iilabr. ^long the margins. Flowers ^ed in axillary fascicle* : w i rufmcent scales.

1 P. GutAKi'jcsts (Auhl. eiiian. I. r. | I, Native of Ma. Branches downy. Leaves ovate-oblong, acute. Flowers Corolla fulvous.

M*M Paralea. Tree tall.

Cult. For culture atxl propagation tee *I)totpyrot,* p, 41.

IV. I»< >VI.v >>e'l by Ltnnaias in honour of Adrian Van Royen. I le ami I <a« id w*rr sucer* I botany at Leyd«(n). Lin. M, no. AJ5. Ga I •. urn. I ilr. prod. |

Lw. *imdrut, Ih^yin*.* Vlonert tM-rma; ilb with a 5-jurn-d r< nb. Stameaa li of the tube of the corolla; filamrm i<^» *t%* oi.liIIIJI, acute. Ovarium u*u«)ly +-c> cded. Berry tlrwhy. Seeda tnatwuUr rub*, itativc* of (he Cape of Good Hope, will leavM ; and axiltar *A,* Military or aggrega' [•edicelt. Flower* *»dite.

t It LicinA (Lin. spec, iii.i.j leaves ovate, muflhi.h, «hn abo^e. I;;. O. NaJ U m. ill. t. 870. f. 1 — Herm. par. *iSi.* t, 232.—Comm. hort. 1. p. 187. • ••.— IMuk. -ry .1 above aisd [«!« below, containing a firm, whitun Brah, almoat of an appU.

Bladder-nut. I | May, June. Cli. -hrub 5 to 10 feet.

!;. vitto. »pec. 468. Thuiib. pr-xl. 8».) leave« tomentme beneath -. brancUe* vilkwa, h . I N i 'P* of Good flop. !*», Buna. pr«d. 13.

Madder-am. Fl, June, July Clt. 1774. Shrub 5 to 10 feet.

3 C. GLA'BRA (Lin. spec. 668, Th od. «• leaves lanceolate, glabrous. * Native of the Cape of Good Hope. —Comm. hor.. j. p. *Hi.* t. W—l'lui t. ail, • 4. Fruit roundish. purple,

tican BlaiMt-T-nut. Fl Sept. Clt. 17*1. Sh. 4 to 6 feet.

4 R. PA'LEA., (Willd. sp«. 2. p. 632.) leaves oUoog-oooo-v»ie, obtuse, glabrous. sativ.oftb* Ca^toT Good Hop*.

PaU African Bladder-m.t. 11. June. July. CU. 17*9. 4 to fl feet.

6 H. cc*lVT* (Lwn. diet. 6. p. *3U.~)* Wan* wmewhat obovate-oblofig, downy, nerveleaa; branches villotts. **. G >•* tiv. of the East Indiea, *1* but probably of tb* Cap* of Good Hope. Flower* toliury. Calyx white. CorolU pt«T**' ** pabrscen*, Willd. enum, p. 457. Ker. bou reg. 500. Flowet* whitish grren.

UMmJcd-leavrd A fr ican Bladder -nut, Fl. July. Aug. <-''• !. Shrub 4 to *6* :

6 R. uiaat'iA (Lia. spec *tit.)* Waves •u. V- . G. Name of tbe Cape of Good Hop*, ill. t. 570. I. I. Jacq. coll. iuj.pl. 110. t, li. *t* !•-dirT 1 r.3._tlocrh. lugdb. *• p t». Leavea • Flower* of a worn out dirty; purpW colour.

//oicy African BUdder-nut. Fl. July, Aug. Clt. to S fbel

7 R. AMoviTtfoLu WilM spec. t. p. 6U.) I '' • * f ? r acute at both cntls, ralbvi pUoat be—ib. » the Cape of Good Hope.

Nar• *im-Uatrti* African UlaJdn-nu(. Ft. Jutw, July. I 1789. Shrub 4 loo:

B R. L*TiruLi* {WilU. rnum. suppU p. V ha* not yet Sowend in Ow gardcni: waaaqiiWslly oothmg is known of Uw plant thaa tb* M M .

llroaJ UatrJ African BtaddfT-nut. w . July- Iftl6. Shrul> 4 to 6 fret.

Oak. The spear* thrive in a mixtur* of loam, peat, • sand; and slip*, bltrti from ripen*] wood, »uilu root «*l.ly in sand, under a hawl-fbaa.

\ lill-l *t.

•ma. a filament: SlamMa double/. Roytwa

r. #>a/yg*M. /KrirM. Tbl* genM ftey»M in th* riowers being polygamou*. M tb* ail male dower* being 4 time* the number of tb* segments of the corolla, in the nlamcoi* being double, and in tb* ambers b«M boanled. Ovarium 4-(.^elIrd.—tibruh* with enure leaves •*• axillary 1-flowered pedicel*.

.Ubr.Mii; (lower* quinquefid.? ½. G. N .tive of tbe Cape of Good Hop*. Roy*t» pot)indra. Lisv •uppl. *HO.*

kl I tiplooema. Fl. June, July. Clt. 17 74.

t U. A*»»v*; leav*a obovat*, raiber villoti*. coriaceooai corolla ti-7-clrft, with »btu*« —sjawn *m.* Roy*a« arabigua Flo h refle«cd *cgm< .uel.leu)

^Mhf«« w Diptuaema. Fl. June, JuU l»U. 4 to 6 I

CnU, For cultur* and propagation see *Roy****, above.

m sVsJut* «VAi«. doubk awl arv^fa, *Muthtra,* ao anther ; in rafcr—c* 10 tb* debiacitif by two **U•••'. Man. a w. geo. bras

*Pt*lA*dnm,* Www. I«arted.

limb. AoUwt• *i,* w««iW ui tbe tbroat, t-vaitnl from the base. Ov>. |'r,.««,l]:,f *ts* ">'d wood, and elongated, often prnduVot* abmb* ot branch*-* «nl, *urnnil, petkdatf, q d u W> hie****; racemose, bracteate Sower*: and rrram or Bula-ODlMtrrd *«-

rolla*. which buouu par]¹ -globoar at the ha*? ; *mmn* '>roTla not warned at the throat, bat n<h narrow, bluntiah, imbrira*'

1 1) k f ,]!. 1 i !>i|rlal>.lnUr , li »»•• « Oblong cauyxea amoothiah. 3 timea ahortrr than the corolla, •lloua in. llio Negro, along tin river Solimoes. llabir *'nu #tw»*

Pendulous-flowered Diclidan thcra l i. *U* f» 80 ft*l-ll),! ACRITÒLLA (Mart. c p. 1 + i. 1. I9T.) branehr* looae; petio In gU&dktv downy ; leaves oblong, downy along the middle nerve ; calyxes downy, twice shorter than the corolla, which is glabrous ; calycine segments oblong. ♄. S. Native of Brazil, in the province of Rio Janeiro, near Sebastianople.

Uuxit lUnthera. Shrub 5 feet.

< tilt. I For ciiliurr md |mi|ttg*th* ate *Diorpjnu,* p. 41.

VII. Ci RGILLI I lined in memory of Jan* ND, who lived in tlir Htm- of C,»tjjai Baubin, and who descri '••*vt*\, for tb« first time . •onw marine Algai » his I heatrum Botanicum, particularly the *Fu*•-•i c*rn" *atus, F. pa/-mâtus, F. digitàtus, Mi V lea* perônia). i i w.lto.

LIN. SYST. *Polygàmia, Dioecia.* I irn nolygMnom. C»-lyx semi-quadrifid. Corolla wit i a 4-rlt-fi limb. Malr flower* he bwatr of the corolla, but *o«n*-times also hypogynous. «l»u»»lr the number of the tcfmr'ts of the corolla ; filaments doub •• II. nn-ijil.r.Mln, or t. malr Hont r« having fewer stamens ihau UM maW, «t>J th*M b*mn. Ot*> rium 4-celled ; cells 2-seeded. Berry ittobfMC, jpnlcd l<y lltr adpressed cup-shaped calyx lit bottom. —Evergreen trees, with entire, glabrous leaves : ami axilUry, l-fl *i*]irod. 520.) lrate* oblong, a little undu* lated, glabrous, almost of thp utrn colour im both Mtrtfccn ; calyxes of the male flowers 4-toothed, me half thonrr than itie nbcof tin- coritlla; *t parted; liraitrdlct* lmt*v Jattv* of N ml, with in t< /.uoM-tiratM.-li> >. fit. IU7. Tree.

f C. acnmA (R. Mr. prod. p. i*7j leave* obkmg, glabrous, obtute at i)w ajwx. acute at the baa*, pale bcinr.i ilyx in I he ma! !la ; atjic undivided. ♄. G. Native of New South Wales. Hook. bot. mag. 3274. Corol :» while, rirdlia. I'lt. ISt«. Tree lift et.

IN *Reft, p. 41.**

\IH narular name of *M.* *.' t. 1(1. Juaa. in aim. am*. *S.* p. 418, Juss. gen. 418.—Ferrèola, K mij(. and 1 U '.TN. SYST. *Diòecia, Triándria.* Howrn dioecioua. Calyx •trind. Corolla urrrolatr. inlnt. Mali* flowvn with hy* pogynous •tamrna, iliHjltk in numtw-r lo the *cum> ttti *of* the corolla, rarely equal that number : with simple •\f and douhle nla-ri».i KrmaW H<mrr* without any stamens. Ovarium 3-celled ; i-rlN t-wrrlrd. Berry oval, "***lir glohoar. girded by IIM rttp»haprd caly* ai th« baw.— Shrub »* or ire«a with i IMI and axillary, l-lwrwwl pedicels.

1 M. ELLIPTICA (Forst. gen. p. 122. i. 16, ri. an.tr. Ue.) leaves elliptic, glabrous ; flowers triandrou«, by three* IMII. Urn. iII. I. SOJ. Yotmg UavM and branches villous. Calyxes downy.

Elliptic-leaved Maba. Shrub.

2 M. LAVARA (R. Br. prod. 517.) leaves oval-oblong, vel >y, Wuuii*h at the haw. *hmmg. are, •• well as the branches, gtabrow ; maU a-d female flowers solitary ; alternate filament* doable. *• S. Natire of New Hollanc), within the tropic,

Laurel-like M«i»a. Fl. J ty, Aug. Ch. IM4. Shrub.

3 M. «>•»»•• TA (R. Br. l. c.) leaves obov »tr. op*t|ue and flabnma in th* adult •»»•• but the young ones, petioles, and branthea ar« downy ; calyxes downy ; alternate filaments double ; berries sessile, solitary, **oml.** ♄. S. **Na*** tive of New Holland, within the """|"

Obovate-leaved Maba. Shrub.

4 M. ACRITÒLLA (Juss. an •i. mui, *S. p.* 4t H. Per*, ench. p. 000.) leaves obovate, glabroiM in it* adult •tat*: calyxes downy; flowers solitary - antvBat, neuuMroiia (all ttmtile. Imhr«, on I IK- ! FcrrtoUb I i»er» yellowish.

Box-leaved Maba. Clt. 1810. Sh • *Sib.*

i M It Br. l. c) Iravri nnl wbonw, rather r«-tuse, attenuated at the >Mae, irtabrou-, a* *n,* ll .. the hranrhleii, even in the, towr state ; berries i>lnary, oval, alxttii yqnail to half the length of the leaves, and are, as well as the calyxes, glabrous. ♄. S. Native of New Holland, within the tropic.

ifombir Malta. Shrub.

6 M. GEMINA'TA (K. Br. l. e.) leave* oval or »|*n ,te, marginate. rather veiny, aom«wl.at atientwted at th* baa»(td«l>r<<i, | yoang alale, aa writ a« • bffll' oval, twin, 4-5 times aborter than the leaves, *mg,* as well as the calyxes, clothed with f nedowii ♄. S. Native of New Holland, within the tropic.

Twin-berried Maba. Shrub.

7 M. LITTÒREA (R. I ••r. 1. c.) leave* oval-obbmg, rather retuse, attenuated at t!c ba*e, shining ; branchlets ^labriH ; berri • • M>lttarv, nval-oblong, 4 tifM* longer than the r.alyx, • lurli ia ubMtlrtrl) lobed, and 4 to 5 time* abortcr thai. the leavei. •;..**. Native of N • 11 Hand, wKhia the t. , . on the shore.

Shore Maba. Shrub.

8 M. RETICULA'TA (i: Br. l.e. p. *ith.)* le«v«. obovate or oral, refute, 11 tlaajmly veined, w<th »ub-n. glabrou* in the adult state, la wrll a. thr hrwcblet ; alternate filaments double ; berry d. S. Native of New Holland, with in the trot ic.

Reticulated-leaved Kate. Hhruh

9 ¹! COMPA'CTA (R. Br. I. c.) lr-;i ives obovate and oval, rather retus i, corona. t, reticulated. Hat, and arr, ai •«•)! a> the branches, glabrous ; berries trprraardly globea* ; OBIVK of ib* fruit obsoletely lobed, reflexed, silky ir ♄. S. Native of New Holland, within the tropic.

I Ciwy. Maba. Shrub.

10 1 - ; kavr. umall. lailf llilali, ha , flat, glabrous •a welt aa tb* hraocbt*; ptduwtea trmmu), m flowered ; berry ovate, acutish ; c • H v wanting, ajw) nectarium *I*D' X. Native of CVx-hinrhu, in east w«wl Ebenóxylun, Lour. rorh. p. fiJS. i Caju-arang. Humph.* mb. 3. p. I t ! Wood «ar' H a U heart, at> is the ebony of Coch ii-chma Berry reddish yellow (ex Lour.), small, 1-celled, 3-see •%• ; P lowers triandrous.

Ebony-wood Maba. Tree large.

Cult. See *Royèna,* p. *it. u.t* mhurr and propagation.

(>«Dli t \ I . \ II |PLEINÆ (r. rtJW on account . of its conuintng |>Unu agreeing with (/Ir. in important characters.) Hu» k, fl. jwrt. p. laOfl, R. Br. prod. p. 5« Jaaaanear, paxt. J«aa. gtm. p. 104. Libta*, Vewt. t*bt. 1. |>. M6.

Flowers hermaphrolite, sometimes dioecious. Calyx 1-leaved, divided, permanent. Corolla hypogynous, monopetalous,

a t

i-deft (f. 8. *b.t f.* 9. a.): sometimes 4-petalled: petals connected by jiairs to the middle of the filaments, rather valvate in aestivation | sometime* wanting. Stamens 2, alternating with the segments or petals of the corolla. Anthers i-celled: cells dehiscing lengthwise. Ovarium simple, girded by no glandular disk, t-celled; cells 2-seeded!. Ovula pendulous, collateral. Style simple, or wanting; stigma bifid, or undivided. Fruit drupaceous, baccate, or capsular, often 1-seeded by abortion. Seed* with dense copious albumen. Embryo middle-siied, longitudinal, *iht.* Cotyledons foiiaceous, half free; radicle superior; plumule inconspicuous.—Trees and shrubs. Leaves opposite, simple, rarely pinnate. Flowers racemose or pantclcd, terminal or axillary, with opposite unibractcate pedic

Tbe bark of the ash is so bitter, as to be highly celebrated afl a febrifuge, and is even compared with quinquina for effect. The sweet purgative called manna is a discharge from the bark .e.eral species of *Onus* and *Fratimu.* The sweetness of i substance is not due to the presence of sugar, but to a distinct principle called mannite. Olive oil is expressed from pericarp of *(flea Europe a.*

Synvpti of* lie *gtmtn.*

Tins I.

On*'*. *Corolla thorl, mOHopetainu, enmpo**tatc or mrttoUU, Stamau *, mth ,kort JUamemlt, and rrrtt anther». <lr*jtaee<mt,*

I <lla funnel-thaped, having the tube exceed- | the calyx. Stamens inclosed. Style very snort; stigma Berry globose, containing 8 chartaceous •

* pMTitVat*. CorolU short, eampanulair. Stamens a little extern ..U**, Laving one of cells usually abortive.

Calyx tubular, 4-UH Sagsssmta of corolla ovate. Stamens a little exserted .i ; stigma bifid, with emarginste segments. Drupe *-cellcd, one of the)U abortive; nut oblong.

-IUSHI*. CorolU globular, thick, do-ply 4-p««. Anthers lying in the substance of the corolla wanting, rupe containing a two-celled putamen; one of the cells sbortive. Albumen none?.

roll, globose, coriaceous, with a » •ened above tbe base si the imlh *1*-celled. Stigma almnst sessile, obtuse. Berry only Albumen fleshy.

Mvxon'tvii. CorolU globose, coriaceous, plicate insidr, with a 4-cleft border. Stamen* inserted in tbe middle of tbe sjfeft very short fiUments. Ovarium i-celled. Drupe 1-aV raised, containing 1-4 angular 1-seeded nuts.

mcs. Calyx 4-parted. Segments of eorolU elon- imear. Stamen* inclosed. Style short; stigma Uiftd. ntsining a stiiated, 1-seeded •

8 CHo*r>aosP» anew. Calyx 4-toothed. Segments of corolla linear, clavale, vertical; throat closed by tbe anthers, Style short; sltgma tr.W. >>«>' -'celled, 1

Tin II.

Nil. *ConMm* /wsaW-cAsfeat, *m twmpmmmUtte,* #-i-*parted. Stamtmt 1, ikort. fruit loptmlar, t-citlfd.*

» SraiKo*. .t.ular,«hnn,4-toutbed. Corollafss*M>* shaped, with an elongated tube, and a 4-parted limb. Stamro* inclosed. Stvie filiform ; .tigma Caps«W oblong, t-celled, S-valvcd; ralrea contrary IO the Seeds solitary, compresseil; with men

10 FOMT'TKU. ;tarted. Corolla 4-cleft. Stamens eqttal in length to tbe callx. style; stigma S-lobtd. «apsoUr.

II. FunTAxt'tu. Calvx 4-part«d. CorolU of I Stamens eioaguad, and stigma bi6d. Capsstle pafwry, cent; cells I seeded.

Taiss III.

t • f'atyj i-parttJ, or 4-4 *Stmmnu t. Frmil dtm/mtcromM.*

IS No Calyx 4-eleft. Petal* orstr, pairs to tbe fiUmenta at the baa*. Dntpe cbartaceous 1-seeded puUm<

! .toothed. Petals linear, by pairs to tbe Blaaiatus at the baa*. Drop* 1 tUai

Taiai

fsSBSWt *CmtfM* 4 *t*£i UfH. Lumprtt$*m*.* MswW.

warn. rlowers poty

13 0 I lowers hermaphr- -Jrgamcw* 4-parurd. PciaU 4. Samara 2-celW.

UI.

OU1 I Calyx 4-lootned or 4-ekfft. CorolU si. prialnu*, cainpw> <irl-.|,»| itSKM »ith sbert SSBBMM» and erect ant irvp*cro*i

I n. mat. i I Kmn. no. 9 *«u t.* p. 7J. l. 01. Jt** gen

Voastf,—. Calyx abort, 4-lootbed. lunrttl-shaprU, with the ttlW ceeding lb< calyx, and the lm»b •• parted. KtametM,!. * inserted into tbe tube of the corolla. Si\I. . 1. Berry globoar. tacrotls I- nuts. Albumco hatduh. 1 . d.—Hbnibs posite leaves; and tnmuial, 111111(111—ij, tbrraosd

as (Tr«. hist. 1005. Ls». tpiC. |. p. 1 revUtr. gUbnms . H >« btdm and many par' >fl. bot. 761 300. <fcd. A. . Snalib, aNC

Lam. ill. 1. t. 7. Bull. herb. t. 295. Mill. fig. 162. L. Germánicum, Baub. hist. 475. The flowers are sweet aeented, white at first, but soon changing to a reddish brown. *l>* erries dark purple, almost black.

The common privet, in old i liak author*, i» also railed Prim, Print, Primprint, from its regular appearance when clipped. In German, Dutch, Danish, and Swedish, it is called *Liguster;* in French, *Troene;* in Italian, *Ligustro;* in Spanish, *Alhesa;* in Portuguese, *Alfesa.*

In point of utility and ornament, few aUrubt ii ceed the privet. Its chief use is to form such hedges · « j r. i. quired in divided gardens, for shelter or ornament; ami fur tin* purpoae the Italian or Evergreen Privet is usu all preferred. It bears clipping well, and is not liable to be disfigured by insects; and having 'only fibroua rooU, it mb* il ground less tha *a* almost aajr other shrub. It it one of ihc few plant* that will tht ive in the tmokr of l>ondon; it alw> grow* well undri tin- drip of trees. The MOCK! is hard, and fit for tiro bar. From the jmlp of the Wrrim a rme-ndoajr* pigment may U- prepared. With il. H 10l and ailk of a good durable ·IN ; for this purpose they, mu»l ». ·_·. i m i l l IIXIII a* the) are ripe; they contin *m* on the shrub till spring, and in times of scarcity are eaten by different sorts of birds, particularly the bullinch. The following varieties arr in the (fan!-us.

Var. tt, Uvcxxmrumm, 1 he white-berried Privet.

Var. ·. The yellow-berried Privet.

Var. 2, sempervirens, ir*M. I. Italicum, Mill. 1 tie Italian or Evergreen Privet.

Var. «, rtirtc^M/MM. Thr variegated loavrJ P rivet. The lwi es are edged with white or yellow.

tar. ., *mmxuitifoimm.* The ·arrow l—Tad Privet.

Common l'rirvt. Fl. June, July, UriUui. Shrub 6-10 feet.

2 L. S N»'»«K (Lour. coch. 19.) l«a*e« Uncenlaie, tomenio«e ; HCHim coarcUtg. l> M V>T>. | na, mar Canton. Vaht, rnum. 1. p. 35. Brain hr* iliffutc. l lower* t»! t very tmall, brown cup-shaped. Berrie

Chinese Privet. Shrub 6-8 feet.

3 i. t inb. fl. jaj). ji, 17. t. 1.) leave* obtoog- ovate, so M*im 41-uinmaiftl. ^LbrtMN] H0MMI it)t»ijM)iiin) , peduncles and pvdicrl* spreading. ½. M Naiitr* of Jap«n. Vahl, enum. 1 (i. 35. l latifoli mi, Vitm. aufflm. l. | Lin. syst. 58. Hranrli.» wrmklctl, ^lal- l ,\y% tubular, lllK wrr* wtalc Laavaa ĸnx.».<) alun|[tltc tnnlillr ·botf, with a correspondin n rawed Una bnr> th. /·MM l'rivet. Shrub 6-8 feet.

4 L. RIA'VUM (Hamilt. mss. ex D. Don, mo .1. 11. ncp. |>. : IMVM ellilitl. . acutr. lwiiy lx-maih, at w*ft at ilw branrblrU ; flower* crowded, ·lrixi. «·<-, ,li.ιn»»«d in a tbyrac, na*mg *the* mil vrry hairy ; br.. II. S ·ntain*. (look. b,.i. mag. *tttl.* l - WilLI Roxb. fl. in 1. l. i>. lil. »l. rar uiai. .1. t». 17. t. 251. l lanrrulaium, brtb [M D . r M « m « l ute. l vestium. Wall. a|i|>rar* to be rMiilnng but a vaficrt\ of this species; the ihyr*r i* roor* erewoW, more drim-ly hairy, a* well as the young leaves, branchlets, &c.

Spicate-flowered Privet. Fl. June, July. Clt. l t » . Skrttb

·a »V

t, rtaiViMi (Wall. ca(. rm. l 7**. pi. rar. aaiat. 3. |> *(·· Uncrolalr, »c uKtli, r*ili< r |(l*l>ruui ; hnmclm without ··*. tHMcWd

" rmw Emp?re, *an* Mount TaoNg Dong.

· L. k> . , „ 11 |) ,,, j ir,Hl. ll. ncp. lor) leaves ovate-lanceolate, MM* KUIJH.U. a* »rll *· iba braath— ; ··van diapoaMl in bracuatf ptaickw; pwlwiclw very haiiy ; bractrolr* linear lanowrfn'" ·" · H. Sativr of Nipaul u-iiUi*. H« it" ljuttb. i n\»ti aiul H M U :> nV lowatl t« .nc j« tlu i ll.il< , ami · iln firdurl* \tr\Ujt »fl»lri>ii», -Booffftl l Privet. Sbnib.

Bracteolate 7 L. LU'CINUM (Ait. hort. kew. 1. p. 19.) le »rt« o¥iU»-obto«tl, acuminated, shining above; t>artnlt-. ilixrund, tprt-adinfi nun K. ½. ' l Native of China. Sims, bot. ma*. * »0J, Uavc* bniail. ' lowers white. l arT»rd* H l a*sj nut' *She* >«g Pn*rt, or W ax Tree. Fl. Sept. Oct. Clt. 1794. Tr»* 10 io *0fi.

Cult. All species of Prive (arrofra*) culture, and will l froo in any kind of soil. Cuttings root without difficulty. *L. lucidum* requires s rinr |Mt>te<luMi in u><ir weather.

ii. run i

LYREA (from φυλλον, *phyllon*, a leaf; shrubs leafy l Dioscor. Tourn. inst. 367. Lin. gen. no. 19. Vaill. arad. K. p. 197. l 13. f. 35-37. Juss. gen. 106. Gertn. fr 2. p. 11. t. 92. Vent. tabl. 2. p. 313. Lam. ill. 1. t. 8.

I.is. »ver. *Diándria, Monogy'nia.* Calyx small, tubular, 4-toot'tuil. iH I III.II ent. Corolla short, campanulate, rotate, 4-cleft, deciduous. -tamen* a lit le exserted; with short filaments. Style si ple; stigma thickish. Drupe globose, containing a 2-celled nut; o e of the cells usually abortive. Seed solitary in each cell. A Evergreen shrubs and trees. Leaves opposite. Karemes ·· illary. l flowers greenish-white. Drupes black, glo bM»

l l[1] ANGUSTIFÒLIA (Lin. spec. 1. p. 10. Va um. 1. p. 3«.) l 111, rl ll. Native of itaJy ami Spain. Lam. ill. t. 8. f. 2. P. obliqua, Tenore, syll. p. 9. P. mèdia, Ten • *nr. H.* nap. 3. p. 6 Branches beset will. elevated dots. l Leaves obsoletely ve , ,|.

Var. u, lanceolàta (Ait. hort. kew. 1. p. 11.) leaves lanceolate; brat*. *i.* rofwwr. l! P. no. iv. flu*. l, ist. 1. p. 32.

Var. γ, brachiàta (Ait. hort. kew. 1. p. 11.) leave t Un- iiolat. -».i ulate, elongated; branches straight. ½. II 1 . no. *M.* J. ist. 1. p. 32. *Rose'naryUaHii Phillyrea.*

Var. γ, brachiàta (Ait. hort. kew. 1. ti. 11.) leaves oblong- l-ili-i i i.i:· il.iii ii i :'.ut tt the other varieties; brarulM-i dp ricate. ½. il. *i'nit* f Phillyrea.

Narrow-leaved Phillyres. Fl. May, June. Clt. 1597. Shrub 8-10 feet.

2 :- HI NA (Lin. spec. p. 10.) leaves lanceolate, quite entire, or a little a*rr*< ed in the middle, triple-nerved, veiny. ½. H. Native oi the south of Europe. Kerner, t. 774. P. latifólia, var, t, II dia, Lapeyr. pl. pyr. p. 4. P. ligustrifólia, Mill. dict. no. 4. P. la'vis, Tenore, syll. p. 9. P. latifólia, var. *u*, ligustrifólia, Poll. pl. ver. 1. p. 7.

Var β, rugàta (Ait. h ori. k»u 1. p. 11.) leaves lanceolate,

Var. γ, W.J.JM (\,[. hurt, tu . 1. p. 11.) , a»r. oval-oUa^c bluntish. ½. H.

Intermediate or ' lance-le '-- ' II >'·. II Mav. June. Clt. 1597. Shrub 10-15 feet.

3 P. LIGUSTRIFÒLIA (Ait. hort. kew. 1. p. 11.) leaves oblong-lanceolate, sub-serrated in ' pletely-veined; at mtddlr. o!». M M W r t m · ||, N»(m ,i| il,, »..,,ti, · l ,· ·§-·. "· ·-· Spain ami ihe sou[1] l aataaWa May, Jam 10 1 *m.* l. p. II.) »*·»' t**olrul> acrraMd ai the apet

" ·

drooping. 11. Native of the south of Europe, P. ....tin. Willd. spec. 1. p. 43.

Driving Phillyrea. v, June, Clt. 1597. Shrub 10-15 feet.

6 P. OLKCFOL1A (Ait. hort. kew. l. p. II.) leaves oblong. lanceolate, almost quite entire, obtuse, narrowed at the base, veiny. I? - H. Native of the south of Europe. P. roed Ait. bort. kew. 1. p. 11. P. racemosa, Link, jahrb. 1, p — Plukn. t. 310. f. 5. Branches erecti»h.

Olite-Uated Phillyrea. I M. June. Ch. 1597. Sbrub 10-15 feet.

6 P. tJt'vis (Ait. hort. kew. l. p. IS.) leaves i-Hintn'-oblong, almost entire, veiny, bl nut tab. *tj.* H. Native of the south of Europe, and north of Africa. P. laiitolia, var. a, Wdld. spec. 1. D. 43.—Lob. icon. 132. f. 2.—Duh. arb. t. Iff, P. laufolia, diet. no. 1. Leaves an inch or more long, a little narrowed at the base, blunt, with a small mucrooc at tbe apex.

Smooth Ptiillyrea. Fl. May, June. Clt. 1597. Shrub 10 to SO feet.

7 P. LATiruiu (Lin. spec. 10.) leave* ovat ded at the base, serrated, veiny, (j. H. Native of the » rope. ath, lt. grate. L 9. P. 1st i folia, /J. serrata, Poll, fl. ur. I. ▷. 7- P, laiii.V n. 6. nap. 3. p. «. P. spinosa, Ten. aylL p. 9. no. 2. P. btifolia, fJ, spinoaa, Seg. ver. X. p. *73. Young leaves tulKTordate at the bate.

Broad.lean Pl. May, June. Clt. 1597- Tree 23 to 30 ft •

8 P. omJooa (Ait, hort. kew,). p. If.) leave* lanceolate-oblong, serrated, acute at both ends, veiny, bent obluiui :*ive oft! ld. l. p. 43. P. *k.* jahrb. l. p. !55. Pl l Clus. liiit. 1. c. Leaves like those of *Myr,*

O6/.7*;k'avcU Wiillyrea. Fl. May,June. Clt. 1507. Sbrub 10 to SO feet.

9 P. amrosA (Mitt, diet. no. 3. Ait. hort. kew. 1. p. lt.) leaves ovate-oblong, rounded at tbe base, acute, sharply and cuspidately *errated, glabrous, flat, veiny. I 11 Naiivr '.011th of Europe. I\ iluiii.l.*. Willd. ON iptnbaa, Willd. *pec. l. p. 43. I' !ik,j«h»> l- Phillm-i. l. Clu*. 1 k phyt. t. 310, f. 4.

j^wyortl 1 Pl.illyrea. Fl. May, June. Cli. 1497. Shrub 1" M ioi.

10 P. iTslci p. 43.) leave* all flat, elliptic; superior one» raceme* denee-Hov. >>oping ; . drupe obtuse, tt> ll >>nonis. P. latifolia, Maur. cat. 13. p. 3t>. P. latifolia. Ten. fl. nap. 3. p. 6. »yU. p. 9. no. 1.

Straight Phillyrea, Shrub.

Calf- The •pectes of thi* genus were cultivated very early in our garden*; these were formerly either planted againsi rails, io which they were trained, to cover them ; or, il xrere placed as standard*, tlteir branches were clipped other evergreen Bees of O.ai day ; but they tr k«. to plant round tbe bin > lawns, where they have a very l in winter, when other irec* are destitute of leaves. TbeT are generally im-reawd by layering down brandies in autumo.

III. O'LEA (Olea, *ma, rlaia,* the olive, which is itself, front we *l*,ot* smooth. Olea it > y used for the tree; Oliva for tbe tru.t ; and Oleum for tbe oil run: but this is not et*>»t*ot.) Tiium. Us* t. 170 «en- no. »0. Vaill- mem. par, 172*. J"*- «<«>• !0*' o*rtn* fnwt* '* '*

Lam. ill. 1. *nt,* obi. *. p. 31J. and 4. p. 101- «• S.f.l.

T. />tfasV»s, *Momogfrna.* Caly* ettMtt. 4-toothed, permanent. Corolla finwwl siia[m1. with a tube, and 4 ovate segment*, drridix tteos *t,* a bd aeried/ Style sbort; •Ofpna biti. naigi—ie or Ngowdta. Dmpe rnnniajajH a l-J-celled, l-i-*erded, ls often abort »e. AtbufIM* fcei green tree*, with opposite Wave*; and ejulUry an pamclet of «anall whtte flowers.

I CJ, ..UA'n»(IloaMastf|t. «. port. I p. 387.) leave* oblong, tnucronatr, qntte ratire, boary bereaih while •<*"! branchr* tptneacwM. s anve of *Von* NgtJ. »»be *+*u*T* of LitlMtfi, and other part* of that kingdom; south of Spain, and lu P- '*' T^ enum. 1. p. *i* ih. fl. gt*c. ! Slee. *«n uted. bot. 1. ' mmuni' Lm. IH.M. cliff. 4 , •» I. —Utacfcw. Knn. 1. Kid. II' Leave* green above, and with a l«w leatiered i . sre altortrr and .iiBer Ibaa ibe cultivated olive : •»» wall, and of no value.

Wild Olive. Fl. June, Aug. Clt. 1821. Shrub 4 io * *Smt* O s*tiv« late, mucrona: <t«rstl»; branches awspnW, but not spins, mm ve of tbe soutb of IMi J?J* ropms, Ltn. spec. 1.1 I »hl. enum. l. p. W. W01* fl. lu». l. p. 10. All. peuVtn. l. p. 1*|. no. 4 Rom. arch. 3. p. 311. Wood*, med. bot. p. 3*9. t. 1B«< l-r•. longiloua, Lodd. bot. cab. |>«- Ob lyuwruha, Kisao. Leaves lwag-fcw-ceolate, green above ; and boary from small scale* benr ttave eonte originally frosa Asst, . abundantly about Aleppo ami Ubaw "»»" uarts of tbe south of r rsnee. Spain, and Italy t and M found w swdsjsa and wood*. I *t>*g<t•* that <be south of *Utij* sise of iheonsnmon 01 ovenee or lt rank of flavour aa io be too strong . 1 he oil, and fruil in a ptckled Mate, arr Leglwrn. and Naples, to England; the 1 • from l^gborff. ulH1 ilw best pickUs from Genoa and Marseilles. Tbt trot io brancby, and of so greai loogeKity, that some psaoti Italy, as at Terne, are .i.pi^M-d to have c&ieted from the nme I wtoua, caksveoejs steeps, and does not i •ituatiuna, S T M I distance from ibe sea. The best od M produced from frail grown in calcareous sott*. >d may be **M1 IO i..rn> ike cream and butter of hpain and Italy ; sad ibe Ir*« baa been celebrated to all ago lhe bounteoti- »nd «, tbe emblem of peace plenty. ii. amm , i. msamaj PttaTJ IBS) following fart. Wrswm Vforld, dki uiiogreaa of •hub it was consMered aa the symbol. Two ccmu nation of Home, bulb Italy attd Africa • ere strangers to thai wsenjl plant | tl was mm eoumnea, at at length ea> heart of Spain » 'Gaul. It* use re it requires, and the otherwise barns •ituatiua* whu-li it product!* I* Spfes. r thr PISISIU BM« of Appenines. I ti* suckers are removed from the , all iraaons, but i* best done m sptrng and autumn. grounds are ploughed, and somsiii— H , , MM -rr «hmly saaimid, sown with corn and lupme* merely looaei be rwtu, ss>d, t« tbtn U*d round them. Tbe young I H,»e plant

I yeart, the produce i» the <>ir« »t amirrr of «i-alih to tbe farmer, u tli* tree nr«)» ilw uak in longevity ; *o thai the proverb here it, that if you want u> leave • *fating* *em* to your children, plant an <' fhrre ii an old Olive in* Dr. la»t)r*r yuldeJ 240 qu. }»<y to hare ban W aecure •gainst mountain 'iw *Monti** • • *of* the Olive abroad mav be said to rearable MM by metiers. Urge tiijj*. or truncheons, planted in trenches, four feet deep, h •[t* «nll tbr custom to depoait •form for cocoon •!«« root*, M described bj Virgil (Georg. ii. 546.) i chip* of ihe nwr, in the To ing manner. An down, and the »lofk and abapc of a muahrttum, and called D>N Care b i •ken tha' each novnlu »li»ll have a •Ball Dortion !«t 111n <li)t|M-il in manurv, the . and « n <• up «IKN>l>. anil •re transpunted at il,. finally nnv •ti protaciioa i fn»i. i a wall in tltc Utiiod* 1<MI. In I'. >v« »toml i»ai.

me* and Italy, by presses or mills. The fruit is gathered, when at the utmost maturity, in November, when it begins to redden. They are put under tbe mill at soon a* ^athered ; and care i* taken that the mi|]-«tonea are set • • such a distance, that they do not crush the nut <• the olives. The p ing the stone, and con- i|> cox i itui 11 *a* lhe oil in its cell , being thus prepared, is put into bags iml tnotl made of rushes, and separately pressed ; and thus is obtained, in COtMtdcniblr quanliiy, a gieei nnjiau-til uil, *ml* semi-transparent, and of a greenish, from ila «« \cellritcr, i» called Virgin oil. I IK? marc remaining after the fir»l ptt'Murc u limkrn to pirces, ta nxxa* leiK-d mtli *m* ter, and returned to the press, upon whic), ibm Bowi out a mixture of oil and water, which spontaneously separates fn from the rest. This oil, though inferior to the former, is of good quality, am) fit for the table. The marc is again broken to piece*, snaked in water, a»d fllwSIIUil in Urge cisterm, and la aframsubmitted to the press, by which is obtained a third oil, that is valuable to the soap- •oiler and other manuUcturm. The Spauu h Olives, instead of being gathered, are beaten down, so that il e ripe and unripe ones are mixed ; and to these are addVil tuch M have fall. n of themselves, and are, therefore, more or lr*« decayed. All new are thrown together in 4 hemp, and aoon fi-rtn. nt. The olives in this state are ground •od pressed, and iha« ia rtt oduced, with little trouble, a large quantity of oil, t » rank and diiaj. reeable flavour. It is possible wal the SpsnianU derive the process from the Moors. We •Ml tlic uiwimil--. l'^KtlinJacksos's Hiatcir> <! M r.Mo.. descend to particulars. The best oil I cornea li om Provence ; but that which we have in 4 and Fltw< nce. When this country is generally from Lucc recently drawn, virgin oil has a bland, almost mucilaginous taste, wit' a ilttft.t. but »reeable flavour ; it fre. »r« at «boul 36 or 38° Fahr., and this disposition to freeze, renders it improper *tar* bunp*. The uil i» wim titrw* adulterated w»th t)« *Pickled Olives* i aiv peepa*' •*vatn)W steeping them in « ll. , to which quicklime, or any alkaline substance, is sometimes added, to shorten the operatio •Ai AAer* wards t*»jr (art aosked m pure water, and then taken out and bottled in aalt ami «.. without au artmiaiic. They an «*tra abroad as • whet before • . and Juni,. xipal null, and in tlita couetry aa a *6nm* i y y poatd to MCttt a, .nd promote d%r*(n>n. Hat kind of tW prrpared fruit ta called *by* the mrrchanu Pirholmi. lino, Ml Italian, who fim dmcovetrd the art of pickling Olives.

>emt proftrrtKi and ajart.—Tlw owdictnal proprrtte* *of* <*tl are thoae of a drmulornt, rmullirnt. and LKSUVI catarrh, ami other pabnanar; aflrdioaa, it haa been ua*d a* a demulrrnt. in ihe form of »• emulsion ; but the oil gf almond* M more generally employed. It » occasionally rteomaneodrd to be mtemally adimniatrrad for wonm, and to lubricate ami sheath the mucous membr UM of the atomacfa from tbe action of add poiaoaa. >il «nien tnto tbe cowpawUdn of !•>•*«- wt«»mta. and enema*, /(..applied externall wtagwui mllueiKr of tbe phgM.

Var. β, longifólia (Ait. hort. kew. 1. p. 13.) learn linear-lanceolate, flat, silvery brncath. » l t of Europe. Lodd. bo.- MaV l. 456, l). Callica, Mill dict. no. 1. [1] *he* inltahitanu of the tooth of Krancw rlm-ll this variety, f torn vrhi. oaka the W t oil. I be ytrnnff fruit is also most eeteeaaed wbm p^kM. Of this there are several sub-varieties. Th • kmg-lcftved Kuropek < Olive.

Var. T. / ' " irn UaCMr lair, acute at both ends, shini ng and nuty Intrh ath ; ri l the Cape of Good flop, and thr Maut.i IVrhaps a diatinct tp««Ms.

*Var. 2, I*ufU*a* (Ait. bort. kew 1. p. 13.) leaves oblong, flat, • «sry bet» ath. t. Native of the south of Eu irri^_ O. Hispánica, Mill. dict. no. S. (>. sat)vs. Be.ul pin. 472.— Illsck*. I 199. O'ea, Dodon. pempt. *f\. *I* his var...|y i, chiefly cultivated in Spain. The fruit ta almost twice the size of the Provence olive, or *Var. β, tirngt/bini,* but of ft MrtMttf rank flavour ; and tltc oil it t<*> strong for most ! nf(liah pa lates.

Var. •. *MUnta* (Ait. bort. kcw. 1. p. 18.) leavrt oblong, bent obliquely, pale brnrath. l . \ . of tbe sooth nf Europe.

Var. ζ, buzifólia (Ait. l. c.) leaves oMoog-ovate; branches •prvMtinR. divaricate. ♄. F. Nat ve or thr south of Europe.

Imr, n. *Cmytama* ; Pcntagti, tatit. f. p. 19.) leaves o Mr lanceolstc; fliie/urs raceOK se. l T thr smith «»f Euro

varieties of olive cultivated in C and deser ./»«/ M / Ferrera agricul t. gn.* 1MB. p. S51. fry /*-* *ftixtu* (ttmrmlr « ftwbto.*

Var. 1. *ovàta* (Clem. l. c.) leav *m* MBeil r,»H, obovate. *la* r. 2. *ovàlis* (Clem. l. rJ Irsvi small ; fruit oval, small, very black. Ol. Eur. ovàta, Oa«M

#«*•. J. *l.mmM* (CW». l c.) leaves «ww», hartily silvery on tbr htrk : fruit to <«"• iftl lll l

beoeatb, b«' green and shining above ; fruit |(U»ho»r, middle-sized, very black. O. Eu rap. pr« cox. Gouan.

Var. 5. Arolinsis (Clem. l. c.) leaves I w n obtiMe, wwrow, Uea intensel y rrm, and .hww, ,hm,t ^ B.rro.w tha. M no. 8. Fruit to 'ttdrr. Mark, mottled w.th wbtte and » marks.

Var. fl. *f*>mtfi.rmi, (C\m* l. c.) fruit globose, larger than any other ra iety, very black. : leaves broader and smoother than in no. 9. O. Europ. sphaerica, Gouan.

Var. 7. regàlis (Clem. l. c.) branches law Hfi al than in no. 9. ; leaves larger, having the nerves more |»f«T*nuM-i t. Fruit form of a l! bert, black, more globose tha« m no. ». Ol. E*. ;«OM9a,tt rop. Hisp.

Var. b. *Unftaliititi* (Clem. I. c) wood le« hard and more white than *m* no. 1,, and the leave* are more lucid beneath, and broader, ami the branches are longer and more erect. Fruit of a dark violet colour, cherry shaped. 0. I- ropa/a regia, I

Var. 9. itnai (Clem. 1. c.) trunk and branches a* in no. 7. Leaves larger than any of the other varieties, not very green, but with manifest veins. Fruit large, acuminated. O. Europ. odoràta, Gouan.

Var. 10, *ceratocárpa* (Clem. l. c.) fruit more or less arched, sometimes •Jllfifiirmr. an inch • d more >< ng, but never thick. O. Europ. odoràta, Guan.

Var. 11, *roii ràta* (Clem. l. c.) branches and leave* a* in no. a. Fruit nut much acununau-. •. nor very black ; long And middling thick.

Var. 12, *empéltre* (Arias) trunk dwarf, with smooth bark. Leaves pale green, rather broad.

Var. 13, *hérbegua* (Arias.

Cultivated Olive. Fl. Ju. Aug. 1570. Tr. 20 to 30 ft.

I dwarf, with pendulous branches.

2 O. LA'NCEA (Clt.

leaves i narrow-lanceolate, < timinated, Valil, ciiiiiin. 1. | *mm*. ill. 1- p. *!>•) aaiaaL

Native of the Isle of Frmi. he» ilott.il l)ru|«e >»b-long. .Kiite. Ulum., in his bijdr. p. • \'*i.*, sats the !• in tlit- i urous this, unless in tin- 1

tr-leaved Olive. Fl. Jul. Aug. Clt. 1819. 1 r. 20 ft.

3 0. AMU: iy*t. 17. mant. J4. Vahl. enutt p. 4) leaves elliptic-lanceolate; thyrse rather compound, axillary, narrow; bracteM ovttf, permanent, iinnate. *h* 11 f Carolina, Florida, I c. Michx. h iM. arb. am. -Cno»b. car. 1. t. 61. Branch 'trational. Leaves 4 inches lony rather coriaceous, shining. Flowers by threes, *m* aMis oouining an •ci Fruit purple, globose, c ible nut. Coroline segments revolute. Perhaps a distinct genus.

American Olive. Fl. June. Clt. 1758. i tree.

4 O. CARA'NDAS (Lin. spec. 11. i'hunb. H. c»|. 1. p. 39.) leaves oblong; flowers disposed in racemose, termi >al paaicle*. ½. G. Native of the Cape of Good Hope. Ker. bot. Il r. 613. O. buxifó.ia. Mill. diet. !branches rather tetrag «n»l. from dec tirrent lines. Leaves coriaceous, dense, and rigid, decussate, always palat iM'iieaih. 'Corollas v rInte. Drupe rather wrinkled, size of a pea.

Var. β, *cr titcta* (Ail. hort. ke* 1. p. 13.) leaves «^ ate-oblong, stiff, flat; petioles red. ½. G.—Dill. hort. elth . 193. t. 160. f. 194.—Bur*, air. p. *tit-* t. 81. f. *.

Vmtt ft Mwluiittu (\ it. l. c.) leaves elliptic, waved; pet ioles green. ¿. 3. O. undulàta, Jacq. hort. schœnbr. 1. t. 2. Lodd. bot. cab. 379. O. !aunf4li:i i am. ill. 1. p. 29.—Sana, afr. 233. t. SI. : 1.

Cape Olive. Fl. June, Sept. Clt. 1730. Tree t .11.

5 O. EXCK'TAA (Ait. hort. k.«. I. | p. 14. ed. 2. 1. p , «.) leaves elliptic, acute; bracteas perfoliate: lower ones cup-shaped and t iceoua, and deciduous. permanent, superior ones large, foli nb. 3. ½ ' I adeira. Vahl, sy p II ,,i»|itrau. Jaiq. It wches long anil broad) sometimes 9 in i wburl, • r» .IIII. 1 cbotomous, BUI rather targv. Drupe oval, sise of a IKO

Tall Olive. Fl. May. Clt. 1784. Tree.

6 O. APE'TA: *K* (Vdal, iyiub. 3. p. *3*. but ww of Aml< lirK*r nrod H. in*. BOrf. p ''ary, slmrter than the leaves. ½. G. Native of Norfolk Island. Bauer, ill. pl. ins. norf. t. 172.

Apetalous Olive. Shrub.

7 *>. TRA'CHANS (Thunb. fl. jap. p. 1 8. t. 2.) leaves elliptic-lanceolate, a little «erru pedkeU1-flowert• I lateral, aggregate frosa • ualy budt ½ .> N f Japan. China, and Cochin china. \ahl, _-t«« | _^ ja» *ia—tai tint CWIil* I * |'» 1)i wHWt UIH* mag. i. !.'.«. OaokiMhu* gran*. Lour, rochp <*' '•' Kanppf.amo Osb. itin. enjtl. ed. *t. f* (tranches an< tomous. Ears pale benrj- I ' • tree >• ewl-



Hi

i. and Japan in the gardeoa, for the sake of its sweet-scented flowers, which i are awd to be put into lea* to g'»* " rlavour. Flower* yrllowish or abnoel wbHr

Fragrant Olive. Fl. June, Aug. Clt. 1771. 8h. (u> > 0 ft.

8 < ' PANICULA'TA (R. Br. prod. p. 5 •8.) k *km* leaves elliptic-lanceolate, acuminated, quite *entire*; ultkaitt pad ..I nicle 5-flowered. ½. G. Native of Ne • South of New II l.nd, wi. in the tropics.

Tree Olive. Fl. July. Clt. 1825. Tree I Oft. /'itnt< !>>I-r\

9 O. HEYNEA'NA (Wall. cat. • ^ *tSSA* leaves hw»d, acuminated, glabrous, quite entire; sneanatnl at the base, rrpandly toothed ; I * * * ? laterI and aaillar ch each fefk of br»JK" bearing almost sessile flower rsatthe spex ; fruit o Wong- Native of the East Indies.

// cyne's Olive. Shrub or rre*.

10 O. COMEA'CTA (Wall. cat. no. 2819.) leave* dHpttc, a«u- Wd • .! tto rwml. lert minated, glabrous, quite entire; panicle thy brous; flowers crowded. ½. G. Native of Kamaon and Sirmore. Tube of c «»rc41a hardlv M ger than the calyx. Perhaps a species of *Ligústrum*.

Compact Olive. Shrub or tree.

11 O. ORANDIFLÒRA (Wall. cat. no. 2820.) leaves ovate, acuminated, quite entire, glabrous; branchlets warted; panicles thyrsoid, terminal, downy; corolla funnel-shaped. ½. G. Native of Nipaul. Phillyrea grandiflóra, Wall. herb. Perhaps a species of *Ligústrum*.

Great-flowered Olive. Tree.

12 O. SALICIFÒLIA (Wall. cat. no. *i$ 1*1.) glabrous. W aves lanceolate, acuminated, quite entire, raibcr glauroua: imioMcd. panicles axillary and terminal. ½. G. Native of Silhet, on the mountains.

Var. β; leaves broader, obo vatr-lanrrola e, acuminated, sometimes furnished with 1 or r t treth on raeh aide. *:. 8. Native along with the species.

Willow-leaved Olive. Shrub Of tree.

13 O. IXNEA'TA (.no. 8t< (Wall. cat. no. tUt.) glabrous; leaves lanceolate, acuminated at b wart. .rrotair, atieouat- >th endtl panicles thyrsoid, t.rminal, d- SObfft. Calyx small, obtuse, pubescent. Corolla funnel'shaped, with a long tube. .•olrtely toothed. CoraUa

Lindley's Olive. Shrub.

14 O. ATTENUA'TA (Wall. cat. no. tUt.) glabrous; leaves ova' .long. '½. G. Native of the Burman empire, on the bank* of ti.' river Martaban.

ytttttmmtti leav. Shrub or iree.

14 'O. CLAVA'TA; leaves ovate-oblong, entire, smooth; branchea drooping; pmielva terminal. *S. 0* Sa<n» of China. Phillyrea paniculàta, Roxb. fl. ind. 1. p. 100. O.

burjrhiana, Snrrng. [. p. 34, but not of Hirm. et Set.

IUCOUI beneath, Dmp* obliquely obovatc, r>g a »oliiary nut and the rudiment of another. "Vijpna entire, clavatr. Corolla funnel-aha pod, tinatl, white. Ve rj like a i|M-(ii-» II' *Ligiistrr .m.*

Clavate-stigmaed Olive. i n .

16 O. CUVEIDA'TA (Wall. cat. no. U8I7.) glabroua; leave oblong-Ian icolate, Ktrnuatrd at both roda, cuspidate at ih apnt, rumiy Ix-nraih ; panicl r* lermtna) and axillary. Native ol Ramaoa.

CmMata (Hi*r. S!,nil> or tree.

17 < > kuarrwa (Wall. cat. no. 2813.) glabr. leave* ovate, acuminated, cunacviti*, Mimrimx • repandly toothed ; panicles terntrul, thyr»..nl. - Nad ve of Singapore and M•late*.

i'ra-Wr Olive. Shrub or 11 ee.

18 *. '••• &. no. S82S.) leaves ovate-oblong, lire, acuminated, glabrous; panicles terminal, Urge and spre•dii g, villous. S N tive of Sil lid, where it i* called IHliihaa with very hard durable wood. Philly'rea robiista, I Roxb. fl. ind. 1. p. 101. Young roots dotted with whitish specks. Panicle villous. Stigma emarginatf. H erries subcylindrical.

Robust Olive. II. June, J ly. t Clt. ; 182 i Trre large.

19 O. oLARDfLiraaA (Wall. rat. no. £811.) glabroiu ; leavei ic-oblong, long-acuminated, entire ; paiuclr* terminal and iUary. * 0, - »ul and Kamaon, dec.

(itand-htattng • ire.

SO <• *i M.* no. SHI*.) leaves broad- elliptic, rounded at both rnda, or altrtiuairdat ihr h*ae, rail., r rusty beneath ; paiiiclra axillary and terminal : having the mtef divisions of the panicle 2-flowe •rd, h, S, Nit' »s»ft' Leaves sometimes a tir nu a let I at both rnda, and aenn

Few-flowered Olive. Tree.

21 O. ACUMINATA (Wall, *cut* no. 2809.) glabroua : leave* oblong-lan icolate, acuminated, quiti iau-d at biith ends ; fatctrle* of flowen axillary; pedicel* I-flowered, riling from waiv bud*; prial* narrow. •?. S. Natn< Pen tng, Sipaul, Silbel, \c. !>long, IVrltajM a *pedn of *Notela'a.*

Acuminated-leaved Olive. Tree SO fret.

22 O. MICROCA >r« i,Val.l, enum. I. p. 43.) leave* el' racvmr* terminal. I . Native of Cochin-chin a. Philly'rra I'mltca, Ixiur. roch. p. 19. 0. rigtda, Hart. cels. A in I, mttrh-braitclted Irrr, with •urrad- ing, t •»lrd brancrM I mall, ulahruu*, rrArxtd. Urupe small, round, black.

Small-fruited Olive. Shrul • or tree.

23 O. ROXBURGHIA'NA (Ro •II. el Schultr*. «yat. I. | 77.) leaves oblong, quite entire, glabrous ; panicle I axillary at*1- •llary ; (vrmf ttt^ina divarteatr, bracteas deciduous ; lo . G. Native of the circar mou tivc di < iiiiiam*. O.paaicwlaU, N nd. I. p. 1 04. but rw>! ncd. Sea^rn rolia oblong, roncavr : wuli *har| 1 potnt*. U ate* & in long and (broad.

Rozb •fA'iOltve. II Altar- ^|". (l> *iH1*- Tree small. ti C noic • Hoxb. tl ind. t. |. .*.-. oblong, serrate ', panirlr* axilla' ; flowe '* dmreiou* . ittvr of Silhet and Chittagong; in the former country it is called *Atta-jam.* Tetra)>ilua brai hiatus, Lour. coch. p. 611.! Leaves tapering 10 boili end*, amu nh, 4-S nitln* lonff, »i«l 2-4 broad. Female flower* will out a corolla. Drape, in MM and Cutour, much like a comtmm •loe. This olive g •ii«» lo a ptriiy large tree, the timber of which is reckoned excel Imt. awl |» t to many uses by the natives.

Dioecious Olive. Fl. Mar. Clt. 1818. *Tn» 30* to 40 fctt.

ti O. TT—lliail (Wall. rat. no. *til 5.)* leave* elliptic, aiw- ntiatrd at hot h ends, ruminated at th< apex, diataai *n* the middle, dlabrout: pa ""»•! •"«! axillary, dtvanratr, glabrtm*. ^. S. Native f>f the H»*t 1 odies. O. dioica, var. Wight. herb. I • »ve« broad, vtry like few.

-At i (ilitr. Trre or *lirub.

HC (). vitai k, rnum. 1. p. 33.) branchtrU warted; leave • lanceoUte, white beneath ; fruit ni rly gl tmae. ^. G. Native of the t'apr of Qood Hop*. O. Euro ;wr'a. Tmawb. BroeV p. S. tl. cap. I. p. 37. O. HIM*, ear.*, verruroaa, Rona. et Sch «die*. »y»t, 1. p. 69, O. Africana, Mill. diet.—Burm. air. p. *37. t. 63, f. f, Drancbe* aomewbat trtranonal al the ion Lravr* *ol* tuse, with an acumen, entire, greyish beneath. Pi,n.rle lem*' ely com |tfxind. Hractra opposite, decidt,*ou:* llruj* of a pea, hard. - W-brai fleshy.

Wa ched Olive. Fl. April, May. Clt. 1*14. Trrr 40 1.

Cui Most of iKe aper.it* of olive are adi> ired for the fra- grance of their flowers n our grrrnbouae*. I •cm i> a fieat and loam, I: prnrd root readily in and, under a band i;l'"". <bo*t • in heat. I y may also b> .• on the cammon privet. *O. cedster* and *O. sativa* i wdl endure our winter* aftainti a aoutb wall.

IV. NOBONHI V .n honour of C. Noronh*. a ir»*ell. M.^I»K».r»r, Ulr of irancr, A). Pet. Th. rrn. mad. no. 7. *Voir. in nouv.* did. dri »c. nat. IUIJIT. i> I look. bot. misc. *. I>. 187 V «hl.

I.ix. UtT. *liiindna, MoH*>gtt*M.* C'al) v •mall, 4-cleft, Corolla globular, thick, deeply 4- > 11 \ , *t the bo of the (ul i>ti>IU, and Ijmaj in n« tubaiat I in.... •null, conical, 2-crllcd, 4-n-rdrd. 8tjlr none, I>ntn» obtonai or rouruli.li, i untatmng a i-rrllrd nut ; trnra H U . St^d «»li- t*rv(with a aum-rior radicle f and thick roiyl<<dona, aril .—Small tfwat, with oppoaitr leave* and atiltary ra- I v CE'RNUA ; glabrout; leave* i.lilimg-UnrritL blunt. miMlimn rmar^ ; racemes simple, axillary, solitary, twtnoriirn: flower* drooping. I] . S. Native of the Mauri- nui. Cflea crnm.i Vahl, Mtib. 3. . ill. I ; llranchr* markrd with < l«iatrd dot* with reflexed edges. Bracte .. o»aic, solitary .i the base of <dirrl«, ai vl. r aa'ta c'l\>\ the p and twin u Flowers twice the size of those of the common olive.

Drooping-flowered Nor *ixhi*. Clt 1816. Trer 20 feet.

t N. nm»MMt» I oir. l. c. I' . *t9rt* obovatr, eanargwaie; ramne* axillary. t . S. Native of Madagaarar. N. chartacea, Stadm. mss. \ Binia, Pet. Th. gra. rned. n. 7. "Ira rnargin«ta, Vahl ertutn. |. , 42. La* dict. 4. p. 545. I. I. 8. f. K. Branch**glabrou. Leaves t-4 «f, nUtmnit, ti.n.iiv I is grown in lb< gardens of th . IfaarWaa,« *I'ontu* *t» /•<< t. t ruit size of* walnul. edible There appear to be two species confused under thi* name, one » ith coriaceous emarginate leaves, and ter- minal junm led tuniii flowers ; and another with chartaceous em.. -mKia. PL Aug. Sept. Clt. 1825. Tree 20 feet.

Cult. See C' l< a, alw.Tr. for culture and |mip»fainw>.

\ PACHYDI RMA (from *v.pa»*>. *Jtrmm,* a *kin | *W< ries). Blum, bijdr. ,». **t.*

Ihdmdnm. Htm^f- Vm lotlnil. Corolla IMNW, *t**momm*, wiih a bait • na f, very aWt, maened tkott the haw of tHr M

Ovirium 2-colled ; cell* biovulaic. Stigma almost teuilr, obtuM*. Berry nearly dry, l-*eeded. Albumen fli-shy. Embryo inserted—Thi» genus tt nenrly allied to *OUa,* but it diners from thai genui in the globote corolla, undivided ttigma, and baccate fruit.—A tree with opposite Icavei, and terminal pantclvt of flowers.

I I*, *i* AVJ SHVM (Blum. I.e.) leave* obi nog-lanceolate, acuminated, aeuti»h at the bate, quite entire. glabrous, rill on tbort petioles ; panicle* terminal, hrachiate, length of U*ve». 3, Native of Java, in wood* on mount Salak, where called *Paljar-gmmmg.*

Jata Pachyderma. Tree.

Cult. See *(Jtta,* p. 49. for culture and propagation.

VI. IfYXOFTRUM (from awfe, *mym,* mucu«, and ***?nr, pyren,* a nut; nut* covered with mucilage). Blum, bijdr. p. 6IIS. Lm. ITIT. *Ditmdria, Monog^m,* Calyx .mall, quadnftd. Corolla globose, coriaceous, | b quaint men* 2. inclosed; tilat nscrted in tbe middle of the tube. Otarium t-cell i 3-ovulatr. StigtM thick, tesiile, angular at the tide, and hicu.jmlatc at the ape*. Drupe coriaceou*. l-i-cellwi, coataining 1.4 angular, 1-aetdcd which are covered with mucilage. Athumen *h-*o erect.—A climbing .hrub, with tetragonal branches; oppo lie eltiptic-oblong. 3-nerved, glabrou* leave*, which are some inie* serrated at the apex ; am! axillary tad lateral psnic• of flower*. Nearly allied to Aorta***.

1 M. xiRvoftL-H (itiuni. I.e.). *.^. S. Native of Java, in calcareous place* near Kuripan, and at the foot of mown Salak.

imnti Myxopyrum. Shrub el.

Cult. See *OUa,* p. 40. for culture and propagation.

Vll. CHIONA'STMI .n x.-,.<•».«•, .rmw. and *ant hot,* a flower; in refere >ce to the snow white (towers of the specie*), I in. gen. no. 41. JIHM. gen. 103. Oavrtn. ftt*< t. *59.* Urn. ill. t. 9. f. x.

LIX. *YiT. *Ii tiin.tr la, Momtgynia.* Calyx amall, 4-parted, or 4-toothed- Corulla with a thort tube and a *• parted limb , ie)(tncnti of t! ng and linear. Btylttawdi 'gma >-lobcd. Am hen ftlmoat sessile. Drupe baccate Miiaieil nut. illniniin< •-«, having t) let* compre*«ed at top. I oraxillar'i ijvally in lite figure of tbe segrroHa from 0

1 C< VHK.I p. II.) racemes terminal i pe- (lumlrt J-fiowered ; flowtr* prdicelUte ; leave* lanceolate, gla* brous. I]. II. N»L, rth America. Lodd. bot. cab. 120*.. Huh. arb. 1. p. lijj. t. 61.—Cateab. ear, 1. I. OK. M NMall Mr of a laurel; the fl 'ne out in May, hanging in long bunchea, frum whence i tanl* call it *Snow-drop-'tt* . awl from the rarrtlU being cut into narrow •egmenu (bey al«» give it the name uf *frrngt-lrrf.* Drupe pur lih

far. a, *tali filial* leaves ov.v downy beivealh. tj . II \

I, t. 607. Leave* oval.lanceolate, coriacemit, gta- V panicle* detia* ; drnpe* oval. Purah, II. amrr. M-pi. t. d (Ait. bort. kew. ed. t. vol. 1. p. fS.) Jabrom. tr-H. Ch. irifi.U. M.rneh.

Vat y martin "• w w* tepl. I. p. ».) leaves obo- ou», pubr»,ent; panicle, very loose b me 11 Native of Nofti. Atn»nc«, by tbe •*.-

Virginian Fringe-tree. R May, July. CIt. 179*. 10 to 30 fret.

t C. AXILLA at* H lit. prod. p. *US.)* aplkaa axillary. thort: IM«N oaimtf^Uipur, acittr. N <" Hollandi within the tropic. Flower* w!

*Ajtliary(in*tm* rriagr i I. May. Jul • Shrub.

3 C. iiieaa. »art«, prod. 15. ft. k*t oee- 1. Pj * braacbe* of pamcle acre—ale or tasUgiate; AVm«c« Pfjj^j"]^ MM*W Mmoavl, tritB .ro«. AktoMi a f M M ! long, *h • 0 • of Jamaica, tn wood* on taw Leaves rather corianoaa, with a •hart, obtuM *mevn.*- mat* peduncle* S-Aowrred- Corollas wb»te. wt*b tarttt. •»•* clavate segments.

Thickened Knngv-tree. Tree tall.

I I M . gen. a»r panide* i .boit. tnfi.1 -•«»• peduncle*. *i* ,th linear • H M M * i ka*r. *t*lliptK-obkujl, W««-i*h. coviacrooa, cJothfd »nb *oft do«n brt»r»ih. \ . O. >• live anvla, near I Bamba, and Salto del Frayle. wt 7* ' nattTe*. Panicle* ruing bviorv tho VMVW, 4o»ny, corywo*

*Dmm** Frinjre-tw. *tmWfm*.

*C*h.* Th* ' • «•• Urf. oniMMMal It chrivM b n t m i moMt l^ht lommy ml 1« ». (trnerallj• « creaaed by an »d from Amerifa; by by. cult. I IK- wt moi*t. By grafl.. Minmun **h it tuccred* very well. ll» greenbi' grow freely in a mixture of land, loam, and peal ; ami npnttd tkji ol them will mnke root in aand, under a hand-fU**, * • littir IK at.

VllI dllO NDROSPERMUM (from *chondros,* a lump, BIW! *sperma,* a seed; 1838.—Chionáothus species, and Wall, in Ko»b. S. HML I • p. 14

Lin. syst. DalMairis, *Mim«gy*ia.* Calyx urrroUi- titfiil. th lanceolate, acute, with purple edge* I fuanel-sbaped, rather fleshy, bavins; a large obsnm: tube, winch i» longer than tbe calyx ; and a 4•parted •oreading limii, w) nger than tbe lube; segmrnu I clsvaU. b al,i and dilubkfOmd at tbeir *|x I closed !• ither*. Sumena S, insertrd above lb» ba tbe lube i flavhy, with *l* nargtnal eri;- the. *2* oppm e border tub*. C»va mate, 2-celle.i in ba*e f— A ramblin•g evergreen •epsraimit hark | I and 1 *nirl*i of anull grt b yellow of the forr»l» lie Burmese e:

Wall. rat. no. IMS. be the sane. ChmnaMl Wall. fl. iml. 1. p. IOS. l.^.trum I b*Sg. p. *St.* Uranfhr. ami petlunrln 4-«>dei! I long, and *i* broad. S.nerved, eoriaceowa, pal* bear, and bull ated between the |.fineipal n. , ajai myeh el. I ncair.. and uniting a ImW above tbe Flowers •mall, almost scwntVna, TW ererl paaittoa of the ovula teem* to imlicate ita brlowgiay to tKe order *Jasmineæ.* The amivaiun of tbe corolla i* valvate.

iSaolas • *Irarrtt* I iiimdrospcnnoni. tMutib d.

ulture and propafaiion •«• *(/Urn,* p. 49.

rwitiii.

SYRINGEÆ. Corolla fun„el .haped or campaaulatc, 4-parted. Stamens 2, short. Fruit ipular, I-«el led.

l\ 5VRISGA (•, «*. a pipe ; the tranche* an long and straight, and •re fitted with medulla; hctirr ih. old name of the lilac, pipe-tree. Linnæus places it a•iKtna pv><tical names. I The story of the nymph Syrinx in Ovid is well known. The English name of the genus is from lilac or lilag, the Per tian word for a flu »> r). Lin. gen. t 10. **. Garnn. I ». Lilac, Tourn. inst. l.37f. Juss. gen. p. 105. ! ila, Flieder.

Lin. svst. *Didndria*, '•famogiftut. ('nlys MIMII. 4-tuotbed. Corolla funnel »hn i a 4-partrd I twm i, incioard. Stigma bifid. Capsule ovate, comp retted, 2-celled, *•raked, 2-seeded; valves navic ilar, with a narrow duwjnmiiit in <hr middle.—Shrubs with sim |ilr lea«rc» ; ami thyi oid ter nina] paim les of flov \m, which are oppotitely branched. Fl |>urjil< n white.

I v vvioa'xis (Lin. spec. 11.) leave* ovate-cordate, acuminated, h , H Native of Persia, and of H Hungary, in c talky precipic«« in tU Cvernj valley, and mount Domoglet, »• *rll as the[1] wliole group of rock* along the Danube. I-»m. ill. t. 7. Schmidt, *Htr.* baum. I. 77- Ditham. Hi 2. t. 138. Schkuhr, handb. 1. t. 2. Lib e vulgàris, ' '<*rtn. Ix-ate* K labrous, shining, *t,* broail. The ftrmnym lilac, now ao p)< utiful in every p law* ation, wa i a (trrat rn ity in the year 1597.

Var. a, r,rrnlr,t. 1 he comm(1 hluc lilac —Ger. em ac. IM9. fc—*i* t. t. r. eyst. i.—Park. par. 407. t. 409. f. 4. theai. 1467. I

Var. β, violàcea. Th r romiiKMi jmf j.l. hlar. Curt, bot.naag. 183. M ll. fig. t. 1 «S.

Var. γ, álba. The common white lilac.

Common Lilac. Fl. May. Clt. 1590. Shrub 8 to 10 feet.

! S. Huuoi i Wall. rat. no. 1891.) leave* elliptic-oblong. glaucous beneath. Hi brnratli, attenuated at the baar, and acuminated at tlir apex. tj . H. Native of K amaoi, Ktward* tltr flnnnla\». Branrhe* watt- nninal, panK-lctl. Capsules almost cylindric til. Bud M ales permanent at the base of the year's shoots. Flowe !« apj-arr nll» purplr.

Emodi : lilac. Shrub 8 to 10 f rl. T

3 S. Josiiæ'a (Jacq. in bot. zeit. 1 11. l. <7. Kfhh. jtl.crit. no. 1049. t. 780.) leaves elliptic-l inCiOallr acute, >i!iatrd. wrinkled, glabrous, on short petioles, white beneath. [1] 11 Native of Transylvania. II ok.)>ot man. I. 3278. | ,KII. U>t. reg. 1735. Flowers purple.

Josikæa at Lilac. II \).rrl May. Clt. 1832. Sh. 6 lo D ft.

4 S. Chinæ'xsis (Willd. *M.* tiirr. I. p. *4*8. berl. baum. 498.) leaves ovate-la*. ivra ovate-lanceolate. ½. II Native of China. S. dùbia, Pers. rnrli. I)• • I Illicium ItothamagfsM-. llenaull, A. de Forn. p. 100. S. mèdia, Dum. Cours. 1. P 709. Flowers purple. An in termediate plant between *S. vulgàre* and *S. Pérsica.* l. Belgium there is a hybrid between th and *S. vulgàre,* called *LUmc m Merli,* which is probably *S. Rothomagénsis,* Turp. et Poit. fl. de Par. *Chinese* i lilac. ; l. May, Jo. Clt. 1795. Sh. 4 to 5 ft.

5 S. Pe'sauca (Lin. ..!'-<-<. 11.) Irave* tnuill, lanceolate. eotire. ½. It \ . e of Persia. Curt, bot. *nH,* 4M. Mill. %- Iti. f. I. L.U« minor, M wirh l.ii.. I Persica,



I 10 *9*

ing. ___Pluk. phyt. 227. f. 8. Flowers purple. (f. 9.)

Var. β, ilkmi leavea laoocolate, enttre: flow ere while. lac*

Var. γ, lacinidta (Mill. dict. no. 5. fig. t. 164. f. ft.) leaves j*Cp*l *>r jnniutifn!; flimm purg H. Lin. hurl, elitt. 6. t«dd. bot. CJ. 1 >itiiing. t. A6__Toum inst. 601 S. capitàta, Gmel. itin. 3. p. 304. t. 3 :. f, 1.—Schmidt, arb. I p. 79. The cut-leaved Pers an Lilac.

Persian Lilac. Fl. \Iay, Jui Clt. 1640. >h. 4 to I ft. fl S. TILLU«« (Vahl, enum.) p. 38.) IVM oht"ng, acute at hoili ri»d«, villou* Iteneath. II \ati.e of Chi«. on mountain* ab out Pekin. Thyrse terminal. Per liapa the same at I gústrum Sin ena», Lou r.

Villosa Lilac. Sh^ub.

Cult. The species of *Li* /«c are well known elrgant aliruba. They are very proper for •hrubbftn «. and are increased very readily by layer*, or b> •< ckers from the root.

X. FORSY I III \ t,»nwd ai I. iiungion | authoi 1)IH a*rt of 'I'rre*. >»f a particular n cure. London, 1! \ »! i. twua. 1. p. jy.—Syrings »pe« |

Lin. •*«t. />m *'.mogpn-* I Caly* 4'partvd. Corulla Mib*campanulate, quadriAd. Stamnw equal in length fc» thori ftlainrnt* and oblong anthem. Style lengih of calyx: •ligma i-li>br<l.—An *mt»t*\ I .^ threat, « uli tetragonal branchea : and leave*. Flower* l-t-3 togrtlti r, yellow. Calycine segments lanceolate.

ii ?. sueis'nsa (Vahl. enum. i. p. n). i . Native of Japan, where it i» <- ften cultivated for the elegance of its flowers. Syringa suspénsa, Thunb. fl. jap. 19. .. 3. ilac perpénse, l Jim, <)»ct. 3. jp 515. Rèngio, Kœmpf. amœn. 5. p. 907. i

Suspended Forsythia. Shrub hanging.

Cam. For culture ami propagation »ee *ttnlnatw,* p 58.

\I . FONTANESIA («med BA >t Flora Atlantic^, f vols. 4to. Paris. 1 7!/o- 1799, and several o iher wofka). L»h.!l j> syr. dec. 1. p. -. i. t. Lam. ill. 1. t. 22.

I ittr. aWrM, Monogjf***. Calrt 4-6 partrd. ; ttiaiMfM f, *hi«(t«ie«l «d C»j«nW a Ifimngrtl, t-rrtlnl. p«| .llarr rac na to be a

I ai»lir« tix >imi (k«Miui, and of ! odd. bot. cab. 1308. Leaves acute at both ends.

fktltytrn.lUi I OStaiM • <. I ! Aug. I lt. 1787. Shru*u* io to 1 4 feet.

II ttartd in the oper> itr, m i »K«m*t a south wall, with a littlr prw. (I> treated H • grew 'caaed by rotting*, wndft a hand-glass, or by layering.

Trib I I\.

NOTELÆIÆ. Calyx i-pan«d or 4-cMt CerolU of 4 prtil. d pp d mm dmrpanNMa or d Ml N ltl ! \ from i . , naVi—w la tlw *gmm h*m* ••'^ .ii. rho... t. *tS* |WOII (Jwttn. »r»n. I- p. l)t. I.

N. STST. *DiJutdrta, Mtmogynia.* Calyx 4-toothed. Cc rolls of 4 petals; petals ovate, connected by pairs to the flla* menu at the baae. Stigma bifid. Drupe containing a chamceotts, l-seeded putamen. Albumen wrinkled.—Small evergreen trees or shrubs, with tlie habit of olive. Leave* quite entire- Flowen while, in axillary racemes.

1 \ >tu (Vent, cboix. t. 25.) **leaves lanceolate, reticulately veined on both surfaces, more or less downy beneath,** dotles't, calycine segments unequal, stigma bifid. L. Ox Native ^outh Wales. (71tra apvula. Andr. bot. rep. 316. •• are varieties of this shrub with lanceolate, acuminated, and elliptic leaver, which arc either imoothuh beneath or clothed with copious toft down.

Long-leartd NoteVa. Fl. Mar. June. Clt. 1790. Shrub.

2 S. PI-XCTA'TA fR. Br. prod. p. 528.) leave* lanrrbliu. attenuated at the base, velny above, quite ttlabrotia, but dotted beneath and obsoletely veined. '. • itivt of New M.Iland, within the tropic.

/Wted-kaved Nou-lwa. Fl. June. July. fit. l«t«. Sh.

9 N. OTA'TA (R. Br. l. e.) leaves ovate, glabrotat, dou ; catycine tegmenu equal; stigma sewiW, undivided, l Native of New South Wales.

) NoteUra. Fl. June, July. Clu l8t4. Sbrab.

4 N. IMV'miSA (Vent, ehoix. t. *iJu.)* Uaves narrow-Uoeeolotr, tloii^ated, pettolate, quite glabrous, with timpWmargin*. doited beneath, having the veini on both tides obsolete •• »f Van Diemen's IJUKI. Racemes hmgth of leaves, Pl July. Attf. l mb.

5 N. MicaocA afA H. lir. prod. p. 5 « .) l.•* ceoUte, elonfrated, attenaated at the baae, almou se»« us, obaol< d beoeslh, and having it • ibove. >- •• \ ative of \ . Holland, within the i (iritjn- in this species is smaller than t pea, while in ' fiiifrriM it is lam

SwmU fnmlttl Note lam. Shrwti.

8 N. POM:'A (D. Don, prod. «. nep. p. 107.) Warnhpti«<oblan|t acuminatrd ; pedicel* axillary, droopanir. meTatr, 1 Opiwad \ cal) V ' • ' Ir« Poaia. llaaa»lt m»* Obea Buttu.. i broad. Notclsm. Shrwb.

=r,l ºlTS2^^TM^_^=«=

t *A doubtful species.*

7 N. Hlil»A (Dou". arbr. l. D. .) leaves • tiff, broad-lanecolate, qu :* emir*; rarmnes axillary. ♄ . G. Native of Van Diemen's L «d, wherr it was collected faring th* i xpedition of Baudin.

Stiff-leaved Notelaea. Fl. July, Aug. C 1821. Shrak *Cult.* The species of this genus thrive well in a mixture of loam and peat ; and ripened cuttings root freely under a handglass, in sand.

Mil L1N4 I HiMotrr il« Plantes, Paris, 1584. 12mo.). Swartz in Schreb. gen- '• P- 178- l houinia, Sw prod. 14.—Chionánthus, spec. Jacq. Lin. and Swartz.—Mayèpea, Aubl.—Cerànthus, Schreb. gen. 1, p. 14. *at*.

LIN. SYST. *Diándria, Monogynia.* Calyx 4-toothed. CorotU of 4 hnear peuls, much longer than the calyx, which are co be filaments at the base. Anthers 2, elongated, dlamen u short. Stigma 2-cleft. Drupe 2-celled ; cells 1-seeded.—Evergreen tre*s, («n with entire leaves, and trichotomous panicles of white or yellow flowers.

* *Species natives of South America.*

1 L. LIGUSTRINA (Swartz, fl. ind. occ. 1. p. 49.) flowers panicled, pedicellate ; petals reflexed ; leaves lanceolate. ♄ . S. Native of Jamaica and Hispaniola. Vahl, enum. 1. p. 46.

^ -i T-T[1] • J " f * l'*'"""-*. •** »". prast 15- BM 2J**T.'^*' "***" *** ****— *«.•*. .•*. £ ot)!UM"> "" *Prirrt-* •. |9tO. Tlrh· t L. LAT \ shl 1. p. 44.) n*.»er» ps •nasfo aswl the ' otaaglaata. Lam. ill. 1. t. 30. Id dinvn r in ike traves bring WwM&f, Arnstr, awl Wa* inalrd; *m* th* petals Wing twwaoVr and »•** o'l""i> ' P**- 0 r s >" ..... i l'oM, pi. Was. t . t !•#.) m d ; pcluttcW* man) lanreolau, hardly W i at tW axils *of* tW _ . th* d»u«t«« of Branl. in th* pr.^mce of Mn Gerace, the New Minns, of Mma> Novas, among bushes in dry mountainous places. Flowers yellow.

Glo ....3owered Linociera. Shrub 5 to 8 feet.

4 L. COMPA'CTA (R. Br. prod. p. 525. Ait. hort. kew. ed. 2. vol. 1 p. 23.) racemes compound and decompound ; peduncles 3*fl' wered ; flowers mutt umi, # petals attenuated, subulate. ♄ . S. Native of the West I ml ITS. Onwis. Swani, prod. p. IS, Vahl. r.-.um l p. 44. aWMft baa, Jarq. eft. 8. p 110. u f •ntlMss H I laa. s!m lt4. f. l arwmiaaiiid. often a hand long, t'aty »•• viOnm. Prlab wbtt*. Ambf

*Camfmt** • *1 '* 1. T,«. UtotO

5 I. TETRA'NDRA (R. Br, •«<»!. p 5« fswstW* t <Ur«tW», lviraaatrMsBt awstla I I

Native of Guiana. Chionánthus tetrándra, Vahl, enum. 1. p. 43. Mayèpea Guianénsis, Aubl. guian. 1. p. 81. t. 31. Chionánthus incressàta, Willd. spec. 1. p. 47. Chion. Guianénsis, Pers. er*fh. 1. p. 5. Calyx villous. Anthers obtuse. Petals white, concave, terminated by a thread. Fruit size of an olive, violaceous, l.wrdrd, bitter. The flowers exhale a grateful scent. Perh *pa a f*WM of *Rhizoear.*

Tetrandrous Linociera. Shrub lt«7fan.

** *Species natives of Asia.*

i L w MsVtcais l Walt cat. no f»f shrub Ramne* mUary. ssWtwt •' • •dhwa. »« at. *m*- fM4V) *Dichotomous* Linociera. Shrub 7 to 10 feet.

7 L. RAMIFLORA (Wall. cat. 4 panicles ovate, below the leaf-bearing shoots, smooth ; leaves broad-lanceolate or oblong, entire, acute, glabrous. ♄ .S. Native of the Moluccas. Chionánthus ramiflorus, Roxb. fl. ind. 1. p. 106. Leaves about 6 inches long. Flowers numerous, small, yellow. Segments of the corolla lanceolate, with incurved edges. Drupe oblong.

Branch-flowered Linociera. Fl. March, April. Tree.

9 L. huctorai l (Wall. CM. *2MU.-* raceme* compound, •••llarj. eompoacd of dunclr.; < rllrptM-, tapering to both ends, on long subalate petioles, entire, |Ubro« .clira long, and •<> broad. Very lik« *L. r—fjltrm.* c or thrub.

l*. M*utti (Wall. H. no. S8*8.) |H-ilui>' axillary, aggrrs wWl *• flowered braiwln-* ;!«•** « tuae, •hort-afuminaicti, aomrtimr* tapeitng to the ba*r roriacaoua, slabrou*. *h* Native of Malabar. Chionánthus Malabáricus, Herb. Heyne.

MmUbar I ia. Tro • shrub.

10 L. M<I*T*'X* ; raccmeac compound, axillary. rrmtdcd, much shorter' than the leave*; learn g, acuminaird, «|- tire, glabroua. ½. S. Native of Java, in woo •d* cm the noun* tains of Parang attd Salak. « here it is called *Kih* Chionánthus montánus, Illum. bijdr. p. 681.

Mountain Linociera. Tr r*.

11 L. OBLONGA (Wall. rat. no. fliS lea lateral and axillary, trichoto tn.Ht.ly branched • '>hl.i|((;.|a(i<-1oUU\ aoimoaM Native o mr*f empire, on mount Taong Dong.

Oblong-leaved Linociera. Tree or shr nb.

12 1. TERNIFLORA (iall. cat. no. JC* i . < oblong-l«n- ceolate, acuminate •d, glabroua : hating t! , rging at top : acumen obtuse : pedunctea rutinwr, bran and axillary : with 3-flowered branches. ½. S. Native of the Burmese empire, on the banks of the Saluen river.

Tern-flowered Linociera. Tree or shrub.

13 l., mm (Vahl, enum. 1. p. 47.) raremea aub-rom- pound : pedanclaa 3-flowered ; flowers pedicellate ; leaves vil- l-cm-ath. ½. S. Native of Ceylon. Chionánthus cotinifólia, Willd. •pec. 1. p. 47. Chionánthus Zeylánica, Lam. ill. 1. p. 30. 1.9. f, *2.* Houtl. tv*l. l. li 204. t. 5. f. 1. Ver» ™ I ŷ'al K..l ,„ / , .

CtX,nui-Uatt.' Linociera. Clt. 1818. Tree.

14 L. n« n' « i % (Vald. fiiutn. 1 p. 47.1 raceme* axillary, u ually cfxinpuund ; ptditnctr* 4-ftc ate; petal* ctiaiinellrd ; lra| at both enda, and aj •ell a* tlu ,, (ionintlitia pi fl. iitd l. p. l>>7. n«»timia(K aim. t. |41. l Mark iltit. l * « * M U.f indtM lmle aitenwued at the baar, with a abort acute acumen. Petals shorter than in thr r»«t, purplish.

Purple-flowered Linociera. Tree.

14 l ru ffd m«m.|i. J Vahl, *rt>* um. 1. r* .) panicles axillary ; petals ovate ; leaves obovate, retuse. ½. S. Native of the Mauritius. Thouinia flávicans, Willemet. Pedicels thickened at top, furnished wi'• H af IMMM9 bracteas at the forks. Calycine segments tri'•MtvUr, CoroUa coriaceous, yellow. Petals erect> rimcatr.

Yellowish-flowered Ltl MH era. Shrub.

* a/l. .Srr *NoUl** Tor mlt«r* and pmpafaiion, p. 52.

Tribe V.

FRA^l^11 l l ••. |H>lvyantou* 'Calyx t-parted, or wanting. Corol of 4 petals, 4-parted, or wanting. Stamens 2, short bifid. Frui* a if m-lkd, m w p w w d aatMra, winfMl at tU top, usually 1-seeded.

XIV. FRAXINUS (from φραγνυω, *phragno*, to hedge or enclose; the ash was former y used for forming hedges). Tourn. inst. 343. LJB.>n. no. 1160. Mich. frrn. 107. J liandb. 1.-57J. Um. ill. i

I'tfygimm, limit m. I none, or 4~|>afied ro)ta Co M M. St tl»« maJr flow '•'•'•I) i M MOW, M MUMM. Stigma bid umiit f-«*lbd, at t»|i rarely ann|iU> Iravn; aixl lateral racvmi of greenish-yellow llnwrr*

* hmrtM

i^«*citaiot i Lm. *ppr. p, I509.J le«nVt. atmmt te-oblong, acuminate, serrated, cuneated at the base; flowers naked : aanwra • !-. l« Mnargiiiai* at the a» '- p. 10 Un. '•ih.«ml. boi. l«»f. Hnilt, fct i apeula. Lam. fl. ft, Um. ill. 838. f 1. 1 l*odof *I, t.* •pftala. Lam. fl. •oa, llo*. *$* pair» l o M a f t x li. • , .,.|r»»,,| |J,r hraiul.. « female H

! aian, *Jat. Jn»m,* or *Jattm,* l ti« BagTiah nar ihr Sajioa iEaa. Kay say> it ha* it* name *ft-* the bark. It* until lime of 6Vtw«ringM Marrh »mt A • April *ttd* IM M 15th. The timber of the ash is next in value to the oak, and in aome placea •ajitaj l tough, and of earellrni uae to ih» coachwakei and ran » plouKlt*. a»le-trre«. and inativ tither ituj. Bf hutbanilry ; for ladd< tdix-k* for |Ml1ll yt, *Xc.* An. irntl) il MM in ^'r* ai r«-«|u.

ruf MM apt in tpln and teak, it u • xcelleat lroaaa and tnont*e«; alao for ihe < .«hmg >• UM il for paltaade-hed,- pole* and »pat*. handle* and *torki for tool. MMMaWI u*e it. ai> Ebony. (>(all timl- it is the sweetest (>»«L If • wool of aah-ireea be iiiainagiil well, it will turn greatly to the ad- Tvntag* of it* owner; the M H < W » l d will be fit to cut every seven or eight years for hoops, or every 14 years for hop- poWa, Ac. and Mill ibtra •* H !«• - stock preserved for tim- ber. The best season for fell ig tltr ad is from November to February ; but, for lopping pollards, the spring is preferable for all soft woods. The < aa&Mof the wood aJTurd a very good potash. TIM baik i* uted for lanwing cal-*kwi ar<<! nets. In the north of Lancashire they lop the ash, to feed the cattle, in autumn, when ihe gra** i* upo* the d. cline. The leaves have been gathered to mix with t'•-a At) mruaatan of them is an aperiant; and a decoc- iton of t drachm* •>(the b rk, or 6 of the leaves, has been used in ihr mre of •+ ues. If cows eat the leaves or shoots, the b«tirr from t' eir milk is said to be rank ; but this is doubtful, for there is no taste in ash-leaves to countenance the assertion, and thi* » ihr- t. ext tree, after the elm, which the Romans roco-aarwded fwr (udder. Th» a«h »», lt. * n»- proper tree for ' Udare row*, and the border• *o(* araWe latwt ry uhlavuuraW to all otWr vrgatoU* pr«l*»ctini»»; il exhausts the soil murh, aad llw root* •prwaal *mnUix* KM »uif«r. so that is injures dht klaalga>, andi tnapanvnalkaa the crop auwn w«« it.

ur> ihr nli U • handsome tree, it *nM* not by any means be planted for protection or ornament, because the leaves

come out late, and fall early. The fertile tree* alao generally exhau*i themselves so mncb in bearing V ... > >» tree*, however, which bear male flowers only, have a full and verdut foliage, and make a handsome figure, though late in the season. It is well calculated for standards and clump*, in Urge park* and plantation*, and for grove* and wood*. It will gn>w u. very barre it MHI», and in the l>lruk« *t m>.l moat exposed utiiltinaa It is so bird; u to endure tlie aea wind*, and may therefor* be planted' on lie coatt, where few tree* will proaper. If planted by ditch *tde«, or in low, boggy meadow*, the itnu act a* under* drains, and render the ground about them film and bard; the timber, however, it m tin* cut of hlile value. It waa natural that our rerootc ancestor*, when the Miami waa overrun wah wood, ihould value trees rather for their l'ruit than tbeir inuUr; it i* BO wonder, then, Utat by the lawsofllowvl Ihla, thr pnc« of an oak or a beech should be I to pence, while the aaii, becsiav >oludnoftmd for s«ine, was valued only at fourprocr. i he Kdda or Woden, however, hold* ibe ash in the highest veaamion; and man • d<*cn>ied aa brag formed He»i manner, dcitucv* In* bnum race of men fmm the I heogony has nymph* of the name of MtJuai I A u> the remain* d Gothic teoeratwo. (br this iree, tliat the country poopk, m the souih-vatt part of ihr km*, split young ashes, and |*M their distempered children through the chasm, a hopes of a cure. They I have also a supentitioM custom of boring a bole in an ash, and » shrew nwiiue; * few str>kes with a branch • 'e« la then accounted a sovereign rrrrudy aifaitwt rramp* and lameness in cattle, which are ignorant!) supposed to proceed from this hannlei* animal. In many parttnf the highland* of SrutUnd. at tin- birth of a cluld, the nur«- or midwife puts <ne end of a green stick of Ibia tree into the lire, and, «|.ii<- u i« burning, rr . into a spoon ibe sap or jaitie, wliKh nous oat at the other end, and administen this as the nrst spoonful ot liquor ti the new born babe.

The facility with which the aah is pciipsgsi • il. and adapts itself i to any soil or situation. even the worst; the quickness of its growth; and the general demand for the timber, in every part of the country, for a variety of rural and economical asjtaasjaat recommend this •ree very much to the \lanter.

(Mming arttke mo,I rrrxarkultr MriafaM *oft* •

far. A, *jkmduU;* brauches pe.nl, lous. ▷. II Ait. hort. IMW. ed. I. vol. 5. p 475. T..r Weepinff A.h.

Fa'. y, aurta, (WilkL enum. \< 1059.) brmnclm yetkm, dotted; leaflets sessile, lanceo lat*, une<)ually wtnilairo, aeuminated, cuneate i st the ha**, glsbruus. *t^,* II- I- sure*, Pers. en tb. *t.* p. 604. Th • yellow-barked A«h.

V<: *ipa* . |ts| >«| ^. n. i

I atrovirens, Desf. arb. 1. p. 104.

Far. s, fu upssVa (Willd.) bark and wo..1 *turn* wl with \i

Far. <• "'if'1 *tden* (Desf. arb.) leaves va'iegi il with white. The silver-striped-leaved Ash, tnjied-lraved Ash,

Var. «. *liUa* \ leaves edged with yelk.

t'mr. -. *crisa* (Pers. ench. 1. p. 604.) le«a«u erosely toothed.

Far. . iarow >'«». 1. e.) braacW* i The horizontal-branched Ash, rid al A«ti

lar. *. *serrulata* (Desf. P •rv l. c.) warted. Tht striped-barked Ash. iricd--^

Ymt \ *striata,* ' The spongy-barked Ash.

Far. p, fungo I The whorled-leaved Ash.

Taller or Common Ash. Fl. March, April. Britain. Tree 50 to 80 feet.

t F ba'ba um. IOM) leaflets sessile, usually 5 pairs, ovate-oblong, acute, unequally serrulated roundly cuneated at the base. ½. H. Native of Eu raa» *r.* ».Jark. Mui. grry. BkM .aadaatdly 4 - > pair. I *h* tn< Fl. April, May. Clt.? Shrub 6 to 10 feet. 3 F. SORBIFÒLIA (Pers. r. m Hun *«• a»> suppl. 671.) leaflets ratsi M«aU« 4-4 pa.'v <** sharply-toothed, ovate, nearly sessile; petiole • a < ½. H. Native ouairy aakaoaw- F. nàna, Desf. hort. par. et Mb, 1 p ; P.MJBJ (appendiculàta), Pers. Vark. F. appendiculàta, Lodd. cat. A humble-branched Shrub. Branches of a livid WaaCBtoat. UanWta apt / ' long, and 3 lines broad, Com ze wingy Sh. *Greek-Falerian-leaved* A.h- FI. .\|* Clt.? Sh. * 1 mate, tf, ttmtauiv HATERARIA (Vahl. enum. 1. p. 53.) leaves simple tor*h* long, obiaat and at iW »f» or ternate, an emarginate ... ½. H. ative of Europe. In England, in woods, but rare. F. simplicifòlia, Willd. spec. • P !••»». btti. haumz. p. 121. t. 3. f. 3. Smith, engl. bot. t. 2476. F. monophyl la, Desf. arb. 1. p. 102. F. excélsior, var. simplicifòlia, Hort. F. excélsior, β, diversifòlia, Ait. F. excélsior, ε, Lam. dict. 2. p. 534. F. excélsior, β, heterophýlla, D. C. F. integrifòlia and diversifòlia, Hort. Leaves usually simple, but sometimes ternate and quinate, 3-4 inches long, sub-cordate, or acuminate at the base and spec. Branches dotted. Buds black. Perhaps only a variety of *F. excélsior.*

Various-leaved Ash Tree. Fl. April, May. England. Tree 20 to 40 feet.

5 F. PARVIFÒLIA (Willd. spec. 4. p. 1101.) leaflets 5-7 pairs, sessile, roundish-ovate and oblong, attenuated at the base, quite entire at tbe base, but • d at ibe apex, mucronate; flowers nakr,l > li Native of the Levant. Willd. herl. bautnt, • l. f. t. Tanar. •«H. a. *9* tngoaal at the top It differs from *F. rotundifolia* in the leaflets being more cop a es, in the bases not being unequal, and the buds being brown. 11. juice of this tree is the manna of Sicily. It is called Fraxino mistina, and Frassino lentisco, in Sicily.

Small-leaved Aah-lrec I Fl. April, May. Clt. 1822. Tree 20 to 30 feet.

6 F. TAR i « • SCIFÒLIA (Vahl. enum. 1. p. 52.) leaflets petiolate, oblong a'til baBMail > sharply serrated; serratures mucronate. ½. H. Native about Aleppo. Fr. lentiscifòlia, Desf. cat. hart. par. p. 52. I Willd. spec. 4. P. 1101. F. parvifòlia, Urn. dtrt. f. |. • i PWka. pi 540. Aleppénsis, Syst. 188. f. 4. Brsnchr* dark purple. └ iach *U** -' ••*• ••••Ibi' than the 'al on**. Flower • naked. Saatara narrow late-leaved Ash-tree. • ntng to the a *Ummw* ii maaify *3* pair* of rather coriaceous, elliptic-ovate, shortly cu .p,.Ute. Wamry-toots*d *U+*** *m* BiM l*av»» •* very grey. Nearly alU Urop*.- IMa. • r. uaaaavai ov*t*4aarasUse. tae asils of lh# It -n *i* p IMaV M.i.l .«„ •etwl b. JLavat. tmrr. I p, ft II bU<k d- •eat* at b*«b. MM! •

Elder-leaved Ash-tree. Fl. May. Clt. 1§00. Trrr 30 1 feet.

9 F. SCHEDDA'NA (- hleehL *ti* Chaaw«««. m l.miura. 8. p. 391.) ttUbmtf ; leaves with 1 pair* of tettdf, lanceolate, blumi.h, qum • r, lratl.i., or «fch • lfcw t.li%i.|tic »rrr»Mir«» in ! ront; tc otl,j one the tongr*i, ami attenuated al tbr l> •ll thin, smtttf «bore. and paler beneath ; rat l ebajMtetlcd; aanara nearly linear, wtth tin- »iti|t bardl\ |ittc-ol>l' rial »|"-x, t-iiiiinj; in an oblique little point. ♄. H. Native of Mexico, near M.ocndad- LARUIU, in warm ..tuaii-.m Fajrara< ichalm. •yai 3. p. <«ply Calyx 4-part < IUU *t.* tin

Schiede's Ash-tree. Tree 10 to 15 feet.

10 F. Bósch leave* with 3 paiw of glabrous lrafWu; lranYi* oblong, acuminate, tuothed ; common petiole* winged at the base t buda blackith ; branch** HMrWM. *h.* Il Native of North Amrrtca. F. nan*. Uoac. but not of Willd. tMktd.

Bosc's Ash-tree. Fl. May, June.

Ck.1 T«»,

11 l .ftVu from .1 *7, tanrrolair, terraud ; panicIr< Il Mi L«area i: lateral lraftVta on than prtiotm, and Mnallr-r than lb* l one, which i« protruded on a winged 1'inkif* f. SlyU lona: and curred.

Chinese Ash-tree. Fl. April. Clt.? Tree 12 to 20 • A.h. i v«.

lt l jftVia alrooat **ile, lanccolatet arutmt 'rated, stabnm* ; l? n*ked; aamara tar ittrnuatrd ai l Il N

Sharp-fruited Ash-tree. Fl. May. Tree.

13 F. ANGUSTIFÒLIA (Bauh. hist. I. M. *i.* p. 177.) leaAVta sessile, Unccolatr, twmotrly deMteol amara lanceolate entire at the apex, acute, rj, Il Native of Spain. Vahl. rnutn, 1. t> *">i.* Wtlld. tpec. 4. p. 1100. Brinchct b«i«ui>li Wtrjilr. ltratirhlrlt gr< litid* lifonn. LeanVt* 8*« j balaaj llM- lt««t», Millar *c** long. Samara obtuae at llx> U»r. Rower* i ^icd to A*, (/mu , but b> V.l,| i(, A *r*tiUw.*

Narrow-leaved Ash-tree. Fl. V(.y. True.

* * *Flowers calyculate.*

l* '. JUGLANDIFÒLIA (Lam. dict. 'p. 44-3.) leaAVta tulkr.t. rlJipttc-lanrroUtr, arrfairrd. jrUucotH brnmih ; brancbea and pe wlaa glabrou*; (lo rulate. *b.* II. Native from Canada to North Carolina. Wjlld. apec. 4. p. 1104. BraatcwM and buds gnr) ii. Lealtrt* M>4 BM .M lone, membranous, glabroti*, but not •hining, canescent beneath, downy in the axil* of the trin*. 'Calyx toothed. C«rymb* pendul MM. Samara hitrar.

W. ,J. *nimUgttrtm** (Vald. MUMI - i I I -(nuhi, Waaawdi. II. M Willd. l)« KoL *«t. <d »ol. 1. p. 400. ex Vahl. Fr. Nova-Anglia, and F. Caroliniana, Mill. dict. no. 5, 6.?

Walnut-leaved Ash-tree. Fl. May. Clt. l7«4 Tree 30 to *lt)* fr

CAROLINIA'NA (Lam. dict. 2. p. 345.) leaflets prtutlatr, lanceolate, ser Tated, and arc, at >• n.f ». glabrous ; flowers calyculate. ♄. H. N •live fratn l ennsylvania to Carolina. Vahl. enum. 1. p. 41. Willd. spec. 4. p. 1102. 1 • »< < U* «i, Walt. fl. car- *9.* 154, >, serratifòlia, Michx. fil. at l,. P. *33* F. lanceolàta, Bofkh. llr». laj rowwih. ck long• «ft«« < <• >n from the Ml dot; pedicrlt numerous, mubelUtc. amall,«ampanulaie.

VMW A»h.irer. 11. May, June. Ck. 1783. Tr.

lk0 Fr. kUiliK rM. (W«aUL nV. car. p. M4.) WaftVtt petiolatc, elliptic-ovate. M-rratrd. downy or tommtoaa bmeatli. •• *•>!• aa th* prtioira and brand*. flowttv r< " Nat ttli Amrrwa. V.Ll, r •m. l. p. : • *ML* »p«- 4. p. 1103. r nijrra. *Ihi Hot,* ed. f. vol. 1 tomentMa. Mich*. .13. l<rallru 1-4 pair* Rajaaaaji rather oompouml. Calyx rampartu nara • lan- crolate, obtoae, with a khort •imillwl at tbt apn, t Stamen* *t-.**

lmT.,\.(tfKf. A illd. •per. « p. 1103.) leaflets ovate- lancrolalr, til aomewhai •rrrnu-d. l Il F. sub- vdloaa, Bt»c. f l Pennsylvánica, M •ftata ot.t.-, brnad. ♄. H.

Var. γ, latifólia (Willd. l. c.) le *Var. δ, su* '-/H.W.. i t. D, 604 > leaAVu peti lair. rllijuu •ulilwir, ar—liwalail. i»rp)» *• Mated, downy be- neath, aaajaaajaj |M B]ajaj rfajMajM l- ft l*i iliaaa. a duitnri species. ♄. subvillosa, Jacq.!

Jersey Ash-tree. Fl. May. Clt. Ml 1. Tree 30 feet.

17 F. XIPHYRRA (Michx. l. c. p. 256.) U-aAVt. lanceolate- elliptic, sub-serrated \ aaatara runeated. obiuae and rmi ginate at the apex, and teret r al bottiim lj . 11 Native from Canada to Carolina, frequent. Vahl enum. n. I. p. *b<* p- 11 02. F. discolor, Michx. fil. »db. 't. *ss. v.* Canadénsis, Gærtn. fruct. l p. *lt** . t. 49. l lam-ra, l Jose. Young branc n, covered with white dots. Bark chinky. 1 Leaflets opaque, lawny bnirath an <he *r»n« • Flowers calyculate. Ktult brown.

Wing-leaved Ash-tree. Fl. May. Clt. 1823. l -r* .10 l feet.

gtojtprJ «e«ded or Two^olowrvd A»h-lree. Fl. May.

l* l QUADRANGULA'TA M • ks. fl. hor. amrr 2. p. 255.) leaflrta atmnat ar* ile, ellipti- laMBtJaaj, •rrr«tr.l1 .: owny be- nraih , tanura blunt • both ends. ♄. H Native of Ohio, Ki murky, ajaja Taajaajaa] Mrli. abr. with a *tifUK* 1104. Valtl. HHM l. p. 50. l F. tetragona, Cels. ex l*«tti < ours. iWanehe* qnadraMaJi >amara < *Quadrangular*-branched Ash-tree. Fl. May. l Tree 30 to 40 feet.

1» 1 PLATYCA'RPA (Vahl. enum. l tl bur amer. 2. p. 256.) leaflets almost s outside, elliptic-lanceolate ; samara elliptic-lanceolate. ♄. H. Native of Virginia and l Carolina. F. Caroliniana, Catesb. car. t. 80. Mirltl. •>' with a figure. Leaflets 2 in rfir* l"n(f. and aa inch d, having the larger veins »illo«« broraih- v«in»ra l inrhr* bro* acute at both ends.

Ilre d Ash-tree. Fl. May. Clt. Tree 30 to 50 fe

*«djrm*t.* l«4.

20 7. A'NA (Willd. berl. baumz. p. 150.) 1 leaflet* t»aU>- oblong, unequally serr rous, petiolate ; Taaclar «> brous ; flowers calycu «trJ, BJUl Native of North America. 7. Coolii rt. Worli ll oung branches green, smooth. l < •> Hjiia. ll • ;/ ^ 3 inches broad, glabrous, glaucous beneath.

m,'. .ii •l•?.•• .,ii<i,

B«lt bnmn. l-artm *&* pair* but

Expanded Ash-tree. Fl. May. Clt. 1114- 'Irre.WKi 50 feet.

21 F. MIXA (Bosc. ex Spreng. syst. 1. p. 96.) leaves with 5 pair* of leaflets, glabrous on ftoib »ur' aces ; leaflets oblong, alaamt sessile, •wi| all) toothed. ♄. ll Native of North ica.

V ized Ash. Fl. May. Clt. 1824. l aja.

tr l FULVESCE'NTA (Bosc. l. c.) leaves wit l, « f pairs of leaflets, tomentose beneath ; leaflets m *Um§* pKiola* oblong, acute, sinuated ; petioles powdery. ♄. lf v. Native of North America.

Powdery Ash-tree. Fl. May. Clt. 1824. Tree.

I. iu Bin's DA (Bosc. t c.[1]) leaves with 3 pairs of coriiceou* leaflet., rather tomentose beneath ; leaflets oblong, acute, a little toothed : having the vein* and petiolt-s reddioh beneath | ud* and brancldets grey, *h* H. Native of North America. ed Ash-tree. Fl. May. Clt. 1S21, Tree.

24 F. LOKOiruLiA I llo*c. 1. c. I leaves with *3* pairs of leaflet*, shining above, but tomentose beneath and on the petioles ; leaf» oblong-lanceoUie, acuminated, a little toothed; brancltct hairy. *?• H. Native of North America.

r-kmwti Aah tin, I MJV. Clt. 1824. Tr. 30u»4rtft.

5 F. VSRIDI (Bosc. 1. c.) leave* with 3 pain of leaflet*, shining above, but the vein* are downy beneath ; leaflets oblong, acute, sharply and unequally serrated ; branches green, tj. li Native of North America.

n Aihtree. Fl. May. Clt. 1824. Tree.

£6 F. cme HA (Bosc. I. M with 3 pair* of glabrous leaflet*, but the vein* are rather pilose beneath ; leaflets lanceolate, unequally toothed; bud* linear, grey, pilose. 1}. H. Native of North America.

y Ash-tree. Fl. May. Clt. IU4. Tree.

27 F. A'LBA (Ili»c. I. c.; leave* with 3 pair* of leaflet*, hairy beneath, and on the petioles ; leaflets lanceolate, unequally and sharply toothed, acuminated; branches grey. •; . ||. Native of North America.

'I *fote* A.h-tree. Fl. April, May. Clt. 1823. Tree.

28 F. RICH A am iBow, 1. c.) leaves with 3 pairs of glabrous leaflets: but the veins arc rather pilose beneath ; leaflets oblong, acute, toothed ; brancltes cinereous, pilose at the base. Native of North America.

urifi A»li-tree. Fl. April, May. Clt, f Trt*.

29 F. OTA'TA (Dose. 1. c.) leaves with *i* patrs of leaflets, pilose beneath; leaflets o?ate, acute, equally toothed; bods fulvous, tj. II. N rth America.

.ved A*h-tree. Fl, April, May. Cli. » I Tree.

I ac 1. c.) leave* with *&* pairs of glabrous •t»g, acuminated, some* h* uerica.

filark Ath-inc. Ft April, Ms>. Ol ISM. Tree.

31 F. ILIUM we. 1. c.) leaves with 3 pair* of leaflet*, pilose beneath ; leaflets oblong, muenmate, a little toothed ; bud* fulvous; brancltes browniah black. *i.* It. Native of tli America.

s.li-tree. «. Tree.

3£ F, FV'SCA (Bosc. I. i i leaflru, glabrous abo\< veins are tilluu* Unratli ; leaflets oblong, mucronate, iirqually toothed ; branches brown. *; II Native of North America.

.in-br-mcht-d Ash-tree. Ft. A: It. 18*3. Tr.

F. au'ra (Bo*c 1. c. i U-ave* with K twir* of leaflet*, beset with rufous nil beneath ; leaflet* lanceolate, acuminated, eus- ; II) toothed, *t;,* II. Native of North America.

• I \ • May. Ck. 1 Tr.

I. IDA (Bow. I.e.) leaves wita 3 j>nr» of glabrou* ; leaflets almost seuile, ovate-lanceolate, toothed ; In am lit* > ell«iw. 1}. II. Native of No cm.

V-barked A.

^;. I LanL diet. 2. leaflets peluilate, inmg, tit. F. cuncol v. fil.

H. N.

,, Wi.ld. M. 4 p. 1

*rb p. 3J sBOB. leaflets 7.

*A(*mi»tltiti* \-b. Fl.

86 I aodUoac. I. c) leav toawioif beneath; leafl> ovate,)>ud* fuUou*; petiole* s it. 18*0. Tree.

37 F. rairii feo imer. S. p. *tit.)* le»ft>« <*•*•*•• tnmenttMc beneath, obltqa* at thtbawv; *»aw» ?^j ethptic-obovsteimostly S-winfrd,atteti»*nd at the bawf, l-se«ot» »eetl S^idetl. II f South Carolina, Mt *o*k* » « * » •

Tkrrt-mingrd'ftunni A»h-trre. Tr*e.

Cwftt M<>»t af tike *prrte»or *tr**n*t* ar» large for*** tatu and are p-nrrally raited in quantitie* from *eeJ. • b«f b OO not vegetate tdl the lecood tprtng after w«m#. >ul the ground all wituer ; but if sown ifi the autumn immet! Jksj gaihenng. they vegetate tn the fcUewmg *pn»K- Any kind* may W increa^d by buddioft or paftms; on tW ash; and the younger the Mock on which they are grafted betier. In grafting the *pe*.. •*-•*, •• **'* M o*T «hKh do Dot readily take, it t* *b.* »ft « «• allowing the top to remain unlit the »d<> •"•* "•* kssurd. a* the top, t*ben alkmrd to rccMin. draws up Ml « Nluk on the conf sksti off. il ilstMfi of tlie *ap to tba graft.

W •->. llrbrew; «•<•*« ,>• I ,«(. OTM. a moan' *Omm,* Utm ; the name* lor the will[1]. rs. ench, 1. p. h Pursk, tl amef Nun. u< it. stner. I

mdrm, httmogwm, or *Poty* Flowers brrmaphroditr, or of different or i.t.-iibrtl. Corulta 4<parMd ; seirment* long. Itgulat*. men* with long tilamer.' nat«. Somata I-rrll** l-seeded, witigrd.—Tn nal or sxillary fiantcles of Sow^r*.

!li. I. p. 9. F I pairs of laoctolatr >»ted, l, iiaUni leaflet• : peduncle* n than lh. complete or Wnnaphrodite. •; • i h v . . < ' f .... I *peC- Urn. il I. Si" '-I*, mrd. bot. I •as), kot. *t.* t. #1 .uaamll no. 9. and *on. i.* P. bole*. Mot. pravlud. tu'< I li»nt. sr \OBWg >r h*td, with yellow dot*. Hud* • >•*, vdtou* or downy beneath, (lowers ^copoli oU. xtauhrod *n* on and feasak oar* on He ,,tWr. M \ male ll MassM is o«u«nrd from thU tr aa from O, rofasWi/uJw. " "

rent tree*, bat priacipally from the M*, sbtl *Jagless.* 1 be manna is tslly of two kinds ; not on at ount of the intrm K -lillrrrnt, but only brcatu* they are g t m • diflerrnt ma: obtain taaasia, ii<o*# who ha the managnftent - ood* of the swmtka »< July snd Auguat. »hcn make M *nhUmi* ™***m.* and uke off from the bark of the tree about 3 inches in length and t in bteatllh; thry tr* *ad by sVgrevs tk* maMka nsaa owl, and •• als»os« henng to the bark of the tr, ^ TW Manna. «h»h *. « »'• kfJHwXj M the nami sf M « S M *gnum* a dry pi ag* first k.ral of wsawaja M oJbm m Urgv l eokmr. aajl U fr«.,u,ni!t full f »»»» Bwt wK#n tka peops* w aai <u ha« •ajuaa. MM > amavi l i •»il *m* cmlWcted i the name of ib«*

kind i« more ratwtnw) am) il» ays prefer red lot! obiu»4 *. II. |wul. wl»r«-il i« called A'<V«. *taiufrt.* and /**•;». Frii»o« floribun la, Wall. 6. ind. l.fi 150. pl. rar. asiat. 3. t. 277. ! Don, prod. fl. nep. 106. llatL ash-coloured, dotted. Branchlets compressed. Laflrt* »ai ying much m AJpir< the termin >' «r cxld otic lhv largest. Flowers white.

it is l'rr am) clear from impurities. There» «lill a < bird kind in Calabria, which is as white as the finest sugar, but is seldom met with. The two lir .t kutda of manna umi rgo no preparation nwl.at* ever before they are exported. When the summer is rainy the •Bfenna i« alw ays scarce and bad. Manna likewise exudes spon- ttncoualjr, at concretes into granules; tbii kim) i* known m the markets by the name of nainu Hl it ar. Manna ia • »«* t. but *rAtrt m* nautrou impression "» the umjt[1] e. I l a ttuUl ca- thartic, for which purpose it was formerly much used in practi it is now seldom give *a* alone to adulta, but rombtnril with •nuta, neutral salts, and other purgatives. axe fr»n«mi1y u»«l > o cover its taste.

Var. β, latifólia (Alt. hort. *htm.* 3. : 445.) leaflets <>*al- «bU>t»K. arrralrd. italkr.1.

European Flower.nil A*' or M IBM A«li. II. May, June. < 1750. 11 K) to SO !.

Cl et. 2 O. SOTUSDITÓLIA (Pers. ench. 2. p. 605.) leaves • nit 9-3 pairs of roundish-ovate, bluntly serrated, almost sessile leaflets, which are -anuw at tl.« t> se; petioles channelled; flowers with petals,)*>lygani' us; peduncles axillary. ♄. '1. Native of Calab i la aud the Levant, &c. Fráxinus rotundifólia. Mb hort. kc*. l n. 445. Vahl, enum. 1. p. 49. Willd. spec. 4. 6 1105. <ittl baunt. |. 145. t. 2. f. 1. F. mannifera. "M—l'luk. aim. l U. f 4. t lauh. hist. 1. p. 177. f. f. Branchn ami buda l>M>» l Leaflets -ather small, ajlabroua. Flo*tn pur)'. ash. l The flowers come out in IM •!»»«. before the leaves, like the other species of the genus, as well as of *Fráxinus*. l The lower parts of the mountains of Calabria abound with this. tlvr manna-.' ash, which grows spontaneously and with- out any culture, except that the woodmen cut down all the at^ong atrma |li,. grow above the thick< «* uf a »t> 's leg. Towards the end of July the gatherer • of manna make a lori- zontil |fa>li, inclining upwards, in the bole of l' t)>r iri e. l\s ihr liquor never oozes out the first day, another cut is given on the sec ml, mi11 tlun ilir woodmni fix U** i talk of a maple leaf in the upper wound, and the end of the leaf in the lower DM, ao as to fi HI a cuj to receive the gum as it distils from each gash. The season conti <t>r« about a mot th. l r men) have only 3 carlines (1s. 1½*d.*) for every rotolo; which quantity, con- taining 55½ ounces, is sold for 24½ carlini, or somewh >t inort than 10s.; if it be in tubular pieces the price rises one third. The tubular pieces are called manna in cannoli, and these re- ltuUr in! es are produced by applying to the incision thin straw, or •mall bits of shrub, upon which the manna runs as it oozes out. The trees succeed best in an eastern exposure, in order to *..rm the juices in the morning, and tu rna|NMk t)n»*r » l which the tu at has sweated out in the evening.

/ i.n.t *ir.ii·d* l l .»·· Tit· Ash or Manna Ash. \ \ \pril. Cl. 1697. Tree 16 to 20 feet.

3 O. AMERICA'NA (Pursh, fl. amer. sept. 1. p. 9. N«u. gen. •mcr. 1. p. 6.) leaves with 2-3 pairs of oblong or ovate- •CWMIM.. d, shining, serrated leaflets, glaucous b oMtk, ihr mid one rathrf c«fiJ. te; flowers with petals, disposed in terminal panicles. ♄. II S, . ive of North America, in Maryland and Virginia, but rare. *i*. Americana, Lin. spec. 1510.? Br »(H lt! 4 brownish grey. Buds brown. Leaflets 3-5 inches long and 2 l>mad, 1 aler beneath, and having the larger veins rather villous. Samara narrow, obtuse, mucronate.

American Flowering Ash. 11, April, l May. Cl• l»fO. Tree 30 to 40 feet.

4 O. FLORIBU'NDA (G. Don, in Loud. hort. tint. p. l 2.) leaves with 2-3 pairs of elliptic-oblong, acuminated, serrated, glabrous, •ull,«l lra flets, and an odd one; panicles term >«l, compound, thyrsoid; petals linear, clavate (ex Wall.), oval- oblong, obtuse (ex D. Don); samara linear, or narrow-spatulate,

Lwddar, in the l.«« t li..li< s. Fráxinus Moorcroftiana, Wall. cat. no. 2834.

Moorcroft's Flowering Ash. Tree.

r O. UNORNI'LLA; leaves pinnate, on long petioles; leaflets 5-7, oil long petiolules, membranous, ovate-oblong, long-acu- minated, serrated; peduncles panicled, axillary. ♄. H. Na- tive of Silhet, on the Pundua mountains. Fráxinus urophýllus, Wall. cat. no. 2835. l lowers much smaller than those of *O.* (l • -'...«,/„.

Tail-leaved Flowering Ash. Tree.

8 O. STRIA'TA (Sweet, hort. brit. p. 256.) leaves with • {Mir* of leaflets, villous b- r.i-.illi .4 as well as the petioles; leaflets ob- long, petiolulate, acute, toothed; buds green; branches striated. ♄.]i. Native of North America. Fráxinus striáta, Bosc. ex Spreng. syst. 1. p. 95.

Striated Flowering Ash. Fl. April, May. Clt. 1818. Tree 30 feet.

Cult. The species of thi- genus art- rai«d from seeds, like tfco*. of *Frá* '•**, aud »nay bv increased by budding at , grafting M il»c *tommm* aait.

*Ovn** CX1.VIII COLUMELLIEÆ (this order contains plants agreeing with *Columéllia* in im (-ifUtll characters). D. Don, in edinb. phil. jo urn. oW. I M i ,

Calyx l ur *tmmyfn»A,* |in• • • » !, adnate to the *m* arium. Corolla inserted ft ilkr upprr part ui the tube of the M 1 |x, rotate or funnel-shaped; limb spreading, 5-lobed; lobes equal, 1 , convolutely imbricate in æstivation. S imrajl, n serted in the thickened part of IM tbrwO, oppo*ite the a >«ln calyx; fl amrau abort, dilatnl ; |»41cn rr.nwn s. Ovarium in- ferior, or half inferior, 2-celled, many-ovulate. Style declinate, scate l on a fleshy disk. S fl.i capitate, convex mi top. Capule 2-celled, woo fy. ^-t«li1.1, < l,.».lv rombi&rd « with hi l- of the calyx, dehiscing *t top t>) a r*«w-like chink, there- fore the valves are bi6d at tb* ape» ; d issepiment contrary to the . OW|Wf Miult of th» prdu»ctr; .ill. MM) -seeded. Albu- tiM-n fl fleshy or wanting.—Trees or shrubs. Leaves opposite, ¡ petiolate, entire. Flowers terminal, y rlkm, o) white, very like those of the species of *Jasminum*. Peduncles bibracteate?

This order corresponds with *Jasmineæ* in the structure and æstivation of its corolla, in it« bilorvlat ovanttm. anii erect ovula, and it agrees both with it and *Syringa* in the struc- ture and dehiscence of its capsule. A itrrtjiai i> on of the

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calyx and corolla of *Mtnodira,* with tboae specie* of *Jasminum* wherein the number of tegmrou are itulrirr initiate, will dtvplay more <-Warty tbe intimate ol' '-in>t between the** two familie*. It differ*, however, *-*«• ntially from *Jatmtnracra-* by having an adherent i»»tium, by the pretence of a prnyynuus disk, by the undivided stigma, and lastly by having an inferior capsule with polyipermotui cells. The imbricate antivation of the corolla, and adherent ovarium, with erect uvula, tbe p w w w of a perigynous diik, and a capsule with polyiprrmou* cells, are characters sufficiently numerous and important to pr* > it* ever being confounded with *O&tmt,* and to establish as an osculant group between thai family ami JarauMurr«r. It appears alto to be Dearly related to //a/riiijcr<r, a small group forming the connecting link between */Ut*.r* and Air*, ila group is principally distingimhed fn>m *CvlmmiUi** by tbe indefinite number ol' it* stamina, and iu umple sligM.

Synuput of the gtntr.*

1 COLVWI'LUA- Calyx eompreaaedly t-edged; with a 5-lobed Imb. C•roll* rotate. Anther* eutivoiute. Capsule rhinate ; cell* many-seeded. Albumen fleshy.

t BOUVAKM. Calyx {-parted. Corolla ftiwul shantd % ith a 5-partrd limb. Capsule cartilaginous ; cells t attdtd. Albumen none, but the seed* are incl- sed in a peculiar integument.

5 Mitrooosu. Calyx many-parted, half inferior. Corolla •alver-shaptd ; with a a-parted spreading limb. Capsule *-celled, many-seeded.

1- COLI MI I I : \ named in honour of L. J. M. ColumelU, who Bo ltu.i rt I'M. H. per. I p. 28. aysi. p. S. rli. I. : II B. et Kunth, nov. gen. amer. 2. p. 588. I> Don, m edmb. phiL journ. tlee. 1828.—Uláxia, Juss. gen. Lix. syst. *Diándria, Monogynia,* Calyx turbinaiely lubular, compressed, *•« g Corulla rota If with a 3-ktbed cornavc equal i mb. the anill*'* «f tl(« HI fiUments short, Hat ; anthers convolute or replicate ; one of the cells very narrow, contii resinou* naie, H41 ' Capsule turbinate, woody, 2-celled; cells inai>v»<''1<'t Baadi <t> ompresacd. aacen<l<nK | with a baailai mnb In oa. Atbu Plumule incom tu.—Evengreen Irres or khruba, Plumule incom tu.—Evengreen Irres or khruba, on slhort pedtodea, yellow. Peduncles bibracteate u ihe base.

1 C. ORÁNDA (Ruiz et Pav. (I. per. 1. p. SB. I. «. f. a. sjsi.)• 1 8.) leaves oblong, veiny, toothed at top: lassara corymbose. ħ . 0, Native of Pent, in wuoda at Pillai. C. arbórescens, Pers. t-Dch, I. 11. 1.1. Tie* hating the bat iduouji bark. Drum KU t« cluthn! with silky down, compressed between the internodes. 1 locate* attenuated at the baie, shinin« and green ab- ttlky and gtaacowa beneath, 1-2 inches long. Corym*s leary. tadlycmc segmrnts IMS> late »ilky bene*ih, furnished with a horny macro** at tbe apex.

OWUrf-I*••»*«.<! Culumellu. 1 rre KO to *ti* sWt.

t C. psuVAti (.Km* et l'«v. fl per. 1. p. 19. t. 12. f. b. syst. 1. p. 9.) tomentose ; leaves obovate, mucr.mul usually xdita- ,f entire, veinless ; flowers 11 and hill' about the i«wn of Tarma. C, frutsaottai, Peru, Pers. euch. 1. p. 13. Skruti with ihe habit of a speora of *Leptospérmum.* Branchleta clothed «riih boary down. < length "become blackish, Leaves crowded, green and •h(O\- above, bat tomrntose brnrath, from I to } an inch k» connate at the base, rarelv twinor lem, c tegmenu 1 Junwlli*. Shrub 8 (set.

3 C itfti* U H. B. <' kiiMb, no*, gen. amer. 2. p* leaves oblut . benraib; H"**"1" Aowercd. *; G, ^ .••» of 1 be provtnc* Young branches obaotetely Wragonal. •it«*e. nmcrunaw, free* and akustng above, and silky white brnrai > c*U, Wartaaa, and talya* • ee \i K ue and priipagatwii *m* Bvim^ri^* below.

It. r.ol.lYARIA na»rd alUr Bolivar, tbe liberMor «** South An*rica). • fuun. et Sehtecfit. ta Lmnara. 1. p. SOT*

U,%. O.T. *DihJrJm, Mtmtgimttt* Caljx S-parted. CoroUB funnel-s.aped : with a 3-partff<dl> I -txnu capdl in a peculiar intrgrn <e wiiddle. ellipiK, mmiuwate. omen.—tilabiou. aad lateral. conatituit»f

1 B. ISTEGARÍÓLIA (Cham. «t Schlecht. l. c. p. 20 H.) Jeawa land- late, quite entire. (he r»ince of Ciiplatine, frequent. Flowers white o r j«lU»w, »i*e of those i'f ./««•)* *um frúticosa.*

Entire-leaved Bolivaria Shrub I to t feet.

f B. ff»J RIA (Cham. et Schlecht. l. c. p. 209.) leaves linear, trifid, or entire. ħ . G. Native of Brazil, in the province of <isplatine, and of Chili. Flowers yellow.

Trifid Bolivaria. Fl. July. Clt. 1828. Shrub 1 to 2 feet.

Cult. A mixture of loam, peat, and sand is a good soil for the species ; and cuttings will strike root readily in the same kind of soil, under a hand-glass.

111. MENODORA (from pi«i. asenas, eouragt, at *dorom.* a gift ; a vefi - 1 nl ; Htn»b. et Bonpl. pi. aM]«n, f. p. M. t. Ilu. I) „©, pbtl- journ. dee. IRft.

Lot. SVST. *J'ttujrta. M>mafjm»m.* Cahx campatx a many-parted limb; segmeots 10-11, sutwls' a *wmj* short tube, a itllous thfoat. and I nMtrronolatc al tae • emarginatrly t-kibed. Style oeetiaaie, •lcwlcr; sttgssa trw»* («p>«W t-celled. w.th a srtxu-xUI iUb»cen<r, many-seeded.—A small, MtfrwMos- decumbmt stems; oval and 1

dalena. SUSM tetragm

Shrub-like Menodora. Shrub ½ to 1 foot.

Cult. For culture and propagation see *Bolivária* above.

ORDER CXLIX. JASMINEACEÆ. Jasmineæ, R. Br. •M. p. 520.—Jasmineæ, j«a»t. JUM. gen. p. |<

Calyx monophyllous, tubular, d <»M or taotbed I p"•'iiiLi- CorwJbi wasMB>talam. byynyyewa, Hgwlar. *iver- •baped (f, 11 11. » 1 -H (f. (0. «.) segmenu lying ovtr earb otber lauralli, imbrxaie and 1 tsM* in aretnatiua Mamena f, eppttakxM. tnelused.

by any disk, f -celled j celt* l ••ceded; o<ula erect. M «-lobc oua hc-fij- or a bipartiliU nptwV UbooM « •|«fui^ >>t wMttttgi l •bcyc acrai| in, >n inferior radirl- •(«Jinib*. l pinnate; having in* p> nmi of the tprci** arururalird.

This order differs sufficiently *from* OJrmav in the tituation of rifeOTtila, itructtireof the aeeda, aaalao in the dtvittonand aratiVatfion of the Mirt.ll* : l.nt it a. regular and diandroua, and k >ng either baccate of capaular, but aranwly in halm In V*yrtimtkti* the mature avrdi have hardly any albuntn MMI*. Fragfat.' l predominat; the Jaanunv Ma and baa made it for age* the h r o i i l ta and of the peopl* : tin* rra^ranca ahwa from an oil, which ran l* • xtractrd •o a* to rriam t» perfumt.

Sy»<>|'#»j of tit gtnrrm.

1 JASMI'NUM. Corolla ••Scl.it a. II. ft, f. 10. *m.y.* Berry didymous. Seeds wit»out ajbutmm.

2 NYCTA'NTHES. Calyx entira. Corolla A-lobed. Capsule bipartite. Seed* albuminoua.

I. J H I I M M I -,.. name fmw ... MI. a >tolet and »•>•*• o»"e, •ell; but the scent of the flowers has no resemblance to that of the violet.) Forskoel, aegy•. arab. p. 49. aaya that t apt <t. 368. I in. gen, no. 1 *t,* Ju»». gen. 106. R. Br. prod. p. 521. Gærtn. fruct. 1. p. I!»n. t. 4«. Lam. ill. t. 7.—Mogòrium, Lam.

LIN. SYST. *Diandria, Monogynia.* Calyx tubular, 5-8-toothed or 5 (f. 11. h.) -8 (f. 10. a.) -cleft. Corolla 5 (f. II. /.. f. 10. eft. Stigma 2-lobed M Infill. Berry didymous, having o it, MI of ttx> lot usually abortive. Seeds without albumen.—Usually twining shrubs. Leaves simple or compound; petioles articulated. Flowers white or yello

left.

1 J. SA'MBAC (Ait. hort. kew.1. p. 8.) twi camtt: leaves almost sessile, m mbranona, from cordate to oblong, acute or obtuse, glabrous; calyxine segments 5-9, subulate; berries globular; branches, petioles, and peduncles downy. ♄. ◠. S. Nativ• of the East Indies. Desf. ann. mus. 4. p. 20. Sims, bot. mag. 1785. Ker. bot. reg. t. 1. Mogòrium Sámbac. ict. 4. p. 210. J. ginea, Zucc.? Nyctánthes Sámbac, Lin. spec. 1. p. 8.—Burm. zeyl. t. p. If a i. AN f. • L i i n wtfnt, and sometimes Mottoprtt. inwwih, rxrrjtt »liil<- >iwiti, but tjirtr str generally tufts of down in the axils f the » eins beneath. Flowers g orralU lbrmiftK •mall 11 u llOIIHIHMM uanbclk ts, white, fragrant. Berries blac i from this species we have the common double arul rose or great flowered, and full Moogaries (Arabian or T • •ran ja«mtne«. i l*hrae arr •!<••>• raiard from layers, even in India, arni ha»r been improved by culture. The plant that bears the common sort still retains its twining habit, but it is lost in the great rose, or full-flowered sort: here the branches :i iluuhli rect or spr• s probably nothing but a variety of *J. Sámbac.*

*Var. a, Single-flowered. '>»ht** jmimttu.* *1.* ni)i|<il«ium. 'lira MHI A-pliwia. mat. (l.ji J: . 1 55.

1'mr. 0, *liamhte-JUmtTtd Arabutm)*tmmr.* J. Slmbac, rar. ftor» plmo. Amir. bot. rep i : — Kheed. mal. fi. p. »7. t. 50. —Burm. zeyl. 128. t. 58. f. 2.— I aajplk amh. *i.* p. d f«r. y, *drtat domhtt AtaL*,* MMf. J- .Sanibar. Ker. bot. reg. 497.—Rheed. mal. 6. p. 89. t. SI.

Var. 2, trifoliátum; leaves 3 in a whorl; flowers d tble. Nyctánthes grandiflóra, Lour. coch. p. 21. Nyct. mfoliata, Vahl. enurn. I. p. t«i.

Sambac or Arabian Jaamine. Kl. year. • lt. 1665. Sl. tw. 2 J. i, M.yne, kern et Uall. cat. no. II bxaiiciir*. | peduncles, calyxe*, and j petioles downy; leaves oblong, lines sh acuminated, always rt mil cronate; calycine segments li Iniif aMMIMM lli aja >ili)i, «l MMH MMMIit segments; peduncles terminal, 3-5-flowered. ♄. ◡ S. Native of the l t Indies, at Gongachora and Patna. *J. sanjárium,* Hamilt. mss. Flowers white. Nearly allied to *J.* VilwfcMl . \ *ar.* ,). ;iu^- - leaves rounded; plant more downy; corella «. aefMM fewer flowers. ♄. ◡ S. Native of the East IIHI . .. .! M J | subéscens, 11 nilt. mss. ex Wall. cat. no. f 180.

aWrrrJ Jasmine. Shrub cl.

Vaht bo« 1. p. 17.) <-avi- uing i eoryn.)

rotla «-S$_t$ lanerai te, very acute, almo.(the l ength of tube. «••«, part icularly ii lUngaJ, < 'K-H»ji. and Jam. NwtaJUltea actodnta, l ets, o .*. *. P- »• i irn.. Urn. dirt, 4, p. 110. Peduncira !l >a the c*h xr». ficKwr* pure white, delightfully fragrant.

Climbing Jasmine. Fl. July. Cl•- l«»0. Shrub twininit.

4 J. CLA'RIUM (Horsfield ex Lin k. jahrb. l-t, II, „ Blum. bijdr. p. 679.) scandet it; lra». ovate-oblong, acumi >ated. downy on the margin a aitd the rib* benrath, a* well a* tl i petioles and branchlets; peduncles axillary; calycine segments subulate, dot. i y. ♄. ◡ S. Native of *Java*, about Batavia. Cun>lla <tf f* narrow tr giix-nt*. Branches terete.

Glabrous Jasmine. Shrub cl.

5 J. ELONGA'TUM (Vahl. enum. 1. p. *H.* Willd. spec. 1. p. 37 i clnnbidft, ttl(.<iii ; lra»r« opposite or alternate, lanceolate or ovate-oblong; corymbs trichotomous; segments of c >rnlU 8-12, linear; calyx 5-6-cleft; segments subulate. ♄. ◡ S. Native of the East Indies, in forests near the mouth of the / >iral. aiul <f Jara Nyctánthes elongàta, Lin. syst. 50. suppl. 82. Berg. act. angl. 1772. p. 290. t. 11. J. Roxburghii> um, Wall. cat. no. 2870. Flowers pretty large, pure white, fragrant. Pedicels elavate. Corolla having the tube much swelled towards the mouth, and with the edges of the segments revolute.

Var. β; leaves .11 •umewhat cordate «t ihe l., e.«*, about l.tnga Jattir, at tW foot of Mount Tjerimai, among bus es. Blum. bijdr. p. 678.

Elongated Jasmine. Fl. April, May. Clt.1820. Shrub cl.

6 J. GLABRIU'SCULUM (Blum bijdr. p. 679.) subscandent; leaves opposite, rarely alternate, ovate, acuminated, nmaiinl at '•• ttaae, glabroua, <l •.n.tUl, u the branchlets; cymes te ♄. ◡ S. Native of bt l U Java.abotM(divided; calycine segments su-

Smootk.ti, JaMnmr l v.r. Hhrwb d, ee I p, S do*i leate. c«tda li..I. «. n f.«fmt»)i ai' 1 liters*M*M3 i.l,,.1..,.. < < t •

raapidate. J. G. Satire or the East Indies, in Bengal and Nipaul, but originally from China. Vanl. -\iuti- I. p- *$• Nyctánthc* tnuluflora, Bunra. ft. intl. p, 3. t. 3. f. 1 N.vrt. pubesrens, ftttS. »*>•• *• P- 9, J, multttiomni. Amir. rv|>. 8. L 4<h; irnntuni, Lin. spec. p. 8. J. litrvutiim, Lin. »yil. p. .6. Smith, exot. bot. *2.* p. 117. t. 118. Ker. boi. r« g. 51. Sim i, bot. mag. 1991. Mogòritim pubetcena, Lam. dict. 4. p. 11;«.—Khtrd. inal. 6. p. 35. i. 51. Flower* largc.purewhite, flagrant

FIG. 10.



(f. 10.)

Downy Jasmine. F). May, Aug. I Clt. 1759. -l.rubtiragging.

8 J. LACairouuM (R<«b. if. ind. 1. p. 91.) climbing, .hi. brous; leaves ovat^Unceolalr, lucid, 3-ncn-d; flowers axilUry and urm.nal, from 1-3 together, on long pr[1] IMa segm reta 6-7, filiform : tbow of the corolla 9- IX, linear, Ir'ngth of tube. ♄. S. • ttive of tlie mountaiaa tui of Bengal. Ker. bot. reg. t. 521. Flowers white, fragrant.

/.««rc/-^atfo*Ja»min. I Fl. May, Sept. Clt. 1819. >hrub cl.

9 J. FUSCES'TUM (Lamilt. herb. e *x* Wsil. cat. no. *W* 7.) puberulous while young; leavri uvai. tng-tanceolate, acuminated, feather-nerved, glabrous in the adult • *tr; peduncles terminal, trichotomous; calyv downy, with linear »egm< nts; segments of the corolla 8-10, acute; rartrat aubulate. ♄. S. Native of Patna. Flowers white.

•red Jaaminr. Shrub cl.

10 J. COARCTA'TUM (Roxb. fl. ind. 1. p. 91.) erect, •baWawi leaves oblong, smooth, acute; corymbs terminal, pedunculate, crowded with ternate, nearly ses.ii* flower*, br*< teate; calyx 5-cleft. ♄. S. Nativ eof tht B*M ln«lir». on i e hills iirar I'hifi sgong. *In* be known from all il e other simple-leave I Ea»t Indian «| • cies by the erect habit, am by the great number of flowers, which form the little dense corymbs.

Coarctate-flowered Jasmine. Fl. April, May. Shrub erect.

H J. COMPRÒLIUM (Wall. cat. no. 2858.) leaves • «ad, ovat*-rofdatr, aenminated, with 3 principal nervr*. glabron* m ||M ainlt ilate ; *torn* yntbuae ; corymb* liotoaaoaa. downy : brartru an bulate; calyx campanulate, with subulate segments; segments of corolla 8, elliptic, mucronate. ♄. S. Native of the East Indies, on the Nel ilk;!-" IfJ mountains. Flowe r« •liilr

Heart-leaved Jasmine. Shrub cl.

12 J. TRINE'AVE (Vahl, symb. 3. p. 2.) climbing, polished, glabrous; leaves ovate-lanceolate, long-acuminated, 3-nerved, polished; flowers axillary and terminal, 1-9 together; calycine segments 6-7, subulate; segments of corolla 6-8, nearly filif "n, laHH than the tube. ♄. S. Native of Silhet, in forests. J. acuminàtum, Pers. ench. 1. p. 7. Mogòrium acuminàtum, Lam. ill. p. 23. Flowers large, white, fragrai.1. Tube of crotU long, widening above the middle.

Three-nerved Jasmine. Fl. M if. Apnl • Clt. 1804. Sh. cl.

13 J. FINLAYSONIA'NUM (Wall. ç at. .. o. 7126.) leaves ovate, acuminated, 3-5-nerved, , glabfou*; p eduncles axillary, 3-flowered; calyx segment I long, awbvfatt. | Native of the East In Plant glabrous.

Finlayson's Jasmine. Shrub cl.

14 J it TRACTEA'TUM (Roxb. fl. in J. I. p. '• • twming, villous; leaves ovate-oblong, acute, villous; flowers in bracteate fascicles •f », ». of l ; calycine segments from 5-7, subulate; segments of corolla 5-«. oblong, with rounded acuminated tips; stigma entire. I;, ^. S. Native of Sumatra and Bencoolen. J. congéstum, Herb. Ham. ex Wall. cat. ae.tt7«. I. K« Wall. cat. mi. * * « ! H..-rf. numrrou*. prrttT Iwf^ " fracrant, in faarWln raabracvd by bracteab ikm— bwck* iW<-«WJa*» Br Fl. April, May. Clt. (»U. Sh.«w. 15 J. »rr*•» « .) brMhtkifta, cdjaMi MM) ka*r% whik TOWW downyt faavw dpyowd i« « ia it* •Uit, on abort prtiok*; nod—chi aadUry, branr*-tik«, a tx-ad *J* « ucrawd by tW p •f: and 6-» laawnla « * Native of Pen *ri|{. J. brartriium, *Hn\K* Bifarious-leaved Jas <imv. Shrub cl.

16 J. »-, LEXICAU'LE (Herb. Ham. ex W ,11 Ml. ••• * * ' glabrous; leaves ovate, acute; tanianclrv » xillary and terminal, 5-flow .red: terminal ones corymbose; calycine segments subulate; segments of corolla 7, lanceolate, acute. 7lo*g. Natm of the East Indies, at Goalpara.

Ste m· clarping Jasmine. Shrub cl.

|? J. LATIFÒLIUM (Roxb. fl. ind. 1. p. 93.) IH a (. smooth; IMTM cordate-oblong, powfctd. »mo<.ih ; cofjmU I»KI. il ^ a.K [1] calycine segments 5-7, subulate; segments of corolla 10-12, linear, cuspidate; berries kidney-shaped. ♄. S. Native of the Circar mountains. Flowers large, white, fragrant.

Broad-leaved Jasmine. Fl. June, July. Clt. 1817. Shrub IH J RETICULA'TUM (Wall. cat. no. 2869.) leaves reolate, acuminated, tapering at the state; flowers terminj , capitate, or corymbose; young branches and calyx s dowoy; segments of calyx 5, subulate; corolli » rT a loaf labr, and S l linear segments. ♄. S. Native of the P aiaai •.. ...a >.n..i. S».rt« .n.»d 10 / -r^*"r1M and *J. latifòlium.* Ilradaof Aowen brartrstar.

Reticulate-l »>rd J«»rnn*r. Shrwb.

!'• J. ARBORA'SCENS (Roxb. fl. ind. 1. p. N.) arborescent; leaves opposite and 3 in a whorl, ovate, downy; flowers in marowa, corymb-formed; calycine segments 5-6, subulate, incurved, villous; segments of corolla 10-12, l n ar, acute. ♄. S. Native of the more elevated pwta of Bmf«l Nyctánthes grandiflòra, Loar. corh. fl. V 4 bt villous. Panicles trirbiMma Mat. Plawan lavaav white, and very fragrant. Very r nearly allied to *J. latifòlium.*

Arborescent Jasmine. Clt. 1824. Shrub.

jo J ANGUSTIFÒLIUM (Vahl, enum. 1. p. 29.) twining, polished; leaves ovate or oblong, smooth, of a shining deep green; flowers generally by threes; calycine segments acute; segments of corolla 5-9, lanceolate; berries single, ovate. ♄. S. Native of the Coromandel coast. J. viminèum, Willd. spec. 1. a. M. Nyctánthes trifiòra, Borm. ind. 4. t. 2. J. trifiòrum, Pers. ench. 1. p. 7. Nyctánthes viminea, Retz. obs. 5. p. 9. Nyc. angustifòlia, Lin. spec. 8. Mogòrium trifiòrum, Lam. ill. t. 6.—Rheed. n> l. 6. p. 93. t. 53. Flowers large, white, with a faint tinge of red, star-sh g a peculiar but very pleasant fragrance. Stigma lanceolate. This species, being constantly covered with I--I, hai Uimhf, bright shining deep green, sometimes as small as those of box, renders it always beautiful, and particularly well adapted for screening windows, covering arbours, &c. in warm climates.

Narrow-leaved Jasmine. Fl. year. Clt. 1816. Shrub tw.

21 J. TRIFÒLIATUM (Roxb. fl. ind. 1. p. 96.) climbing, glabrous; leaves nearly sessile, ovate-oblong, smooth; flowers from 3-5 together, on t ifjrtl ' ' ' ' ' [; ' >> T I I segments 7-8, subulate, one-sixth the length of the very long slender tube of the corolla; segments of corolla 7-8, lanceolate; three times shorter than the ; berries ovate. ♄. S. Native of the Malay Archipelago.

Tube-flowered Jasmine. Shrub cl.

22 J. CUSPIDÀTUM (Willd. act. soc. Berol. 4. p. 1*f.) climbing, glabrous; leaves ovate-lanceolate, attenuated, mucronate; petioles axillary, 1-flowered; peduncles axillary, 1-flowered; flowers pedicellate. ♄. ◡. S. Native of the East Indies. Calyx 5-toothed. Corolla white. Very nearly allied to *J. Sámbac.*

Cuspidate-leaved Jasmine. Shrub cl.

23 J. GUINÉENSE; leaves simple, ovate, acuminate, glabrous; petioles terminal, trichotomous, compound, pilose; calyx campanulate, with subulate segments. Segments of corolla ♄. ◡. S. Native of Guinea, at Cape Coast, common among bushes. Flowers white, very fragrant. Calyx tube short, limb 5-cleft. Corolla usually 6-cleft, with linear-lanceolate segments.

Guinea Jasmine. Shrub cl.

24 J. TRICHÓTOMUM (Heyne, ex Roth, nov. spec. p. 6.) leaves ovate-lanceolate, glabrous above, and clothed with rusty tomentum beneath; corymbs terminal, trichotomous, compound, pilose; calyx campanulate, about equal in length to the erect segments. ♄. ◡. S. Native of the East Indies. Calyx 6-8-cleft. Corolla usually 6-cleft, with linear-lanceolate segments.

Trichotomous Jasmine. Shrub tw.

25 J. UNDULÀTUM (Willd. spec. p. 6.) leaves ovate-lanceolate, glabrous, shining; petioles 5-6 times longer than the superior joint; calyx campanulate, with very short teeth. ♄. ◡. S. Native of New Holland, within the tropic. Lindl. bot. reg. t. 1296. Panicles terminal, trichotomous, corymbose. Flowers white. Corolla 6-parted, with ovate segments.

Undulate-leaved Jasmine. Fl. Nov. Clt. 1820. Shrub cl.

26 J. ACUMINÀTUM (R. Br. prod. p. 521.) leaves ovate, acuminated, glabrous; petioles 5-6 times longer than the superior joint; calyx campanulate, with very short teeth. ♄. ◡. S. Native of New Holland, within the tropic. Lindl. bot. reg. t. 1296. Panicles terminal, trichotomous, corymbose. Flowers white. Corolla 6-parted, with ovate segments.

Acuminate-leaved Jasmine. Fl. Nov. Clt. 1820. Shrub cl.

27 J. MULTIFLÒRUM (R. Br. prod. p. 521.) leaves ovate, acuminated, downy, very soft beneath; peduncles terminate, trichotomous; teeth of calyx very short. ♄. ◡. G. Native of New Holland, within the tropic.

Soft Jasmine. Shrub cl.

28 J. ANGUSTIFÒLIUM (Blum. bijdr. p. 679.) [illegible] with glandular hairs; leaves alternate; floral ones [illegible] opposite, oval, acute, triple-nerved, shining, of the consistence of parchment; pedunc[illegible] axillary and terminal, crowded, 3-5-flowered; pedicels long; calyx tubular, obsolete 5-toothed. ♄. ◡. S. Native [illegible] in the mountain[illegible] of Java, in woods [illegible]

Narrow-leaved Jasmine. Fl. year. Shrub cl.

29 J. SIMPLICIFÒLIUM (Forst. prod. 3. no. [illegible]. Vahl, enum. 1. p. 27. Willd. spec. 1. p. 39.) shrubby, spreading, glabrous; leaves ovate-oblong, polished; flowers from 3 to many, terminal; calyx campanulate, with a 5-toothed border; segments of corolla from 6-5, linear, acute, equalling the tube in length. ♄. ◡. S. Native of the Friendly Islands, [illegible] Eastern Archipelago. Sims, bot. mag. t. 980. J. australe, Pers. ench. 1. p. 8. Flowers terminal, fragrant, in a decussate panicle, having its ramification trifid. Bracteas small, subulate. Corollas white, fragrant.

Simple-leaved Jasmine. Fl. June, July. Clt. 1808. Sh. cl.

30 J. LAEVE (Wall. cat. no. 2859.) branches, calyxes, and young leaves downy; leaves ovate, acuminated, almost glabrous in the adult state; corymbs terminal, trichotomous; bracteas [illegible] ovate; calyx with nine teeth subulate; calyx 7-toothed; segments of corolla 7, lanceolate, acute.

Smooth Jasmine. Shrub cl.

31 J. GLANDULÒSUM (Wall. cat. no. 2849.) glabrous; leaves ovate-lanceolate, acuminated; calyx tubular, 5-toothed; segments of corolla [illegible], lanceolate-linear, acuminated; bracteas setaceous; peduncles axillary, 3-flowered; flowers pedicellate. ♄. ◡. G. Native of Nipaul, on Shrubby mountains.

Glandular Jasmine. Shrub cl.

32 J. ORTÒSEPALUM (Burm. ind. 4. t. 3. f. 2.) [illegible], mucronate, glabrous; peduncles axillary, 1-flowered. ♄. ◡. S. Native of Java. Flowers yellow, [illegible]

Oblong-leaved Jasmine. Shrub cl.

33 J. ACUMINÀTUM (R. Br. prod. p. 521.) leaves ovate, acuminated, glabrous; petioles 5-6 times longer than the superior joint; calyx campanulate, with very short teeth. ♄. ◡. S. Native of New Holland, within the tropic. Lindl. bot. reg. t. 1296. Panicles terminal, trichotomous, corymbose. Flowers white. Corolla 6-parted, with ovate segments.

Acuminate-leaved Jasmine. Fl. Nov. Clt. 1820. Shrub cl.

34 J. MULTIFLÒRUM (R. Br. prod. p. 521.) leaves ovate, acuminated, downy, very soft beneath; peduncles terminate, trichotomous; teeth of calyx very short. ♄. ◡. G. Native of New Holland, within the tropic.

Soft Jasmine. Shrub cl.

35 J. ANGUSTIFÒLIUM (Blum. bijdr. p. 679.) [illegible] with glandular hairs; leaves alternate; floral ones [illegible] opposite, oval, acute, triple-nerved, shining, of the consistence of parchment; pedunc[illegible] axillary and terminal, crowded, 3-5-flowered; pedicels long; calyx tubular, obsolete 5-toothed. ♄. ◡. S. Native [illegible] in the mountain[illegible] of Java, in woods [illegible]

Narrow-leaved Jasmine. Fl. year. Shrub cl.

36 J. SIMPLICIFÒLIUM (Forst. prod. 3. no. [illegible]. Vahl, enum. 1. p. 27. Willd. spec. 1. p. 39.) shrubby, spreading, glabrous; leaves ovate-oblong, polished; flowers from 3 to many, terminal; calyx campanulate, with a 5-toothed border; segments of corolla from 6-5, linear, acute, equalling the tube in length. ♄. ◡. S. Native of the Friendly Islands, [illegible] Eastern Archipelago. Sims, bot. mag. t. 980. J. australe, Pers. ench. 1. p. 8. Flowers terminal, fragrant, in a decussate panicle, having its ramification trifid. Bracteas small, subulate. Corollas white, fragrant.

Simple-leaved Jasmine. Fl. June, July. Clt. 1808. Sh. cl.

37 J. LAEVE (Wall. cat. no. 2859.) branches, calyxes, and young leaves downy; leaves ovate, acuminated, almost glabrous in the adult state; corymbs terminal, trichotomous; bracteas [illegible] ovate; calyx with nine teeth subulate; calyx 7-toothed; segments of corolla 7, lanceolate, acute.

Smooth Jasmine. Shrub cl.

40 J. VOLI'BILB (Jacq. hort. schcvtinr. 3. I. 321, fragrn. I. 44. f, *t.)* twining, glabrous; leaves ovate, or ovate-lanceolate, glabrous; panicle terminal; CJK\ 4-S-tootlied; corolla *.-S-cleft, *h*.'*. *O.* Native of the Cape of Good Hope. Peduncle* many-flowered. Berries blue.

*Twi*t*g* Jasmine. Shrub lw.

|1 J. ▷▷ I ill. cat. 2860.) brandies villou*; leaves broad-ovate, acuminated, *otiu what cordate at the base, downy on tnHh surfaces, but especially beneath and on the nerves abort; priiolea short, villoun ; corymb* terminal, villou*, iricbototnous ; ealvx with a short tube, and tuliutate teeth ; segnx I ilia G-8, liw.ir-lancvolaie. acuminated. Native of the Barman Empire, on the banks of the Martaban, at Amherst. Flowers while Divuion* of calyx between teeth and segments, like thaw of the following species.

Drruttate-leaved Jasmine. Shrub erect'

4t J. *n%WQi* Wall. cat. no. SStiL}f{Ubrout; leaves lancrolate or ovate-lanceolate, acuminated ; prduncles Iruhotomous, axillary and terminal, corymbose ; calyx campanulate, 'nth *ti* subulate teeth ; segments of corolla Unceobte-linear, acutc, f»7. rj. ^ 8 Native of the Iturtnan empire at Amherst, on ttte banks of the Manaban, ami at Ta»uy.

Lilac-leaved J'"*»mui<-, SImili cl.

43 J. NCHÓTONUM (Vahl, enum. 1. p. 26.) climbing, glabrous; leaves ovate, quite glabrous; panicles di-trichotomous; •rj \ sub-campanulate, with subulate teeth. ♄. ◡ S. Native of Guinea. Corolla an inch long, white, . tweet-scented. Berne* blaw.

Dichotomous i J a* mine, Shrub cl.

44 J. 11 •; glabiou*; leave* ovate-roundi«h, «m> minauil; |K-dunclc« axillary and termiiul, trichotomou«i earn obsoli-tely i-tMoilic<l; segments of corolla acute; ben clavatr pedkt'K: brae tea* nunn' • '" Indir,. J. un.liilat.im. Heyne, herb, ex Wall. cat.

yae'i JJXTIII. > rL

iTm'mtn ao. tM ltUbroua; leavr* 'ticeolate or i ummatod. muero- v ratnpMtuUtr, wilh r«««c in Mae M • ell as the pedicels, as the fruit comes to maturity ; M M I U Of corollas oblong-lanceolate, mucronate. ♄. ◡ S. Naliv* of the Burman empire, 6n Mount Taong l>oog. riowmwh

•. Irtt Jain

46 J. ATTENUA'TUM (Roxb. herb. ben. ex Wall, eat. no. 2864.) glabrous; leaves obtocig-UnccoUu[1], cortareuua, «ilh revolif niinniia mtclr* axillary and terminal, t.. tr, with short teeth ; segments of corolla 5, lanceolate, acuminated. ♄. ◡ S. Native of Silbet. Lew Ill l n» HMIJI to WaB. tat. I. r. I So* l* a variet)

^((r*MMim/-leatrd Jasmine.

* ib cl.

* * * *Leaves ternate, opposite.*

47 J. ACUMULA'TUM (Vahl, symb. 3. p. 1. mum. I. p. •0.) leaves ternate, but those of the branchlets and flower> arr urn* ple ; lateral leaflets small; calyx angular, with 5 minute gland-like teeth, and is, as well as the branchlets, which are terete, downy ; corollz 7-cleft. ♄. ◠. G. Native of the Isle of France and Malabar. Ker. bot. tl-H- I B*. J. -: ifoliàtum, Pers. ench. 1. p. 7. Mogòrium trifoliàtum, 'am. ill. I p. I 4. The whole shrub is clothed with greyish down. l'antcie fasiiftiatr; pedwr* cles trichotomous. Calycine segment* obliuc. I^ignwim of corolla 5-8, ovate, obtuse, obl m^. Berriea nU». Htigmai hite, disposed in trichotomous corymbs. Native. "" . * A»t •• Jssinu" IS J

tng, giabrou* j traflet* ovate-oblong, acuminated ; racemes axillary, brachute; ralys campanulate ; with 5-6 mn teeth; temtei' corolla 7, shorter than the tub* Native of ihc East Indtr*, and the Haunt Hon. J. Trav pcoei—«, Herb, madr. Peduncle* spread was loaawr than the lea*e* , partial ones 2-flowered. Corolla

Aeisf-petioled Jasr

49 J.Toantv* <>m hori. berol. I. p. 10.) twining, glabrous; leaflets lanceolate, I I I U U W ' largrst; branchn d<twny. »j , ^. (ft. J. fV \il», *i*cx*\. bort. seboTttbr Leaves glabrooa, but not the mid-no beneath. Pctioli • downy. Corolla titan 7V,

*'ml** Jasmine. Shrub • let, | . p. ovate-obsnnai, arumioatrd, S-n thn l. tenmioal. calyx denticulated. ♄. ◡ S. Native of Sierra Leone.

Night-flowering hj lasjaaJn, M,,u t t r I .

52 J. AZO'NICUM (Vahl, enum. 1. p, SI.) bwAeta ovaW * I"it-i iif il.iir, undulate •!; branches) •< <M|ual in 1m. hot. r*«. - .pec 1. p. 9 — C'_••.T -n I p *59. t. 82. '...«*. """ te.

Azorian Jasmine. Fl. May, Nov. Clt. 1 Jt*. Hhmh tw.

AS J. CARA'NUM (Thunb. prod. p. 2. fl. ca p. I. p. 41. Vahl. symb. 3. p. 32.) branchlets • leulsr, and are, a* well a* I** petioles and leaves glabrous; leaflets ovate, sub-retuse, with an »fun en ; peduncles axillary, 3-flowered, shorter than «'>«» leaves; calyx in bular. . . G. Native of the Cape of Good Hope. 1 angulàre, Willd. • Jirr. 1. p. 58. Branches tetragonal. Leaves glabrous; m . . . of petioles pilose. Panicles terminal, trichotomous. Calyx 5-6-toothed, short; teeth short. Segments of corolla 6-7, much shorter than the < ..be.

Cape Jasmine. Fl. April, July. Clt. 1111. Shrub 3 feet.

54 J. TIJVTUM (Forst. prod. no. 8. Vahl, symb. *S.* p. t .) leaflets ovate-lanceolate; racem «» <i..»ri\, .., Uf> I H.ir^iJttrltt of seed reticulated and chinky. ♄. G. Native of the So *t? Islands. Glabrous. Leaves 2 trvrhn long, dh%< Peduncles length of petioles. Calyx short, campanulate, with tmniitr teeth.

Didymous fruited Jan

55 J. LINEA'RE (R. Br, prod. p. 521.) leaves <'^'] >0*r°ZS: downy ; leaflets linear, acute ; branches terete ; panicles larj. tr ichotomous. ♄. ◡ S. Native of New Holland, on the v.ii th coast.

Linear-leaved Jasmine. Shnbcl.

56 J. HVARICA'TUM (R. IW pvoi. p. *itl.)* |WbRM* Uretd of rajya olwblt t seed imperforated. ♄. ◡ G. Native of New Holland, - ithin the tropic. Lindl. bot. reg. 1291.

Divaricate Jasmine. Shrub cl.

57 J. CAMPANULA'TUM (Link, j.htb » 11 p. SO. enum. 1. p. 32.) leaflets oval, acuminated, spicul ted, gUbmast calyx campanulate, g • n I, 1. short segments ; panicle close ; branch** urrie, and are, as ftt ll aa iW petioles, downy.

maad, having IU v«n» owl'

MTTLAM* «.md. 1. p. »?.) HKli lc«*« MtMit; k.ftVu Unccolat* ; porymU terminal of Silhet, in tkr jungle* and

J. r. ML

i•. |•mall, while, mimrmui.

JV nil. –

60 J. b!.ri a m ' (Wall, in BOKO. i ... ind. 1. p. 99. pl. asiat. rar. 3. t. 274.; KMtdrnt, glahnmt: leai. ... opposite, pi ... rarely ternate; leaflets 5, rarely 3, ovate-oblong or oratc-tan Motatr. k. uiiiii.ilMl. conlele at ilw '»»'. tormina! and iai.fii. hraclnatr , ' c » U ' ‹‹‹ ... late ir, tli; 'egtn'nU of corolla 5. oblnrv ben ies twin, ... 'd«d. ': • w ... Ml Calkd ... A. M wrll ... of Kamaon and Sirmore. J. latifolium, Hamilt. m.*. J. (niinqur»*T»r. Lanb. I

•«>Wular. Leaves cmtit»in«i» t I •r*i

i»^-H(i/i.[JHIIIH.) * -' IB w .Jit••.

• • • • i • ternttt, altrtmatr.

41 J. tkVTKAKi ! p. V. »TM, • VaM. • T O . 1 . p . 3 3 .) i- -l«l». and MmpU ; . ruitrihirm, obluar; tirafttthra angular; r»l> ,____aubwlatr, *h.* II. Native of the south of Eur .tpr, and throughout tbr Levant, Cwn. but. DIM, 13 I. i lt, *•!. baumr :.•*. J.lw p. 3«1>, f. 390. tjcat. I Maji I T- il by i In in. Corolla yellow : wuli ublonu, oliiutr argTiMmta. itatiar it oftrti ,-•11111 Wml ihan thr rnmm<m;a>«iw. rr ;i If ft.

l.m. •)‹‹‹. I. Jl. ». Vahl, m.itn. 1, y leaves ill ternate, acute, terna !r MM | pinnate; b •MWM angular; calycine segments very short. \ .11. Native I Ma<trira. Krr. i<>. r. 2.—Knor. thes. 1. t. I.— bot. reg. t. 550.—Besl. cyst. Schmidt, æstr. baumz. t. 149. Plant glabrous. I Peduncles terminus twin, or tern, 3-flowered. with oblong, ubtuw segments.

HttmhU m lul.*n Yellow Jaaun ... I l. J u . Hrpi Cit. I«18. Mi. «-rrrt, 3 i«>-t feet.

63 J. • *wm* (Lin. •pec. p, 10. VaU, rmtn M.) (aves ... iwan, bi ternate, and pinnate; branches ... rrete; calycine segments very short. ... H. Native of Madeira. Curt. ... *m.* mag ... ««—BatT. Mn. I. *bt.* 1'laM glabrom. I'r.l.n,, l,. trfi= •) yafla •rajtt .

Frry «• / or mm— ClU l«i»,.

*• J. MkTlkOTM« ... rplr, or a * ... ; leaves alternate, ... broad-ovate, acuminated, waved, lucid ... glabrous; ... l . and ... bxn.' ... paw.

FIG. II.



II

dra terminal, trichotomous, fastigiate, corymbose, downy; calyx urceolate, with short, subulate teeth; segments of the corolla ... equal to the tube in length. ... H. Native of Nipaul, where it is called *Goojee* and *Javana*. Wall. pl. asiat. rar. 3. t. 275, J. arbórvum, Hamilt. mss. This species grows to a middle-sized tree, with long, tj-rrtr bfanrl - ... which ha... < • U>od«1 to become rambling. I leaves varying in size and form. Flowers very numerous, yellow r. fragrant.

Various-leaved Jasmine. Fl. J»l AMg. Oil- lafO. Tr middle< •Jatii

65 J. cULoritt'llin (Wall• r»i. n<». ISS9 alirrnat', B ifoliate, M tnng j petioles; leaflets roundish-ovate, and nvatr<Unr«ol.i< ... shining, acuminated «nd fn long pttwlulr' i prdunrlr' urmtnal, cniti(«nnnl. trichotomously branccnctl, wuli •l«•' ... at sessile flowers in the extreme forks, somewlial r'C'«OM>. calyx slightly 5-toothed; segments of corolla 5, acutr, ublxag laaw'- ... ; • i h * ... M d w anal L avtacaooa- ; lowers white.

Beautiful-leav ^ J«.uut>c. 8kr.

• • • • • /-c«r*i fiana(». *opposite.*

66 J. ... (Lin. spec. 1. ... il, enum. 1. p. 34.) leaves opposite, mnnair; leaflets ovate, artimmatrd: t>ud* erecuish. ... M ... -lirdgr*. Curt. bot. mag. I- t. St. Lam. ill. I ... 7. f. 1.—Bull. herb. t. 231.—Schmidt, æstr. liumi l t. 150. Plant ,!«l.ii.u». Branches nitfuUr. 'Calycine (#]rtnmt. 5, subulate. C •ralla white, 4-5 cleft, sweet-scented. Terminal leaflet the longest. The common *jasmine* has been a favourite wall shrub from time memorial. Its native country, as well as the date of its introduction, are unknown. Gerarde, in 1597, says it was in cou- ... use ... ... ours. There are golden and silver-edged-leaved varieties ei Uw «otna»oa jattnmr, at wrll a* . double-fl. • *ered variety.

Com.m J.- mine. Fl. June, Oct. Clt. 1548. Shrub cl.

ANDTOBAUM (Lin. spec. 1. p. 9.) leaves opposite, pinnate; leaflets bluim•l, outer 3-5 confluent; buds horiz 4iial t; . ... , S. Native of tl. East Indies. Kcr. bot. reg. 91. J. Hispánicum, Hort.—Rhecd. mal. 6. t. 52.—Merian. sur. t. 46. —Knor. thes. 1. I. 1 \ very like *J. glaciale*, but differs in the rqu.l utr of ilw IraArU, ami in l> l w t n l»rtn« latgrt. ami exterior ones being confluent, and in the ... rdilish underneath.

Gre,t/<mrrt4 or C'aialiK.ian J.mii. i Fl. June, Oct. (*1(. XT' Shrub cl.

68 J. ... (P. Con, prod. fl. nep. p. 106.) leaves opposite; leaflets 9-11, ovate, acute, ... alanoai i. ... , gi,. brous; panwlra irrminal and la- br. 1-MfM «l.l.,.«i. » || Sttt ... of Nipaul. Flowers yellow.

taVa ll iTrrrnl Janmnr Shrub

69 J. ... (Wall. cat. no. 2886.) leaves opposite, pinnate; leaflets small, oblong, or oblong-obovate, or attenuated at bulli rn*l*. (Ulsrt-mt* : .ulil <mr u> ... ually acuminated; peduncles aggMgatr. J-rt-.».fnl. Irtminal . ... corolla funnel-shaped, with roundish-reniform sh... «T1 H|(nMlttl . f alyx 5-toothed. ... G. Native of the NaUigfaflry n o i i u ... ns, where it was 4i*ctrd Ky Noton. The leaflets are ... am, ... xtimes binate.

Bignonia-like Jasmine. Shrub.

- - - • • • • *Leaves pinnate-, mlutmti.*

'0 '. ... Low. rorh. f. '9.) scandent, glabrous; lrair» |»tinatr . l.afUti ... ate, acuminated, 3-nerved, shining; calycine segments 5-8, subulate; segments of corolla 5-8, ob- lo«g. ob|u... (I. Native of Cochinchina, in hedges. l i t m r r t *mUur.* H « u l W « . K W a a M t M k f T r i ' . ... r U » * , ,

Nerved-leaved 1 Jguminr. Shrub cl.

71 J. REVOLUTUM (Ker. bot. reg. 178. Sims, bot, mag. 1731.) erect; leaves .iltrrnatc. pinnate; lcaflri* S-7. ovate-lanceolate, or elliptic, glabrous. i»n »h-Tt fH (iilnlc* ; corymb* terminal, compound: cal\ tranche* angular, glibrouv . F. Nati*t of ihr mountainous countries rum), *of* Hind<>«taji. and of Mipmul, Ac. l>odd. bot. cab. yfitJ. J. chryMnthrmuni. Koib. fl. IIMl. l. p. 93. Leaves shining. II. men bcwlit vrllow. very fragrant. Segments Of corolla 5, obtuse. Stigma clavate.

ftrrt>lutf-\f\rx[* JautlU l vi (l *. !)oii, nnnl. n. ftcs. A 72 J. FLORIDUM. Fl. May, Oct. Clt. 1812. Sh. cl. 'Vai^-lanccoUtc or < ^ i , . .[1] 106.) leaves alternate, pinnate; leaflets 7, cl oblong, acuminated, sessile, downy while young; branches angular, downy; peti cles sub-corymbose, downy; teeth of calyx short; t-wngmtrd, l-Howrrrd, tcrmin.> • trmrau of corolla 5-«, obtUM. jj '. Native of Nipaul, where it is 1-iiitll- bot, reg. t. is »nni»l lraJtH lOBUTT ai>d mure attrmiaied than tt>r lateral onr*. Flowm •malltr than thok. *Jut*m,* u> « yVarlj allt*d,

Pubigerous. Fl. May, Oct. Clt. 1827. Sh. cl. •«« Yellow Ja«mim>. l ,•• of J«»uiw arr «rU adaptrd for ii <_ itfuintt wul

Cult. The hardy speci, ,, < or trellis work; they will grow i. non soil, and are easily increased by ripe cuttings planted under a hand-glass. l • greenhouse kinds grow freely i> a mixture of Wtn, MWl, • peat, and ripened cuttings struck l the *ame kind of • soil, or i• und, nndvr • haad-gHwa, tn a little heat.

and καθω, flower: in allusion to the flowers opening at the approach of night, and falling off at the break of day; hence the name *árbor tristis*, which is given to the species.) Lin. gen. no. 21. Juss. 104.—Parilium, Gærtn. t. 51.—Scabrita, Schreb. no. 154. Gærtn. 1. t. 138.

LIN. SYST. *Diándria, Monogynia.* Calyx 5-toothed. Corolla salver-shaped. Stigma capitate, glandular. Capsule superior, obcordate, compressed, 2-celled, 2-valved; cells 1-seeded. Embryo erect, without albumen.—An erect, spreading shrub, with opposite simple leaves, and large terminal panicles of flowers

1. N. A'RBOR-TRISTIS (Lin. spec. p. 8. syst. 56.) b. S. Native of the East Indies. Ker. bot. reg. 299. Parilium árbor tristis, Gærtn. sem. 1. p. *,u. t. 51 Scabrita scábra, Lin. syst. 115. ed. 12; Gærtn. fruct. 2. p. 265. t. 138. Scabrita trifiora, Lin. mant. 1. p. 37. : ^pumcrum, Hh«. ra^on.!. Sephálica Asiat. ros. 4. p. 244. Branches ter •• •, oordaw, acuminau^l, entire, or coarsely serrated, scabrous. Inflorescen*t* a lariri of imall, t.lk • panicle, composed 3-flowered, terminal umbellets. Flowers numerous, mi ired, exquisitely fragrant, open at sunset, and fall off at sunrise. Involucra of the umbellets 4-leaved. Corolla with an orange-coloured tube, and a white border; segments of the limb 6-7, twisted, triangular, or obliquely lobed, having the outer margin scolloped. The flowers of this tree are exquisitely fragrant, partaking of the smell of fresh honey, and on that acco)nt lh« t.l.i i« but an indtftVin >nc#. when destitute of flowers, it h The orange tubes of the flowers dye a most beautiful orange colour, with the v lrv-xn •h»:l. . '.-.«..•» ^..in, HHfdjbj| to the preparation and m nwlr of •'"»*ujuclmi| IIM OOTTallOft *1* bvt. unfortunately, no way has yet been discovered of rendering this tl«-"ii'i MIBBJ ilnr* ble.

Sud-Tree. Fl. July. Clt. 1781. Tree 10-18 feet.

Cult. This tree grows freely in kiam and pmt, bwt seldom

w* *tamrn m* Eaglmd. Cutnnfr*. <MK too ripe. root «•- dily in MM), UII'UY a hand-gUM, tn Wai.

ORDER CL. STRYCHNACEÆ. i bit oruW only «•»>*• th* ifftitu S/fjr A"or.) Strychneæ.

Calyx 4-5-parted. Corolla funnel-shaped, with a cylindrical tube, and 4-5-parted limb. Stamens 4-5, inserted in the throat of the corolla, alternate with the segments. Berry 1-2-celled, many-seeded. Seeds horny, flattened.—Trees or shrubs, with opposite entire leaves, and small flowers in terminal and axillary panicles.

1-parlrd. Corolla l» rd; • tuhf, and * »• j-parud b»»nki; •rfoMfiu Mffow. «nboci« » B-rtltltMHJ. SUMTM 4-1; (IMMll *ttrj* abori; Mtbcf* »w Mffituu* of oUoag. On»tMMlptHw, t relied; ovul* " « ^ * M M U to (1r*li\ rmptark* d«"O lo th» middle o rous, ling in gelatinous pulp; integument double. Embryo straight, furnished with al wiM«, Utinn the radkW p«"**"f hilum, centripetal; and thr roiylrdoft* oAt« 5 nerved.

led. but in ihc '. ***** tt«w«l. urlui*. k***^ ^** bw«b* *r«t or l t«|k#T-B**1r**' l^avMoppndt*, rambling, either with or without tendrils. ..lt, «h,w, or „reenish white, disposed in terminal and BS,|Jtr, prduBTuUn eDrvmtbs. TW »rU-«n«.» 3-nerved, or triple-nerved, rarely 5-nerved. Flowers s 1c*ria*HMiaf UMEOJ* lnd*«. ar* iw*« tl.<- fruit is remarkable for iu l tterness, and acrid del MTioa* eflvt HIITIII. but still nMfi> violently *\»b introduced into the system by inoculation.

d. Corolla funnel-shaped. Stamens 5, on shor tube. Berry 1-2 celled. Seeds nestling in the pulp, flat, peltate.—Li ves 3 or triple-nerved.

2 PICROPHLÆUS. Calyx 5-parted. Corolla funnel-shaped. Stamens 5, exs , short, inserted at tfci to*e of tk* corolU. Berry 2-celled, many-seeded. Seeds variously angled.—Leaves veiny.

3 CRATOSPHYLLUM. Calyx 5-parted. t ituxl-^P*"* Stamens 5, exs *~u4. *»n«i* u. tW ti»r pwt of the tube. Berry 2-celled, many seeded.

» '.ASSIOROMA. Calyx 4-parted. Cotoli *•»•» • and' 4-cleft b; t.ln^ nll»i». St»im in ih, Mko, CapnW l-*»llr,! short tube, inserted ex Kunth, 2-celled, ex Meyer, 1-2-seeded. Seeds conver c ,,, w ^ .nj «at on tb* otb*' —Leaves triple-nerved.

5 GARDNERIA. Calyx 4-to»]<hrd. « aad a • parted mnb. ffnw ens 4, inclosed. Berry 2-celled, 2-seeded. Seeds orbicular, com vered.—Leaves b** ther nerv • d.

I. STRYCHNOS (*στρυχνος*. Greek name of Solanum, applied to this genus by Theophrastus.) Lin. gen. no. 255. l Gærtn. fruct. 2. p. 476. t. 179. Juss. gen. 149. l l. Br. prod. p. 469. Ignátia, Lour. coch.

LIN. SYST. *Pentándria, Monogynia.* Calyx 5-parted. Corolla tubular, funnel-shaped: with a 5-parted, spreading » * ii'. is æstivation. Stamens 5, inserted in the throat or corolla. Ovarium 2-celled, many-seeded. Style one; stigma capitate. Berry globose, pulpy inside, with a crustaceous rind. Seeds fixed to a central placenta, peltate, with copious albumen. Embryo foliaceous, with a common radical.—Non-lactescent

[1]

trees or throb*. Leavaa oppoaae. ttaually nerved. Flowwa corymbose.

* *Tendrils none.*

1 S. Nv'x- Viatica {Lin. apec. t7l.) prarea 3-Vrwrved. raj, •timing: herrie* many needed. • of the t Rooaundel. Wood*, mrd. bot. C. p. YD. t ffM. Church. et Stevmed. hot. f. (. J* Roxb. .w. 1 • p. d. Gærtn. fruct. t. 179. f. ;. Mayne.dam. i. IT. *V*txV.* 117. Cartiram, Kbeed. Ma). 1. p. 67. t. 97. Blackw. t. A04. 'liill—l TomH| ltgnt tertium, (•i • us in UI.IIMT, iiauh. pin. p. 301. The tree is called *Koochila* by the UcngiJrir, and Vm/i by the Telingas. Leaves smooth, shining, from 1½ to 4 inches long. Stipulas wanting. Klowrrt •mall, grwniah *» bite, collected into terminal corymbs. Anther* hall within the tube, *nd half out. Bernr round, smoo4h, »iw of a prrtty larjp> apple, ot«fhi»<«ok>i ured, when ripe. The wood of thi» tree being hard and dumb le, is used for many purpose* by the n»nv. It is exceedingly bitter, particularly that of the mot, which is rncd in cui intermitting tevers, and the bite of tinotnpm snake*, when that of Nag** Musadi, th. S. colubrina. M M , cannot be had. The •reds are employed in tin iiataVajam of MMttJ *|>MI., •> im.lir bWal •OTt intoxicating. The pulp of the fruit seems perfectly itMoceat, aa it is greedily eaten by many sorts of birds.

Nux Vomica is one of the narcotic acrid 1 claaa of poiaona, and seems to have a direct power over the ipinal cord. It produce* laborious parapiradon, wnich la fttliowü by torpor, tfewMmg, etMta, eonrulaaona, and death. M Drapic i ha* aacrrtn ined, by numerous rkprrtmrtiU, thai the fruit of *FrMttm eorJifdhm* ia a power'ul anitdotr attain*i thi*. and other i lyfabU potaon*. For a centu•r *HUM* rwai baa hrrn known aa a powerful medicine, and is employed in a «aa« *arw • of diseases, with different degrees of success. M M.jrmlu- .1 »l li.r plant possessed the singular effect *4* »tr.i ngly affecting the spinal marrow, without affecting, except indirectly, the function of the brain; and it waa en jectured by him, that it might be turned to advantage in the cur* c of diseases. I his conjecture has since been amply confirms! M Majend «d caatt, aucceeil. »ce firaa the air •' both partial and gmen al and grnrrali nine ia a prrpafmtkm of *Nux Vomica.*

Vomit-Nut, or Poison Nut. Clt. 1788. Tree middle-sized.

2 S. ROTATÓRIUM (Lin. spec. p. 237.) leaves opposite, from ovate to oval, glabrous, poipted; bark deeply cracked; berries IM ! in. suppl. p.144. Roxb. cor. 1. p. P. t. 5. Strychnos Téttan-cótta, Retz. obs. 1. p. 12. Gærtn. fruct. *i.* p 477. t. 179. Caniram Titan-cótta, Pet. Th. dict. des. sc. no. 2. The Hindoo and Bengalese name of the tr• M *Nirmalee*; it is called *Indrgu* by the Telingas, and *Tettan-Kotta* b y the Tamul The leaves cannot be either said to be 3-nerved or triple-nerved. St tpuia* cume«iintf. Corymb* ftom the tops of the 1 ast year' . llwmlt. round (he bur our l'br pft i d ll p in a ternary order, many »mall, *^Hiti<> BadY MiMunaf, blach •• l •..«,„ ^ arwaia rconumtcal pwrpwwi. The pulp fe Mm by the nadirs alihowglt not very agfeaUe to *m* terd* i i •a impt•' 'Hi tfcr in*Ml. Ml WMjU*fs1

very ahort lime tk*> impurmc* fall to tltc bottom, leaving water cltar, and prHvctly wnulnafl. Tht«* aa«da are generally carri.tl aboat by the MOT* prorideot part of • and aoldivra, in time of war, to enable them to p wacrr. They arc eaat. • lUiiMfd tbaa atom, and art probably teM hurtIMl to the ctKifti

itrmktrt Siryrhnoa or Clearing v *rm li* to fO fret,

lUa (W,< a, tapering to both end*, acuminated, prdunrk• . • • ••• •iar of l ama! cherry. ½. S. Native of Pe ajmj, Ua*r» with three principal nerves. ft. laurlAh Wall. eat. no. U9l, a native of Tavo v. doaa not apmar to aVJErf murh from l be pr»—l species, unless in the peduncles being branched and paaucled.

Oval-leaved Strychnos. Shrub cl ?

4 - M ADAGASCARIENSIS (Pet. Th. ex Poir. diet. l. p. 8 B •earn* ovate, am ••*« tbroat; very large, 1-seeded. ½. S. Native of Madagascar, about Foul-Point. Caniram. '•« d« Madagaacar, l Pet. Th. L t. M. 3 Flowers n axill.ry bracteaie ctaryaitba, at iba lop* of (he branch** Very nearly allied to *S. petmldtmm.*

Mmdmgaatm r Strychnos. Clt. 1827. i ree.

5 S. SITIÒBA (Lam. ill. no 2449. Poir. dict. *Ht* p. 697.) branchM apiny; I M V M • obovate, acute or acuminated; corolla with a bearded throat, hardly lona lagnacar, « aana(onU er than the calyx. ½. S. Native of Ma shore. Caniram, Voutac. Pet. Th. l.c. no. 4. Voutaca, Flacourt, mad. p. 121. no. 13.— Pluk. phyt. t. 170. f. 4. Leav •••gl brous, 3 inches long, and 2 broad, 3-n« ;HDTI (a sorbtive tendrils) longer than the petioles, axillary. *Cotjm* axillary, at the top of the branches, with • oppoMtr pedwaciea. Corolla tubuU ly vent "roae, amall. P«il gbboaf, œmwy aeadanl. 1 inche* ia Uiameier, at l. ngth orange-coloured.

Spiny Strychnos. Clt. IMN. Tre* 10 to 1« fret, cl.

6 S. LICIDA (R. Br. prod. p. «».) i. aves ovate, acutish, coriaceous, 3-nerved; nrttri btpar tite. ½. (i \ative of New Holland, within tle tropic.

Shining-leaved Strychnos. atoft*.

7 S. IGNATII (Berg. mat. med. p. 149.) leaves ovate, acute, glabrous; berry pear-sh apad. ma y-seeded; peduncles axillary, about 4-flowered. . S. Native of Cochinchina, and the Philippine Isla >»i» I|(IMIM aaaaVtt Lin. suppl. p. 149. On Itl Iraan da St. tgn^. tio, Pet. Th. l.c. no. 6. Camelli. Pbai tram. 21. t. 1. f. 46. Branches sarmentose, scandent. | *m* • span long, veiny. Panicles small, axillary, composed of 3-4-flowered peduncles. Flowers long, dr ng, white, with the scent of jasmi l fruit ova i», attenuated at the neck «>)»! size of a Bon Chretien > pear, b w m r o, bow ever, says that the fruit is rounded, attenuated at the neck, dry. Seeds ovate, trigonal, of a dry, very bitter substance.

St. Ignatius's Bean. Shrub cl.

* * *Tendrils present.*

2. COLUBRINA (Lin. spec. 271.) scandent; simple; leaves from oval t ntly acuminate, triple-nerved, polished; berries many-s •tied. •; ½. S. Native of the coast of Co Silhet. Plesck, off. t. 118. Modira Cani >am, Kheed. «w> 8. t. 24. | .mtaan a < Pet. Th. l. c. no. 5. l '•»* dpi 'Colubrini, Rumph. amb. 2. t. 37. Tendri la lateral. *h***#i* thick and woody. Corymbs terminal, small, com pawd of t-i pair* «f villon* •*• aches. Stip •hi no*. Flowers .mall, grawniah ywaVw. Le» ves 3-6 inches long, and 2-3 broad. Berry o <M aa large a* an <*» nge: rind yellowish. The tree is calle .| bv the BengaWaa A ockia- f«ta.an.l b« the Telingas *Naga-Musadi*. (Nags, or Tanoopaum,

i .linga language, means ihe *Cobra de VapelL.* *Tuntoo* mean* dancing, and *JMMUM,* a serpent, this sort being famous for* it* head, and moving it from kide to side. at the w>und a Thii ipecies yields the real, or, at ^asi, another kind of *Lignum Coiubrinmm.* The wo. wrt is esteemed, by the Telinga ph> for the bite of the Nnga, as well as for that of every other vL-nomou* soak*. It is applied externally, and at the tame time given internally. It is also given in substance, lor the cure of intermitti• $; fevers. Roxb. m*s, in fl. ind. *I.* p. 20J.

A'miA-e-wiMid, or Lignum Colubrinum. Clt. la.'O. Shrub cl, 9 S. AxiLLAKt* (Colbr. in Lin. trans. 12. p. Ml-JM. t. *IS.* Blum, bijdr. 1019.) leaves ovate, or oblong-tamvolair, acuminate; tendrils axillary, simple, thickened, downy; berry oval, 1-see(led. IJ. *yf* 8, Native of the tnounuinuu* coui north and cast of Silhec, in Bengal, wh or *Hnr-cuch'tla* ; and of the island of NusA-Kaintanga. Uranchc* dicho mm»u», downy white young. leaves glossy, villotts while young, triple- nerved, sometimes also 3-ncrved, twice u long M the ii terstices. •: ipulas none, except a downy axillary Mai gin, which *u* connect* the base of the petioles. Fascieks of fl. crowded, round, twice as lung as. t • n. Axils <: principal nerves of the leaves, as »l» !«», downy.

.^j-i/Ai/y-tlimertni Sirychno*. Clt. >hrub cl.

10 S. Tiiu re (Lescnen. aim. du raus. 16. p. 480. t. tS.) Blum, bijdr. 1019.) leave* elliptic, short-acuminate, 3-rtcrvcd, glabruus ; tiii'lnl- simp]. ed, opposite the solitary leaves. ♄. S. Native of Java, where it is called *Tjettet'.* or *I'pnt Titutt.* Bark of stem rufescent; wood i IIMI fulonml. spongy. Branches green. Leaver !, t;labro fruit l globose, many-seeded. Tliit in s, and is probably the true Upas tree of J' in. poitono

11 S. SIRINNOSA (Lewh. in *Hoxh.* \\. UK). -'. \> ite» elliptic, cuspidately acute, triple-nrrv ed ; tendrils bifid, opposite the leaves, with t ickettnl ilivition*; brrry globo i b l I W •; • v, S. Native in forest • near koudrao •oath of Tanjore. Ter «lnli wirlt • pair of »c tilalu < ry part. under the divisions. Two-tendrilled S •rychno' Shrub cl.

12 S. SIRINA ; le i»et ovate-lanceolate or oblong, acuminate, with 3 pri ticipal nerve*, awl .icral ones ; ietul' small l s oppo- •itc the leave*, bind at apex, having the lo es clavate and curved at lop, without any «uall procr** between tli.-m. aa *i* S. *tectrrliuta.* Ixv^h. I? ♄. S. Native idtea, on the Pundua mountains. Pedu •icles long, corymbose at top. S. lucid i, Wall, cat, no. *Mi'JM,* but not of K. U'I. Shining-leaved Strychnos. Sh .nib c).

13 & Ba*CHIAT* (Itutl et Pav. fl. per. 2. p. 20. t. 157.) I Ate or oblong, acumina'ed, 5-nerved, glabrous; tendrils leaves opposite the leaves; '•vrry globo*e, many seeded ; stem brachiate, terete; flower* corymboae, axillary and UTIDUU S. Native *4* Pom, in wood* ,e* pent! • nt. Ht.HtCM Jmtar. subulate, deciduous. Calvx •(llous. Corollas white, villous • MltS de. Berries large, globose, pendulous, greenish yellow. Brachiate-stemmed Strychnos. Shrub cl.

Cult. A mixture of loam, pest, 'ltd aand, is a good suil for the species of *Str ^knoM;* and cutting* of them will link* root in MIKI, midrr • hwwl-gla**, in boat.

II. PICROPHI

iF h)it< r | and «V.not, •A/tut, bark I the bark UbWrw, *tox0gfmm.* Calyx 5-parted, imbricate. Corolla with a short tube ; and a 5-parted limb, which is imbricate in aestivation. Suraen. 5, inserted in the base of the co •'i»lla. shun. Style short ; st '«pna uktiue, emarginate.

Berry with a crusUceous rind, i-celled, many-seeded ; receptacle* or placenta* twin in each cell, fleshy, rising (ram tlte intlcxed edge* of the dissepiments. Seeds |minute, variously' angled, reticulated. Albumen rather cartdaginous.—A »• rub, with bitter hark; oppoaite, oblong, coriaceous, rather veiny. • quite glabrous leaves; and terminal, dtchotumous corymb* of fl. flowers.

1 I[1]. JAVAXK MM (Blum, bijdr. p. 1020.) *tj.S.* Native of Java, in the higher wood* on Mount Salak.

Ja<<i 1* crophlcous. Fl. \|inl, July. Shrub.

Cmit, See *Strycknot,* above, for culture and propagation.

III. CYKTOFH YLLUM (fro *mr*fnt,k,rtOM,*curved; and ., *phylion,* & leaf; in refrratca to the leaves of the ftrst species being convex on iln- upper side.) Ket»«dt. herb, ra llhitri. bijdr. p. *{Oft.*

Lm. nit, *Prmtdndtut, Memogfmia.* Flowcti inferior, «c> cording to Blum. ; but, according to Reinwdt, perior. < •5-pa'ted, imbricat •, permam-nr * corolla funnel-shaped ; limb j-pai I . m«n» 5. exserted; filaments inserted in the upper part of the tube; ant) nab—t, emaramale ai the Style filiform ; iugtt>.i bluntish. Berry '•celled, many-seeded ; receptacle fleshy, fixed to the dissepim it.—Hardly lactescent trtt[1]* ; « ith opposite, coriaceo M, gUbrous leaves; and axillary and terminal corymbose inflorescence.

1 C. PERROTTETIA (Reinwdt. ex Blum. bijdr. p. 1022.) h oblong-lanceolate, *<••••• ated at both ends, convex above, and coucavc *tctu* i th. ♄. G. Native • of Japan and Cbtna.

Foreign Cyrtophyllum. [1] 1 .)csr, 1 ree.

2 C. STRICTIFLORA (Blum. bijdr. p. 1022.) leaves bro«i)>Unceo< lite, mud acuminated, flat. ♄. S Native of Java, -t woods "ii Mounts Salak ami < when Kitninjak.

Show Cyrtophyllum. Fl. June, Aug. ; ree.

Cult. Srv *Strj'ch* above, for cul >re and propkgmuoo.

11 LASIOSTOMA (from λαστος, *latin,* woolly *l* «ul

-•i, 4 mouth [n mouth of corolla.) Hchreb. |(rti. no. 180. Meyer. ess. p. 85. H. B. et Kunth. nor. *jpm.* sm er. 7. p. SO .—Roûhamon, Asbl. guian. 1. p. 93. t M. IJI.

Lis. SYST. *Tetrâudria, M' Mttgy'niit.* CUyx 4*part*d, bibtactrate at the b»*r ; tr|pnenta acvl*. Corolla fWirtgf skapsd ; tubr short; limb quadrifid : lobes acute, v lloua. Starama I inserted in the tube, exserted ; anthers oblong, 2-celled. Ovarium ovat. Style one ; stigma ovate. 'Capsule orbicular, 1-celled, ex Kunth. 2-celled, ex Meyer, 2-seeded Seeds ovate, convex on one side, am! flat on the nt' shruU, full «! yellowish, I»OCHHI« juice ; having the branches opposite : and the tendrils axillary, solitary, thick urd. awl spirally convolute at top. Leaves opposite, quite entire, triple-nerved. Corymbs axillary, opposite, bracteate. Flowers small, white. Capsules yellowish.

I LCIIA s (H. B. et Kunth. nov. gen. 7. p. 210.) leaves oblong, triple-nerved; flowers corymbose. ♄. S. Native of South America, near Esmeralda, in the missions of the Orinoco. Curare, or Bejuco de Mavacure, Humb. relat. hist. 2. p. 547.

Curare Lasiostoma. Shrub cl.

2 I HU ICA'TA (Meyer, *M. p, 13.) WMVM ovate-oblong, triple-nerved; flowers racem wss-ly cwjmboif. ♄. S. Native of tropical America.

Dwaricate Lasiostoma. *.*,,, i. cl.

3 L. (Pers. ench. 1. p. 154.) leaves elliptic, 3-nerved ; le . ♄. S. Native of Guiana. Roûhamon Asbl. l. c. c.

Tendrilled Lasiostoma. Shrub cl.

Cult. For c ihur» ana pfopngalMf , see *Strychnos,* above.

mu

eon rub* %«« Urn. I

V. GARDNERIA (th ». R*n«M is dedicated hi Hon. 'Edward J, late roswWfU ai ib# ftMrt of the Rajah of N*p««l.

by VTBOM indefatigable *cxtntotn* and libtralily tlir Botanic Garffctta ai CiKutta, at well «• thow of Union, I ave been enriched by' many iplrndid addition* of |Janu ami seeds, the productions '«tpawl.> Wall l oxb ft. tai. 1. p. l'M and 2. p. 518. D. Dot t, prod. H. twp. p. 15'.' Cyathospérmum, Wall. mss.

Lrx. syst. / flnMrut, .l/oai.f y ».. Calyx small, 4-5-toothed. Corolla rotatr, with a 4>,'<-|>*rtt tub*; *ah«tc> limb, and a short in Motivation. Si.nw«»*-i; filaments var short, flat; anthers oblong, convex cm side, flattish inside, 2-celled, closely com> a COM l having the valves membl niKMM aiv involute after dehiscence. Style subulate, straight, shorter than the stamens, with a furrow on each side; stigma acute. Ovarium supr:OC. Berry 2-celled, 2-seeded. Seed• cotwprf—»J, orbicular ; tr»ta simple, adhering closely to the f alhutnrn, wl'ich is Wpia us, white and horny, pellucid and dotted. Embryo straight, Uwilar. l Cotyledons ovate.—Climbing, much branched shru ba, (tlalirout in *vvtty* put. IJCSTM opposite, ex-stipulate, ellipti d, rather coriaceous, quite entire, shining, petiolate. Peduncles axillary, opposite, trichotomous, 3-flowered, or simple 1-flowered, glabrous, shorter than the leaves. Flowers u'timitut. whitr, *iv* ice the size of those of the *Cynäckum vincetäx* ' KM.

l (i. nv At k (Wall. in Roxb. fl. ind. 1. p. 1 .....l leaves elliptic, acuminate, acute at the base; peduncles trichotomous, 3-flowered ; flowers tetrandrous ; .]. l. r»r. a*iai. 3. S. Native of Silhet, in Bengal. Wall. II. 17, l. 231. Leaves pale beneath, having the nerves united by tub-marginal arch< ; petioles widening at the base, and surrounding the branches, concealing in their axils a few withering cilia. Placenta fleshy, short, originating from the centre of the dissepiment. Anthers combined.

Omir-!. *><-<! I Gardneria. Shrub el.

2 0. A MI VITÒLIA (Wall. in Rox i. fl. md. l. p. MS.) la«VH narrow-lanrtolatr, taprring inui a narrow aruinrn . flowers Military, axil! ry, pentandrous ; anthers distinct. ♄ . ب S. Native of Nipaul. l Leaves 5 inches long, and 1 inch in breadth. Petioles I* in lli< preceding. Flowers nodding in æstivation, tetrandrou i. a m i |M ntandrous. Stigma 2-lobed. Berry scarlet, as large as a marrow-fat pea, but in all other respects likr that of *G. oväta.*

Narrow-leaved Gardneria. Shrub. el.

3 l GLA'BRA (Wall. mss. ex D. Don, prod. fl. nep. p. 132.) leaves elliptic, acuminated, obtuse at l!M' b m peduncles 1-flowered, simple : seeds flat inside. ♄. ب S. Native of Silhet. The flowers and seeds are lamtr than m 0'. or^l«. lt as in *G. angustifolia.* >> arnhtyj th. wm.

GUI,,,* Gardneria. Shrub el.

4 (. WALLICHII (Wight, herb. ex Wall. pl. rar. asiat. i. p. 49. t. 251.) leaves • itiliitie-l^i . olate, acuminated; peduncles Mill*' y, 3-flowered, or bifid, each • divi '"m Wanng 8 flw ers ; corol >» (Inn p ; urthrtt 4, combined. '- • v-/- S. Native of the East Indies, on m mtntairu kt -al.in, U't|(hl. *Wallich's* Gardneria. Shrub el.

Cult. For culture and propagation, see *Stry'chnos*, p. 66.

† *A ge*MM *do*b<f*l mkftkrr t^hngmg to tkr prrtrtt vrJrr.*

y > DICA'RYUM (from *δις*, *dis*, double : and ..(Nwr, *karyon*, a nut; drupe containing e l,.; ubi .) Herb. Willd. ex Roem. et Schultes, syst. 4. p. 802.

l.i H. ll r. l/oftMf jfnM. (*ah > 5-toothed, per(nwtrnt. l Corolla 5-toothed ; with a pilo tt ihrtMt. Stamens 5, inserted in the throat. Style thick, subulate ; iifftna obi sc. Drupe containing 2 2-celled, 1-2-seeded nuts.—South American trees ; with opposite leaves ; ami irrminal. |. nicles, or axillary racemes of flowers. I tut ffrnut it tan) by D. C. to belong to *Strychnéæ*, but it is hardly known.

i D SUBDENTA'TUM (Willd. herb. l. c.) leaves elliptic, acutely toothed, shini >a abovr; r r trmmial. *; . 8. Native of South America, at Pich .ifwha. llumb.pl lk> p. Leaves coriaceous, with protube ranrost ibe haw of thr | • tiples, reticulately veined, pale beneath.

Subdentate-leaved Dicaryum. Tree o t shrub.

l l ' . . SERRULA'TUM (Willd. herb. l. c. > leaTMobiottv acuminated, serrulated ; panicles axillary. ♄. S. Native of South America, on Mount Quindin. Humb. et Bo •i p.

Serrulated-leaved Dicaryum. Tr rut tiiiub.

Cult. For cultu 'c awl innaayiiiiii M« *Si rychnos*, p. 66.

Oummi LI. POTALIA'CEÆ (so called in c aMaajMM the order agreeing with the genus *Potàlia* in important t h a w ters.) Potaliæ, Kart. nov. gen. bras. 2. p. 133.

Flowers of in.,ju«| part s. Calyx 4-5-6-parted. Cor0Ua lul.ul.r, Mith a *m* arly equal limb, which is fr ,,,, 5-|.^ -cleft, twisted m the tube of the corolla ; pollen elliptic, simple. Style continuous : stigma simple. Berry 2-celled. Seeds numerous, peltate, fixed to the placen M». «)IKII arr mttral, 'l esta double. Embryo heterotropous, in cartilaginous albumen.—Glabrous, sometimes shrubs or trees. Leaves opposite, quite entire, joined by interpetiolar sheathing stipulas. l Flowers disposed in terminal panicled corymbs, bracteate.

l This order is easily distinguished from *Apocyneæ*, from which it t* 1 '• brma; iHwqwal, in rl..ul.tr tr»ta to the • ^ 1 , and ttapmally in tlt« |wiiulr« i being joined by interpetiolar stipulaa, aa in *Rubiäceæ*.

Synopsis of the genera.

1 l POTA'LIA. Calyx 4-parted. l imb of onrolla |(i-|i«it imbricate in æstivatio :i. Stan»tm 10; filamrnta rombtni an annular nurmbrarw. * • ry 2-celled.

2 ANTHOCLEI'STA. 1 ilyx 4-|*it< 0. Limb of corolla imbnaitc-in i< .llW-IM \t, t^omlnncil. B r m <•• 12-cleft, æstivation. Stc celled.

3 l SAURE'A. Calyx 5-parted. l «nb of corolla 5-<5-p. tukiion. Sutnrm &, uMMMcrtrtl. Berry t-caJM. imbricate in æ

l l" i A'LIA (Guia na name of tit* Ar*t apc«kM). l .• • . •li», N'(no. 714, Ln *Tomagymtm.* 'Calyx -4mtred, tttr- bmatr, i-par t..lU ttibuUr ; lwb M'H by an annular *ummhtwm* ai StyW «fcnrt ; Migma rape > « ^IK^Jl rnafiy > ar^fdlf aHBJwaBaja^ ajaMpilaf * (iroai t bkailat jilaeajUw. l >ml dfCVMMr. br|pr, • •lar w a t h at Uw baa*. r*l« •l eoimar. 4l«*IH i t in t^rmiaaJ lumiliim • « » l ~ , fu»- ''"•»•••". ••'.....• |-MMr,i ,.!,» ytUo,; aanlU' .h.i. iiana, in . fctrnwtr fiirr*< .«. .in.pl,. U»»e. 1| l-MH lorm nr« broad. y.lkm. nV.hr. aw •• pUni «r» tic lratr* and trwlrt i vuwwial r«w-.. ami whm tWr* «a an., Bitter Potalia. Shrub.

2 B. nurmrcKA (Mart. no*, gen. bra*. S. p. 90. t. 170.) ivea opposite, oblong-obovaw; calyx yellow; corolla green. . itive of Braail, in the province of Rio Negro, at Villa Barra do Rio Negro. Stem simple. An infusion of tlie leaves i* rmher mucilaginous, and somttvliat astringent; and is used as ft lotion to we*k eye*.

Rem-bearing Powlia- Shrub C to 8 feet.

Cull. For culture and propagation tee *Fagreea,* p. 69.

11. AVI liOCLEl'STA (ftom ar0©c, *antkoi.* a flower, and riUtsroc, UriilM. shut up; corolla shut up by the crown in the throat). Afx. ex R. Br.

Lsx. **ST. *Dodec6ndria, Mowgynia.* Calyx 4-parted. Co-:illa tubular ; limb 12-cleft, imbncile in aestivation. Stamens ifd. Style filiform; stigma capitate, obtusely *t-* rry roundish or oblong, size of a cherry, 2-ctllnL f slhd.T—Slid.lk-*iztd branching trees; with broad, oppo* *a* leaves, whiclt are combined at the base by inicrpetiolsV sheath* ; and terminal panirU'd corymb* of white flowers.

1 A. KOBIMS ; leaves broad, obovate, coriaceous, almoat sessile. Ij. S. Native of Sierra Leone, on the mountains. •IU white.

Xobte Anthocleiita. Tree *iO* feet.

2 A. MACRorin LLA (G. Don, in Loud. hort. brit. 471.) Waves >bovate, obtuse, membranous, *h* . S. Native of Sierra Leone, on the mountain*. Berry 4-celled. Leaves aa large > those uf the common cabbage.

Large-teatcd Anthocleiita. Gt. J»iO. Tree «0 feet.

Cult. For culture and propagation *ec *Fagrir'a,* p. 69.

111. IAC.R/EA (so named by ThunbcTg in honour of Jonas Theodore 1'agriru , M. D.). I hunb. MV, pssV 34. Schreb. gen. no. 270.

Lt!t. SYST. *I'mta-Itfjamrfnti, Monogymta.* Calyx 5-parted, nbricate. I corolla funnel- haped: with an imhrioate, 5-G-< tub* widening fr -n the base. Stamens 5-6, in- ert*d in the mouth of the tube, and protruding beyond ii Style filiform i; stigma pcltately orbicular. Berry small, .'-•-cellnL Soed* ingulnr.—Tri es or shrub*, with opposite, broad, coriaceous leaves ; with tmerpetwUr siipulas; and terminal flower*. Bracteas opposite.

• *Erttl* lArwEii *ami Irtrt.*

1 P. *Zvruimc** (UsV **y* t. 198. l'hunb. M*. gen. 33. and act. holm. 1782. p. I It. t. V) shrubby, erect ; *tem sub- |UJilt 'bo* ale -oblong, obtuse; braeteas ovate, obtuse ; flowers fe •, terminal, umbelUlr. > . S. Native of Ceylon. ^ illughbeia Zeylintca, Sprang. sytl. 1. p. 672. I • ivr« a span lon^. t »< r* large. Segments of coilla oblique, obtuse, enl; bj mbiculate.

I 'grata. Fl. 1 Ceylon. Kt.xh. fl. lad, ,' : Shrub 2-4 feet. ivea lanceolate, bluntly acuminated ; corymbs axillary, decompound ; stamens ascending ; corollas large. ½. S. Native of China, but now cultivated in I'ulo Penang. [^eave* decussate, J foot long and 1½ inch broad. Petioles enlarged at the ha*e into a stem-clasping ring, which, in tW dncd specifDtiw, are incrustetl with a clear yellow resin. I \«ers amall, bumeroua, wh ish yellow. Corolla baving a tube between eatapaauUt* and funnel-shaped 1; and ovate-oblong divisions. Kerry sia« of a currant, red.

Fragrust Fagr ri. Tree n middle-sized.

3 F. LANCEOLA'TA (Hurti. bijdr. p. I 021.) arboreous ; leaves oblong-lanceolate, rotate, *» u.i mai«tl at both ends, alsmjsl v«*nl' stipulas petiolar, round' aal, solitary, twin, or tern. ½. S. Native of Java, in mountain woods on the west side I ibctslaad. where it rtcail.

and of Penang. VYalL cat. no. 1499. Leave* tmalWr than MI most of the speci.'*.

Lm ceolate-leave'1 Fagran. Fl. Nov. Dec. Tree.

4 F. iLurncA i Konh, tl. ind. X. p. 32.) Waves broad -elliptic, on ihort pet>ole*. firm ; corymb* terminal, sapra-dwowipoBi. tube <>i MMSSI cylindncal. \ . S. Native of tne Molocras.

tplK- leaved Fagraa. Tree or stirub.

5 F. OKOVA'TA (W.itl. m Roxh. fl. ind. *t.* p. 33. > arhorrona; leave* ovate or obovate, crowded, rounded, with a abort broad point, pctioUte ; peduncW* terminal, 3-flowered, sob-corymbose. V; . S, Nstive of Silhei, and Singapore. Branches obactiT 4-sided. Leave* 5-6 inches long, thicau PttioWs furnished with a few glaitdular cilia?, connected by interpetiolar Stipolas. Flowers white, fragrani, mriactows, aa Urge •» those of *Ptvmitra itntmmata,* hut much imaller than iho^ *y-tantca.* Calycine aegments ovate, obtuse. Berry 4-celled, many-seeded. Seeds immersed in soft pulp. Perhaps the same- a* /'. *ZryU*mu-9.*

Obovate-leaved Fagrwa. Tree.

6 F. I ILATVIU (Man. nnv. gen. bras. *t.* p. 01.) Watt* elliptic, rounded at both ends, with a sfcon acumen at the *|- calyx 5-cleft, a* in the rest; corol tubular, 6-cleft . itameos 0. Ij . S. Native of the Prince of Wales'* laUii d. i Perhaps the same aa < *F. elliptica.*

Mafay Fagrtea. SI.rub or tree.

7 F. BACBHOSA (Jack, in Ho*b. A. ind. *t,* p. *iJ.)* shrubby, erect'. ; Wave* broad, oval, rounded at both ends, almost *••• ncetne* drooping, urmtnal, shorter thai} the leaves, consisting of opposite fa*' <ttb*t*sa*W Aowrr • •sg, lyeaves &-7 inches long, aad !•.'• WKW, ohtuae, or •lightly pointed, united by interpettolar stipulary protfisia. < .iyrtnr segment* oval, obtuse. Segment* of corolla obovate, crriiii! «inl. Stamens at first dr^mding, afterwards asceodtag.

Racemose-flowered Fagrwa. Shrub.

* • *J* fli i lf *t*

« I ttoxb. II. mit *1.* p. .10., shrubby. i>g ; Wave* ovate or obovate, pMtolate ; rmiaii Urmiaal. loos*, lunger than the Waves, WMspdiid of remote, sasaj] raewmuWs of prd»c*llat» flower*, b • w *, of Bencooleaj. Leave* ratSrr remote, t-11 inches long, and 4-7 wide st top. Stipulas aa in *F.* r*re**Mat. Petioles fumuked with a narrow margin on ea< >lnch oripr; ihe slightly d >aae of the leaf. Berries aa Urge as fooavbrnwr*. Wf iht •ne of those of *F. otxxatm.* Placeolas oblong, broad, Bessry. convex and notched for the r*etptio» of the seaxls; tbe inner .ind concave, 6xed W«)trtudi«aUy by a narrow lamina to the sides of the thin dm*pintenL *« «'«'• aaguU: brou*. with eopiows d*.- pic, crtMtaceotia Albumrn AVsby. Embryo cjliodrical, orcupyiog a great part of the • s* allmmrn. with rxrvrdinglv small i and * centrifu -*) radicW. This asd *P.* rawrssoaa may probably form a dtilinrt grnu*.

Twtmtxg Fagrara. Shrub

* * * *Parasitical shrubs.*

• r ATRICULA'TA (Jack in RoiV A. ml. X.] 54. Blum. bijdr. p. 1020.) parasitic ; leaves broad, twiaat ehl • ng, acute, veiny ; interpetiolar stipulas, 2 red; peduncles terminal, usually by threes ; coroll , Urgr. | . S. Native of Java, p«r»» tical on trees about Buitenzorg, where it is called *Mes- «MaV-s«s1at; sssd of Smgapnr*. H«it. ,,). , ar. asiat. 3. t. 222. Lame* curisWMss, fr-|« aBckrs Inng, and 5-1 nsrbn broad at top. Calycine segments roundish, obtuse, spreading. Flowers very large.

Auricled RsfNM. Fl. year. ^.»»b pat

10 F. UflMl'lM (Ulum. bijdr. I Oil,; paraailic; lea*» o»al, *KM9* tt both ends, almost ve kw; tdjmlai prttolar, rounded at lop; nedm »al. umslly bj itland ot Nusæ-Kambanga. iraaiikal on irem.

Sestiara Fagrwa. Fl. O< > parawiieal.

11 F. Mlwoa (Herb. Rainwdi. *tx* Blum, bijdr. p. 10»t.) parasitic; leave* oval, acute, rounded at ihr ba»e, veiny ; MJpmlaa petiolaf, rounded at tnu ; pralunck* terminal, lub-corymbose, trifid. • Java, upon twca on tba motattains, where it . called Afea£«aat».

SmalUr FaffTJra. rub par.

12 F. imi | paraMlk ; leave* obovaie-oblong, bluntuh, ahnMMt vnnlea* above; «ii[iul.i» prtwtlar, miar^innir at the tiinal, corymboaely S-fl»wrre«l. I; i mountain wood*. F. obovata, Blum. '• but not of Wall.

Blaaar'* Fagmav Fl. Feb • |» I , , nf *Fngr.ra* t*ar OIL \ iiwMtwre of loam, id saiwl, ia a gM> i; ami rtntinfri atrike root readily in aand, i»l *u,* with a band-glaaa over than.

OaptaCI.D, AIH«'\ M 1 MI named on account ol' n» containing |>buiU agrveii^t in panirular chaiactrr* with *.4jvcg-*, geo. p. 1W>. It Br. [»Nnl, |i. .

Calyx 9'i anrni. Corolla mortojH ul<>u»,)>>pogynous, jjuUr, • lobed, imbricaw in aMtivauon, oWiduou*. hernaimg with tbf argtnrnta of the limb of the corolla; anibrr* 2-o-1W • detitM-ing lengthwiae; pollen granular, Stiginaa at Ant ajtjtlirtl t<> i luary of twin, and • iho »tylra arc 1 or *t,* and but al«ra)« 1 ittgm*; ovaria fur ine matt part nuutv Hadtalt Fruit fiillu-IIUT, (!to|>4r.>nui or li.irratc, 1 or many-tcrdrd, Military or twiii. Svrdt usually albuTtiiwiu*. 1 milk) ju: [jaana o|)|wwlr, tomelimeji ncriiallatc, r.i Kaih H-.I. qutta eodn, uauaJly funiulutl with mirrprttuUr cilia or ((laitdi. InAorMwvnc* •ubHwrymboar.

mini in (hi* onlrr are very natural. Thr uf il.r siitltrr» ami ttifrtnaa r»»i'v -h ihrni from *AteUpiidttt,* tonliit-h tin y «rr *matt* nearly allir<) than to any M Fhr order .Sfryi A*ui«.. rrara thw in *the* prltatr •••J[11] I *ft c\o*e\y* allinl t.i lW */t«t,,ne*.*r ; but t* *•*'"y <J'»ci«gvi»hcil fnxn it, in the waul *of* int. r|x imUr ttipulat, •ftd in ihr iu|Niior oral

Wr now mm frmti the cooirmnlation of ptanU rmlunl with mild awl a«fnabW propertiaa, ami fr»Krant ftuum, and ofWtt bearing food t»r man, i winch arr among the moat dan* i poiaoaa, «»'"»«• ju.<ci, tbouitti mtlky. are not a whoktmM • I thoae of *Smfmlirt*,* but, on t)>. luittr, an bitter. Ttiry a/* readily known by the twisted direction of (In- corolla, wlurh hj.c brrn compared U> the rays of St. Catherine's wheel, IWIKT Ihry *mrtv* till.. aeJria*.

i*f lt> pan of ihr tirdrr tonawa of tropiral tree* • 'ibt; a few .</.. «««•«*, .^MMNHW, and / t«f«j, arr »e« oiU colder rafiom of ilf earth. Many at* elegant the •pCCIM • i>|. ««o>f belonf* to AVrtaai. t

of *n*mifr», Camninm, StropUmlkm.* and C«H<aa, arc plania of ibe grnuK beauty

The medicinal action of the* plair gmefal the *A\tfxy'*t<** are acrid, »iiniu1atii>K, and •>< thrae prmriple*, when in exoeaa, act to powerfully on (he tx aa to produce Mupefaction. The root of *OpkHryUm k r* and purgative. Tbe bark of *TtrngUnm Mdnfka* i-* gativt; of *Etktu, anttdftrHiirua,* and ihe HVI^A/M of *thv* tafM name, •«tringent and febri faga). The Icatet of the IW« m •o Miringrnt, that they hare been utcd im cwafullj in taniuna: > tboae of MrHaH *OUAmdtr* are utd to abowod in gallw acid. The imptmaled juice «r t»»* tpenes of *CttUra,* known »M the name of Inrfli, ta a fatal pntMtn. The fruit of *Tmmghinia u* the famow ordeal of Madagaarar.

Synopsis of the genera.

Turn I.

tH of f *fatittUt, temtfmtt m tiriM <a/*»l*.*

f AM W *mik* a fmjr •/ *hmrt ml tit wpprr* or *wmHicml* cW.

tf curtJIa Mln/, *met crottmtd, mmi wUkomt ttmkt* «r

teeth inside.

1 Ecnirrs. pnaw inclycd ; Wthrra adhering. I gynou* aeakfi .mbinrd Corolla aalv«T-«h» I <tander.

I CiKHiaMOi. *t* tamrna indoaed ; anihrn adh«riM«. Hypniijnoui »4«U* *i,* diatinct or combWd. Corolla funnel-•hapnl, witli ilmutliate aegrm lirlc* •lender.

3 AQAHOCMA. All at in CfcmratoVpa*, auwpt the In pogynoui acalea, which are long and combined ; anal the ttyle i! not alendef; and ihe stigma is conic J, angular at the baae, ami 'iiatc at top, not emarginalc.

• BlAW . Calycine segments foliaceous. Corolla funncl-ihajN-O. with a abort i«W, and a large, i-ollrn. rampanulate limb, w.ih *rt\uai* lob. aa» e«aertcd; anihen «.l-htffaf, Sugma b«lmuie. Kollirlca coasbwed, large, long.

5 Pachyrhiza. ». Stataena wdoaad; amhrr. nnrly MaaiW, •dhenng.f Uypugynoaa aoaWa w>< I •(w^; with equal, i.btucr aagmenu

9 ItHniMtMi. Staanena iadoaad j antaan free. Hi nog* now* cot|.u»cuU 5, fiUform. Corolla aalver-*)ka}ml, with aegmenu. FoUidaa alend.

7 Holas'•'•«'»«. Stamen, mcloatd: anthrr* frcr M>| gynoui enrpu*.uU waniiog w i ' nw ts. Follicles .(mder.

8 Isonan. '«*nanae> erted ; •nihrra adhering/ filaments simple •» op M>|K>gynow aoalr. wanting. Corolla •alver-shaped ; limb 5 •parted.

9 Valla'ris. Sta"*n. *m* erted ; anthers ..tbrrmgi AUments each furnished I with a Beahy g bbosity .aiaida. at the apex. Hypo •gynoua arale* 5, nansbaaed at the bat*. Corotl. **>*«' -shaped ; limb 5-parted. Ovari »n. f-erlW.

10 Helit'oia. *n«aww aurrwdt anUieva •ibermg; til*. menta filiform. Hypo «)noiM acnhM 4. Stignw cU»»t e. I Corolla rotate, with 'liniHliaUr aawWMmu. I Follicles combined, with adnate placentas.

11 I'AKSUKMA. Stamen* exterted ; anthers adhering ; filaments filifoim, inserted near the base of tbe tube, llypogynnu* ite* o, duttnct or combined. Corolla funnel-shaped. Fotli- •licring.

12 LTON»IA. All as in Parsoasia, except the fruit, whclt is *i* •celled i'*|niik\ with]>arallel pUcemiferout dissepiments.

13 Tin ncn* t'SMTtcd ; anthen adhering ; filaments simple, nterted Dear the law of the tubr. lhpogynou* scales *5,* distinct. Corolla rotate, with dimidiate segments. Follicles twin.

U ADL'MM. Stamen* toclo«ed; anthen adhering, ending eli in a pilose brink. HyuogJBMai scales wanting. Corolla salver-shaped *I,* with equal segment*. Oraria 2, globose.

Tube of corolla /nrniikrd with 5 indotrtl It >. or teeth inside.

15 ArocTMtM. Teeth, in the tube of the corolla, *S,* amali, »|>potite the segments of the limb. -tamens inclonnit. Style• wanting, llypogynou* scales 5, CorolU campamtUtr.

16 I'MMoti'm. Scale* in the tube of the corolla 5, obtu*c, iliernating with the segments of the limb. Stamcm inclosed. Hypogynous scale* *3.* Corolla funnel-shaped. Style mm*.

17 ExoTHmTi *ov Scales in the throat of the corolla 5, ite the segment* of the limb. Stamena everted. Hypogynous wales ft- filiform. CorulU* funneWthapi d. bat, slender.

18 HiKuiKin^, Scales in the tube of the corolU 5. alt nattag with the segmenta of the limit. Stamen* mcloard. -Style filiform. 11. pogytwtw scales A. CorolU ul\< r.ihapcd.

19 Ciacoooau. Scale* in the tub« of the corolU 5 f, aj ^ with tin- M-gment* of the 1 Siaoeaa inclosed. Style filiform. I -ynou* »cjlt 'totlls salver-shaped. Follicles boriiontal.

Throat of coroUa *enned* oy *txurttd teal**,* or *littie tube*.*

20 I Corona doulhaa, extrnor one annular, and |uHf entire | inter' a, which alternate with tlir ni» of tiie corolla. L'rceolus , us.

21 I : rot'ill A. Corona simple, tubular, m-nuUted. Hypogynon scale* none ; but dam are 10 scales seated at the baa* >1 the calyx, OUUKU the corolU. Segment* of corol!, equal-sided !. Anthers ending in a ahon mnrrinn

22 N I orona aimplr, .,| one term of divided seg. MM Etypogynou* scalea wanting. SegmrtMa of corolU ending in • long awn each.

23 MM ajaaplt, or 10 undivided UwU. 11 v |H»,:% nous scale* *3.* Segment, of corolU tail>

Taiai 11.

nut of t fit' fknitked witk a imfl of katn at tke batr end of the teed, or that end tpfftH tk mmkm mbrfo wttk imratm*

rhrottofewolk crownad. Tuft of hair* at

25 Kiiata'ia\. Hi nut of corolU not crowned. Toft of bain at end of teed atipitatr. CVrcocoma, Wall. T

Tarn 111.

AmoMi*. /'•"/ '/ *i Jotticles. Setdt peitmte, i more elongated at balk rmit.*

iG ALSTOKIA. droll* aalver- shaped, with a naked thic Anther* inclosed, *thm.* Mypogynoos scale* none.

Tan IV.

*4 fvllttlft, wkick ate trd in the middle, i-talttd, i-crtltJ. taltet \-ettird, tnfUxtd icmi*ifertM* edgtt, wkick rtmtttttule the duMmimentt.*

«7 Oswkfam. Corolla funnel thaped. Stigma tri Capsule ovate-oulong, rather comprmed. Seed* ttnbrtc iltranou* at *mft*

ff8 PuWTinVa. CorolU with a abort ventrtcM* tube, a twisted or coarctate limb. Stigma Mfkattt. Anther* ilr fol lieu lar, very tong, * -celled ; seed* coropriaaid, Mioged.

Tribe V.

TtlUKIUODTAKt. *Fruit *>/ t folia I*t. tartly Htltinry ahoitum. Srrdi mother tmfted u-r H-imged, utualtjf nettlmg »• the fmlp of the fmt, albummtmt. Stigma anmutar Utmw, amd bijtd at lop. Mmtkert frr.* •/.

19 TAKE as rolU funnel- tlta|ird. Sumena inclosed. ' iHaii at ihe bate of the calyx ovu.«!r the corolla. Seeds immersed in pulp.

90 (o>IU between funnel and »aUrT-»Waprd. 8iar» • il ; anthtr* contuvvnt, drawn out, «acli tnto a thread. Style hardly any ; atigma obso). Ilirlea tn- flexed, emitting a M» on ea« srrted into a prruliar membrane. •

31 \ ' rolU funnel -shaped, in 'icloced. inserted in the bottom ul tbr coroOa. OfaVtHB girded by an entire urceolu*. Follicle* <« Seeds immersed in pulp.

32 CorolU funnel-that . w««tlr, - iiu .1-k.Ud. tested on an annular ' twin, baccate. S< ds inbedded in pulp.

39 1 ktkrd. Kiamen* in- eloaed; anil- s free. Stigma biciispidate. |Fruit solitary, elliptic, •iib-dmbilicaie, indel scent. Seeds com |>reMed, nestling ia put |.

34 ' nrlftha, d, havin t the Uirnat half closed by a tumid ring. -atnrm mrloard ; antn*n caaaiven! I by a kypofryaou* ri > Follicles torn, fleihy. jtlotme. 8a«*ti wnnkWd, imU4J.il m fwl|» J

lla fliMil ifci|iil. Hia anther* connivent. Stigma /ma clavatr. cnarginate. Follicles twin, ventricose. Seeds ftinawhiJ with a wing at bott om. Ovarium girded by a hypogynous ring.

36 | 'ttA\m funnel-shaped. Stamens each naiag *ttxmt* a iccutmii ; •ntltan i ing WHO a •ub-brftd. I . >• .. .' |-t- shaped. Seeds I4. *$nm,* stones, attached to • sltmfer • * « » ! columu, or placenta.

37 Vine*. Corolla **Wer-*h»ped. Suunen*tnc!o*ed ; anther* pjvrnt. llypogynooa tcatra «. Stigma ma ruinated below, and ciliated above. Follicle* •lender. Saadad .trow*.

t C«THARVntiti «. Corolla aaKer-tha; -wi-na indoted: amlter* conniveni. rlypogynou* acalt* *1.*T Stigma raargiaated below, and pilot* aba**. Follicle* »Iender. Seed* diapoaed in t row*, tuberrlcd on on* aide.

TUII VI.

ALTXIE'æ. *(Jrarnm AuubU. Frwil >•» Jrmjmtttmt. Alb*-men targe, rumtmatrd at* m /fawMCcvuf *plantt, or Jteikj, Ant•t /'ft, rQMtirmt.*

39 ALT'ZIA. Corolla *alver-aliapvtl; tliroat naked, Mitncm inclosed. Stigma obluce, naually pennll.-i!. 1>HIJ»* 2, or solitary by abortion, conuininft a half i-<rllrd |mtamcn,

40 Cu'RBin. Corolla Tunnel••liaped ; throat MoodmL litters inclotrd, r<>: 11 ;-r» twin, dry, con Miiuttg a fibr r< aemi-bivalted, l>*ecded puiamen. Albuinen none.

41 TAX. Corolla aaiver-ahapcNl; throat pentagon*!. Anthers hid U-II by an efjual tiumltrr of fuliareou* »calr* from the throat • ami furnishe! with an umbihralr tuU'iclc under each stamen. Dru ipe toliury, eontaintng a I•celled, 1-aacdcd. M nut.

42 RAUWÔLFIA. Corolla. funnel - »!i«[*"l . thr >•• brarded. Stamens inclos d. or a lititr *exaeturd ;* anthen Irrr. Hypog- aj <•« '>-•• of >!» cMrarium. Drapw 2, nous ring surround g a t crllrd mil, or f |-aeed«d nm»; . combined, containin il Iwlrifiilar

43 I SSOLE'NA. I lonji tube, of *t* fur> MfOMl : MBfCr (>»rl cjliinltiral ; limb oprrailing. Siamcm bttted below ih« MOM i part *o(* • Stijrma t tbraoa. Drupe toliury, »null. T*<tnif a DptCMrd, tcabroiu, l-tcllrd, J-untied nut.

44 OCHRÒIA. Corolla funnel-shaped. Stamens short, inclosed; anthers free. rofia funnrl'ihapfd. Stimfu iadoacd ; Drupri twia «>r BOJ >ittaiiung a 1-celled mi), and racti nil containrng *t*& flat, wtng-edgrd *cedi.

45 ORNÒXYLON. Corolla funne! •»!.»]» il Anthers inc uMd. Stigma <4]nc«u-. Drupe* twin, or Military by abortion, each containing a wimLltil, l-«c«drd nut.

46 V - iLUi'li*. C-orulb MII i-r'*lia|ir<! : tltriut U jt-l.il. Stamens inclosed. ttgina mb-<lavaii solitary, containing each a wrinkled, l-a*cdad M

Tatm \ll

KORSIE'æ. *Ou trim ttamUr. ftuti 4* rspaceous. *Altmmt** wantia .

47 KÒRSIA. Coro :U«alv«r-*haped; ihroaJ villou*. Stamena inclosed ; anthers free. Stigma oblona;, downy ai top. |Drupes twin or solitary, coriaceous, divided i by an inrumpJrtr *d'tmt* \ inside, 1-seeded.

48 CALPICA'RPUM. Calycine -ini»riitj Men aaduHt in . corolla funncl-shaped, •IUI rt)tul Mgnwnta. Atitltm inclosed, adhering. Stig <na Ur$u«, t lobtd Dnmm, or ratbrt

2 * w<wll y ^ itary, | t | d , sub- b l ved, urn-shaped, 1- ed.

I.IM VIII.

Mri.<irii«rn. *Fruit bacc* U. *solitary. Seeds many, compressed, tmbriLltd m* fir pn/p, *mtmaily albuminous*

49 X LOPHYTUS. Corolla salver-shaped. (V I > M in (he throat of 4 bifid, or quadn&d, or tmdmtlcd Kml(«, or fotioU. Sunwm tndoted. Syrle bipartiu. Stigma mntfal, actiW-. Befry Rloboae, f-celled. Seed* flattened, imbedded in pulp, dbuanOM.

SO C*amiM<. I lla aalref-aluiped, *wiA* reflexed segmenu, throat crowned. Anliter* conntrent, incto^tl Style ftitnpte ; iltfrma raptutr. llrrry t-evllrd, main seeded. Seeds ffattrni-d. Imbedded in pulp, albumin',

51 CHLOC *k'trvt.* CorolU uilver-aharMsl; throat not rrowned-' Anth :><n ineloaed. 8ti*rma raj' I ;»uk large, cort*mie, 1-celled. Seed* arillatr, fl.iitri>.-.t. Albumen borny-

52 ILIA. *it* H'uii'riii' •Corolla salver-shaped; thro i wit rn. wned. Aatl Ird, ers inclosed, free. Stigma obtuse. Berry large, 1-cel or half *t* Oaflti. Seed* flaiu-ned. tmbetji' ed in pulp, ex- albu nil- nous, .li*po*ed in *t* row*.

53 AMBELLA'RIA. Coro lla a*Jf*r»*n#| Stigma bicuspidate at the apex, seated on> a Hat annuUi *i* Berry 2-cel tHiJ. waned, Sceda rompreMed, ininwinirJ in ibt pulp, fixed to a slender •••n-|rt*lilr. albumin

54 ACOU'RIA. Coro Itllw-i rualrxH crtmtted. ' ers cuspidate, inclosed. Style and sti ;m» a* in *AmKlt.m*, Berry 1-celled.? Seed • eJ« angular, neatling in tb* (nil(>; »lbuinu.

55 ALLAMANDE'æ. Fruit capsular, c i'> lltv(u«u. Calyx tinoll. 1-partod. < d *follicles,* *pntklg or maulk* ear «li.tjntl. StamcM mclo.r.i Stigma bifid. Berry I -celled, man\ -»eeileit. S,^-,t. albutninooa. seeds peltate, fixed to a central placenta. Albumen none.

56 ALLAMA'NDA. Corolla funnel-shaped ; with S(< ANDÒLPHIA. ''Ha »nK.r.ktiqjH.t ; tlir<>*t i ide, swollen, infl ned, i-Wbed limb; thro» furnished w lltl , scales, which cover the anthers. I spsule prickly outside. Surorm tnchm-d .(ia «uli.i Berry nearly gloUw, cowprwaad . top, 1-celled. Seed. nestling in [>ulp, o\s" compressed.

57 COC'MA. Corolla lla funnel-shaped. Stamens short, inclosed; anthers sagittate. Disk hy pofyttoua. Kti|rti»»l.ilr : ruit globose, 4-5-seeded. Seed* imuwrmd in n ulp.

M l\

ALLAMANDE'æ. *Fruit capsular, c d follicles, pntklg or maulk* ear side. *Seeds peltate, fixed to a central placenta. Albumen none.*

58 ALLAMA'NDA. Corolla funnel-shaped ; with ide, swollen, infl ned, i-Wbed limb; thro» furnished w lltl , scales, which cover the anthers. I spsule prickly outside.

59 APIDOSPE'RMA. Corolla 5-cleft ; segments lanceolate; v ^ • t.ro.1 -rtbo., scales. |apsules smooth, solitary twin, obo- ««te, raroprfMed, uim)ual aided.

TRIBE X.

winged, naked. Alb or twin. Seeds peltate, rmy.

60 CARISSA. Corol :• tunneJ-4,,, ed ; thro ..naked. S.inHM ,, — ' • «*SPM dilated from Ow U., btM. 11erry solitary, 2-celled ; cells 1 or fre .—Prickly sh- ia.

" " CBTE'RIA. Corol* ftUMwl-«|»|- h ft. mens inclosed. Stig .'na vraw, I d. Berries twin, 1-seeded. Unarm d aknnVa.

+ *Gtmtra hardly knom.*

MOXX'TIA. Corolla of 4 petals ?; petals somewhat re* 1, alternating with the segments of the calyx. Stamens 4, hypogynous; anthers sagittate, incumbent. Stigma acute. Fruii rather fleshy, pea-formed, 2-celled; cells l•seeded. Seeds • (impressed or peltate.—Prickly shrubs.

63 ALA'ri*. Corolla tubularly rentricote, with a 5-parud, twisted limb ; segments plicatdy sinuated on one side. Anthen IMM, distinct, connivent ; 111.intents bound by the style, which is fl *WtWB,* and furnished with *5* appendages. Stigma inclosed, capitate, acuminated.

64 LtiiosoTis. Calyx t-parted. Corolla tubuUr; limb 4-lobed. Stamens 4, inclosed. Ovarium 2-cvlled ; cells bi-ovulate. Stigma annular, conical at top. Berry l-3-teeded. Seeds exilbutninous.

Tribe I.

I mil c.U forakbed with a tuft of hairs, at the itcrior or umbilical extremity. Fruit of S follicles.

I. ECUI I I - named from «X'C«*". a viper ; perttapa on count of in deleterious quality, or from its twining habit; rsx, *tchius,* is the serpent stone.) *V.* Ilrownc, jam. j>. Br. in wcrn. aoc. I. p. 59.—Echites, spec. Lin. gy>. DO. *»09.* tj. aiiier.

tTBT. *Pmtawirm, Mmogy***,* Calyx small, 5 parted. roll* salver-sha]HMj, with a naked throat and tube; segments tlie limb unequal-sided. Stamens inclosed; anthers sagittate, cohering by the ir mi.MU- to the sugma, having the hind lobes without pollen. 11 -- - 2. -tyl• 1, fliiform. H>I-»v *11* slender follicles.—Twining shrub". I , having the interpetio Ur cilia glajij^lar. I'nl iolar, many-flower. I ,*cn showy, wb.t pk.

| I. *Flwtrri utxUUate* or *rorymbtf**.

I (Jaeq. am. t. *«. « •pec. .H>7.) leaves oiat< rnui. Klanilless ai ihr ba ts lanceolate. Ij.***. *i* tnaica, among buili**. and in \u ubli- quum, "Aill. diet. no. 8.—Sloane, hist. 1. p. 207. t. 131. f. *. —Brown, jam. p. lit nchn Imi.- I ia stion, subulate. Corolla silk l, viiiim* HMU tube, i tw.

I . *o*u* | ,,,,,,_ 30. cronate, shming stx« »urlae>s, nienhat paralMly H n w >.ri largf, urnl^ll.. .^-learei! tub tw.

1 ' ' iinh. nor. gen. as* •rvinatr, gUbrous, glaodlaas at the Mab Mk'i»»i I . *xt* (Juana- •cbea lilitor*m.* Interpetiolar cilia sobulate. Flowen those of *E. nmltrll* p. 31.) tli biit .wded, I-H

ftopher, b i an shore. Flowers yellow, ftiabrou*, havin rOM marked with mfesceM tines. tub tw.

4 I. I i Mart, ex Lmturs. 6. p. SO.) stem arboreous, twining a little leaves oblong, with a short acumen, aeutiali at the base. reticulately vei iicd beneath ; r acemes corymbose, tnany-rl ! terminal; caKcine segmei cate, ovate, obtuse: throat of corolla downy : segments oboraie- roundish. 1 , . ^ . S. Native of Brmtil, on the bank Hum,

mra Echitea. Shrob tw.

6 E. SCA'SRA (Ub.il. serf. eaL p. So. t. 81.) have* sotnewlui undulated, acuminated; cyme* axillary and Us liairy. • tthre of New Calrdoni. seabrn, Spreng. syst. adtlrnd. p. 63. Stem pilose at top. Corollas «ea> *«ie,* from ha» '• «n linear*s»f

Stabrwu Echitra. Shrub tw.

strtoaA (J*«). anwr. 38. t. SI. icon. ptct. I. t& •iiec. 907.) lcarc« oblong, obtuse, mueronatt, gUhrosn; pedun- cles 2-flowered ; calyc•at segments small. ovMr. >e Wrsi India Islands, m sail muabes. ot». p. 103.—Plum, aomer. St. t. to. Lnves ait btse, obtu i wnaJl morrow, 3 isdm long. CorolU. • How thrmt; tube narrow,

-/owerr BWIB, had t. 28. f 1.| Iravr* cordate, acuminated; peduncles 2-flowered, bifid i. ^. S. Native of the *u the tsuddU. Wrst Indies. Probably only a variety of *i. biflira.*

'wy Etbitfs. Shrub l«r.

• »• *Flowers racemose.*

• *Leaves oblong.*

>M, prod, p. *Si.* (L ->lea -T o* at«-obtlwig, acsM*. glsbrw— » rather ni> «Hnewliat downy Wn« flowered ; ealycine segmenU tutntlate. ha ' iirwiea and Hn|mni»la, among baabea bv the see . Jaco,. roll. I. p. ft. icon.rar. *ii* E. hrtrrnphyll I. p. KUiwrrs largr, yrllow , ihn».. wide. II

NMbtw. 10 R, itm" :!. md. o. rasj '|«inr gkbrosn, oba- 1; urdtMckm rlaagatml; Aowen >«1U baring the tube tractad • short way at ll* bur, and

IS. Icon. pVi. t. *n.)* leave* bMtajlatr-l , ,f .,, 4i.--t.inr<i>Ufr. gUrasMl i*Jui«lr» *twr* S and on the idffs of •IOMIS. Hstws tHabnws sarmentose, wfas« old ptorumhrtit *mti* rooting, and when young ervct* usually bifid. II vpogjynous gtiaris

I.nult. pnwifl.isjd.ecc. p , '•*, mvcrtMiai ssjas* cototttr *m* botb surface*, almnst VSMIMS ; Aowrrs axillary and lsiutiiiaJ, iwta; caJy• eiM sfwmmts aaan—Ut. Wumi.b ; ml* of rvnJla mfUtrd M ««1». ^. **.* p*n*Ja Vrry „. -.<«/««W-lra»r,t lVbiiM ftnb t-m-^. I ». herb, ra Haas |m*t. 11, me). o«r.

p. 51.) alrtm iM-rtitnml, funicular, wlalirou«. lactwi, linw, mue-rwuic. [illegible] ux illary, filiform, bifid, shorter than the leaves; follicles tonjl<Mc, linear. ☿. ◡ S. Native of St. Domingo. I low*™ •null, whit*. Nearly ..ll ied to *E. rèpens*, in which the flowers are red.

Linear-leaved Echites. Shrub .1.

U I
Ml.] -I, p. 53. ft incLocc. I. p. . and rai "UK*

. . .* I t. 70. Stem pur J.II.II, hii- pid. Follicles rough, filiform. Flowers white.

15 i ROSÆA (Jacq. amer. 33. t. 27. ed. piet. t. 34.) leaves lanceolate, acuminate, glabrous; peduncles su- ••r*crm< e; calycine segments l»mr..l |. ◠. S. Native of Jamaica, m «OO.' ks, on the mountains. Swartz. obs. p. 105. l..mi, ill. l. l7t. i'. l.—BTOWM, jam. 101. t. 16. i ;. Leaves 2 inches

1 lofty. l •KonaJ; r, l'taft, • rri'i. l l..••in. til. *i,* 19. no. .V. f, l. whii l «• 47 : i* prubaK . a* ilic flimfn arc MHl w be *l"iic or n that, *mm u* tin*, arr i orulose.

Tot \ ihrabtw. 16 J B KUbrom; lravr* orai« ami ultlni^, acuminated, furnished *wnh* 3 t[l*tiil> at tin- liaw > each; racemes short; pedicels iwia. ^ .r l lira. a small t :. ltr»ct««a •mall, trifid. Flowers white.

Acuminated Echites. Sh mt> iw.

* *

Lrarti (tvrdflr* *at tkr bau.*

E. RICHA'RDII (Rœm. et Schultes, syst. '• |.. 30l.)lr., ,, CU; rolU ,,,,, M, i;<l(«lt.r«l. ,,, «. |lUt. Mfc llBr• „ |0;< ,,ul J J

Richard's Echites. Sh ml. iw.

18 E. HIRTE'LLA (H. B. et Kunth. nov. gen. amer. 3. p. 213.) iry; leaves oblong, joa. U (micron.!, narrowed a imtaitlM base, —'iif. UMl rarniahrd *nl, one gland, hairy; pe ,.. " racemose; calycine segments ovate, acuminated. ☿. ◠. S. Native of New Granada, near Mariquita and ... i *m.* inter- pe obsolete. Corollas y------, ..airy outside, ,nd dotted with silky pili inside. The -Jxriitk-i,. o.llrcf.1 ,bo« Santanna differ from those collected about Mariquita, in the branches being smoothish, and in the leaves being lanceolate nd smaller, &c. This is probably a species of *Prestònia*, the ost being f[illegible] nd.

iry Echite.. ... ... s!.mlj tw.

to E IDA (Jacq. amer. p. 31. t. 24. Kunth. ietic, short-acuminated ... e base, and ds; racemes trifid; calycine segments oblong, obtuse. ☿. ◠. S. Native of New Spain, in woods, ""••I « HO, , Ciiitianat and ... E. cuspidata, Willd. herb. ex Rœm. et Schultes, syst. 4. p. 796. Stems glabrous, purplish. Glands on the petioles ovate, acuminate • l. bifid M tj ex, and rather concave. Corol la glabrous, mtla-colwirri! upper part of tube red inside.

Trifid-racemed Echites. Fl. Sept. Shrub iw.

20 E. GRANDIFLÒRA (Meyer, essecq. p. 131.) l • » « Ob.v ate, attenuated at the bw, HU«e gUbfout; noKti vol. IV.

rymbs shorter than the leaves. h roundish-ov[illegible] --..-, 3 orwbirh arr lar«»r tlian Uw ullirr ». h . ^. S. Native of d of Arrowabisch, climbing on trees. E. insignis, Spreng. syst. 1. p. 632. Ped -rl. .ub. bracteate. Flowers large, reddish yellow; tube 5-angled.

wered Echites. Shrub tw.

21 E. RHYNCOSPE'RMA (Wall. pl. rar. asiat. l. p. 43., . 49.) leaves ovate-lanceolate, acuminated, glabrous; flo cymose; limb o[illegible] than the tube ately obovate segments, [illegible] slender, very long, pa ulous; seeds ending in a long beak, and a tuft of hairs of the beak. ☿. ◠. S. Native of Martaban, along the rivers Saturn and [illegible] vers large, sweet-scented, white; tube and limb red towards the throat. Corolla salver-shaped. Perhaps a species of *Kitajelia*.

"M](*«wlt BUlHn an. l W a n «rw

22 [illegible] (Ruiz. et Pav. [illegible] p. 19. t. 134. f. b.) rather yil leaves cordate, acute, furnished with glands at [illegible] ose, racemose, few- flowered. ☿. ◠. S. Native of Peru, in woods. E. glandu- losa, Poir. suppl. 2. p. 557. Stem glabrous, angular, often granular. Branches rather villous. Stipulas toothed. Brac- teas small, subulate. Cor , yellow.

Loose-flowered Echites. [illegible]

23 E. [illegible] leaves oblong-lanceolate, cordate at the [illegible] rous above, but tomentose beneath; ra- [illegible] any-flowered; coro[illegible] hairy outside. ☿. ◠. S. Native of Maranham, in low bushy places. Flowerc

b~. .-.^Xiia.:

Downy-flowered Echites. Shrub twining.

24 E. MONTA'NA (H. B. et Kunth. l. c.) leaves elliptic-oblong, acute, cordate, roughish above from hairs, but soft and canescent beneath [illegible] icles racemose; calycine segments ovate-lan[illegible] shorter than the tube. ☿. ◡ S. Native of the And Pasto, in bushy places, in the valley of the river wvnmn, ftMi'lubr at lht> l>a« ; prduti' ••mlair, mm ••», alum cilia obsolete [illegible] at t[illegible] glabrous outsi[illegible]side, yell[illegible] ollicles smooth.

OoajtenL Latkvn .'J *ntc\tm UMM,* Intrrpriiolar !r and in >» aborr, and •»».«• iMMMh. l

Mountain Echites. Fl. Dec. Shrub tw.

25 E. RIVA'RIA (H. B. et Kunth. nov. gen. *mcf. 3 p. 214.) leaves ovate-oblong, acute, cordate, smoothish above, but it clothed with soft, hair-like down beneath, and canescent, glan- ilular at the base; racemes usually 6-flowered; calycine seg- ments lanceolate, hardly one half shorter than the tube. ☿. ◠. S. Native of New Granada, in hot places, near Teneriffe, on the banks of the river Magdalena. Branches glabrous. Peduncles and calyxes downy. Corollas white, glabrous inside and outside. Very nearly allied to *E. montàna*, from which it chiefly differs in the form and size of the calyx, and in the colour of the flowers.

River-side Echites. Fl. Shrub tw.

26 E. CONA'STER (H. B. et Kunth. l. c.) leaves roundish- ovate, short-acuminated, cordate, rather pilose above, clothed with toft lll.Hl, hrnrath and canescent; flowers racemose, rapi ately crowded; calycine segments lanceolate-linear. ☿. ◠. S. Native of South America, in the province of Popayan. Branches hairy, and besprinkled with white warts. Leaves 3 to 3½ inches long, and 2 or 2½ broad. [illegible] s white, very like those of *Jasm* [illegible] nimbec. Coro[illegible]us, but with the tube downy inside.

JJs;

Crowded-flowered Echites. Shrub tw.

27 E. BOSCHE'XIUS (H. B. et Kunth. l. c. p. 215. t. 243.) leaves obl[illegible] minated, obsoletely cordate, glabrous above, [illegible] with 2 bifid glands to[illegible] ard ikr b.. racemes bifid; calycine s[illegible]

Native of

Frater't Echitet. Shrub *tw.*

Cull. All the irw »(iecies *at* this genns bear Urffc. elegant, white or yellow flowers. They grow frerly in a mixture of loam, and, »iii] (nut ; and cutting* ttrike root readily under • hand-glass, if planted in utui-

II. < HONBMORPHA w * <A«K, a funnel, and r f *morj,h,,* Kara] ionu of corolla). Lcliitca specie*. Wall, Roth. Koxb., &c.

LIK. BTST. *Pentiadr ia, Monog i»ta.* Calyx (mall, 5-parted. Coro Ua funnel-shaped, with a naked throat, and a twined limb ; legmenu of corolla ti]i].i! -«i<Ud f. Stan ens incle -«i ; anihera sagittate or Lanceolate, adhering to the stigma. Ovarium didy-roout. Style filiform , ttigroa «inn »|i.n conical, emarginale at apex Hypogjooua »> les 5, distinct or connate. 1 -lv« distinct, slender. Sit<i furnished with a tuft of hair* at the upper extremity.—Erect or twining «liruti», nai ives of Asia, with opposite leave* ; and inlerpcuolar glandular c ia? i Vdund s tnterpetiolar, Cory rolHMc. Ftowcr* •bowy, white or yellow.

shrubs.

1 C. CRISTA'TA : stems erect; leave* oval, miKTonate, tomen-tose bcneaili, with horizontal ribs; corymb* axillary, dichoto-motts, divaricate, on short JH-JUIWII •- ħ . S. Native of the East I ndies. Ecliitet crist&ta, Rotb. no*, spec. Uractcu me nute, r i.H>th-formecl.

Crettnt Ctionemorplia. Shrub.

2 C. in. liiWoM ; stems erect, dichotomotls ; leares ovate, acuminat*d, downy beneath, when you ug clothed with *tlky tomentum ; corymbs axillary, dichotomous, on • «hort peduncles, erect. f «• \ ative of the ! ast Indies. I Echites dichótoma, Roth, nitv. spec. Echitc* Ili-ynii. Spreng. syst. I. 1. ȷ>. 63f, Leave* a hand long, downy on tl. The nWtT* are said to be »*!• «h;i(Hil, very like thot< of *Jasminum odoratissimum*, but a linlr larger, with the mU- downy.

Dichotomous Choonemorpha. Shrub.

3 [1] aAKt»iri,os4 ; stem erect; leave* oval, acuminated,)|la)iroti* above, and rather lunH-utntr brneath ; (loners terminal, by threes ; peduncles as well as the calyxes downy ; co roll* Ittabriuti. I ħ . S. Native of the East Indies. Echites .-ran* diflora, Roth, nov. spec. but not of Meyer. I Echites macrántha, Spreng. syst. I. 632. "g- •ȳ"•.!. | tttml. bifid at top. Flower* »b«« f of *OUaml-* •I rornlla ovate, mm *at-JUmtrtd* Choruroor|

4 C. VESTITA ; stem erect, downy ; leaves ov > I-lanceolate, downy above and tomentose beneath ; cory »b« jxilbry, almost sessile, dichotomous, somewhat divaricate ; co • "I! *i* i|n» ħ . S. Naii'e of the East 1 ndies. ; Echites vestita, Roxb. et Schultes, syst. », p. IJV. I tomentósa, Roth, nov. spec. Bracteas lan-oeolatr. concave. Tlw cor olla is said to be salver-shaped, thUt is probab ly funnel-shaped, like the r. ,i ['erhaps a species of *Aganosma.*

Clothed Chonemorpha. Shrub.

5 C. ANTIDYSENTE RICA ; stem erect ? angular ; leaves ovate-lanceolat r, with ob*i> letely crenulated edges, glabrous on both aWaVeMt ctirymb* axillar. , dichotomous ; calyx and corolla downy. ħ . S. Native of the East [1] ndies. Echites antidysentérica, Roth. nov. spec. Bracteas linear, downy. The corolla [1] i said *to* *c *alvi - ia* (irotwlily funueI •shaped.

Antidysenteric Chonemorpha. Shr nb,

" * *firming shrubs.*

6 C. RETICULA'TA ; ilrni twiotag, angular, roughish; leaves oval, mucronate, glabro iM on both surfaces, reticulately veined ; corymbs axillary, pedunr ulate ; bricteas imbricate. ħ . S. Native of the E»M Indie*. BtlilaM reticulau. Roth. *nr. i pec.

Var. β, *Itmtntltit* (Roth. l. c.) leavea tomcotoat on the rib* and veins, especially beneath.

Reticulated-leaved C l)onemorpna. Shrub tw.

7 C.? MA tsVucji ; *iem scandenl; leave* oraie, acumin* «ted ; flowers dis i-meti in axillary cvnnow r»ceme«. ttlloua. , S. Native of Malabar. Echites Nlalabarics, Lam. diet. 2. p 31 $,— *l* al-valli. Rheede, mal. 9. t. 12. - *m* ilender. kneed. Flowen light green, reddish outside, w 'ib a wbitiab neck. Fottkln »u»r, n.. b cl.

8 C. n u i u r m LLA ; stems twinin %i Iravt acuti nated, downy beneath ; cymes ter r.mal. ' ħ . S. Native of Silhet. Echites grándis, Wall. c it. no. 16.5. BcUIM ma> rophylla, Roxb. fl. ind. 2. p. 13. Leaves from oval to rounditli 10 rncfees long, and 7-1Q broad. Flowers very large, white. Calyx c mijtanulatr, 3-UMithetl. FitanMttU hairy. 1ollicles pendulous, about > foot kana}. Seeds spatulate. Em-bryo inv rted. I lahit of *Htammimtta gTM+4*f*

ve-leaved Chonemorpha. Shrub d.

9 C. DENSIFLÓRA (Blum. bijdr. p. 104. u*v laftmia, glabrous; co-rymbt axillary and termi »t i#, mwy* •Ha funi -«-i>Ur at is Ci *ianlam* I lowers white. I Hypogynous scales *CU'e, distinct. Stamens inclosed.

Dense-flowered Chonemorpha. Fl. March. Shru lid.

10 I C. BANTAMEN'SIS (Blum. bijdr. p. 1040. under *Echites*) leave* elltptic-obl img, ammituti d, rather stu IMUMd at (he ba . v labrous, reticulately • '-tnrd Wt» ath, tomento >- on the midrib and veins beneath, as well as on the petiole • MaJ hriacli lets ; corymbs axillary and terminal, tricho OMMSS, On loOg peduncles ; corolla funnel-shaped, hairy. ħ . S. Nati v, of Java, among bushes, in the province of Bantam. E. ferr *tfmm.* Horsfield, in Rem. Schultes, syst. 4. 796. Hypogynous scales acuminated, distinct. Stamens i

Bantam Chonemorpha. Fl. Feb. Shrub cl.

11 C. CORIA'CEA (Blum. bijdr. p. 1039. under *Echites*) l nn lanceolate-. coriaceous, glabrous ; corymbs axillary o[1] trrmwal, bifid or trifid ; pedicels usually 3 together ; eoroll. funnel-shaped, hairy inside. ħ . S. Native of Java, in mountain woods, where it is called *Ojat-ija.* small, yellowish. Stamens inclosed. II ypogynous scales mna»#.

Coriaceous-leaved C Shrub cl.

12 C. INVLA'TA (Blum. bijdr. p. 1039. under *Echites*) leaves elliptic-lanceolate, bluntly aetinimaurd. e» inceous, glabrous, full of parallel reticulated veins ; corymbs axillary and terminal, bifid or trifid ; pedicels 3 together ; corolla funnel-shaped ; having the tube widened and 5-angled downwards. ħ . S. Native of Java, at the foot of Mount Tjerimai. Flowers white, bqt tin- thr<iat is yellow. Hypogynous scales roundish, distinct. Nearly allied to *E. reticulata*, Roth., from which it differs in lit* a thers being inclosed, and in lbe taW of ih« corolla being 5-angled above.

Awl ated-flowered Chonemorpha. Fl. August. Shr ill el

13 C.? CONVOLVULOIDES ; leaves sagittately cordate, acumin-ated, glabrous, on long petioles ; racemes terminal and axillary, 4-5-flowered, on short angular, thick peduncles ; tube of corolla very long. ħ . S. Native of Africa, in the I ..Undo/»t. backs of rivers. Corolla funnel-shaped, with a naked throat, white. Anthers conniving into a cone. Lobes ai h«*rof !«.. ves distant. Follicles long.

(MIWr. *Ian-like* Chonemorpha. Shrub tw.

See *Echites* above for culture and propogation.

111. AC I \ from fro"K. «*""<*. mild, and omr. a •mrll: went of* Ho*. \gan6aOM, Blum, lujdr. p. 1040, r«.

•T»T. *PtmtAmdrm, Mtmotymta.* Caljri Urgr, 5-twrtcd, o lrntfth 10 tli' tube of the corolla, spreading. Corolla funnel-shaped, will an oblique 5-parted limb, and the tube gibbout ai the bur* (• HHII.M^I at. U* aUfrma. Granum d -, inch*.-- combined hyj» «ral«. Style t MMIM al the IHUT, iimcrotuir at top 01 cvhndri *ioppe»-

| A, (tiii)i ; l>avr* oval, acuttah at both rnda, tomcotow benraih a* m* I ai ttw branchi Indie*. 1 chites caryophyllata, llium. bijdr. p. 1041.—Rheed. mal. 7. t. 103. t. 55. Flower i pa)« yellow, tinged with red, very sweet scented.

Clove-scented Aganosma. Fl. Oct. Cll. 18)2. Shrub tV.

t .\ ' n*at«<« 1 • mill \ eins red, yUbron , pale beneath and shining above: with the principal nerves running from the base to the apr\ of the leaves; corymbs terminal; segments of corolla tri- Mfubr. \. S. Native of the East Indies, in mountainous trark» only, i chites caryoph Hiu. li oxb. fl. bd. t. p. II. Sims, Ixn. "maji 1*1 L: ' but not of BlwaW.'—Rheed. mal. 9. t. .135. Perhaps *Echites costata*, Willd. is 1 IM wmr. 1 > • • 1 large, pure white, delightfully fragrant. Nflfltaty tuliulat, A-tootrtrd. Calyx and corolla hoary outside.

Roxburgh's Aganosma. Fl. Oct. Clt. 1812. Sh rabtw. cymòsa; hairy; leaves elliptic, acuminated; cymes terminal, shorter than the leaves; segments of corolla oblique, ensiform; nectary cup-shaped, 5-toothed. ½. S. Native of Silhet. Echites cymòsa, R \b. H. mil, C. p. 16. Echites cor- r«Ma, Wall. ral. no. l6fl5. Uavn J. (mf es long. Fle,«rni •mall, dull »l ite, fragrant. Calyx and corolla hoary .tiUitlr.

Cjri se-flowered Aganosma. Shrub.

4 A. W *i.i.i. in ; leaves cllijitic-. acuminated, shining above, and [ale beneath, glabrous; veins parallel; corymbs terminal; nectary tubular, 5-toothed. ½. S. Native of the East Indies. Echites calycina, Wall. cat. no. 1653. Calyx and corolla downy outside. This species differs from *A. Roxburghii* in the veins of the leaves being parallel, not longitudina), Ir.'lll the base to the apex. Flowers white, fra M I. >.

Wallich's Aganosma. Shrub tw.

5 A. ELEGANS; leaves elliptic, shor 1 acuminated, glabrous; corymbs terminal, crowded; calycine segments lanceolate, linear, longer than the tube of t li* ruiolla. t- . ^. S. Native of the East Indit s. Echites élegans, Wall. cat. no. 1656. I Echites bracte lta, lit rt». II. yne. i lowers small, apparently purple, being black in the dried state. I Corolla downy outside, as well as the calyxes, bracteas, and pedicels.

Elegant Aganosma. Shrub I Mr.

6 A. ACUMINA'TA; leaves I r. *l ii • long to broad-lanceolate, acuminated, glabrous; panicles axillary, longer than the leaves, trichotomous, diffuse; segments of corolla linear, falcate, curled. ½. S. Native of Silhet, where it is called *Pingaree* and *Bengerve*. Echites acuminàta, Roxb. fl. ind. 2. p. 15. Leaves 2-4 inches long. Panicles and bracteas smooth. l lowers la white, fragrant. Calyx length of the tube of the corolla, smoo 4h, V nectary cup-shaped, obscurely 5-toothed. very long, slender.

Acu tated-leaved Aganosma. Shrub cl.

I A H ., INA'TA; leaves lanceolate, smooth: having the tops of the veins formi within the margin of the leaf; panicles terminal, lax, co rytnboM-, ai futi ' lontotii, ami then dicho" * * •), R^aUrou*; arj," curwlU linrat nectary annular. ^> . S. Native c >f Sittirt, whfn it it c*tl«| *Dood-luta.* Echites ma irgntiu, Koxb. fl. ind. l. p. 16. I flowers numerous, large, white, fragrant.

Marg '•o/r Aganoama. Shrub rl,

h .4 *tptcie* hardly* iiunm.

8 A. ARTICUS; i rect, tomentose; leaves oval, mucronate; corym ^. irminal : •rgaamU of calyx equal in length to the limb of the corolla. ½. S. Native of the East Indies. I chites car ophyllàta, Roth. nov. spec. E. affinis, Rœm. et Schultes, »v*t. 4. p. 59 1. Lravn densely clothed with soft down above, and grey tomentum beneath. Corolla with a glabrous tube, which is said to be twice as long as the calyx, in the description ™! Roth; it is consequently n* a t m species c *,f Agmtinm.*

Allied Aaanoama- Sht ub *tt** ect.

Cult. For cultu irt; and |»f..,«,g·(tlW> „ e *Echites*, p. ;«.

"^ BBA1 M U M M ..ui.mcnt m (he late Mra. I eaumont, of Bretton Hall, Yorkshire). Wall. te.,, *a* nep. p. 14. t. 7. Bot. reg. 9 ll. I chites species, Roxb.

LIN. SYST. *Pentàndria, Monogynia.* Calyx of 5, foliaceous, unequal, erect segments. Coro l.i *» nli a abort tube .ttd a larK c c«JH(annulate 5-lobed limb; lobes erect, ovate, actr. ; throat destitute of scales. Stamens 5, inserted in the throat of the tube, exserted; anthers sagittate, beardless, cohering to the stigma: hind lobes without pollen; filaments free. Style twisted. Ovarium 2-celled, surrounded by a hypogynous 5-lobed ring. Stigma oblong, with a bifid point. Follicles 2, large, combined, but at length separating. Seeds furnished with a tuft of hairs at the umbilical end.—Large twining shrubs, with permanent opposite leaves: having the axillary and interpetiolar cilia subulate and sphaceolate. Corymbs axillary and terminal, many-flowered. This genus agrees with *Lyonsia* on one hand and *Parsònsia* on the other.

t It <>R*!(|tiru>aA iWall. | . c.)leaves broad, oblong-obovate; with a liiilf {mint, i spering towards the base, smooth and shining above, tint raihci downy beneath; calyx downy. ½. S. Native of ng and Silhet. Echites |rilllh« lΣ vl. M lli.l. K, *y.* ll Corolla large, white, greenish outside near the base, and dark throat. Young leaves and branches rusty.

Great-flowered Beaumontia x. rl. J u. Clt. l. i ii

2 B. LONGIFÒLIA (Lodd. koC. rah. p. C. 1 1830.) nothing more than the name is known of thi i »pto«» ½. S. Native of the East Indies.

Long-leaved Beaumontia. Shrub tw.

Cult. See *Echites*, p. 76. fo - • nlturr and pToj. gation.

V. PACHYPODIUM (from πάχυς, *pachys*, thick, and πους *pous podos*, a foot; in reference to the thick fleshy roots). i indl. bot. reg. 13 '1.—1 chites species, Thumb. and Haw.

LIN. «tit. *Pentàndria, Digynia.* Calyx 5-parted. Corolla salver-shaped; wi h a MM ewhat curved pentagonal tube; throat and tube scaleless; segments of the limb obtuse, equal. Stamens inserted in the middle of the tube; anthers sagittate, subsessile. Ovaria 2. St . . . it ypogynous scales none. Follicles twin, ovate.—Fleshy, lactescent, spiny shrubs, with the habit of some species of *Euphòrbia*. Spines 2-3-lobed, infra-petiolar. Leaves scattered. Flowers axillary or terminal, solitar fl ? aggregate. I'. duncles 1-flowered.

I t* lit t'aai H ; leaves ovate-lanceolate, o , obovate-lanceolate, glabrous. ½. G. Native of the Cape of Good Hope, pacox. chites bispinosa, Thumb. prod. 37. nov. act. petrop. 14. p. 503. Ait. hort. kew. ed. 2. vol. 2. p. 69. Lin. MMj)• 11.; l'll kl. » f,.f,rt»tr t.,»-.»«..»f paler beneath, hardly an i tell Wmf. Corolla aith a mm. what curved, greenish rufescent tube, bearded with white hairs, and an inflated campajml^ e limb, which is reddish outside, and purplish inside at the base; segments ovate, obtuse, white.

South America, near the town of Santa Fc de Bogota. Branchc* glabrou*. l^ftve* *\ inche* long. Flower* HM of those of Vinca. Calyx imootli. furnished with *J* trifiil scale* inside, towanti tike base. Corolla white, gUbrou*, hairy inaide.

//. | i I. Inti v '!trulj |w.

tS E. crrmirouA M is . t Kunth. 1. c p. 216.) leavworaie- oblong, KM oordaie, quit* glabrou*, »himt»g above; petiol- ' gland* inside; racrtne* bitid; calyctne segment* lanceolate, acuminated, *tf.* vtive w Granada, near Santanna J. Branches gla> brou*. I^eave* 3 inches long, »u» ouuide.

A Echii. Shrub tw.

I II mh. l.c.p. il'OW-avesoYate.- -tcuminated, cordate, glabrout, glandless I; raceme* dichoiomous, on long pr< segment* 0*M*> N of Souti i. i" tlw !»"'>* 1 arooro*. between Jam and the river Amazon. he* »mootbi»b. (.'otu'.U blue or purple.

tub tw.

30 K. MAE v u^iuatc-olilong. Acuminated, glsbron* abov. . with white tonx i beneath; racemes many - flowered : flower* almost *ea*ile; co- rolla* gUbniu* ouuide. *t*. ", *S.* Native of Maranliam. I ig, smooth.

31 *E.* *i B» tPav. fl, |MT ula- brou*; leave* oblong, (ub-tagittalc, aciiminatet), lobes i.buiM. ciliated, glandular at the base: p« liort. racemose ; calycine segments acute. . Peru, in woo<i nch. 1. p. *7I- Stem* glabrous, granular, filiform, purplish. Pi-tiole* downy.

^irub tw.

• •%. amer. 2, u. *I'*.)* leaves oblong- lanceolate, subcordate at the ba*e, fUfarous, tinning above; peduncles racemose ; calycine segments linear-obtt Native of South America. Leaves 3-4 inches *Uma,* acaitf. of a glaucous rust colour beneath. Petiole • |iurj.lt«• Pedicels sometimes twin. Corol I* white, wtih ittv tut* »»olli u at tu|>. Anthers §, beaked.

Shining-leaved Echites. irub tw.

•3 1. tomentosa (V *M.* tvmlt. 3. |>. 4i.) leave* eordatc-ob- loogt acuminated, and are, aa » na, hairy j pid— it*. t> • *^- '" Native of Cayenne. l*ca»w 3 inches long. >lU be«et with grv v low,

Utd MM Siirui. • * tacq, amer 31. b *tS. ti* «*/«« 1 ; peduncles raer«»«: esJ\ Fl. July, Aug. (ttrabor. ovate. *j 3. FoilieUt u>»U,i* Mi *toy.* UM tm tesus>. Pedt«« >f cciutlaMjMuidjptHt- y; follii paaiMte at the tubulate, aru- ntnated. I N It, t* m» gUbrmi*.

36 E. *!* C*Tt*»* i; leave* oblong, spiny, ttitf, almnat veinleas, often involute; raceme* li-8-ft rmmal and a\ii- lary ; *egmenu of tbe rorolla • oaAJgMMu at tbctj> ex. r I. Native • uwn. 4. p. 307. *pec. Ms*, car, d, p. *iS. i. S3.* Fol- B<BVM UM *m.* Hower* yellow, double, f Prrhapa a I *ForUnimi*.*

Cattily i .rub tw.

f *Spttiei naUttt of .tmmra, kardijf known; fiW gnrnitr nmmbtrvf wittth probably do mot bttomg to tkt grain,*

37 £. ? tvn »n|>jtl. 187.) leave* ovate, acute, quite gla dunclea axillary, divided into two brant-he*, and t»e*c branche* again diviiled into *2* Spikw, which are clowty IHM-I with Duwrn. v .me of Suri- nam. A laxtescet I oil** largi large, fiat. Stigma of f mr«. A decoction of il ,% noted, in Surinam, in the ei. syphilis. Perhaps a species of *Tmbtrmrmmtimm.*

Syphilitic Echites. Tree. I

38 E. ma . . cclog. smer. 2. p. *H.)* leave* ob- long, attenuated, somewhat cordate at the ba» racemose t p*di< late* I7 - every part. Lra-. >>ng above, *yutyUih* on tbe rib beneath. Prtiole* t . linear-lantvol.>

Subpicute-flowered Echites. ub tw,

39 £. m » -. luppl .'. p. 335) leave* o» scuminatrd, nerved beneath, and rather dowr ; flowers lateral, almost solitary; stem red. (7 . r . S. Native of Guiana. a*es gtabraua, and aloxnt sbtaing above. Flower* hardly ihiTsiistr

Red-stemmed Echites. Fl. July, Aug. Clt. 1824. Shrub cl.

40 E. ovalifolia (Poir. suppl. 2. p. 535.) leaves oval, blunt at both < nds, downy beneath ; follicles very hairy ; peduncles racemose, r, ItMtgt'i than the lr» ves ; branches and peduncles pilose. h . ' . S. Native of St. D****JbM»j II branches stiff, brownish. l^eave* sn inch and orr long. Bracteas subulate. Follicles slender, * relied.

Oval-leaved Echites. Sluub tw.

41 1 glomera'ta (Poir. suppl. 2. p. *$$*.)* leavp* menibra- nous, ovate, acuminated, glabrous ; flowers in axillary, •**rly •lobow £»aci.l -, aim...! *m* nut sesjaoWr' uingth 1 leaves 2 3 inches long. I lowers •iddlr«*i«ed. Bract*** lanceelatr.

Glomerate-flowered Echites. Shrub cl.

42 E.? paniculata (Poir. suppl. 2. p. *M 1 leaves oval- lanceolate, acuminated, glabrous ; panicles lateral, spicate ; pe- dicels cymosely umbellate. . S. Native of South America. Pedicels downy. Perhaps a species of *Parsdasia.*

Panicled-flowered Echites. Shrub tw.

43 E. angustifolia (Poir. suppl. 2. p. 537.) leaves very narrow, scutr ; rt. wers axillary, usually solitary ; follicles slen- der, somewhat tomentose. . S. Native of St. Domingo. Habit of a species of *Cerop^gia.* Leaves 2 uHbr*I.Mc. kaidly petiolate, glabrous, with 2 longitudinal ttea, 1 of which an almost KMKUval I ollicles 6-8 inches long.

Narrow-leaved Echites. Shrub tw.

E. nitrosus (Walt. fl. car. p. 98. Pursh. I ame. sept. 1. p. 178.) leaves oval- mnvkr. acutr at tbe U. linear; flowers in Uvr, <*M* Ulr-r..f> nb*. Native of Lower Carolina, in woods. Leaves Utwr downy beMwtk- Flowers small, yellowish.

Jknwt . tto«. «> tw. act lu»4. «•!. p*». 1 07.)

branches raihaf trabrou* Tram | prominent dots; leaves ovate, with an obtua* Kuan , very veiny beneath; corymb'• compoumi. ^ . *"\ 8. Native of South America.

/Axlffi-branched I Echites. Shrub tw.

46 E. ANGUSTIFLORA (Richard, in act. hist. nat. pw. p. 107.1 leaves ovate, acutely acuminated, sub- • imrgtMUe « the baw, •maktcd, « ' • '.• •« h»»aaf U»cncr»M at»trrroufhiali from minute down; stem slender, ro *hlah. jj.'*, S. Native of Cayenne.

Wrinkled Echites. Shrub w<

47 E. GALEOTTIANUS (Rudolph. ex Ledeb. jd. .t. ttmnm$_H$. no. 6.) peduncles many-flowered; leaves oblong, obtuse. ♄. ^. S. Native of St. Ikmiingo. Very like *B. tmmtilim,* but dil ers in ilw Ir– ves being ob •' WMI tlir fl«wi.r« roar-coloured.

frairga-form '• -'.rttbln.

IN E. f iimi UTEA (Lerg. act. vlis >ig' 3. p. 383. kone.) Ira*. ovate-oblong, attenuated at both en 0*. »;.". « Na- .1. ivit. p. *13H.* 1'rtlumlr* oppo* sitely fiirrmiiK.

Srmidif ymm» Efhilet- Shrub iw.

†† *Ea*.(/if/ma *tjxrie, katdty kmewn, mlk tmati famrr$.* 7*A# *speciv* > /Irr* *mumcraUil mitt praiabty jform a dttumii* ^fraut.

49 E.† GLAUCESCENS (Wall. cat. no. 1*659.)* l««v« oblona;. coriaceous, glabrous, tapering 10 ttie luwr, and acuminatn) at the apex, on very short petioles; panicles term nil ami axillary. composed of trichotomous peduncles; flowers crowded, corymbose; «lyx aiv pedicels downy; follicles narrow, torulose. ♄. ^. S. Native of the Burmese empire, at Amherst. 1 ••;.i. irti-.i., a native of ntfaporr. hartjly *wm« to differ, unless in the more ovate ca*«. Flower* •mall, white.

Gland-bearing Echites. Shrub tw.

50 1 .† SUCR k'rriM (Wall cat. no. 1667.) leaves Mong or ovate-oblong, acuminated, glabrous; panicles axillary and ter- mil, i varicate, tompoar.) of trichotomous peduncles; flowers crowded, corymbose, downy. ♄. ^. S. Native of Silhet. T brachiata, Wall. t*ai. tin. HJiiS. it the untr, l matt. Follicles probably torulose, like the last species.

Small fi i ered Echites. Shrub tw,

51 E.† LUCIDA (Wall. cat. no. 1670.) leaves elliptic, o MM at botli ends, short-s ttminatrU, c» riaceous, glabrous, shining; panicles terminal and axillary, composed of trichotomous pe- duncles, Oowrts corymbose, downy; bracteas linear; follicles woody, ovate, acuminated, or cultriform. ♄. ^. S. Native of Penang. • lowers small. E. esculénta, Wall. cat. 1671. from Amber IMItlliffHrii differ from the present species, but as there are no flowers on the specimens of that plant examin by us, its affinity cannot be ascertained.

Shining-leaved Echites. Shrub t•*.

52 E.† FASCICULATA (Roxb. fl. ind. 2. p. 17.) leaves lro lanceolate, bluntly acuminated; panicles ax ahrf ami terminal, trichotomous throughout: the extreme divisions 3-flowered; follicles sub-clavate, few-seeded; hypogynous scales combined into a cup-shaped 5-toothed urceolus. ♄. ^. S. Native of Silhet. L«««r« • tnrhr* long and U to ,1 broad, lira. irn. ... »l Flowers very small, pale yellow. Corol la with a abort (tihbou* tube; an'! ly, edged, falcate segments. Art.-

Cracked-flowered Echites. Shrub c'.

53 E.† FASCICULATA (Roxb. fl. ind. 2. p. 20.) leave.tancrol,., panicles ter •uii.al anil •> illary, brachiate; tube of corolla gib- bous towards the base; segments of the limb linear, falcate. ♄. ^. S. Native of the northern Circ >r», and Sdli. E. macrocárpa, Wall. cat. no. 1643 H ypogynous scales combined into an entire ring. Follicles large, ovate, acuminated. E. polyántha, Wall. cat. no. 1664., a native of Chapedong, and A ore coriaceous leaves.

Small-Jlommd Krhite*. Shrub tw.

54 E.† BALLISTICA (Wall. c«t.no. IC09.)Wa» es elliptic, or obo- *••'• -elliptic, acuminate <l, xlabrnu* ; |wxtuiiclr« axillary and tr-r- minal, irtdwwwnom, corymbow, apr**Jin«; romlia «*l> er- *harW. with ob ffmrnta. tj.*n*. S. Sal ive of Silr*4. I chites v rtidHtia, ti sault. mas. Very n. «rly *\\xi\ t to the prtcaviaam.

Ellipti-leaved Echites. Shrub tw. ?*r-|a»ved E< drub tw.

† | t *AmttKmm* «ptw«, A<W/y MM s.

65 K. urint OLIA (Willd, herb, mi Rirn. et Schult. syst. IIM, » J*. p. ; 95.) peduncles 1-flowered; leaves o Monjr-Ui, eolate, mucronate, shining. ♄. ^. S. \ ,ti ,> of Cuba, about the llavanna. 1 his is not to be confo iklad wtak I'arwutwta m> rti- i, K.rtn. • et Schultes, vol. 5.

My 'ilr-Uot, d Echites. Shrub tw.

56 E. UMBELLATA (Willd. l. c.) leaves elliptic, acutish; pe- twin, 1-flowered. ♄. ^. S. Native of Br ,,,|

Twin-peduncled Echites. Shrub i w.

57 I LUCIDA (Willd. l. c.) pedun >dw !•«• wered, <|on- gated; leaves elliptic-oblong, subcordate, obtuse, shining above. t«"*S *" Native on the banks of the Orinoco.

A'Amm^f 1 Echites. Shrub tw.

AS 1 CANESCENS (Willd. l. c.) prtJwnHt* S-ft.wrrr.!. axil- l*' ; leaves oblong, acuminate {, t4MnrtiioM l«iit ath. ♄. ^. S. Native of South America.

Canescent Echites. Shrub '<r.

59 E. VERRUCOSA (Willd. l. c) <so»y»»b» a«ill:. y; leave. ob- long, i. l; branch** warted, K, *n*. &.* Num of - - ' azil.

Warted Echites. Shrub tw.

<H> 1 . NITIDA (Willd. l. c.) tMVffin axillary t corolla* t. mil ide; leaves ob l-»nn-c.jrtUir, acui»)nate<), hi*pid. lj. ". S. Native of B raatl

HnyiJ I Echites. Shrul . tw.

61 E. SCABRA (Willd. i c.) rawiw* i xillary; leaves oblong, acuminair d, cordate, scabrous. ♄. ^. S. Native of Brazil. lira. Shrill) iw.

Scabrous Ech v ^ !.I I < .] t.»rr»w« ll erminal; leaves elliptic, acuniii ated, glaucous beneath. ♄. ^. S. Native of Brazil. Corolla funnel-shaped: having ihr lubt thickened at top, and with the throat hardly pervious. Leav • * cotiaotowa, gLat>» ous. l'criiapa a dminrt (i mn

Glaucous Echites. Shrub tw.

63 E. MACRA'NTHA (Rœm. et Schultes, syst. 4. p. 795.) co- rymb« axillary; lea - * <>)•!.>•. , acute, glabrous, shining. ♄. ^. S. Native of Brazil. E. grandiflóra, Willd. herb. but not oC i thers.

Lan ^jtwrrr ed Echite . Khrub lw.

64 E. RUBESCENS (Willd. herb. ex Rœm. et Schultes. syst. 4. p 7»<) flowers sub-umbellate, axillary; leaves elliptic-ovate, cordate, acuminated, downy beneath. ♄. ^. S. Native of South America.

Downy Echites. Shrub - iw.

65 *V,* «.n»n* (Wdbl. l. c.) t M « N axillary \ Irnvt* 1ai»fu lair, a. lorna* nodow. lj, *\ (» . Native of South

Knotted-branched Echites. Shrub tw.

66 E. NUCRONATA (Rœm. et Schultes, syst. 3, p. 769.) leaves laoc»<. late, cordate, acu >iUkkWd, •nucronate, downy beneath; lacin s axillary. ♄. ^. S. Native of South America. E. acuminàta, Willd. herb.

Macronate-leaved Echites. Sh rtiti t*.

67 E. 7RAXA'RI (Rœm. et Schultes, l. c.) leaves crowded, linear, ciliated with pili, acute; panicle te -n»w»al.iwikrJ. h . ^ v Native of Carolina.

Frattr't Kchitc*. Shrub tw,

Vutt. All the (nif apecM* of thi* gcnu* bear 1 > vtlnii' or vtllow flowfi i mixture of loam, urul. and peat; awl curium* Mrike root readily under a hand-glaaa, if planted in Ml

11. { Hi iM. Mn KI'IM *Irnt,* a fennel, t n d ^ f., *mprpAt,* t'otm ; l'urtu ol corolla). I -ill. Hutli. Roxb., ft*.

Ltx. Wit. *Pentdmdrta, .\fonogtfm*.* Caly» tr all, 5-pir*4. Corolla fuanel-thaped, witlt il throat, and a •efrutenu of corulla < Bt l i sagittate or lanceolate, aii ,• filiform apr* i• ypogynous scales 5, distinct or connate. ! •»« Seed* t rraky.— l twiwng* »nh opposite • avea ; and mit rpcttolar gland' interpetwlar, oorymboac. Flower* «howy, white or yellow.

Erect shrubs.

1 C. crista'ta ; >rm« erect ; leave* oval, tnucrooate. lofOen-toae brm-ath, with honjimtal nb*: corymb* axillary, dicbotomom. diraricate, on abort peduarlr • the ! Kclittr* criatata. Roth. no*, apec. Bracteas minute, tooth-formed.

Crested I iMMcmorpha. Shrub.

t C. i>KHuiuM\ ; »t. ii« erect, diehutomou* ; leave* ovate. awtfc, «).. n young dothrd with ttlky til io«otnmia, on abort peduncle*. ••otorn*. I . •PVC. I Leave* a hand long, downy on il to be *ali 'bably fu> i*>ae of *Jmtwumum vtlnr*titnmmM,* but a tittle larger, *tth the I U W downy.

Dichotomous Choneniorpha. Shrub.

3 C. grandiflo'ra ; stem erect ; leaves oval, artimin- *omruumr* beMWtb ; flower* lvrmmal, l»v tl •-•iii'- i. Roth, nov. %)»•<-. bn - CM* I tbo*e of *OttumtUr.* 8 M * mucTnii

Dichotomous Choneniorpha. Shrub.

1 * •tt-jutrrrtd ChoOffBorpha. Shrub. il-Uncr-.!»«•, <ii>»ri* jtnvv.' and > MhU.i tlumi it

Antidysenteric Choenemorpha. Shrub.

Shrubs.

6 C. reticula'ta ; *ti-iu i*irnti|{, aagular, nmfbnb leaves oval > M W I U . glabrotta on both surfaces, reticulately veined ; rorytnba axillary, rndunrtitalc ; bracieu imbricate, •: . *"\ S. Native of the East Indie*. Echite* teticulau. Roth. wiw. *p*c.

Var. β, 'iM»rwluM (Koch. l. c) leavva towloaf on the ribs and veins, especially b. nraih.

Reticulated-leaved ' ' tonemoepha. Shrob tWi

7 C.? Malaba'rica ; stem scandent ; leavta ovaie, arm aled , fl<' \). ^ Malabar. I •.'. ji 345.— Pal t. If* *Sum* almlaT, kneetl I Flowers light green, rddith <MtMd>. with a »htuab neck. Follicles stiff, narrow, rather flattened.

Malabar Ch oriiiiirnha Shrub cl.

8 <. macrophy'lla ; ste ii* M«JM|| l»«««e» largr, roundish, acuminated, dow I beneaih ; cymes terminal. ♄ . Native of Silhet. Echite • «r«i , no. 165*. Echites macrophylla, Roxb. fl. ind. 2. p. 13. Uarf«fl froM oral to roundish, 10-12 inches long, and 7-10 broad. I low era very large, white. Calyx campanulate, 5-toothed. Filaments hairy. I Follicles pendulous, about a |<Hit /*»tl|J . Seeds spatulate. Embryo inverted. II

Large-leaved Choneniorpha. Shrub cl.

9 C. nervifo'lia (Blum. bijdr. p. 104. under *f.rkitti)* leave* ort petioles, oblong-lanceolate, cwetacrod*. gtabrona: eo- nrmb* axillary and tei [1].in) 1MHair, many- flowered ; corolla funnel-shaped : having the t• be angular at boitoot. ♄ . ر S. Native of Java, about Kuripan, where it is called *Tjankudan.* Flowers white. Hypogynous scales acute, distinct. Stamens inclosed.

Dense-flowered Choneniorpha. Fl. March. Shru'»cl.

10 C. Bantame'nsis (Blum. bijdr. p. 1040. under *Echites*) leaves elliptic-oblong, acuminated, rather >tten«uied at the ba*4", tf labfot* *, reticulately veined be., >- , t'MimiiKr *ttt>* lltr midrib and veins beneath, as well as on the petioles and branchlets ; corymbs axillary and terminal, trichotomous, on long]»<!>itM-|r»; cr>foil* lui.i . l.. -shaped, hairy. ♄ . ر S. Native of Java, m o a f b—he*, in the p rovince of Bantam. E. ferruginea, Horsfield, in Roem. Schultes, syst. 4. p. 796. Hypogynous scales connate, distinct. Stamens inclosed.

ft.t«i„m (l,ftrmorptta. l Fl. Feb. Shrub cl.

II I coria'cea (Blum. bijdr. p. 1039. under *Echites*) leaves lanceolate, coriaceous, rift* .try oc terminal, biftd or trifid ; pedicels usually 3 i together ; rurotU funnel- ed, hairy inside. ♄ . ر S. Native of Java, in mountain woo' aere it is called *Ojot-jam-pol-bidis.* Flowers small, yellowish. Stamens in rloard Hypogynous scales connate.

Coriaceous-leaved Choneniorpha. Fl. year. Shrub cl.

12 C. ipyla'ta (Blum. bijdr. p. 1039. under *Echites*) leaves elliptic-lanceolate, bluntly acuminated, coriaceous, glabrous, full of parallel reticulated veins ; corymbs axillary and terminal, bifid or trifid ; pedicels 3 together ; corolla funnel-shaped : ha* ir ^ the tubr wnUtteil *Hl* 5-angled downwards. ♄ . ر S. Native of Java, at the foot of Mount Tjerimai. Flowers white, but I e throat is yellow. II ypogynous scales roundish, distinct. Nearly ail• : to *E. reticulata*, Roth., fro to wh«rh ii diffrrm "t the i nbers being inclosed, attd to ihr tttbr of the corolla being 5-angled above.

Inflo M -flowered Choneniorpha. Fl. August. Shrub cl.

13 C.? convolvuloi'des ; leaves sagi HM c»i»datr, atumiii- ated, glabrous, on long petioles ; raceme i wnawMt aW aaUkrv. 4-5-flowered, on short angular, thick peduncles ; tube of corolla very long. ♄ . ر S. Native of Africa, in the island of St. Thom*.. on «U l anks of rivers. Corolla flnnel-shaped, with a fiiU.I tKrr>.', white. Anthers conniving into a cone. Lobes at Uw of kta< es distant. Follicles lon f

Convolvulus-like Choneniorpha. Shrub tw.

Cult. See *Echites* above for culture and propogation.

11. AGANO >MA(fraw •ynfc *ttgamtt,* mild, and <"?*, Mcunr annular. K. S. \nici of Sillirt, **hert* ome, a smell; scent of flowers). Echites, sect. 2. AganoMna, Blum. (>iji)f. (i. 104". i Echites species of authors.

Ll«. »1«T- *frmtAuAr,*. (*rt«l, •)i-nt;iti to ill. tube of the corolla, spreading. 'Coro Ha "^ MHt-aUprtl. *»nli »n -.1 . niher**. with the tcipna Ovarium didymous, inclosed by 5 long

i-iT i" 7rxr.....•*-• St 1* _'"U _'-•- •"_'• ONCmMItM lo|i ..f IM.|,l,l.H. Kollul.1 ractcaa Juotit, ai Uir ba

1 A. CARYOPHYLLÀTA; leaves oval, acutish at both >ni«. tomentose beneath a• up1 a the branches; corymbs terminal. ½. S. Native of the East Indies. Echites caryophyllàta, Blum. bijdr. p. 1041.—Rheed. nut. 7. l. 103. l 55. Flowers p*h yellow, tinged with r , very sweet scented.

Clove-scented Aganosma. Fl. Oct. Clt. 1812. Shnib NT.

2 A. ROXBURGHII; li-avrs o»ato>cur«l.tli . •rtinnnati il . l' ijlabrou*, pal- i and the petioles and veins red, beneath and shining above: with tin' nriitrii'.il h' ' '

Glabrous Pachypodium. Fl. July, Nov. Clt. 1795. Sh. 1 ft.

2 P. TOMENTOSUM. iL*M* lea^ea linear or lance*: ate, tomentose be- maili ; glabrous above. ♄. G. Native of the Cape of Good Hu}*r, in * id places. Echites succulénta, Thunb. prod. 37. nov. act. | etrop. 14. p. 305. t. % f. *t.* Lin. suppl. 167. i Prickles filiform, Mrt«ceoti i i grrrn abm e, but clothed with fine villi b nrath, about an inch long. Corollas mfaxmt. Follicles ovate, MM,

Tomentose Pachypodium *am.* Fl.Jul Nov. C L I8S0. Sh. 1 ft. 3 F. TV«ta< wU. bot, rig. I MI.) item tuberou* al the base ; leaves oblong, t <mrnfo»e beneath, glabrous a> ove. ♄. G. Nativ •- of tin- ('ape of (KHM) Hope, in barmt plains. ! chites tuberi«•, Haw. »jn. pi. lure. p. 6,f Lodd. bot. cab, 1676. Prickles straight, subulate. Corolla red outside, and whitish on the upper surface of the limb . tinged with *n*

V M?(rrn'ji-Tiniifd Pachypudiutn. H. June, Nov. Clt. 181.1. Shrub l t r«// Three at very pretty -ucculrnt shruh*. A mixture of lime-rubbish, s tttd, ami loam is ilic be«t •oil for them : and cutti ga will strike nwi ri dily in sand, under a hand-glass. The plants should itot get too much water, •hen not b a t." tng slate.

M !• UN' OCARPUS (κγνος, ic'.«•«i,a*rMi«r, ami •.•,**, *karpos*, a fruit ; in reference to the slender follicles). R. Br. m mem. wer i. w. 1. i 62.—Apócynum frutéscens, l in.

Lin. syst. *Pen* • tfIK/rM, *Monogynia*. Calyx 5-cleft. Corolla salver-shaped ; scymrnu - the limb dimidiate, twisted, hairy; throat an '! tube Mithuttt any »ca nMM inclosed; an- sagittate, free from the st gma. Ovaria t« n. Style 1, fili- form ; stigma ovate, acute. Hypogynous threads 5, capitate, alirr nating with the ijinci;«, 1 »liklea alew! r.—Climbing shrubs, with t>pBOM<r leaves ; brancbtd, umiioal panicl- •mail, wi te, inodorous flowers.

I I i> rrs'scxss (R. Br. hort. k *. fd. J vol. 2. p. 69.) stem twining ; leaves oblong-lanceolate, tapering to both ends, glabrous ; peduncles axillary, very long, racemose ; pedicels fascicled ; follicles variable. ♄. S. Native of Ceylon, Sirmore, Silhet, Nipaul, and F itDMin. Apócynum frutéscens, Lin. fl. zeyl. I I I sprc. l-, 3 Lax p. *t3.* t. It, I I. Echites fruteact 'ile in fhanr, ТМ ; green above and pale bene ath. Flowers small, purple. I. radicans, Wall. cat. hardly appears to be distinct. The Quiribélia Zeylánica, Lam. et Poir. dict. 6. p. 42., considered by them as Linnæus's *Apócynum frutéscens*, must, from the description, be widely different, and per r,ap» does not belong to the same natural order.

Shrubby Ichnocarpus. Fl. July, Aug. Clt. 1759. Sh. .*.

2 I. rss'ssxss (Wall. cat. no. 1676.) leaves oblong-lanceo- late, or oblong, acuminated, tapering to both ends, glabrous ; peduncles axillary, trichotomous, spreading ; NHMMt of lh» corolla long. ♄. S. Native of Nipaul. Flowers large. Follicles long, slender, terete. :

Fragrant Ichnocarpus. Shrub

3 I ? Arss'sii (Rxm. et Sc IW. MM twining ; lowi i Irai es oval, acute ; superior ones, oblong or hnir-Ltr. MJMMI of corolla obtuse ; throat nearly naked. ♄. S. Native of Sierra Leone, and about the awl aleaf the sea shore on the coast of Lower Guinea, in wo O4I and among bushes. A Shrub glabrous. Peduncles flowered ; I- ! rels drooping. C te, sweet-scented. Follicles •I,i, ed at the base.

Afzelius's Ichnocarpus. Shrub I*.

4 I. Lousiaxii (Spreng. syst. 1. p. 635.) rtn l- tescent, erectish ; leaves ovate-oblong ; peduncles later ly 3- II. *v* •

flowered. I; . ^ J>. N»U»* of ZanuUr. A|turvnum Aftt- cinum, Lour. cochi. tC9. UraiM-he* acandrm. *I**m* •mall, (tlabrou*. i flowers pale. Corolla c imp—U>t. rrflrmed Hy- MHjiwii ».•!>• MifaMaMi allcfaaxinK with j tohmnd i;laridt Stigma acute, bifid. Follicles conical.

viro's Ichnocarpus. Shrub cl.

Cafe. See *Echi* . for culture >nd prnpagsiion.

VII . HOLA RRHI \ \ 'W.O&M entire, and *αβρον, narrow,* a mak : tA t> ference to the entire anthers). R. Br. in Mem. aor. mem. I. p 62.—Carissa, spec. Vahl.

LIN. i m . /Vi»: j»JrKj, *.ifvmaffw*.* < Calyx 5-parted ; segments subulate. Corolla salver- «haprd, with equal-sided segments, and a scaleless th rtwt antt tube. Stamens inctoMt), inserted in the bottom of the (ub* ; anil.. rs free from the •tnttnj, entire, hearing ike pullcn loagitiMtmallv. Ov«na\ twin. Si le very short ; Stigma cylindrical. ltypotftnous scales wanting. Follicles slender.—Erect glabrous shrubs. Leaves membranous. Cymes terminal and later it.

I II. v rs (R. Br. l. c.) leaves lanceolate, attenuated. ♄. g , Native of the East Indies. Carissa mitis, Vahl, «tmb, .1. p. tt. t. 39. Leaves 2-3 inches long, shi JJ. purpluh bctwath.

Mild Holarrhena. Shrub.

? H. ? Cona'oa ; leaves ovate, acu ....mini, «tth uhlu|iM> p*> nlli-l mr«M ; pt duncles terminal ; segments of corolla oblong, ii al. I. p. *M. U* 47. KUJ- ers white, sweet-scented. Follicles a ipan long.

Codaga Holarrhena. Shrub 5 to 6 feet.

3 H. rvas'scxss (W .11. • at. no. 1673.) leaves ovate-oblong or elliptic-oblong, short-acuminated, downy '•rtiraih and on the upper surface while young, as well as the branches, peduncles, and calyxes ; corymbs terminal. ♄. S. Native of Nipaul, Kamaon, Martaban, and Tavoy. Echites pubéscens, Hamilt. *tarn.* Hardly distinct from *Echites antidysentérica*, Roxb. ; a native of Silhet and Nipaul, the *H. antidysentérica*, Wall. cat. no. 1672.

Downy Hola •iln-na. Shrub.

Cult. For culti in *mii* pnypitimi n *Echites*, p. 7«.

VIII. ISONEMA (from *isos*, equal, and *nema*, a filament). R. Br. in W nan ant, *mm*, < rri »> mem. 1. p. 62.

Lin. syst. */'entiadria*, *Monogynia*. Corolla salver-shaped : limb 5-parted ; throat and tube without scales. Stamens ex- *cfU d. 1 Filaments inserted in the throat, simple at apex. Anthers sagittate, c g by their middle '•» I« the K « W . • va- ru t» in. Style 1, filiform ; stigma thick, obtuse. Hypogynous scales wanting. Follicles unknown.—An erect hairy shrub, with opposite leaves. Panicles terminal, btariuas*: flovrta corymbose. Segments of calyx furnished with a double scale UMMI*1 at base. Corolla half an inch long ; with a cylindrical tube, which is bearded inside in the middle.

1 I. Sszatuna'xsi (Rxm. et Schultes, syst. 4. p. 401.) ♄. S. Native of tropical Africa, on the west coast.

Smeathmann's Isonema. Shrub.

Cult. 1 or c >!tMir and propagation see *Echites*, p. 76.

IX. VALLARIS (from *vallo*, to inclose ; used for fences in Java.) B p. 51. R. Br. i *»w «»m «r. 1. p. 62. Blum. bijdr. p. 1042.—Emericia, st. 4. p. 401.—Pegulária species, Lin.— Ham. «t HdiMhaa. »> s. syst. ria, *Monogynia*. Calyx 5- Co- L> er-shaped, with a 5-cleft obtuse limb ; a, «IMI. thro Stamens exser ed ; filaments t»MTI>J t«» law ihft*M and tub* S « M » M . w f i a 6paa>7 ••.;)..«» ..wiss<i

gynous scale* 5, connate at I he bate and ciliated at IIH- apex.— Twining shrubs. 1 *n ojifujtiir.* Peduncle* iritcrjx-iiolar, or terminal. Flowers corymbose, iwcet-mnted. Corymb* tri-chotomous.

1 V. PERGULA'VA (Burm. ind. p. 51.) leaves ovate-elliptic, •cu!«-. Kljlirmn ; i-..r\mh< uOUrv. inrhtMHH, il *n\ >. _• men(*tit* < Prrgularia gl '• OWBt. p. I p. 1(17.

«Iiirc6*a, p, 18. »lA amb. A. .' \ inated, gtabi »\ilUry and t^riTiinal, tr. p. 401. I larftVi I[11]- with a goatiab •maH. Ca-lyciiie aejjnif in* brio ulatf, «fu rub I*.

9 V. inrtiti of -ma, I -ml. II

4 V. CLAVA'TA; dichotomous; leaves broad-lanceolate, entire, villous beneath; panicles axillary dichotomous; tube of corolla I l»i jtr, null I he segments of the border falcate; anthers linear, inclosed. Native of the Moluccas. Echites clavàta, Roxb. fl. ind. 2. p. 20. This comes nearest to *V. dichótoma*, differs sufficiently in the length of the tube, the segments of the border, and the stamina, to authorize its being considere

r, bat

< 1 M I ili.tmrt t[M 'Xik)

;fe-tub«l V altar it , \w.

tetdt of (ht tw« • '<<£ *aird, tksy* Wiuny to *tkt grwti Strttpkdmtltmt,* or *mtll/orm a* n

^ ^.? DIVARICA'TA; stems nearly erect; lea •-* bru»il-Ln-volate, glabrous, undolated; peduncles 2-flowered, divaricate, rminal. ½. G. Native of China. Pergulària divaricàta, Lour. coch. p. 168. Periplòca divaricàta, Spreng. syst. 1. p. 836. Emericia divaricàta, Rc et Schultes, syst. 4. p. 401. tlo*. rs yellow, suffused with re Segments of calyx subulate. C«ralU Miih a il ick tube, very long subulate segments. Scales 5, »4/itl»lr seated in tl. outh of the tube of the corolla. Ovarium ovate, 2-lobed. Style filiform, length of stamens; ,'rna aOM stigma e, erect, bifid. Follicles 2, oblong, many-seeded. 8«d. *Umu* sh, naked. Perhaps a species of *Strophánthus*, or a • M M. . . . . closely allied to it.

Divaricate Vallaris. Shrub erectish.

6 \.? SIMA'RIS; leaves ovate-oblong, ob ..... K'.'.'.'ous; peduncles many-flowered, axillary, and terminal. ½. G. Native of China. Pergulària Sinénsis, Lour. p. 168. Emericia Sinénsis, Rœm. et Schultes, syst. 4. p. 402. Periplòca Chinénsis, Spreng. syst. 1. p. 836. Corollas yellow; with long, linear segments. Scales 5, sagittate, seated in the mouth of the corolla. Style filiform; stigma conical, 5-furrowed. Follicles oblong, many-seeded. Seeds naked, ovate. 1'erhapt *m* species of *Strophánthus*.

China Vallaris. Shrub tw.

Cult. For culture and propagation see *Echites*, p. TV.

X. HEYLY'GIA (meaning not , 4iiUi,,r,J bv tbt author). Blum. bijdr. p. 1043.

Us. im. *Prmtamtna, Mtmogj/nia.* Calyx quinquefid. Corol I la rotate, with • short. irntriooM> lube, «ri. netita iti»« rti •! in corolla, < rrounding the style in .i *ptral manner. Anthers sagit •*\r, fxilirring to die atiytna. Stttfrna clavatr. Ovarium didy iiunii, j; . icall * ded by 5 hypogynous «g •lnuli; with nppo- of hairs at the upper extremity.—A twi site, ovate-elliptic, ttUbrooa leaves; atul axilUry, dichotomous, corymbs of flowers.

1 H. JAVA'NICA (Blum. bijdr. p. 1043.) ½. G. Native "f Java, among hoabei on the mountains, where it ia e*)W *d* *Ferrung-utang.*

Java Heylygia. Fl. year. Sh .rub Mr.

Cult. See *Echite*', |> 79. fur culture and propa^ation.

XI. *PA* RSO'NSIA (l • • I in memory of Jamr* Par- 'ied wttfk, t>j.fiu.! M.D., author of an unfinis • <l» ; and u(a I>tcMTtati< The Microscopical Theatre of Se on the Analogy between the P "•pagation of Animal* and tl t of Vegetables). R. Br. in mem. wern. soc. p. 64. prod. p. 465. but not of P. Browne. Echites species, Jacq. et Swartz.

I •• »TiT. *Pentándria, Monogýnia.* Corolla funnel-shaped; wtlli a i-ji«rt. recurved limb; segments of the limb equal-sided; throa: and tube without scales. Stamens exserted; rilanirtii filiform, inserted in the middle or nigh t |w ^ se of the tube; anthers sagittate, cohering by their middle to the stigma: having the hind lobes destitute of pollen. Ovaria twin or solitary, 2-celled. Style 1; stigma dil ypogynous scales 5, distinct or connate. Follicles 2, distinct or combined.—Twining shrubs. Leaves opposite. Flowers cymose or racemose; racemes usually compound, terminal, or interpetiol

" *Amft* se. *Ovtrim twin, I* ollicles distinct. *Forsterònia, Meyer. ess.* 133.

\ P. C t t t m 6 u fR. Dr. I racrme« corymtmK tlang«i<tl. IM ves oval-lanceolate, glabrous. ½. G. Native of St. Domingo, in woods. Echites corymbòsa, Jacq. amer. 34. t. 30. ed. pict. t. 17. Swat z, obs. p. 105. Forsterònia corymbòsa, Meyer. ess. 134. l eaves ovate or obovate, 2 inches long. Flow i r» tmaJl red. Segments of calyx concave, connivent.

Corymbose-flowered Parsonsia. Fl. June, Aug. Clt. 1820. Shrub • t».

2 P. FLORIBU'NDA (R. Br. l. c.) racemes compound, corym- i bo«r leaves ovate or elliptic, acuminated, glabrous; branches flfwcthb, i . G. Native of Jamaica, among bushes on the mountain «. BaUm tVotMad' Swartz, prod. p. 32. fl. ind. occ. I. j». 534. Leaves shining, stiffish. Racemes axillary. Flowers s '•alt, *|n:. Corolline segments aciiiriiioit< •!. t iljr-cine teeth acute.

Bundle-flowered Parsonsia. Fl. Ju. Aug. Clt. 1820. Sh. tw.

3 P. ERICA'TA (R. Br. l. c.) spikes racemose, di in '! * * t ed, axillary, short, opposite; stamens elongated; leaves nearly mat* or oMoMHKIMMMtMl bifarious, smoothish. ½. G. Native of Ca •tiajjiiia, in «< ods. Echites spicàta, Jacq. amer. Nat> i S4. r .''.' ed. pict. t. 36. Forsterònis spicàta, Meyer. ess. 135. Leaves ½ foot long. Flowers numerous, white, almost sessile. «l»fi.i ..f.t,. in. ..v air, ...,«»». ,*|ı|, Segments of corolla lanceolate, acute.

Spicate-flowered l'»i 11will Sknibi.

* * *Australàsicæ. (hmnmm - lK,lU,i Follicles cohering lengt nise.*

4 P. FOSTE •l | rvmr* aktllary, diffuse; leaves lanceolate, glabrous. ½. G. Native of New Zealand. Periplòca capsulàris, Forst. prod. no. 126. Willd. spec. 1. p. 1251. l- *Forster's* tw.

A l[1]. VELUTINA (R. Ilr. prod. p. 468.) cvrnra pedunculate. opposite; leaves co· nljir, ovate, acute or actnataatad, do· oy. ♄. ◠. S. \jti*e of New Holland, within tbc tr opic. Echites velutina, Spreng. syst. 1. p. ·>S4.

Velv· ty Par*onsia. - .rub tw.

6 l'. MtiLLtt tit, ltr. t. c) rymn bifid; tana lattcrt ·run inated, soft, downy. ♄. ◠. S. Native of New Holl*nd, Miih: laAQja, Sansag- »j»' ' ('· '534.

Soft Parsonsia. ·· ; lib tw.

; l. LANCEOLA'TA (·'. Br. 1. c. nmr« *UiM* ; leare* la> late, acuminated, glabrous. ♄. ◠. S. Native of New Holl·ad, willi n the tropic. Echites lanceolata, Spr rt-iij; at it. 1 p. '534.

/.oirni olate-leaved Parsonsia. Slmib tw.

| 3. *AtyAi rtum t-iftUtl. Fviiut g iemgtk' wi» f Aim.*

l P. oi »t. no. 1630.) panicle terminal. [4Mrd of trtehotoa>ou« ptdnncle* ; mbiMr ; lc*»c« p aa lotlU !·' . watc-aeumifutr tOfll.i. I { l mit herb.

rrr-k rvonatL Shrub *Km.*

9 P. SPIRA'LIS (Wall, cat no. 1631.) glabrous; peduncles axillary, i ichotomous or trichotomous; flowers corymbose; laavi coriaceous, ovate, acute. ♄. ◠. S. Native uf the East Indies. Follicle ovate-lanceolate.

Sp rni l'*r« sia. Shrub tw.

10 i'. ORIÓSA (·. Wall. cat. no. 1632.| glabrou . U. nil ·, trichotomous; flowers corymbose; leaves coriaceous, oblong, acumin »u>l. [♄. ◠. S. Native TlUagooa and Mmit- meyne.

Oblong-leaved P..rwrniim. Slintb tw.

ll l'. JAVA'NICA (Blum. bijdr. p. 1041.) le ate* ovate or elliptic-c scuminated, coriaceous, glabrous; corymbs terminal or axillary, trichotomous; throat of corolla naked; branches subsarmentose. ♄. ◠. S. Native of Java, in moun- tain woods.

Jmva P*noi< Fl. year. Shrub tw.

12 P. UUI TA (Blum. bijdr. 1042.) leaves on short petioles, aapo site, or 3 in a whorl, oblong, acuminated or bluntish, gla- brous, tomentose in the axils of the veins beneath; corymbs axillary or terminal, trichotomous; throat of corolla bearded; branches climbing. ♄. ◡. S. Native of Java, ·aaMHJ bushes, at Kuripan, where it is called *Tjankunk.*

Bearded-flowered Par·ioa*ia. l Fl. May, June. Shrub cl.

† *A species hardly known.*

13 P. MTBI RÓLIA (Rœm. et Schultes, syst. 4. p. 403.) leaves ovate, acute at both ends, glabrous; flowers subumbellate, much shorter than the leaves. ♄. ◠. S. Native of Madagascar. Echites myrtifólia, Poir. suppl. 5. p. 637. Said by Poiret to be very nearly allied to *P. corymbósa.* Flowers te riiinal. 8fg' ments of the corolla oblong, narrow.

Myrtle-leaved Parsonsia. Shrub tw.

Cult. For culture and propagation see *Echites,* p. 76.

\;·]. LYO'NSIA (in memory of Israel Lyons, author of Fasciculus Plantarum circa Cantabrigiam nascentium; and from IIMMD >ir J"»<-|J> U-iiAt i «uuc<iifn« in botany). R. Br. in mem. wern. soc. 1. p. 66. prod. p. 466.

LIN. SYST. *Pentándria, Mono"Kg^mm-* Calyx 5-cleft. Corolla funnel-shaped; with a 5-parted recurved limb; segments of the limb equal-sided, valvate in æstivation; throat and tube with- out scales. Stamens exserted; filaments inserted in the middle of the tube, filiform; anthers sagittate, cohering by their middle to the stigma; with the hind lobes destitute of pollen. Ova- rium 2-celled. Style l« fil»fcn-, iihiii w il* apex; stigma rwbat m n l . llypo^rooua ·rtlweooaw*. CapMW cjli*- d(Kml, «., nrd »»J»r». and a fr«, paralWl ,1m.. i iMBMtairoaa cm buin «».tf«, and adnate placentas.—Shrub twining. it. Lcama oppr· site. Cymes terminal, trichotomous. Flowers small, with bearded limbs. *Lyónsia* differs priortfta /'av ally from *Parsónsia* in the fruit being a capsule.

1 L. STRAMINEA (R. Br. prod. p. 466.) ♄. ◠. G. Native of New South Wales, and Van Diemen's Land.

Straw-coloured Lyonsia. Shru bttr.

Cult. For culture and propagation M« Kc*i»«. p. 76.

XIII THENA'RDIA naiatd br Kaath afi· en <*m* the rhe.. 11 1 >h, n«v». ·jrrn. am»r. 3. p. *0!

LIN. SYST. *Pentándria, Monogynia.* Calyx *imdrm, >f,m«tf*m.* C«lvz · 5-cleft, persistent. Corolla segments of the lim b rijM*l-»*ilrd . throat r»aa*d. 'HUMD' ex- serted, inserted in the base of t U corolla; iwl«n *aa!itu«r, adhering by their ·tddl* to tb» Magma. *>t«na *t,* gtrdca by 5 hypogynous scales. Style filiform; stigma pentagonal, tri- mwwred b a clavate tubercle.—Shrubs twining. Leaves oppo- site. l eduncles interpetiolar, somewhat trichotomously branched. i lowe r. umU llately crowded n laag pwttcrla, bract* the appraraft e of tho »· of J«Witai«i faOrrJawaa. IM genus differs from *Exothostemon* in the corolla . brtag rotal*.

1 T. FLORIBU'NDA (H. B. et Kunth, nov. gen. amer. 3. p. 210. t 240.) leaves ov f nynaa;. araatmatad. J& ous. ♄. ◠. S. N , ,r m the city of Mexic >, Lcav«« fl to 3 inches long. Flowers greenish white.

Bundle-flowered Thenardia. Cit. 1825. Shrub i».

I 1. UMBELLA'TA (Sprengl. MM 1. p. 636.) leaves ovate, acuminated, tomentose beneath; cymes terminal. ♄. ◠. - Native of Cayenne. Apócynum umbellàtum, Aub bl. guian. l p. 275. t. 108. Flowers purplish, on bibracteate pedicels. Calycine segments oblong, obtuse.

Umbellate-flowered Thenardia. Shrub tw.

Cult. l Of M.lmrr tad propagation *nmEckUn,* p. 7*.

XIV. ADE'NUM (Aden is the Arabic name of the tree.) Rœm. et Schultes, syst. 4. p. xxxv. ..iM lit.—Nérium species, Forsk.

LIN. SYST. *Pentándria, Monogýnia.* Calyx 5-parted. Corolla salver-shaped, downy, furnished with 5 villous li inside; segments of the limb roundish. Filaments short, ins in the upper end of the narrower part of the tube; anthers s·fill coWrwg with tbr atyaj ding in a piloa* brwlc at th* apex, length of corolla. Ovaria 2, globose. Style l nfftb ofj ·stigma capitate, bidentate si a(*» side quinquedentate. Hy- pogynous scales none. Throat of corolla naked.—\ shrub, with a soft caudex, referrible to a bulb, of the size of a man's head. Branches thickness of a finger, s AMW aaaalami at ll caudex, attenuated at top; 1 < 1.1..·..» lit»i)< i»r» aajaatt. aiu] of cicatrices. Leaves approx . .atf ai tna* laaa of thr b 3 inches l '·ag, allot , narrowed at the base, mucronate, ve villously tomentose beneath, when young soft on both sur with some rigid bristles in the axils. Corymbs terminal, many- flowered; pedicels short, villous. Anthers yellow, with a brown mark inside.

1 A. OBE'SUM (Rœm. et Schultes, syst. 4. p. 411.) ♄. G. Native of Arabia Felix, on Mount Melhan. Nérium obésum, Forsk. descr. p. 205. Vahl. symb. 2. p. 45. Camerària obèsa, Spreng. 1. p. 6 H.

Fat Ade t»ium - Shrub.

Cult. See *Pachypódium,* p. Tt., |i« culture and propagation.

\ \. VI'NCYNUM (a name adopted by Dioscorides, from ·ɪɛs, *apo,* from, and *κυων κυνος, kyon kynos,* a dog; because ·«« M sup-

posed to kill dogs). R. Br. in twin. wcrn. toe 1. p. 67,—Apócynum species, Lin. and Juss.

"Lnt. •ттт. *Pentándria, Mo.ttgfmia.* Calyx 5-parted. Corolla iarapajiulair ; tube in<'"'<tl ^ acute lerth, »lu<it are op* posite tbe atgiwtiitt of i! throat naked. Stainen* wr* closed l; antbrr* Mjjittatc. cohering > •• >uuma; having j the hidd lobe* w Uvamt. Sty In a! most wanting; atigraa dilated, conical al ton. Iffpogvnou* acalea *&.* Follicle* elettder, dbttnet.—IVrrnmal erect herb* : native* of North A ivrnca and tKe aoulh of Europe. Leave* opposite-, — b m o i l l . I lower. . yuM *•

1 A. AXM< ARMERÒLIUM (Lin. spec. 311. It. Mr. I, c.) leaves obbroui; cymea t-rminat and Utrral; tube of corolla twice as long as the c K.I l. Native of Virg -tnia ami Canada. I'ur*)> ft. user. »rpt. 1. p.. 179. Lam. ill. I. 178. f. 1. Cart, bot. tnaj{. t. X«0.—Bocc. •fa. M. I. 16. f. 3.—Mor. ht»i. 3. p. 609, aect. 15. t. 3. f. 16. I<f«vr» pal. beneath. Corolla* pale red, with darkrr tttijn-«.

FIG. 12.



Androsæmum-leaved DM'-bane. Fl. July, Sept. Clt. Kit, Pl. 1 to 2 feet.

2 A. SIBIRICUM (Lin. spec. 311. R. Br. l. c. p. M.) leaves lanecuUtr, acutr at l both ends, (tfabmua ; cymr* pain« trniftli i '-: 11 of Canada an* Virginia, in fields and woods, where it is rammonlr callrd *Ittdiom hemp.* I flowers yellowish-gr. n, «mj)!, The Indians prepare bt memaof tin* pi nt as we do hmp, and make fishing-nets, twine, bags, l <. of it.

Var. β ; leaves vblong-ova), dotttd with white down be-AMI b ; panicles downy. *%.* II. A. ca»n«binum, Mich v. ft. bor. amer. I, p. 123. I'unti, *A.* amrr. M-pt. I. p. ITU.—Pluk. aim. uls. f. I.

Hemp Dogs'-bane, Kl. July. Sent. Cli -'i.ttoSft.

3 A. n m ubloiM- wmin r, obitiae at il»- ha out i-tju.il in length to tlte corolla. *%,* II Native of Virginia.

Downy Do ifv'.banr. Pl. I to I i feet.

4 A. lir ARACIRÒLIUM (R. Br. in Ait. hort. Wew. cd. *t.* vol. t. p. 74.) leaves oblong, glabrous, mucronate, on very abort prioles, obtuse and somewhat cordat r at id.- baae ; i ymes shorter than the leaves ; calyx about equal in l f.glh to tl e tube of the corolla. ¥. H. Native from New York to V rgiuta, on tbe gravelly shores of rivers. A. Sibiricum, Jacu. hart. J.t. H, Flowers small, white, or reddish.

St. John's-wort-leaved iMaf Don'-bane, Fl. June, July, Clt. 1758. Pl. 1 to 2 feet.

5 A. STRICTUM (R. Br. l. c. p. 68. Ud. B alt. illust. t. leaves ovate-oblong or lanceolate, mucronate, glabrous, obtuse at th I ba*e; r. mes alternate, pedunculate, disposed 'i a trr-m'leJ fiantclf | tut» of corolla exceeding the calyx ; pedicels and l calyxr* tloilif-J wi h powdery down. ¥. H. Native about Astrachan a Lotewsk, in salt marshy deserts, where it was collected by Pallas and Ledebour. A. venètum, Ilieb. fl taur. 1. p. 177. exclusive of the syn. of i ilck and 11 blitz. Vaclrptaa rubra, Sievers, in Pall. fl. nord. beitr. Tltere are * *at« of this species, a broader and a narrower l • «rrd variety,

A VENETUM (Lin. i« . 111. H lt' l •) U-avr oblong. elliptic, Klabrotu, nmcronatr, *omewbat attenuated at the bate ; cyme* paiucled, latrral and terminal ; < aly* about e«|ual in k-ngth to *m* lobr of the corolla *TL* II Name rf OM touth of Euro •(*, t*iat>' aea, ami in the uad along tbe Euxine sea, &c.— I alc k, (IID. *i,* t. 4.—l...b. icon. *311.* f. 1-S- Flow 'rrared.

'or. iJ; leavea narrower; Aowen whitr. Tourn, iml. *y* /ViKfiaw UojrV-banr. ri. June. July. Cli. 16'Ji). Pl. lt ft.

† *Species not so well know* oi fu b *imtrrUd* IN /artr *prcprt genera in the order ; thrif hart bttn plant wish Apocinum by mMtHUkan, but f,tl«,nly do mot* fm>prr/« br/oaf *t'ojt, g* enus.

f A RETICULA'TUM (Lin. «pec. 31 f.) *tem enrdateovale, veiny. gUbrooa. l;. -- S . te of lite East p. N . t. 40. f. 2. (oureiro's plant under this name i , ^ij to have hairy >trm» ; ovate, »..„„„„„ted, shining leave »; B1 \\ry u_ U | , ,,f «_._|| J . — - , 1 awjaaj nowvra, and the *5* fertile ftUmrni* altr fcaWetfraM.

, A. TILIÆRÒLIUM (Lam. dict. 1. p. 214.) st rfl)i »w ««ngi • ninated on long petioles. ½ . ◠. S. Native of the East Indies.—RW I . mal 9. t. 15.— Humph. »ml.. i. i. 17S. f. 1. f l^eavrm gretn on both surfaces, length of petioles. Flowers large, in axillary umbelformed fascicles, sh <•". r tliati tin- 1. aves. I rulU cant annulate, villous inside a species of *Dor* . , M .

Tilia-leaved Apocynum. Shrub tw,

9 A. PANICULA'TUM (Lam. dict. 1. p. 111.) stem twining, shrubby ; leaves ovate-lanceolate, acute, glabrous ; flowers terminal, and axillary, panicled. ½ . ◠. S. Native of Guiana, in roea iittiian. A. At< ori, \ ubl. guian. 1. p. 274. t. 107. Mark of *trtit white. I leaves 3 inches long. Flowers »mall. white, m rorymb* of 3-3 (1«» ers ; with scaly bracteas at the base.

Pan. .)i /r.f-nowrrNl ApoCTMHrj. Shrnti tw. 10 A. VISCI i nut' w (Burm. ind. p. 71.) stem erectish, perenniat ; leaves ovate-oblong ; peduncles lateral, 2-flowered. ½ . S. Native of the East Indies. Ascl)>ia» Javimca angt ifolia, Garcin, herb. Stems reddish. Leave i aeuminalnl. maty l beneath. *Viscid-leaved* I/IaiWI I Apocynum. Pl.

Hi A. CANARIE'NSE (Lam. dict. |. p. ?l V> thrubbv : lea ves ovate, acuminated ; tops of follicles recurved. ½ . G. Native of the Canary islands. Apocyn. arboreac. Canarinse, Elaagni facie, Tourn. p. 92.—Pluk, alm. 33. t. MO. f. 3. Flowers •mall, axillary, attb^ytnoae. I . Ut long.

M U M Mat cvrrwboae. irrminal.

ON oecynum. Shrub.

12 A. COTINIFÒLIUM (Lam. dict. 1. p. 215.) leaves roundish, obtuse, green ; flowers s Native of Java. Flowers campanulate, on bibracteate trichotomous peduncles, which are rather tomentose at top.

Rose-leaved Apocynum. Shrub.

13 A. AGGLOMERA'TUM (Poir. dict. suppl . 1. p. *i* 07.) stem climbing ; leaves elliptic, obtuse, mucronate ; flowers cymose, glomerate ; corolla with • p*loae tbttw ½ . ◠. S. Native of S, I,.,,,,,,, go. Le are* tt >e»th and hairy j the veins confluent at the martin*, talyone MgmeMa o« ate, obtuse, white. •mmbtajMHi.

Glomerate-flowered Apocynum. Shrub cl.

' ' A. IUVE'STRE (Lour. coch. p. 167.) .ii m (Mimng leaves <i»mtf. |»l<»r ; tairrtv * rticbotOMMaa. axillary. ½ . ◠. S. Native of Cochinchina, in fields. Branches ' i ed, hairy. Root large, Aeaby, vod vided. Flowers small, greeni ow. Cof oila rarr.|.. ||j |K ^ , , * , ,,. aajbaj i ulate. combined. Anthers *, arale* *VM*ined, adbeftng to tbe baa*) of tbe nn lartuni i and *S* sterile, erect filaments. S tIM wMaile, e«wa\e, btAd. I ollicles

posed to kill dog»). B. Hr. in mem. wem. aoo l. p. 67—

Apócynum species, Lin. and Juss.

Lin. sy»T. *}'<*l<tm.lr,a, Momtgymia.* Calyx 5-parted. Corolla campanulate; tube inclosing *6* acuir tcilh, (t)nrti an opposite tl.i »« ittm 111* Of II" II"[1]; throat naked. St• men* inclosed ; a•thers sagittate, cohering by the middle •o the stigma ; having il>e hind lobe* « ithout pollen. Ovaria 2. Sty lea almoat wanting ; itigmt i dilated, conical at top. scales 5. Follicles slender, distinct.—Perennial erect hert•• ; nalivr* of North America and the »• south of Europe. Le IVM OppMltr, membranous. Flowers cymose.

FIG. 12.



1 \. umaoamvoi •pec. 111. R. Br. l. c.) leaves ovate, glabrous; cymes terminal and lateral; tube of corolla twice aa long aa the ca lyx. "U. II. Native of Virginia and Canada. Purth. fl. W er. sept. 1. p. 179. Urn. ill t. 176. f. I. i rt. IMll . mag. I. 280.—Boec. sic. 35. t. 16. r. 3.—Mor. hist. 3. p. 609. sect. 15. t. 3. f. 16. Leaves pale beneath. Corolla* pate red, with darker stri; *Andr <ti.rmum-t«tr*J U^*'- bane. Fl. July, Sept. Clt. 16C Pl. 1 mil- et.

2 \. CANNA'BINUM (Lin. spec. 311. l |:r l. c. p. *CH.* i leaves i lance*' late, acute at both ends, glabrous ; cymes pm..l,,l: calyx equ 1 Hl lcll^l to the tube of the corolla. ¥. II. S Native of Canada ati. Virginia, in fl da and » oods, where it is commonly callrd *Indian hemp,* l'iow> i ndian* prrpare the •trtna of this plant aa we do hemp, and make fishing-nets, twine, bags, &c. of it.

Var. β ; leaves oblong-oval, cl itml with a hite do <n beneath ; pamrl. \. V. II. A. can in.binum, Michx. fl. bor. amer. l. p. l It, I'ur*li, fl. a> er. sept. |. p. 1 rt.—Pluk. alm. t. 13. f. 1.

Hemp Dogs'-bane. l l. July, Sept. Cil. IC93. l'l.<(o3(\. 3 A. PUBE'SCENS (R. Br. l. c.) leaves ov «ie-obl<>i g, mucronate, downy on both surf ion, U » well as the cymes; calyx about e obiuae at i)«r ba> l>ial in length to tba corolla. *V* M. Native of Virginia.

Downy Dogs'-bane. Pl. 1 in t feet.

4 A. HYPERICIFO'LIUM (R. Br. in Ait. h Oft. krw. «d. t. vol. t. p. 74.) leaves oblon (. glabrou*. mwroBBtr, on very abort petioles, obtuse and somewhat cor Utr at tlw baar ; cymes shorter than the leaves; calyx about equal in length to the tube of the corolla. ¥. M Native from New York to Virgini». oa tbt gravelly .li.ir. of rivers. A. Sib "icua, Jact|. bon. J.t. flfl. Flowers small, white, or reddish.

St. John's-wort-leaved Dogs'-bane. Fl. June, July. Clt. 1758. Pl. 1 to 2 feet.

* A STRIA'CUM (R. Br. l. c. p. 68. Led. fl. alt. illust. t. 2 *0.) leaves ovate-oblong or lanceolate, mucronate, glabrous, obtuse at tKe bate: cjiwt a ternate, pedunculate, disposed in a terminal panicle ; tube of corolla <-xr«««diag the calrx . pr<) cicels and calyxes. rltitl.fl M.II. |» »•!. i\ c!..wn. 1/ II Sainrabovl Astrachan and Lotewsk, in •alt ma i shy deserts, where it waa collected by P lla« aitil l^debon l. venètum, Hull, fl taur. 1. p. 177. exclusive of the syn. of Falck and Hablitz. Asclèpias rùbra, Sievers, in l all. fl. nord. beitr. Theft are ' varieties of this species, a broader and • Ml rower 1« i ved var i iy.

Siberian Do ^••banr. Pt * r. et.

* * VERE'TUM (Lin. per. ail H Br, l r.lleavn oblongvol. IV.

rlltpt.r, -labroua. murronatr, »oti»«liat i ttenuated at the base ; cyme* panicUdt laural and terminal . calyx IMMM Maa in length to the tu Hr of the corolla *%. W* Native of the south of the Adriat Baropr, ulai. . act, and tn ihr aand aJonff (In- Euxine sea, &c.—Falck, itin. 2. t. • — l-«ib. icon. 37t. f. 1-t. Flowers red.

Var. β ; IMVW narr- wrr« « hr • Tourn. inst. p. 92. *Venetian* Dogs'-bane. • l .' .... Jt.lv. Ck. Itttb l'l. Kft.

t S,

taut A. Miting; lcar«a cordate-ovate, ver >jr. glab». ii»n<in. iit. o us. ¥. ◠. S. Native of the East Indies. Roy. bare bain- Mmna: *oxmlv,* at us crùdum, Rumph. amb. 5. p. 75. t. 40. f. 2. Loureiro's plant under this name is said to be amall flntrrra, and ll uminated, shining leaves; axillary umbels o r 5 fertile filaments alternating with sterile ones. Pe rbap* a • species of *Ichnocdrpus.*

Reticulated leaved Apocy •Htm. Bbrubtw.

8 A. TILIERÒLIUM (Lam. dict. 1. p. 214.) st rtilt fMiniitK-, suffruticose; leaves roundish-cordate, acuminated. on long orioles. ¥. ◠. S. Native of the East Indies.—Rheed. m al. *9.* t. 15.—Rumph. amb. 5. t. 175. f. 2.? Leaves green on both surfaces, length of petioles. l lowers large, in uillai y umbelformed fascicl *rt,* alionrr (ban UM In ves. l .rolla carapat ulate, villous inside. Pe ' Ha|M a • j species of *Dai* HIM,

Tili d Apocynum. Shrub tw.

9 K. i RICULA'TUM (Lam. dict. 1. p. 212.) stem Mrimm shrubby ; le IVM ovat< lanceolate, acute, glabrous ; flowers terminal, and axillary, panicled. ¥. ◠. S. Native of Guiana, in meadows about Sinemari. f. coöci, Aubl. guian. 1. p. 274. I.)<C IJarl of stem white. Leaves 3 inches long. Flowers • tual , white, in cor vitibi of *$-i* l!<i««:» . Mit scaly bract« ai at the base.

Panicled-flowered Apocynum. IT) Til tw.

lo A. iMxrt nial ; leaves ovate-oblong; peduncles lateral, 2-flowered. ¥. S. Native of the East Indies. Asclèpias Javánica angustifòlia, Garcin, herb. Stems reddish. Leaves acuminated, rusty beneath.

Vinca-flowered Apocynum. Pl.

1l A. CANARIE'NSE (Lam. dict. 1. p. 2 i '..) ahrabby; leaves ovate, acuminated ; tops of follicles recurved. ¥. G. Native of the Canarjr islands. Apryn. arbor<r»r (.itt.it» n» facie, Tourn. p. *91.* —Pluk. alm. 35. t. 260. f. 3. Flowers small, axillary, sub-cymose. l ollicles long.

12 A. COTINIFÒLIUM (Lam. dict. 1. p. 215.) leaves roundish, obtiMa, g r u m flower* Mnall, corymbuac. - erminal. ¥. S. Native of Java. Flowers campanulate, on bibracteate trichotomous peduncles, which are rather tomentose at top.

Cotinus-leaved Apocynum. Shrub.

13 A. AGGLOMERA'TUM (Poir. dict. suppl. 1. p. 407.) stem • M M a g l l«.i»n cllipi,,. ul.uiM. ti.nc t.., ,i, . ll.,«. t. , \m<»< *t* .... '"" . .""..'.' ' . r * * -'.... ' '. "~ S. Nai.»t "l glomerate. Leaves downy beneath and hairy ; the veins • O W I M M at ibr margma. St. Domingo. Calycine segments ovate, obtuse, white, membranous, ciliated.

Glomerate-flowered Apocynum. Shrub cl.

14 A. JUVE'NTAS (Lour. coch. p. 167.) stem twining ; leaves ovate, pilose ; racemes dichotomous, axillary. ¥ ◠. S. Native of Cochinchina, in fields. Branches red, hairy. Root large, fleshy, undivided. Flowers small, greenish yellow. Corolla campanulate. Hypogynous scales 5, combined. Anthers 5, scale-formed, adhering to the base of the nectarium ; and 5 sterile, erect filaments. Stigma sessile, concave, bifid. Follicles

•e phyaiciana fancy ilte root* of thia plant to refresh the animal spirits to such a tlcfjtec a* by a long uaeof it to endow old i,;c * itb all the »t relict h and vigour of youth,

Youthful Apocy um. Shrub tw.

15 A. scabrum (Mill. dict. •<*u. S.)* leave* oblong, cordate, stiff; flowers lateral; stem • frutieo*.. twining. S. Native about Carthage ri \. acamlen* l»lin cilri, idu^uu roacu-Ut>-. Plum. cat. no. -• Leave* quite glabroua. Raceme* aliort. 1 IOVM

Climbing Apocynum Shrub. • tw.

16 A. pubescens (Mill. diet. no. 9.) stem fruticose, tcandent; ivc* ovate, I *yvw** lateral; Hoi >, Urjjr, with a very long tube, h , v(. S. Native <>*i* Carthage**. Leave* tnm ronate. I ollielM cooiprewed, marginated on one aide.

< ri'ti-li-a\nl Apocynutn. Shrub cl.

17 A. cordifolium (Mill. diet. no. 10.) leave* oblong-cordate, mitrronatr, *r«sile; flower* lateral; Menu acandent. f; . , S. Native of Vera C -»/ llouat. maa. fig. pi. no. I. t. 41. I. *i.* Flowers large, yellow. Probably a species of *Echites*.

Cordate-leaved Apocynum. Shrub cl.

18 A. villosum (Mill. diet. no. 11.) leave• cordate, gUbfoaw; flowen vtllotu, aeuile, longrr than t' i] atra acaw! S. Native of Vera Cruz. Hou*L m**. pi. t. I lowers large, villous, yell *m.* I <illicit • IUIHK], anjrui ar. I Perhaps a ip species of *Echites*.

Villous Apocynum. Shrub cl.

Cult. Common garden soil jttawer* well for the appbra j and they are easily increased by sucker 1 from the rout, whirh in most of the species ri M in great nu> i«n of tlw rarer k 1 m!•• may br grown in a peal border with greater success.

XV). C1YPTOI n<rtr«, *it^,h,.* to hiW. and

VJ*.(,. /<; 'ice 10 the «alr* ID the lube of the corolla), i tfjl.

•^ *lan.it hi, M-m\fytua.* Co«o)la funiwl^tltaprd ; tube inclosing 5 obtuse, wedge-shaped scales. which •IIrr»«Ir with tin* •rgtnrnt* of lac Kaab throat naked. Stamen* inclosed, inserted in the bottom of the tube; anthers sagittate. Ovaria 2. •>i)!r wanting; iti^nva .|,latr<l, .i-«ulrfi. ending in a conical point. Il ypogynous scale- I -Ilir Iri lancrolatr, horizontal.—Shrubs twining. 1 leaves opposite, •>(a diflerent colour beneath, and veiny. Corymbs interpetiolar, almost sessile, very short.

1 C. Buchanani (Rœm. et Schultes, syst. 4. p. 409.) flowers m 1 lid .-, aliiKHt •*» sile. S. Native of the East Indies. \erium reticulàtum, Roxb. fl. ind. 2. p. 9. C. ^ightiàna, Wall. cat. no. 44•'. jn.l » reticulàtum, Wall. cat. 1640. are only different states of *C. Buchanani.*

2 C. tinctoria (Wall. cat. no. 1639.) leaves oblong, mucronate, glaucous beneath, somewhat cordate at the base; peduncles terminal, panicled. S. Native of Silh *m* and Goalpara. Canéttia tenélla, Hamilt. mss.

Elegant Cryptolepis. Shrub tw.

Cult. See *Echites*, p. 76, for culture and propagation.

XVII. EXOTHOSTEMON (ἔξωθεν, *exothe*n, to rotrude, and στήμων, *stemon*, a stamen; in reference to the exserted KMMUi).-BcbiU» •pro Kumb, fte. and

M>iiir<ti. .l/oKfifyaM. C a(y» 4-| a db M O M aide and on die a ber. inxni eiwrrted; ton, | <le ; anther* oblong or M H ^ - H K H , > 2'lobed at the baae, colwnnjt with the stigma. Ovaria i girded by *i* bypogvooua, • ftWntlrr, tarulote.—Twining ahruba, na! nca. Leave* i>ppo*ite, with iotefpetiola • I -|irtioUr. ruatno*. yellow. Thia getuM eoMC* near to *t**i*6*m** *or* fwiifum, Meyer.

1 t. akAcn* TIM; leave* eltiptir, nmcronately cuspidate, cordate, downy above, bat caaeacaat from tocnet • bracteaa Urge, ovate, acwnaiad, colowred, much *Wg*r i!t«i the calyx. S. Native of New Granada, near Mariquita, in •In- trtnDrraic rrgtona of the mo> bfnlr;>t4, II. lt. rt kuuiti, txi*. (•«•«. ari.rr. 3. p. J17. about i, mbtdate, gtabrou*. Mtuatrd at tbe baac of tbe iMrn- of t«rh Wat. 'Calycine segments lanceolate; with a •ubalaie point, with ovata deJlotd erale* aoatde. Corottwi eoloaired, hairy outaide.

Ih,ut.,itt Kxmhoateaano. Fl. June.

>hlong-conUt». u< above. cantacent from abort hwlike totnentwm bror th ; bracteas UncrtJat. , • •.,.,., , igth Ui the caJyx. t «^|J : «da and the mm* of ~ i molttaanna, II |: < : Kuolti. aov, jnm. anwf. p. 118. Leave* without gland* at the baw ' Calycaae oaattd, ftirniahed each with an oval*, f "ty otttatoV.

uamauoei. H. July. Shrub tw.

totbed with adptraard hMr* »b«> e down beneath i bracira* f.*nh to the c»J> r««sr San Ik.rja; and «f the ialand Panwnanu te* wacro|il' aaner. a. n. 111. Kchlta* MMUII*. Wdld. heib. as rU»<< t p. JM tHau u»woeiaa-ob*ona> auwwiiii each with a acale inaioV. Leave* 5 wrfce* long and :\ broad.

>ihga«eatoo. i a».

ive* oblong laacealaW: aunvnoi one* Ian* bractea* lanreobjia-wabidale. •!•• m fc cel»; ca' an >' Atwte tchite* grici *h.* nav, gtaw aawt

L I .mil at Uw

.-lab*inu IWIItHM.

•1Mt !

i E. WKUHIH; Wave* nblong. acaaBMaUcd, rordat*. glabrwna above, and hairy beneatli. brataiaa laaear anbnlata, maMMe . • V I H P V WWvV,JlWm V I M « | VKBaBaBaBaBaBaBaBaBH/ VaKaaVaBTIIPaV VnWal P P W • «W asfnv i, tb* l . . . Hit. RrAitaa II. ll rt Kantb. a»»v. gen. aawr. J. p. tit. l*a«r» I| MeWa hwg, farawbW *>itk viand* mwlr w the baaa,

f \-'.*n* Narob t«

4 I Jtvirt ••> t leavr* •!ti(HM--nUong> aftwrt* n^aW^avd at tfcfc** tkBka^r rTa^aM^laaW^aaW akaWnvek 9J^M4

• I t ai I 1

r. 9. p. KiO. Lea* incbca lonji; with tbr ttliml* at the base hardly visible. Spike* altmnl aewilr,)i»lf a foot long. Flowers sessile. Coro lit tflalnuu*. wiih a v I «n«l a yellow It:]i«r- ticularly from the rest in the flower- IH-IIIJ it(»jxiw il III U-riti spikes, instead of interpetiolar racemes.

Javita E k.i'xwMMM. I I. Juiw Slirub tw.

? E. RALVDOCUM; leaves iJong of oMonfrlinw, acute at both ends, glabrous; flowers 2 .. t.tfctber. trnmnal. calycine ^pnrnu obtofi«. aeutr. lj . ~. «. N< _o J w p , rts of America, on the M'a.borr I«lud«M. Vahl. eclog. 2. p. 19. t. 5. 11 B. et Kunth, nov. gen. amer. 3. p. 221. Leaves 2 or 2½ inches long, with out any glawU ai tbr base. Corollas white, glabrous outside.

Marsh Exothostemon. Fl. March. >rub l«r.

Cult. For culture and propagation see *Echites*, p. *70.*

XVIII. HÆN TYON (from αἷμα, *haima*, blood, and δίκτυον, *dictyon*, a net; in reference to the veins and nerves of the leaves being red). I .nil. in hort. iram. *6.*] 71. Echites spec nd Tussac.

L*x. iV«T. f *ntiadria, Monogynia.* Corolla salver-shaped; segments reflexed, equal, dilated; thro it of the tube RiniiMiwl with 5 inclosed scales. Stamens inclo M-J ; ™tlMT. «gitta.e. cohering by their mid !lo lo the WBM. O»nat« filiform; stigma capitate. fymraa gland* 3, aliematmtt with the calycine segments.—Twining »lirnl)t, i leaves, and axillary racemes of flowers.

1 II. VENOSUM (Lindl. l. c.) leaves lanceolate, glal rou*. a little blistered, and beautifully traversed by crimson veins; racemes drooping. ♄ .S. Native of St. Vincent. Echites nötans, Sims, bot. mag. 2473. Echites sanguinolenta, Tussac. fl. ant. Flowers of a yellow green colour, pale in the center.

Veined-leaved Hæmadictyon. II j.. ne, Aug. Cl. 1821. Shrul tw.

t H. RTHI- ,*r, t>lWr ovate, <W i—leji ud I I Jl- i i i Mil. n

It Il Icavn elliptic, glabrous; racemes many-flowered: having the peduncles articulated; teeth of calyx acute. ♄ . ◠. S. Native of the Antilles, and St. Domingo. Echites circinàli , Jacq. Swartz. prod. *it.* it AS! I ula...! H H M Md Hunt iliroai i alyv ai«l o>n lla velvety outside.

Circinal Hæmadictyon. Shrub tw.

C nil. I or culture and propagation see *Echites*, j» i il.

XIX. CERCOCO ; \ rran . "<t. i *r. a)* U>p of tli* ami V\ ,11. mi. *no* 1623.

LIN. SYST. *Pentándria, Monogýnia.* Calyx short, 5-toothed. Corolla salver-shaped; with a terete tube and a 5-lobed spreading limb. Stamens inclosed. Follicles 2, divaricate, horizontal, large, 9 inches long, acuminated, 2-valved, many-seeded. Wb lanceolate, tapering to the top, where it ends in a long, stipitate tuft of white hairs.—Branches warted. Leaves opposite, lr. vl B. btoua, oblong, mi minated. Panicles corymbose, furnished «»ti many opposite, ovate ute small bracteas.

1 t SINGAPORIA'NA (WA Mb DO, 1083). ♄, S. Native of the East Indies.

Singapore Cercocoma. Shrub.

Cult. For culture aad propagation <•

XX. PRESTONIA (n ,tnrd aft. i l'rct..', M. D., a correspondent of Ray; and styled by him "Eruditissimus vir, et Curiosissimus stirpium Observator." Many of his observations, chiefly on the more minute plants, occur in Ray's "Methodus." Blair also mentions him as an ingenious and thodu« ctrirftdau. -l>rrt bob r. l. j». <«. II 1» et Kunth, nov. gen. amer. 3. p. 221.

LIN. SYST. *Pentándria, Monogýnia.* Calyx. .'-|H»rtr<l Co- n>lla u)i er-shaped; throat crowned with an undivided annular tube, and 5 scales, which alternate with the segments of the lltnti. \ others semi-exserted, sagittate, cohering by their middle to th if? stigma; with the hind lobes destitute of pollen. Ovaria 2. Style 1, filiform, dilated at top; stigma turbinate: with a narrower point. Hypogynous scales 5, distinct or joined. Foll nl<-» like ibuac of / chites.—Twining shrubs. Leaves opposite. Corymbs or racemes crowded, interpetiolar. Calyx foliaceous. ha?itttf il<c M M M I I fbraialwd racn wuh a M at Uie baa* , p ^ ^ OSA (R. Br. l. c. p. 70.) tomentose; corymbs crowded; hypogynous scales combined into an urceolus. ♄. ◠. S. Native of Brazil, near Rio Janeiro, where it was collected by Sir Joseph Banks. Flowers large, yellow.

Tomentose Prestonia. Shrub tw.

> P. miLi li, nor. K« 1. p. f II. but clothed with soft canescent down beneath; flowers racemose; hypogyn s free. ♄ . ◠. S. Native on the banks of the i iver Amazon, near Tomependa, in the province of Jaen de Bracamoros. Flowe yellow: hairy, ventricose KMM «cal. at the lia'M, ami dowhy.

Soft Prestonia. , , A ng. Shrub tw.

3 P. GLABRA'TA (, ll. et Kunth, nov. gen. ' a ovate-oblong, short-acuminated, cordate, glabrous; flowers racemos*' ; hypogynous scales free. ♄ . ◠. S. Native of Quito, near Guayaquil, on the shore of the Pacific Ocean. Corollas yellow, size of those of Vinca rósea. Pedicels hairy.

Glabrous Prestonia. Fl. Feb. Shrub tw.

4 P. HIRSU'TA; leaves oblong-oval, acuminated, villous beneath; flowers racemose; hypogynous scales free. ♄ . ◠. S. Native of Peru, in forests. Echites hirsúta, Ruiz et Pav. fl. per. 2. p. 19. t. 156. Glands one or two > •(tin II, e of each)«>(C alycine segments acute in the flowering state, but blunt in the fruiting state. Corollas yellow.

Hairy Prestonia. Shrub tw.

5 P. PERUVIA'NA (Spreng. syst. 1. p. 637.) l W es roundish, cordate, acuminated, tomentose, glandulíferous; peduncles racemose. ♄. ◠. S. Native of Peru, in woods. Echites glandulósa, Ruiz et Pav. fl. per. 2. p. 19. t. 135. Stems bearing glands at the joints, in the recesses at the base of the leaves. awl along the petioles and stipulas. Leaves large, white beneath, with red or purplish veins. Pedicels reflexed. Corollas large, yellow. Perhaps a species of *Hæmadictyon*.

Peruvian Prestonia. Shrub tw.

6 P. QUINQUANGULA'RIS (Spreng. syst. 1. p. 637.) leaves obovate or oblong-ovate, acuminated; peduncles racemose, CMMfwly S-fl- wered; calycine segments with reflexed tops. ♄. ◠. S. Native of South America, ·Ml tkr We I Echites quinquangularis, Jacq. amer. 22. t. 25. ed. pict. t. 32. IMBM scabrous. Leaves 3 inches long. Corolla large, green, »uh a Il llv«i»h limb; ami fcafMaf *I of UK tube pen- M t

rambling amoog btuhes. Branche* bctpntikl. J «ith whita tubercle*, leaves ovalc, acute. Corolla red, ending in long tail each.

Sormmaa- St/ophanuW PL May, Ju. Clt. i««. Shrub rambling.

i' «. i>c*r i ill.) leave* o j »>• 3 in a whorl j Aowcn glomerate d lateral, nung atirr ihe leave* have fallen. rj. & *r»* Leone, by the am tide. We have «*n tint ipec*e* growing by the acn aide, near Cape Shilling, where it form* a butli, about 8 or ft feel high, covered with blouoma, before the leave* riae. Flower* red and white. Very nearly allied to *S. mimtmtiim*. but the atcma are erect, and the corolla* Ina spreadine.

*Lm*rcl trmtrd* Strot^ianthu*. Shrub G to 8 feet.

C. I. c. Dei I'. L«>) branche* dicbotomous; Irint elliptic-oblong, slit at both end*, glabroua, mucronatrlv acuminated | corolla fiitmt-t-ahapctl ; laiU of Mgiainu corolla *t* it>che* long; *u.* • corolla curled.

FIG. 13.



Nerium cao«l. p. &&. l-lrhitr* cautiaia, I mant. *t,l* [turn. ti. Nerium cao«l. ind. *t,* p. S. I Cany, bort. beng- p. 20. Sterna asrmentow, bcaprinkied with white tubere I-*. Corolla* | eltowi*h in t)iii rouniry, but are aatd to be n d in their native country, (f. 13.)

Far. β, rotundàtus (Pers. ench. 1. p. M9.) leave* oratv nMtndiih. K . S, Native of tbr Eaal Indie*. N niia cauda* tum. Ijun, diet. 3. p. I.'•»,

.{(1-IW.J .Str.'phatuhu*. FL Feb. March. CIt. *lilt,* Shrub • I feet.

I'IVIIM :]. cat. mi. I04X.) branche* and pcdu cle« dtcbotoreou*; leave* LancooUie or oblong-lanceolate, acumi iird, |{Ubroua. pale benaath ; flown small, with short segments. •>< u . 8. Native .ail

Divaricate -iropti anthus. Shrub cl.

5 S. JACKIA'NUS (Wall. rat. no. tdU.) leave* oblong-laseeolate, ilowny beneath • hile young; peduncles short, axillary, dichotoinou*; corolla campar. *i.* S. Natue of I*enaitg< Folnde* very long,

Juri'i Strophanthu*. Shrub.

0 8. 'CHINE MM] branchr u-hotoaou*i leaves nearly *•*&*-, ovate>lance»late, gtabrou* j pedunck* terminal, few->rH-d. becoming I teral, < in ibr i rks of the branches; •»*»• of the aegment* of the corolla enaiforcn, »un.. the haite of ihe tube. rj . 1. Native of China. Nèrium Chioe. is, Hunter, in R b. H. ind. f. p. ». S. divérgens, Grah m f 8, dichotorao , Ker. t»*. rrg. 4«» t Di Roxburgh cuukl not °nd any •<»!<

Chinese Strophanthus. Shrub erect.

7 S.? SCA'NDENS (Rœm. et Schultes, syst. 4. p. 4 1 *.) *lrm. ••''•ndeni i pedan cles terminal, many-flowered; leave* ovate-oblong, a little actimn ated, glabrous I •••*I** «f the krganeata of •be corolla !M . S. Native of Cochinchin I, amtM^r bo»li«B. Nrrira Trinrliwa. Low- coch. p. 116. Calyx tube iar, with fleshy, *rtt** argmrni*. Corolla funnrl-»h»|ml. having tbt lower part of the tube rjhndmal. and tb» aupetwr pail urceolat>, white; limb r«l, having ihc aefmeota long-linear i rrpand. Corona of Uie tube of many acute aegmenla; amber* ending in a long, Uirrad-like tail, each. Follicle* thick, ubtu*e. honaonul.

Climbing Strophanthus. ••*tu\>* oL

8 S. uvaamrLoai» (Spreng. syst. 1. p. 637.) scandent: l«ir*a ovalr, acn minated, glabrous; alternate axils umbelliferoui. I? . v. O, N« ive of China, in small isl m^, w »r Canton. Anocynum al' rnifiorum, Lour. coch. 168. | lower, i»|, Corolla rampaou' i acale*.

Alternate-flowered Strophanthus. v • I cl.

\ *t.* .fnlArrt *kujmi, mnttr.*

W* >' I l. c. Desf. I c. p. *!*.; romlla* funnel-••liij.. long, aninunawdargmmo ; anili ers acute. b . S. Naii. >ra Leon* Shrub hispid, almost with the habit of a *JttttiiW. I,,* aves sessile, ovate-oblong. Flowers fascicular, on peduncles, "huh a> repeatedly HKUUUMnou*. Corollas red: having the tails of the segments 7 inches long.

Iit:* Strophanthus. Shrub.

Cult. Shrubs of easy culture. A mixture of peat, loam, and •and, u (IH best soil for them; and cuttings strike root readily m *and, under • hand glass, in heat. The species are worth cultivating for the singularity aa «rll a* beauty'. of their flowers.

Tribe II.

WRIGHTIEÆ. Fruit of 2 follicles l. Tun of b*u. at ,),«• lower end of the seed . or at that end contrary to the umbilicus. Embryo with involute cotyledons.

\ \ I\. \\I i l (. 1 1 1 I \ i named after the late William Wright, M.I) F.R.S, F.L.S. and Edinb., whose ardour in the pursuit of bot:,: ical knowledge, even while engaged in extensive medical practice in the island of J t«a>ca. ba« lung ttil itled him to this H. Br. in mem. wcrn. M». mark of distinction.) Nèrium species, l in.

LIN. SYST. *Pentándria, Monogynia.* Calyx 5-parted. Corolla salver-shaped; throat crowned by 10 divided scales. Stamens ex 'irifd ; liLaiiKi ts inserted in the throat; anthers sagittate, cohering by their mid !!*• t> IIK> stigma. Style 1, filiform, dil »i<<! at lop | t Orsha I, ojirnng! •• u-d at the haa« of the calyx, outside the corolla. Follicles tlitimrt or combui. d, with adnate placentas.—Erect shrubs, or •mail tr. es. Le MM oji). site. Corymbs almost terminal. Flow <rr**lutr. Albui en none. Cotyledons longitudinally in- volu te, white,),ut immcranj in bot wai er they become rose-colour d

I W. a motti i !. Br. l. c. p. 74.) leaves obovate-oblong, ahortskcu'i minated, glabrous; corymbs nearly terminal; tnbr of corolla 6 times longer than the calyx; follicles distinct. ♄. S. Native of Ceylon. Nèrium antidysentéricum, Lin. spec. ed. :d. p. S06. : coch. p. 116.—Plenck. offic. t. 119. —Burm. zeyl. 167. t. 77. I tgaPtU." ed. mal. 1. p. 83. t. 47. ? ' ' . . « ' ' ! ' » ' i - u l r i l , I > , m i i . f a . ' . ' species of Jamaican. The wo O.l b. .n.. - white, of a fine grain, .. T useful for the turner, and to make cabinets, and other elegant furniture. The bark is reputed to be a specific in dysentery, and most complaints of the bowels, and is the Cortex bark of the Materia Medica.

Anti-dysenteric Wrightia. Clt. 1778. Shrub I i> 10 ▷ et.

t W / (R. Br. l. c.) leaves oblong-lance, sub-acuminated, gUbroti* ; cotynibk la-rminal | tube of corolla 4-5 times longer than the calyx; follicles distinct. ♄. S. Native of Ceylon. Nèrium Zeylánicum, Lin. amœn. acad. 4. p. 309. Ilium »< zeyl. 23. t. 12. f. 2. W. divaricàta, Herb. *mmii,* \ ery nearly allied to I M rf. *H*i,tl₉,,Ht,* frica, from which it differs, i | th» figure of the leaves rather smaller.

C*WM Wr^htia. Shrub < to 10 f. •.

3 W. TIKCTOKU It. *Wt.* l. e.) k»*p« elliptic-lanceolate, and rate-oblong, acuminated, glabrout; |> mul; tirancbea id i-nrMnb. ,ln.ir...i!. tut* • ii>rulb twiea longer tbafi wM t united at the ajx lli, East Indies. I l«it r.' '".1 Srrium ' l>••..rrim. 11. mil- *, p.' I '•.«^r:ttit, win i and a lull /»jrrr'* Wnghli*. Kl. Ju :u. i llfeat.

4 W. MUSMOU (Wall. pi. rar. ovate, acnmtnaud. clothed with hoar MBta, M well aa the branchLrtai rorymba • rect; tube of co rolla twic* longer than the Okrtu downy; follicl i parallrl. bewt with inany rallou* din*, rot' combined into a clavate cylindrical fruit. ♄. S. Native of Nipaul, on mountains, in the Great Valle j ; and of Kamnon. Habit of *W.* It*f,m.; Corolli downy ominlc. yrllow, liagvd with

Very soft Wrightia. Shrub.

5 W. Ro ••it; laavttotal-lanteolate; corymt termina) kwar flact i-l: calvx ami eorulUa i Ind**. W. tinctòria, Roth. nov. »p«r. TabernnrtnontaM divarinta. Roth, f and probably Khe*d. maJ. 1. t. 46. ami

Roth's Wrightia. Shrub 10 to 15 feet.

6 W. BU'BIA (Spreng. syst. I. p. 63 ' leaves ovate-lanceolate, some »list undulated; >rona in the throat of the ajaJh 10-cleft, alternate segments shorter and obtuse; peduncles few-flowered in the forks of the branches. ♄. S. Native of ,hf East Indies. Camerària dùbia, Hook. bot. mag. t. *HU.* Lodd. bot. cab. 404 Flowers large, scarlet. Segments of corolla lanceolate, acuminated, yellow beneath.

Wrightia. Shrub or tree.

7 W. coccl'sxa (Sims, bot. mag. *u* «».'«. U«ld. bot. cab. 894. « all. cat. no. 1626.) leaves >!na»M tr< ile, ovate-oblong; flowers 3-4 together, terminal ; corona in th* thrvtu j-lobsw; lobes crenulated ; follicles distinct, rough ; tiaa of aotnUa •hort. ♄. S. Native of Silbet. Nèrium occtawum, Ko*t. A. ind. f. p. 2. Flowers large, dull red. Coro na acarWt. A U>ir* t> tree, Wood white, remarkably light, Hl tirwi. and much uard by turnera, to mak* I«UH«. &c.

flowtrrd Wrtuhtta. Kl. Jttne. CU.lt! *U* arum IUMWI, and are, aa »rll a* th. •reft i tube of the corolla a litilv longer than the calyx; follicl« eobanttj. ♄. S. Native of New Holland, in Arnhem's Land, on tbc north eoatt; and the I*land <>! a* well at of Java, amung bwabc*. /..mm. reis. xi. 2. liilt. p. 132. with a % ire. Roh. noT. . pec. W. tor ,m«a, Rorm. et Schultes, syst. 4. p. 414. Fl *mwn* wlutr. Tbt tab* *at* ih* corolt. » dwcriUd both by ltl»m» and Koth. U> br >..c«M long a* the cai

Downy Wrightia. Shrub.

9 W. TOMENTÒSA (R. Br. l. c. p. 75.) leaves elliptic-oblong, IM I Ir«*M oblong. ir—JMiiil. dowvy ; corymbs terminal, small; tube of corolla hmgrr than th* ralyv , corona fleshy, lacerated into obtuse segments ; follicles scabrous; distinct. ♄. S. Native of the Circars. Nèrium tomentòsum, Koxb. *A.* ind. « Cala, Rbr*d. mal. 9. i

Braw^hra downy. UM long H—t. *m* o.rolla, and oranf»-coloHnd corona. FoUMaaa ft.u indiM fcW dw jrcllow J M M - M |4arrt when H O M M , dilwl*d with v«dapr*uy good y*0o>

H B ^ ^ ^ *^^^*^*rjajj> ^*^^a»^a»^BF^n^*^^B^ HVVUBMB^H |

longer than iW calr* t eotom of & b.fi.1 foll.il.-. *%*<Men* wi> um J»MC fl-iod. S.

L. 7, B M A ombrawMM adf k coniain* a tju ty of nbnMa outtrf, couni •••»» ittbrt htmj>. ind. b) ^ ia a te ilw rrmui • bark, and c)«an*inf dw fibres, many, i(not the «bolr, of tbe 6sh were killed : k n n ibc specific name.

Fish-killing Wrightia. Shrub rambling.

CwU, For culture and propagation see *Strophánthus*, p. 85.

XXV. KIBATA'LIA (Kibatala is the aatne of the tree in Java.) Hasséltia, Blum. bijdr. p. 1047, bu not of H. B. et Kunth.

Lin. syst. *Pentándria.* .Vonajrjr'nM Calyx 5-parted, yet- fuanrn C.f.ilU I .» *i* tb» tabr . — • • • M tha midflk. ••.. throat aod ihi- aftrJ, Mw l» ai of the corolla ; anUwra largr, u»p», «» ilw UV ndWrtna; to th**W«gm». (. a flrahy ttog. ctongatMl, «i T'd' : at the lower • xtremity, with a stipitate tuft of hairs. Embryo involute —\ beautiful tree ; with opposite, oval leaves, »(,.,!. an ...Jt.**! »t bodi ">'• .'. . . .. <•• |>*'" »nd a 111ik- ditwny I* yrlUrw l!.i«. throat of th* romll •'»•' '* 'be tuft of hairs t• |he «T being furnished with a stipe.

I K *ai »|Man. ia tbc |««%HM

Tree Kabatalia. Fl. June. Tree.

Cult. For culture e awd propagation see *Strophánthus*, p. 85.

*Tri*M III

ALSTONIEÆ. Fruit •/ft CDO> les. Seeds peltate, ciliated; having the cilia more r ttodfatrd at both mda.

XXVI. ALSTO S|\ (in memory of Dr. Alston, the predecessor of Dr. Hope, . I r..l.,,»u.,,tl, I, II, m *w*»> soc. • ni- 1. p. 75.—Echites species, Lin.

Lin. syst. *Pentándria, Monogynia.* Calyx 5-parted. Co- rvlb uUrr shaped; throat and i tube without scales. Stamens inch >«nl; a> brwwaj -bukr W«gib, others lanceolate, and frw fr pollen their r». from the stigma. Ovaria twin. Style 1, filifor dttacd at top; stigma somewhat conical. Hypogy: m rsUcin* scales, wanting. I l»« irt, * f well t*aca*t *u,* »lUir or «*0fiD)utr, ril»WJ. gU*> ••»•*• *mm** Htwsll* •' ite. Folia for the most part very long.

1 A. SCHOLARIS (R. Br. l. B, p. 7«.) W»«r* . «narl, obovate-oblong, •btaa*r ftbfanl, and havtag tl. I*«BS npfx margin ; follicles very long. ♄. S. Native of t nay* en abort paabah i •b*fc»roU»« Koxb. *A.* ind. « p. 7.—Nelam b* EMt Cala, Rbr*d. mal. 9. i I*4*«« Mid IIM Molt l'ala. long H—t. *m* Rb»«d. aaaJ. I, p a l t. «J kaaar*. Mninni amb. *t* o.rolla, and oranf»-coloHnd corona. FoUMaaa ft.u indiM aMaav^rtiaBMg, uWaw • imbwla fcW dw jrcllow J M M - 4 Jata. M Ikt fan) af Ml M |4arrt when H O M M , dilwl*d with r. 10 v«dapr*uy good y*0o> WAoat Abtoma Il Mara*. V lMaV TW laa •

oblong, somewhat acuminated, with simple veins; cymes peduncled, shorter than the leaves; limb of corolla bearded; follicles very long. ☽. S. Native of the islands of Timor. «<'" Ja*a. Flowers very nearly allied to the preceding.

Showy Alstonia. Fl. March, May. Cult. 1825. Tree.

3 A, «r» leave

ve of Java, .1 en, re it is called *Uwuk.*

Spatulate-leaved Alstonia. Fl. April. Shrub.

4 A. villosa (Blum. bijdr. p. 1038.) leaves almost sessile, elliptic-oblong, acuminated at both ends, remotely ribbed, rilltx. beneath; cymes effuse, terminal. ☽. S. Native of Java, on the calcareous mountains of Kuripan.

Villous Alstonia. Fl. Nov. Shrub.

5 A. sessilis (Blum. bijdr. p. 1037.) leaves sessile, lanceolate, acuminated at both ends, lined transversely, clothed with silky hairs beneath; cymes crowded, terminal; throat of corolla bearded; segments obtuse, about equal in length to the tube. ☽. S. Native of Java, on the calcareous mountains of Kuripan.

Sessile-leaved Alstonia. Fl. Nov. Shrub or tree.

6 A. scholaris (R. Br. in Wall. cat. no. 1648.) leaves in a whorl, oblong, short-acuminated, downy beneath; peduncles numerous, at the tops of the branches, trichotomously corymbose at the top. ☽. S. Native of Penang. Follicles linear, very long. A. coauta, Ham. Br. in Wall. cat. no. 1649, does not appear to differ from *A. marrvfrMyUa,* Hamilt. in tb« Trans. Linn. Soc. being glabrous, narrower, and the veins more distinct.

Large-leaved Alstonia. Tree.

7 A. cuneata (Wall. cat. no. 1645.) leaves obovate, retuse, rusty beneath; cymes terminal, many-flowered. ☽. S. Native of Sirmore. Flowers white, collected by Dr. Govan. Follicle* linear. Peduncles 3-flowered.

Cuneate-leaved Alstonia. Shrub or tree.

8 A. scholaris (D. Don, prod. fl. nep. p. 131.) leaves 3-5 in a whorl, lanceolate, acuminated, feather-nerved, velvety beneath, cymes terminal, many-flowered; throat of corolla downy; segments of the limb oblong, obtuse, twice shorter than the tube. ☽. S. Native of Nipaul.

Scholar Alstonia. Tree or shrub.

9 A. venenata (D. Don, prod. fl. nep. p. 131.) leaves opposite, elliptic, acuminated, glabrous, shining, rather coriaceous; cymes terminal, pedunculate, trichotomous; throat of corolla bearded; segments of the limb oblong, obtuse, about twice shorter than the tube. ☽. S. Native of Nipaul.

Venomous Alstonia. Shrub or tree.

10 A. costata (R. Br. l. c. p. 77.) leaves opposite, elliptic-oblong, acuminated, ribbed; cymes effuse; segments of the corolla lanceolate, longer than the tube. ☽. S. Native of the islands of Otaheite and Ulaietea, between the ranges of the mountain, where it is called *Attaid.* Flowers white.

Ribbed-leaved Alstonia. Tree.

11 A. undulata (Labill. sert. cal. p. 11. t. 28.) leaves in whorls, elliptic-oblong, obtuse, ribbed, attenuated at the base; cymes numerous, length of leaves, but the fruit bearing ones are much longer; segments of corolla oblong, obtuse, pilose; follicles very long. ☽. G. Native of New Caledonia.

Undulated-leaved Alstonia. Shrub 8 feet.

12 A. verticillosa (R. Br. l. c.) leaves in whorls, lanceolate, acuminated, attenuated at the base; cymes dichotomous, tricose tube, and a pilose throat.

Feathered Alstonia. Shrub 8 feet.

13 A. [illegible] leaves in whorls, lanceolate, acuminated, attenuated at the base; cymes dichotomous, widened upwards, beardless; tube cylindrical, throat bearded; segments of the limb ovate, acuminated, about equal in length to the tube. ☽. S. Native of the East Indies. Flowers white.

Pale-flowered Alitunm. Tree.

Culture, &c. See *Strojlfntkmt,* p. *Hi,* for culture and propagation.

Tribe II.

GELSEMIEÆ. Fruit of 2 joined follicles, which are at length separable, 2-valved, 2-celled; valves 1-celled, with inflexed, seminiferous edges, which constitute the dissepiment. Seeds flat, winged. This tribe seems to be Gentianeæ with *Apocyneæ,* through *Crawfurdia.*

XXVII. GELSEMIUM (from Gelsemino, an Italian name of the Jessamine.) Michx. fl. amer. bor. 1. p. 120.—Cor. Hum. Juss. gen. 131.

Lin. syst. *Pentandria Monogynia.* Calyx small, 5-cleft. Corolla large, funnel-shaped; with a 5-cleft, almost equal limb. Stigma trifid. Capsule ovate-oblong, rather compressed, 2-celled, composed of 2 joined follicles, which are separable, furrowed in the middle; 2-valved; valves keeled, with inflexed edges, which constitute the dissepiment. Seeds numerous, flat, imbricate, membranous at the apex, fixed to the middle of the valves.—An evergreen, lactescent, climbing shrub. Leaves opposite, furnished with stipules. Flowers axillary and terminal, yellow.

1 G. sempervirens (Mich. fl. bor. amer. 1. p. 120.) leaves lanceolate, shining; fascicles axillary, few-flowered. ☽. G. Native of North America, in the vicinity of rivers, from Virginia to Florida. Pursh. fl. sept. amer. 1. p. 184. G. sempervirens, Pers. ench. 1. p. 267. Bignonia sempervirens, Lin. spec. p. 869. Jacq. coll. 3. p. 258. Anisomeles sempervirens, Mart. Mill. dict. no. 3.—Catesb. car. I. p. 13.—Plukn. phyt. t. 112. f. 5. Flowers sweet-scented, yellow. Called, in America, *Carolina Jessamine.*

Shining Gelsemium, or Carolina Jessamine. Fl. June, July. Cult. 1640. Shrub climbing.

Cult. A pretty climbing shrub, of easy culture. The best soil for it is a mixture of loam and peat. Cuttings strike root readily under a hand-glass.

WWII *VI*ECTANEIA (meaning unknown.) Pet. Th. gen. 55. Rœm. coll. p. 203.

Lin. syst. *Pentandria Monogynia.* Calyx urceolate, 5-cleft, or 5-toothed. Corolla with a short ventricose tube. Anthers sessile, sagittate. Ovarium solitary. Style short; stigma capitate. Capsule follicular, very long, sub-tetragonal, 2-celled, probably composed of 2 joined follicles; with introflexed, seminiferous edges. Seeds compressed, winged, fixed to the edges of the valves by short funicles. Albumen thin. Embryo straight.

2 P. [illegible] (Rœm. et Schultz, syst. 4. p. 420.) ☽. G. Native of Madagascar.

Petit Thouar's Plectaneia. Shrub twining.

Cult. For culture and propagation see *Echites,* p. 81.

Tribe V.

TABERNÆMONTANEÆ. Fruit of 2 follicles, rarely solitary by abortion. Seeds neither tufted nor winged, usually nestling in the pulp of the fruit, usually albuminous.

XXIX. TABERNÆMONTANA (so named by Plumier, in honour of James Theodore, surnamed Tabernæmontanus, from Berg-Zabern, the place where he was born. *Hort.* published

Kraeutcrbucb, 1589, and Figwea of Plants„*1*VJO, in an oblong ouarto form. He w.» p«jr..enui to the Elector Palatine. «MI died in MM.) Plato, gen. SO. LIB. gen. no. 301. Juaa. 145.

R. Br. (irod. p. 467.

|,t> *i'entaMirta, Mcmogymt*.* Calyx 5-clefi. I of oils «Jter-»hai*d: l^imb 5 - parted : segments unequal -sided, men* inclosed; anther* sagittate, cohering to the siignu. Ova- i bind, from ihe dilaird base. Hvpogynous glands wamirv i rnntrioaen. Seeds pulp.—Small tire*. Leave* opp> ,uUi intcrpetiolar, ndnau? at botumt, and loos* at top. Cvme* sub- tin liinouiou*. interprtiolar. Calyx permanent.

• *NmUm of Ntm HoUmwd.*

1 T.o*ii»T4*L!»(R. Br.prod.p.4C8.)le«TMlane*ol»*«-oblong, acuminated, glabrous, as well • inches ; bractras •ubu- lal*, tlowly deciduous. *Y*.* S. .ll.tnj. within the tropic; and of Malabar S3, i. 46, be the same which is T. alt i* not s ipecin: herbarium. Flower* white, swwet-scented. Foliiclr* yellow, ex Rhecde.

Kotltm Tabenurnxwun ft.

8 T. FVSB'KBVS (R. Br. prod. p. *A&b.)* leaves rlltptic-oblong, sub-acuminated, downy beneath, aa well as the bmnchlru ; branches of cyme erect, and are, as well aa the ealy». bracteas very minute, caducous. *; land, wuhin the tropic.

J>oimy TaU rnjrroontana. Shrub.

3 T. laxiCTtVTA (R. Br. prod. p. 4««.) le*v»s oval or KR-, and art, M well as the cyme*, downy; branches and ^Dreading, bractlces. • *Mitt* of New Holland,

Shnib or tree.

* * *Natives of Smdk Amerum, mmd O* »>•! India Islands.*

4 T. Ctmm (1 a. tpec, *1*10.) leaTe* mate fiabroua; do • rnhelL the top* of the bran Janwtca, «nd other Id- sps* I. p. f the I^ni. ill. t. 170, f 1— l'lum. icon *Cum* iches long. Flowers beautiful Jellow, M-rittrd, ScjrmenU of rarulls narrow, >1 of calyx acute. I icumitt.r

rom-ttattd TaUiiiiminunUiia. Clt. 17B4. Tree 15 fret.

i : Mill. diet. iv). I.) leaves oblong ovate, nmtm- enrymb* terminal, large, n wood*, and the adjaeetit tnaiiiniiit [. amer. *it.* Lrave* A mches long, and I) . •wert-«cented. like (how of a •1 n iiiilTtiiiii—nnaniana II Mat, An w>. ib 10 to If ft

8 T. uraii n. spec. t. p. Xiu >vat*oroval, bluntnh. glabnms; Dower* latrral, «uboitilwll»i#. I I'<mmgo, Jamaica, on the » larq. amer. p. *39.* p»n. p. *tS.* Ker. hot. rag. 7I«.—«lonne.nieL t.p. ilj. t. 186. f. t. Ait. hort. kr» ed. *ti.* vol. *1,* 7t. Fl. yrllow, sweet-srentrd. Leav< long, and t ni« runs under this rneciis T. foliam. tore sIUi, ' .indiore, Am*, herb. It It, wbrb probably belong* pm /^wrY/-ir<»eJTabilHlii»nawnBji Fl. May. (

* to I

1 | Vahl. etiog. M H . f. p tt. Pair. diet. 7. p. 5 SI Waves fftL .«*•*. glabrous: roryaaba . . . . . iml, aa4 *m* the hrfcaa/ ofGwsnWaWa^rtMaw. Caawtam Tamaiiuarina, AHW. gwwt. 1. p. fM. t. 101. ., Lam. dkt. 1. p. *S66.* tVdicvU bmnWea. Calyeme subuUu. Segmenu of the rorolla lioenr-lanceoUie. ex Valil. Ftt> inbosc, in the forks of list Wa*K»ta, lar

Swtrt-tr'ntni TahenurtnoatAru. Fl. Oct. No*. Clt. 1793, Shrub 4 *t*

ra (Aubl. guian. I. p. tti*3.* t. 103. I oblong, amntinated, aoattrwbat andulatr«l. clothed • ith fine lominliiin beneath ; Ac ninal, altnoat usaik. 10-12 in each fascicle: ' «h flower ftemashed with a imall. icaJe- like b 'actea; t >>y soft UibeteJe*. I isna. I-*»>r» 4-6 mrhe* IOOK, ami *t* broad. Floweea «»«•. i-wenirtl. Caly» white, ^•taothed. CaralU eaated Ml a yellow disk, with * red margm, ami dotted with red; lobes of Itmb large, yellowiab, woduUtrO. acute. Follicles yellow, ovate. i alya smaU, acute. Perhaps a distinct genus.

I lUmainwnnna. Shrub 4~Sl ftrU

if dtrt. *i* I. no. 14.) Utn* o> aruntinated, nerved, glabraats, shining above; ttowrra U' toward* the tops of the brand* to a .hort, Mb-MmWlUto corjmb; b>i <»(ofDOtt» ; hill leas **tr** • avi ancawlatr, at the », tacheslung, • g .i«tt, U Cotblke, •mall; of the limb narrow, b *marutUa*

AAJCafaiw*Aowewd I abenywontatta. Mirub.

P. iir«i:t ll ll, r« Kunth. «t»T.gen. '. 3. p. tit.) , W H oofoafj , undulated. 3 corolla *i* Mgvasjsta of corolla own* near El Peroa, i» u the bn*», 4 to 4| loa* GbroaU yellow. Ovaria ^;i"p! 'l n> a lt? IN> i n^.

nit<r MI I abrrtui UMHMana. ri. May. j rwr *9Q* Mti.

I - I It. rt KiiMh V e.) gUWoti* t ' elltptic^blon|(. «s-*n few-Dowered . «shrine wgDWewa elliptte-oWnaf. obtest. *• .hortrr ihan the lube of the corolU ; segmenu of roretta drwidiatpry obovnu, roandisn. *h,* neat 1 amprchr, on the *ca-*li in the fctwtr* heiag twice the use, and *m* the structer* of the calyx.

Shore Tabernaemontana. Tree.

12 T. HETERORHYLLA (Vahl. t»L «cl aaarr. t. p tf.) leaves elliptic-lanceolate, and somewhat cordate, sub-undulated, acu- minated, glabrous ; prdunclr* in the forks and ton* of the branches, glabrous, *9' t* -B<>W#f f *\ r enrh neaWvL racemose ; bractras minute, twin at the base o p •Me. (.Nnne long, .r t. asnv segments linear lanceolate. Corolla] an inch long, and t silky hairs in the throat; segments of the limb lanceolate, obtuse.

Variable-leaved Tabernaemontana. Hwwbor Ir

IS I •t«itttUMU J»r»|. amer. 40. t. 31. W. naft. p. 11. t. Un*ea . • al, attenuated at both ends, acute, glabrous, shining, unequal in size; peduncles irregular, 2-3-flowered at

the e«Va a/ ifce ullliill MMHIIni. *»IJM» a a p i • rthngina. *m m,m* MM. n. U Uem. ii a *. Urgr* iha* IIMM* «f oikei *pene« of the g — i

ments unequal, flat, white: the outer S very large and cordate, and the inn. r 3 oblong, narrow. Corolla tm.led above the calyx, with a very wide limb. Follicle* roundtah-orate, acumtnaied.

Grtai-JUmtrtd Tabcrnavmontana. Clt, U*3. Shrub 4 to 8 feet.

14 T. cymosa (tacq. aroer. 39. t. 181. f. 14. ed- p»CC [> J. f. 10.) leatei «»*»it-lanceoUte. acute, glabroo*: cyme* large. Mill ary, dense, convex. ½ . '*. Native or Carthagena, in woods. \n elegant tre• , with beautiiul *cjwm* of whitish, scentless flowers. i .<i« aegment* oblong-Unceolaie. CorolUwith a 6-angl coa« tutu l lefl reddiah, oblong, abtute, r curved.

Cy 'tovAowered Tabemirinoniana. I l. ? Clt. 1820. Tree 10 to 15 feet.

15 P. AmotiAitr.n.iA (Jarq. amef. .19. t. l»l. (*. 15. ed piet p. 25. t. 259. f. 11.) leaves ovate-lanceolate, shining; peduncles few-l•»wered; alamro* ex*'eding the tube of the co"Ha. 17. S. Native o 1 CartIta^eita, in wood*. Ker. bot. reg. 338. hlowen *mk* r, very sweet-s• mcd. Follicle* ovate or oblong. green, shining, acuminated.

t ^iMoa'Mrarri/Tabernarmontaiia. F1. Ma\, Sept. Clt. 1780. Shrub 6 feet.

16 T. discolor (S .in*, prod. |> •'- tl it"l -K-e. l. p 555.) leave* ovatc-Unrcolalr, i"lnl-f<>>i« ; |«d«incle» axillary, 5t-ntn ichototrxnu ; brai iMal •; branches terete, d chlets tetr r Native of Jamaica, among bushes. r edicels longer than ttr Me peduncles. Corolls cream-coloured, having the tube ventric in the b t*e anil mi.lill. ; segments of the limb r nim!>»li. undulat ed. *alycine segments acute. Stigma capi ite.

Two-coloured Taberu ftnontana. Pi. April, May. Clt. *18*$.* Shrut> i •o 6 feet.

17 'I*. HKBMI \ ahl, eclog. amer. t, p. II.) leave* lanceilate, acute at)>oth eml*. ulahroua; peduncle* solitary, few-flow 'fed, •tilwacemow; braciraa minute, lutear, deciduous, ½ . S. Native of Porto Rico. Ver l nearly allied to 7*. */ *cæfôlia*. Leaves 2-3 inche» long, palrr beneath. l Calycin . *t*n*ments oblong, acute. Segments of coro la wedge-thaped, gUbrou•• ll»T dly downy at the base, in •.•Jr. Anther* beakr.! exceeding if ing if the tube of the corolla.

Olea tdrr-Uatrd T»\H rturntonlana. Shrub 10 f«t.

IS T. A v. f, p. tf. t. 143.) leaim obov •trnliltiritt.ii. uminated; coryn ibab) thn es, many-flowered, la leral »tu) axillary; bracteas sm ill, ovate, acu te. ½ . S. Native of Peru, in forests, at Pozuzo. Branches dichotom mi. C* l « cam|wnuUte, with acute tei 'Corol.1 ru-tn coloured, with a 1 inflated lubi >bo*c at ibebaM*; «v> ments of th* limb l. large, ovate-roundish. 1 olicUa arched, acumiuated, ruf •cent. Srnl. itml tiulp red-*Arched*-follicled Tabernæmontana. I'll. |f4N Tree W to 40 feet.

19 I. -ANA'S, o (Ruiz. et Pav. fl. per. 2. p. ft. l. IK, leaves oblong, acuminated, shining, g labrniii 1 etxymba lateral and terminal, 4-5 times divided; bracteas roundish, co'•late. ½ . S. Native of Peru, n forests. Leaves 6-8 in< be* long, un- 1 la Urgi dulated. Calycine teeth o.tuse. Coro , cream-coloured: nth • very lon;, angularly striated t•be. ollicles obovate-roundish, acuminated, white, size of an Apricot.

Vrt*ii>iA<i I A/n tn.rintxilaita I i< < I to \i •.

LLatWaaaa*. *t.* p. l leduni • laitreo> late-elliptic, acuminated, 1.11-1 u i' <1, glabrous; peduncles first terminal, then axillary, bifid, sub-cymose. ½ . S. Native of Trinidad. l eaves 5 inch .-« long. 'Calycin ." •'•.«•"'ents thick. Corolla orange-coloured, with a terete tube, < idefied at tl.. top; segments of the limb linear, (»li!,iv. . 1 . l, »>rtiJu|)ln»i ii the sides; thro •1 glabrvM. IV re is a hypogynous, glan lar

ring, girding the ov»num Anther» linear, very narrow, membraJit at the ba>e. r'ollirlr. rvfteKcd, a link in : both i nds, oblong-triquetr tn.

Ai/a/rJ-traveil Ta be rote mnn tana. FL Jum, July- *iHH* Tree • lo XO t et.

tfl T. M m m ; leave* oblong, ending in a liiinr, obtu*<- acumen, upvritt^ into the petioles at the l>«H\ filahrou* ; flower* terminal . ovarium not gi led Ly any walr*. nor a glandular ring. • l .%<t|iulHi. I p 13.V Calyd— aegnv duwtty throat.

Mrycr» 1 atM-rmrmontana. Ire*.

ft T. *rao6«A (Poir. M M |. 5. p. 275.) leaves large, lanceolate, ac iininated, nenrod benrath ; eortniK« axillary, many-flowered. »» . S. Native of Cayenne. In t' • iik *Ay/fa. ! t<ti,t>rai «a»». Caljcme atytm ents obtuse. Cor-tlU long, arute at '1 tube ; wfrncnu of tb* limb ovate, m> •horier than ti titji.a. Treeot *tkt*

tA I ir. *up}4. 5. p. 171 • tniall, ili>|K(M<i 111 nearly terminal, panicled cymes; tieartraa ovatr« aruie, u|>|. 1 ones sub-•Uu ' « long, acme ai tl.e ba*< • he* of ; anicle very short. Corulla* while. imaJI,) ardly twice longer than the cal yx, which 1* *hon.

Poplar-leaved Tabernæmon i..na. Shtiili 1.1 ir»«-

f* T. MACROPHYLLA (Poir. MHBI, I p. 276.) leaves ovate, obtuae; glabrous; flowers cymose; cyme trifid at bottom, subumbellate, ixillan bracteas small, scale-like. ½ . S. Native of Cayenne. I Cestroides, Nees, in act. bonn. .ll.p 83. Leaves 2 inches lon C, and .1 line* hrnacl, bluntlv am umatnl, wn|, a •• all mucrose. Peduncles opposite, 1 Corollas wlute. a ith lituar-nliioitij. >'Utu»e *egm< li *mn* longer t CaHrdnt *mM* ml* * .-4MM. I.IK font ana Shmbot 11 ee. >ntUtr, acnta). giabrous; flowers small, terminal, cymosely umltrllate ; diniuii »i »li-hkr, »rariout. > ^. Native of South America. Leaves 2 inc g, deep green above, but greenish Jftflow beneath. Pedicela fun th a »hoi 1, scarious scale at the base of each.

li-flowered l >U rruruwniana *Ski'* ub. 26 T. CORIA'CEA (Link, herb. ex Roem. et Schultes, syst. 4. p. 451.) leaves giabrov Mf, anme<«li«i a< uminated. furnished with imp 'e»aed dots beneatli ; cymes dichotome v»a, i« the forks of the branches. ½ . S. Native of Bo .ill. ll- anch-lets bearin it * lea*r« at ll.r ..pex. Calycine teeth roun nHl*, uhtUM Co la having Uie tube nearly an inch tong, ami tbe aegoiettt* iibiuM .

>*rroiu->)ea«i>d Tabrrnannooian L Shrub 01 tree.

»»' 1 . MULTIFIDA (Link, l. c.) leaves ovate-lanceol . . acuttauxl, *mb+tjmdt* nUiiwui ;).. nicles HbMawow* in *t)«* forks of the branches. ½ . S. Native of Brazil. !.,,». 3-> inches long, and 1½ broad. Tube of corolla 3 times l itgrr than the calyx. Segments ovate, obtuse, much shorter than the tu»w

•J;*"»% fmoatim Shrub or tree.

28 T. RUBICA'TA (Link. l. c.) leaves ova <<-obbmg, aetuiMb* ted, with bullMrij 'icniib. mil irr|' " el dots, a"«' »nli sub-repand margins; flowers cymose. ½ . S. Native ol *t\f»*, il. 1 .fwn long < alycine 'eeth •**"»«. "biuar. Corolla having the tube sh *mom* wi mcb lowt* <W«f<w««. mtd ob. oaw •rg ments. Follicles muricated.

ricated Tabernæmontana. Shru •b*>t rr*«r

N

it T. n i y l u M . WilUl. berb. e* Ram. et Schulu**, ij»t. 4. p 797.) leave* lanceolate, acuminated, biuntiah, glat.rou*. tanning « both N H U ; peduncle* raeernow, 5-4-flowerrd, teal}.

? Naiive i>r Broil. Corolla 1 $ inch long.

«i Tabet nartnornan*. Shrub or tree.

rLAvtViM (Wild. herb. Mi oblong, acuminated , *AomtT** umbellate. K ve of Broil. Leave* broader, utd lf •* acuminated tluin iboac of *T. jLiticam :* having woody, scaly budi in the axil* of the leave*, from which numerous i-fluwrri-d pedicrl* rnM.

A Tabcnuetnonuna. Shrub or tr*t.

† *Ca/y z deciduous. St y *, dutind. Tkt iptries contained m Iku* Anno* *mil probabiy form* at *new genmt, gtmtdkn at tkt bate. Leaves*

s T, MiMiKuinu (H. B. et Kusib, no*, gen, uwr. J 125.) glabrous ; b w i oblong, *ub-acurmnatrd : corymb* •!«• rhototnou*, many-flowered ; calyitae *cgtnrni* mate, blunt ith, » time* »boner than the tube of the corolla , *•r*m.* rolla oU>*»te-obloti(t, rouadi*b, curled. • - Sa (jraiwla, near Turbaco, *wktm* it i« called *JmtmtmUlo;* and Cumana, wbrre ii U callvtl *Lyno del Montr.* Rauwotfla 1 i

Cu, Wittd. herb, a Rtrm. et ScballM, syst. 4. p. lOi.

*»u meaibranotM, 3*4 iachn laag. Flowrr* itar of Utoat i>f Jaaminc, white. Ovarium girded by glanda.

Jatmumt'Ukt TabentaoMotaaa. FL Jurti »r •kmb.

. 3X T. VHBIO** (H. B ct Kunth. 1. c. p. *in,.)* glabroMt Iravei vlhpttc^btona;, acute; corymbs »ub-djcbo4Mnou*; caly* 'cm* MgnMrat* tancvJatr. acute, 5-6 *tome** thorter than the law of tbc corolla ; aeymesti *<>/* rofulUditatdiately ubuvstr, roundwh. *J>ööé* and Cumaoaco* Leaves mrmbranou*, *t* incbra loaf, by J •cak-fonnrd, parud «Und*. m ihr n»« n (be fona of tb« I M T M ano cal j a.

J I ubovate, acute ; peduncIM dichotowBow», cy ralvctB* iiKPnate laaieealaie. fi-7 tiia«a aboritr than tIM lube of IM corolla, recvnrvd at U* apex; •rjrtneoi* of co* rolla half obovate. curled. «; *c aloof *rtk ibe pre* UiaiMclilrd wVm»li, l^ant :.', soc>»r» lirtiij. H"«fM •« MM of ihoae of 7«tfiiMM */nun*** Ovarta

TaberfMtmontan*. I 'll lt. aj Kumh, l. *c.<* acumtnatc*!, with ubaotetely repaitd, uodule* dicbouxrtou*. of 4 >p<kti | calycmc I I | I I I > U .. rounded at «pt». (M 1 I M M •bortar than Ib« I U U of Ih* corolla; of corolla «•• ada. on tbe bwik* •<•rMsgdalriul.br I DeinbraTHiii>, t>-7 ituhr* luog, a I about ibe •**• of tbow of *J^* fieair* toy, in (hr boitooi of tW calyx. Haid to b* nearly allied to vjainao, I IT.

abrnur (I. April, Tr»*.

* * * *tfnim nmttnt •/* IJU *Afntmm tdm*4$.*

130. i«i.i ' both end*. gUbroua . Hillary, inai> -<r*et*wa BWIUU. iate, pal< •••dulaiad : with »• tut of ii .IK-

*r$k*ri*-1tm944* TaberiMrmoatana. Cll. I6l9. Tree 10 ft.

36 i MAI OTIV»« (Poir. diet. 7. p. 230.) leave* *o*lat*, oblu*e, metnbrsnou-, glabrou*; flowsr* in axillary raceme*; *•" rrme* articulated, brittle, very •hurt, drooping a little, and • little branched *;* corolla fumirl-*tiaped. |. S. Native o' ^'r i, and the East Indie*. Branches bwaet with *m*ll white tubercle*. Leaves rounded at both end*, ahuung above, and pal«r beneath, and hardly downy, toft to the touch, 3«* inches long, and *i* 1 broad. Calyeioc *eg»nent» obtuse. I "-roll* cream-coloured ; tube narrow m the middle, aad inflated at botb ends; lobe* obtute.

n I 'abet narmontana. Shrub or tree.

37 I. I.'.uai/m (Wai. m hot. rfg. under no *I*<* leaves oval, very blunt si both end.; peduarlc* sutHwOUry. twice or thrice forked; calycinc segments oval, bluntiaa; segment* of corolla oblong, about euual tn length *to* the tub*, *k* of tbc Mur. tus. t roUbly di&nat troai *T. Ummittkm,*

Ttlfmt't Tahernarmontaaa. Shrub.

38 T. oarvHrOLU Pail »uppl. *&.* p. S79.) leave* oblonglanceolate, coaealed at in* base, aad rounded at Ih* Sowers ravttnoa*. of Matlagaacar. I nearly « inches loag. and t br.wl. (labroa*. thin, t tubular ; *ega>rni* ovaw, s<uir, a little recurved.

OUum-ltw—t TaWnvanaoouaa. Bbrwfa or tree

» • • • *Sptxf* aafire *of* *\rw* Gurara.

Molaie, glabroua, *ru f m l a i . nja. p. i I^-avr* tnrtnbranow*. fttarly 3 u»-be* *.th arched yellow ». IV- Calyriaf *ob-* .a <•) imdr.L*! twbr, and abort. tr at thr baar.

Kbnib or tree,

• • • • * Vaiire* •/ *Am.*

>r. codt. 117.) lcavea laacrvilale, peduncles I-Su«rred, prndutou • of rhma. CorolU with a tang. Urndcr, cjl.ndinral tube. •*•{** TMUKOM at ibt ba*r I lr* rather veatricoar, * * * * . * " * aruiainaird. toruloar, rewaiblwg ^Tr-rn' boras. Se*o* »•*" i ulp.

A/a/«'« TabetasMMStfaaa. Shrub A 1.

41 b, 117.) I^iiinrlf J< . • »•*. *ni*n* rt..-rfr.l. •; 0 tchmchiaa. I •• Muwmw! bortaoalal, recurvt<d. »hon, vevitrtcoie, acunuaatad* I osen't born*. >*•«.!« tmbwdded in red pulp.

'haraajaminsns 8ar»b 4 i . . I. r if i 71. leave, elliptic or oblnag. blua"* J. glabrou*. pedHnetr* rrotn the f. -3* low end ; Wacta** drculueua t • abort, rnuadrd , anth. • tl ; StigUM *u* falUCSf* •*Uve «f lke K**t !«• ritf id, arrordmg t» •,«••«!. abour the llctmtada i at>d of S« I ft. s*yl. ll>#. Wdld. su*c- li C»ra»*riMiu. An, Wort. Itew. l. p *tti.* Ja<.(. roll. l. p. f«t. an. •- Lodd. but. ra] '"*"T « M>l. liumph. autb. 4. p. t7. t. >»• B*»**; Hfcail 4 p. l«i. i. i» I l<i»»f< pur* wbtt- •e»»ied,, with a yelU.»i*h tub*. TWrc ia a doubW-Bo- variety of it. *e«* bot. B M » I M i . I I . N. i.um divariruWI* Thuab. >ap. p. 110, M very dinetwat froax ihia.

»»M belong u the present genus, nor even probably to the order.

<;«riaW Tilin—IBJIBIIB PL May. Sept. Clt. 1770. Shru" 4 to C feet.

43 I : . I M C * H ; leavea ovate, undulated, *hv* branche i divaricate: fiowrt* rrowdnl, terminal, t".t». NattM- of Cochinchina. Nerium div irkatttm. Low. eoch. p. 114-. but not of Lin. Flowr-. rt.ldmh yellow. CoroUa funnel-·haprtl, «*iib a short tu·>., and a rrnrird Umtt. Corona in tbe throat of the tub* eoanpoatd of abort tubulate »egmenU, Anther* con~ niving into a coue in tbe throat. Stigma ovate. Foilicfca tag, joined a lntli'at ihe baw. erect. 8e*3t pappoaa,

Divaricate-branched rkbernj-tnontana. Trr* snail.

44 T. xacv'ava (Roxb. hort. ltenj;. p. *t.* (!. lad. t. p. to.) lcavr* oblong-lan .colatr. l.l..! 1.1. ·! L-l.it,rou. raltruu lrrili <>*atr; segments of corolla convex, of two forms, crenulated; cymes di»»ri<-*' ; flow t« droopiag. >; . 8. N«l lndict. I gratissima, Linll. bot. reg. t. l0M. iWw whitish-yellow, sweet-scented. ' ke /'. *rortmitrnm,*

Recurved-flowered Taberna · montana. rl. Hay^ flcpt. l. H* ISS4. Tree mail.

Wall, in bol. reg. t. 1*7.1.) l«WM lan- mat*, lomeuinea 3 in a ·fcorl. ejraan *mmty* ·' - . · · *n* padaaaiaii earjajat a^aMMi and bra i of corolla about ·qual ii. length to the tube; follicles 1-seeded l r; .8, S^ of ibe K»M hulir.. i

Itrmtr-Jtu^rrrd TabvmaMtMMitana. Fl. Jun* ' tM4. b l in 0 t

44 T. r»(»r* (Rnb hort. brng. p. 10, fl. inf. l. p. **.) *X,* utululaIrd ; ptdunrlrt fe»-<owered; (trdtcrli (·parted ; ·r^nK'nt* broail-ovate, fo- lianoti ! Native ofthe l^i«(Itxlu* Prrhap* Curata-

1'ila, RheeU. tnal.

W-lravrd TtbcnMetoontana H M ItIt. ab d to 9 '

47 I out, khimtig, with many parallel tiiroou* ; fiKniir aeg- la oblong-falcate, aboui |di to |1H tul». n and Malabar too* \\y fragranl.

'MIDI Tabemarmuntana. If rr 11 to 1C I T. r · i a»*» oblong* *'*.*ftfwvmm44* Tab iU *ni* with aetareoua T. rutt arv p. |UM ndrd, Aa<. {MM, at the apra, arull at tnr bur, nwtnb lava among btiabra, about KumpMn. Allied is *T.* . dicboteMwaw .b-nr«lul. '·*». <m i! ,v% ,) „ . ,)t M called LVMH anuWlwj-. Al- ".··montana. I l. year. Tree. > p.ti Wall, tnbot.rag undrr iuntly artinnnatrd. aitmualed B Kmg p- ··ill* tomewnal ob< f'Inceof or aar»b.

" " « · · » (Wall. l. t.) le> (a^v^BHBBVtatvakvak ^ HW^ n o v r f r^v-U^.' 17BlJ 'L' Jiff a:

M1IIXDU of corolla obovatr-cuilcd, about i iju»l ID length to the lube. *y . S.* Natir* uf tbe Kaai IIKIM*. *T. twymUu* and *T.* yne, maa.

tirymt't TabefnwfnonUni ·»e« aMnag laaritnlni. ending in a very slender acumen, transversely nerved beneath ; peduncles filiform i, vrry lon»;; pedtceh > rftcrllair. ovate, a lutle brakrd. *tj.* S. Native of Pulo-Penang.

Pedunculat · Tabcma-mnntana. Shrab of tre«.

53 I. cRACILIFLÒRA (Wall. l. c.) leave* oblong acuminat. ; peduncles axillary, ver j long] tow< raea> moar i loW* ol i ·)> & nvatr, amt* ; iegmenu of corolU obloag. and .1 limn aborirr lb« "Irt. v- Martabat , in Moolmeyoe [and Ambcrtt.

Slmdtt-Jtuwtrtd Tabcmaptwotttana. Sbrti'

54 I. CALYCINA (Wall. l. c.) lea-o lanceolate ; peduncles f r»'lowered ; flowers n altort |- dicels, sub-fasciculate ; calycine M-gmrntt anJ brartra* at length dr-rayinu m fal' lobe* of e*tr"lla lancroUte, tpn* l S tiv r of TBVOV, on the roaat of Tenasserin.

'·"'*'-*"*>-"rf TaneTnarmonUna. Shrub or tree.

M T. I »aa laruwlair. ·lrnder arumea | peduncles few-flowered ; calycine segments sub-ligulate ; tube of corolla slender, tumid, and bearing the stamens in the middle, longer th.« n the -limb ; fii

Ht. Herab or trve.

56 T. SUBCAPITA'TA (Wall. l. c.) leave*) obtong l—rn' lr-i tlender, w«b many crowded flower* at ih* apri ne aegRM- MB neatly ovati , about equal in length to <he lube. ' IIM K»'* !

Sub-capitate-flowered I abemarmonuna. Shi

47 T. MICROCA'RPA (Wall. l. c.) leaves oblong, acuminated ; peduncles few-flowered, in fascicles ; follicles sessile, ovate, 1- seeded. ½. S. Native of the Ituimette Knij , on the moun- tains called Taong Don /. lira? At a. This, with T. macrocárpa, Jack , may form a distinct genus, from the follicles being 1-seeded.

Small-fruited Tabernæmontana. Shrub or tree.

55 T. ·>LICIPÒLIA (Wall. l. c.) leaves l iieai<l nceolate, at- tenuately 4< unuii«tr<l, *nth undnlalrd rdgr*, glaucous beneath ; calycine segments lancrolate. »cute. ½. S. Native of the East Indies. T. p ·rvidora, Hryne, l erb.

Willow-leaved awrf 1 >l>rnurmantana. Shrub M tree.

*> l m. > . ' > u i J»'k, 't. ma). niK. t no. 8. j. to] lea'. ·ted at ibe ba ; corymbs terminal, dichotomous ; follicles large, nearly globoae, laeeded ½. S. Native of Bencoolen.

Large-fruited Ta ··ertMnaontana. Tre* large.

60 T. SPHAEROCA'RPA (Bl <un. btjdr. p. lOtt. > lravea elliptic, oblong, obtuse, acute at (be baac, roriaetMta. glabrot-a, one smaller than the other ; c ·rymb* twia, a>cbw«iwaow», eyawaeJy ,/.\ (!,.» .r.ii. l.tsi tr-il-'« »4K-tii . . i . .(cotoHa T..t.i».ttil. uml*»- lated ; fruit apple-shaped. ½. S. Native of Jav a. among bushes, about L Ka Jatltr, tn lite t rovince of Cheribon, where it is called *Hampru-badak.*

Round-fruited Tabernæmontana. l l. Oct. Tree.

61 T.f SCRVÒSA (Desf. hort. par. Pair. suppl. 5, p. 275.) leaves oblong, obtuse, much m n « l ·; S Native of the East Indies. Flowers unknown.

Nerved-leaved Tabernæmontana. Shrub or tree.

62 T. PARVIFLÒRA (Nouv. ann. a m 3. p 379 i leaves un- equal, lanceolate, acuminated, quite fl.br««B. on .hurt petioles ; · f

r,

J;

aAMH>{'aag«MM of corolla oblong.

i'^t lie. braked, fiiivou*. lj 8

I *imM<* Corolla whit. •«lona

it,.- ftawi *.4m*inkta* in tlw order *Boragim*

*Small A *t'rJ* Tabernwmontana. Shrub or irw.

f *Tkr tkrtt fottomtm/c art doubtful tpentt of* lA- m *tk* gland* at tke* fcdJC *of tk* cattfx ifdtng tit txartum beyond tk* iortUla and kjpogymemM rmg.*

63 T. vwavco*A (Blum, bijdr. p. 10iJ).> »t*ro climl. hranclic* waiuti; lcatei oval-oblong, acuminated, gUt>- ttrduftcli^i axillary, umbcllatdy trifid at tin- apex. *: I Java, in woodi. t Salak.

M'ar(«/-braiielird Tain rnam«Mitai»a, F1. D ib d.

Hlutn. Uijdr. p, l< oh long-lancet miutrd, i2ial>r->u« ; H *noard in panic I til Uicidc*. axillary ami irrmin.il, troall. •; . ^. S. Native of Java, on Motntt Salak. and the Srribo mountain*, whrre it is c• UP'1 *Jjmuliuwka*.*

*Sl** ay *-jtomtud* 1' abernvmoniaju. Sb rub rl,

03 T. oait l «««« urmrntoM j leave* lanceolate, j»ar axillary ; croon of iliv tiiroa[1] Java, 5 'lak, in wooil* ; and • Noaat- Kambanga.

Kattrrn TabrrtutrDontana. Shrub *tragfli»a;.

† † *ihtbtfnl ifKtrt.*

|j »ii>. no*, (tm. aw. fO9.) glabrous ; leaves oblong-lanceolate, rounded at the apex, cuneately narrowed at the baa* ; cor gn*nt*. h . S. Native of South America. Psychótria? lùcida, Hum. ' Schultes, syst. 4. p. 189. Branches rather compres leaves 3-3½ inches long. Corolla funnel-shape <-tl. l. l. xhitr, •rgmmta oblong, > *t tbc apex. Berry edible, fleshy, 2-celled, 2-seeded. Seeds oblong, convex on one side, and flat on the other.

Shining-leaved Tabernaemontana t. Tree 20 feet.

Cult. Shrubs and trees >f ra«y l ulagani wWn in fiowrr ; and the Ho» .-rant. 1'lM* aoil bc*l m-nt-<l l'"- -• a mixiiirr of loam, MUM. and • of them *tnkr root ivaddy in taml, *utuUt* a kantl-icU**. in heat

XXX. • \\t t K \ Hl \ i namrd hv Hiiaaiir from Joachim Camerarius, a physician and botanist of Nuremberg, who published an edition of Matthiolus 'i l.*t»n ai anttan, «K)l new igii nany obatrfauona). Plum. gen. . * i. 29., Lin. •*en.* no. 300. Juss. 145. l Lin. syst. ia. Calyx small, 5-toothed, acute. Corolla of a funnel-salver shape ; tube long, cylindrical, ventricose at th.< ba*r 4 MgUMir apex ; iM-ftrd ai the tube: aarthara act sided. Stamens inserted on the tube of the limb unc. 11 • i i • minated, connivent, drawn out into a thread. Style hardly any ; stigmas obaol. Follicles 2, reflexed, horizontal, obtuse, emitting

I-be on each side il \\w ba*r. B«<tM niitttctuM*. m>< membrane.—!'«*• o» shrubs. l avra oMMitr. Peduncles axillary, and in the forks of the branches l of main • flowered. Flowers »w an11fnl yrllow.

1 C. latifòlia (Jacq. amer. p. 37 t. 18« f. MS. r.|.t. mn. i.mal. eo- p. 24. t. 39.) leaves ovate, acute, shining ; flowers te rymbose. ½ . S. Native of Cuba, Jamaica, and St. Domi— Andr. bot. rep. t. 261. Tr t. tab. t.715. Lam. ill. t. 173. Plum. icon. t. 72. f. 1. A elegant tree, wi forked branches. Corollas white, wi«b a yellow base.

l b 7 t -

fl«XK/-/r«r*JCamrraria. Fl. Ait*. CTi. 1733. Tr.Mto30ft. * C. AV l «iw. p. »*.) *hr**f Vine*** Native af Sooth America. Urn. ill. t. 173. f. 3, Mum- 1CO11, l t. no. *t.* , and frutt a» in C. »'»* *fHut,* but tma ller, as is the whole pl >••<• *Narrow-leated* (amrran *. 8h * 3 (l acurninatnl, glabrous; Aowrr* small, axillary, ••< \ Urn. dirt- 1. :JMl t'amcrari > 3 to t *(vrt,* ^^ *Cwti. Vat* ailtur*andpropagabon •*• *Tmmttmtrmuml*m.*

\ \ \ | . \ \ Hl '«o»-»H-(_1W, r. iu[ipl. 5. p. *4Q9.* l rccola, Roxb. in asia'. '*.. *" l but not of Vaad.

roae at the ba«*(and a •11 t. l«9.) Corolla urwsdatr. Otatiam gtrdr^l by[1] ^J" drwal Miur* urcroto.. Staox-n* mucrtrtl in the bottom « •lla; antb*t« *a_k-iii4 .Ununv- rtldml in put) aaiat. rra 5- id. journ. bnt. l im or shrub, wit[1]i i*m« branch**, op| cyme* of flo«

•dagaacar an- '., a«iat. ret. i. p. 107. l" r ' «. l. p. 639 l - mi con* l * * tnull, al th« nw «• inr *y* l^.» ••»«.! Flown i«'> cornr* frotn thia *hnib »• one of •titute litilia nibbtr or eaovuhowc.

Shrub cl.' *Cmh* For cu-tu'»- and propagation iMf *Tm*tr**me*t* \ \ \ i l VOACA'NGA (meaning unknown, M us). Pet. Th. gen. mad. oo.

Lin. s . *Pentdndria, Monogynia.* Calyx of 5 involute segments. Corolla funnel-shaped, twisted limb, ments. Anthers sessile, sagittate, inserted in th corolla. Ovarium didymous, seated on a fleshy receptacle. Stigma ; lower one pel- tate : upper unp 2-lobed ; with 2 tubercles at top. Follicle • I. baccate, spherical, large. Seeds numerous, nestling in pulp— A tree, with large, opposite leaves. Flowers disposed in terminal, corymbose panicles. Fruit variegated from warts.

1 V. Thoua'ssi (Roem. et Schultes, syst. 4. p. Native of Madagascar.

Petit Thouars Voacanga. Trer *tmll* I or culture and propagation see *Tabernaemontana.*

\ \ \ 111 It l P'H \ h« our of M. Rejou, chief physician and prof botany and chemistry of t »* M of France; author of many import res on '.* tion of ve getablM) «aaJ. m Frr yc. voy. part, but- p- pl. ll,

C«toUa Mltcr-vhapetl, wttk an ilnag brtt*atb tb* mtddU. WatMg atamvn taaM l r* akffH l »", ft»rd by their base, free, inclosed. Ovaria twin. Styles 2, co •mbotMl ; _^_____ t, ami pMtata al •!» » Frmt lawdaili •Uiptic, »b.»m> seeded, not dehiscent ; rind membranous ;

shinin l(. Srtda (willing in tb* pulp, ovair, r .1,•• in-
kled, b •iv-colourrd evtrrnalljr. — An unarmed tree. Lcam
opposite, <>blnng-Uno late, membranous. Panicles t HIM),
pedun tiiUtf, bract***. l <«r« tcatirrvd. giwnuti white,
Fruit large, of a reddish onuajr «4our_t TM>d uf «IR *UI* of *n
orange.

1 R. AURANTIACA (Gaud. l. c. p. 451. t. 61.). ♄. S. Native
of the Moluccas, in the island of Rabdak. Tabernæmontana
aurantiaca, Gaud. ge*n.* p. ***Sit,*** and *i&.*

Ormt,
r*<-. *See Tal* ***«nnrmo»to**,*** p. 92. for culture imi propagation.

XXXIV . n|:« IIII-I I>\ (meaning »nhno«> to us). Blume,
>ijJr. p. 1026.

LIN. SYST. *Pentándria, Monoggsia.* Calyx tu l>ular, ili-ri-
duou i; limb bluntly *S-t* left. Corolla funnel-shaped: having
the throat half Hoard in.nit- b a tumid ring; tube • l>KIII nf
J)*. mfl«i. d in the middle; limb spreading, 5-lobed. Sta-
mens inchnctl ; anthers sagittate, cohering to the »ti((iiia.
• Haiium didyawua, >n ded by a ring. *" • > i stigma conical •
>-angled : »n»i i i ouches at top. Drupes twin, fleshy, gl 'Kiae,
1-celled, pul| y inside, deb -rmji at the side. Seeds numerous,
wrinkled, convolutely i-lobml ac mx[1] a| umrn Arahy.
Cotyledons Miacf>oti .— I tree, with opposite, oblong, glabrous,
leaves ; and lairral a«nl terminal, bifid, few-flowered peduncl •-«.

I <>. *fa* TIDA (Blum. bijdr. p. 1027.). ♄. S. Native of
Java, ami nil/ bu*he« on thr mountain*. «here it is called *Hampu-*
bad Jt
Fetid Oc 'op«la. Fl. y<t«r. 'IV
Cult. See ***Inkrinermantina,*** p, 'J for culture -ml propagatKMi.

\ \ \ V . l'l.l Mil i; \ (so named by Toanrfnrt. In honour
of Charles Plumier, of Marseilles, a Iran n*can trevrltrr in
South Amrrica, and auihor nf •cvi-ral rvrt-lU-nt WAIII*, a* l'laitt«>
Americanæ, 1693, and by Burmann in 1755.; [1]Genera, 1703;
Fougeres Americaines, 1705, &c.). I rn, coral-1. 43'J. Lin.
gen. 298. Juss. 45. l<am ill. t. 17 i. f. X.

Lit. iT*T. *I'rulunit'* *Monogyma. i* •mall, i-jwfi.
luint. Coralli furirn l-*ltaj*nl, with a long, ***mim*** tutw ; *ra>
»U of thr 11 mli obtooc, UlK
IMI» inarrtrd in l the middle or base of the tube of the co-
f""la, it. closed, free ; anthers connivent. Style hardly any ;
stig na ilmL. ««BargtMW j ova itrrar or b«M up-
f. Um>r. *m* it*, iiblin<i;. in.Km mil, i mini,; in ajxtnl jf
wards. Seeds numero membrane at the b >. — 1rees or shrubs, with thick, fl r»hy
branches. ' eaves alternate, form lift tulTa at ll tops of the
branches. Peduncles terminal, corymbose. Flowers showy.

1 P. fcl't p. *$i.* ptrl. p. l t in. hort.
cliff. p. 306.) • »T^« o*v 76. aprf
edges, glabrous ; peduncles elongated, trifid ; flowers crowded
in fascicles ; corollas red. ♄. S. Native of Jamaica, Surinam,
and the main land of South America. Curt. Uot. *m»* g. t. 279.
—Cate b. car. t. i. —1 hret. pict. t. 10. Trew. ehret. t. 41.
—Sloan. Mat. f. p. Cl. l. lS.'i. l l. and l. lM. f. 1 —Merian,
surin. t. 8—1*|,,.n. aim. 109. i. W?. f. f l'Hum les downy.
Corolla r ft, with a (l'UMW thruai, atnl <»l»l'-j • ely obovate-oblong
segments, which ar* rounaVd at ihe aj>r» lhe flowers are so
sweet aa writ »• brauiiful, that l!M- woimn of Nouili Aimfnj
adorn themselves with them, and put the maBMMf] linen to scent
l'* •" we do laves,|r fl h l* ralU-d by thr l fM>ch in th« v.
Indies Frangi naaal *nmft.*
Red-flowered P unwra. H JuU, Aug. fit. lfl!»0. Trr.
12 to 20 feet.

.! P. ? ARBORE'SCENS ; leaves ovate-oblo i>X, flat; pniuWa
biglandular ; flowers twin, disposed in urnnnal •(• . • -

Native t.fJamj. l.ff. p. 76. Brown, jam. p.
181. t lowers red.

*.4tl**i,* l rrr 10 lo ll fret.

3 1 RUBY'ARA (Ruiz et l»a». fl. prr. *• *V* •
oblong oral<-. will revolute edges ; flowers terminal, cy uoa* ;
corollas reddish purple. ♄. S. Native of Peru i, in naru*aav
Petioles biglandular. Corollas sweet-scented, purple, with a
yellow hairy throat, smaller than the other species. Perhaps *P.*
tmtamaiu P. cari >.«/«, and /'. *tricolor* are only varieties of *P.*
•wrpvrr, ilitl ering in the size «nd colour of the flowers. In
Peru the corulla* arc uaxl by th women to ornam pr«t ll
their hair.

/'•rW, l Plumiera. Fl. July, Aug. Clt. 1820. Tr. 20 ft.

4 l' INCARNA'TA (Ruiz et Pav. l. c. t. 138.) leaves ovate-
oblong. acute ; flowers cymose ; corollas flesh-coloured, with a
fu) vous disk. ♄. S. Native of Peru. Cymes subumbellate.

Flesh-coloured-flowered Plumirra. ! l. July, Aug. Clt. 1820.
Trr* *0 l. et.

A l' CARINA'TA (Ruiz et Pav. fl. per. 2. p. 21.) leaves oblong-
ovat». acuminated, keeled : with flat, red edges ; corollas large,
B coloured. ♄. S. Native of Peru. Very nearly allied to
/'. *incarnàta*, but differs in the e •ljir» of tl>. l, leaves bein *i* usually
n l Corolla. yellow, «itti tin centre white outs («« tit the WMi-
dle, and reddish above. Calyx r Mi,

A *eled*-leaved Plumiera. Tree (5 feet.

6 P. TRICOLOR (Ruiz et Pav. l. c. t. 139.) leaves oblong,
m t a . and n mniai ed : with flat, veiny edges ; flowers corym-
bose ; corollas tricoloured. ♄. S. Native of Peru. l eaves
with red veins. Coro lla • with a r»'i lulu-, a i '•))•« • -coloured
throat, • nd the limb white, tinged with red.

Tricoloured-flowered Plumiera. Tree 20 feet.

7 P. Ki»- ; leaves obovate-oblong, tapering at btxh Mtd*,
wttire, with |«aralir veins and flat edges ; pedu MIMIIrminal,
cymose ; coro lla* «nli a yi llirn tlir at, white above the yellow
part, and red round the margins of the • gliwula. *• . S. Na-
tive of Mexico. P. tricolor, f
Urn* t' Pav.

A- i i On Ck. 1 • ll i
's Plumiera. l ree 15 feet.

8 P. MILLE'R •I ; l«[1]«\ es ovate-oblong ; flowers en mbose ;
corollas flesh-coloured. ♄. S. Native of St. Christopher.
i incarnàta, Mill. dict. no. *. but mn . of Ruiz et Pav. Very
iwarly all d to *P. rubra*, but of more humble growth, and the
leaves are thic re veiny. Flow n 10 of morr w» i ach
corymb.

km and t< • n 10 of morr w» i ach
Miller's Plu aiafi rl July, Aug • lt. ? Tree or shrub.

9 P. NICOLOS (Ruiz e • l'a\. l • i. 140, i lmtr* oblong, *rti.
minaini . with Mat rtlg< ; flowers corymbose ; corollas r raaa-
eolatiriil i with a < rved tube, yellow th r.»t, •• d milk white
limit ». . S. Native of Peru.

fmvtvUmtni- (iu vered Plumiera. Fl. July, Oct. Clt. 1 llJ.
Tree 25 feet.

10 i. LU'TEA (Ruiz et Pav. l. c. t. 142.) leaves oblong-obo-
atc, arummain]. Hnwrr rorymbua*; cawl as yellow, varie-
gated with *m* ite. ♄. S. Native of Peru. Tube of corolla
curved, yello i »l(,
Yell .w-r1«>»rtr<l l'lumirr*. I l. July. Aug Cit. Itli. Tr.
15 feet.

U P . Ait* (J«<-^. « „ , , j(, t. 174. f. 12. ed. pict. t. 58.
Lin. spec. p. 307.) lratr« laMcroUtT'oWnng > with revolute
edges, arimift ated ; pe lwatlrt ihictumJ at top. cot' mbose ;
corollas white : wi ,)(t ?(-jj ow throat. ♄. S. Native of the
West Indies, as of Jamaica and Martinico, and of the HMMI Un.1
of South America.—Plum. icon. t. 231.—Commel. hort. 2. p.
47. t. 24. Cor lf a arita a Wtj loatg, b< ick, incurved tube,
aad obo«at*-4»bU>fig <»UM)M* argtn<'<> l Follicles reflexed.
l l ,-, ,. ,, . ,. iwbrottir*!, r»r.i.n« rr_tl>alaltt». l •« !«»»..

a foot long. Called by ibe French in Maninico *Frangipanie* u

*¥*r.* /J; *ftrngrmmtUnmrn* (II B. el Kunlh, nor. gen. amer. *S.* p. 230.) leaves, i , obovate-Unceotate, abort •acuminated, with Oat edges, •rlabrou* except the nerve ant) vein*, which are downy beneath ; (lower* pamculatcly •picate, very fragrant ; corolla with a white limb and yellow throat. I -, me of New Granada, and Peru, in the garden* of the Indians, Tree 40 feet high. i >lor. Ruis et Pav. fl. per. *t.* p. tl. l. 141. f Tube of seolla green, and vrntrtcoae at the b**e; argroenu of the limb obovue-oblonj;. obtmr, equal: throat hairy.

' *ar. y, imodbra;* itnn with very few branche*, about 8 feet liifffa : flower* whin-, tcctitift*, laru- Native of Cartbagena, in wood*. P. iiuxtora, Jacq. amer. p. 36. Leavea like thoaeof /*• *rmbra.*

Hk.tc-flowered Plumtera. Fl. Julv, Aug. Clt. 1733. I r, 15 feet.

12 P. HOIXIS (H. B. et Kuiiiii, nor. gen. amer. 3. p. 930.) creeping •r procumbent, rarely erectwb i leave* obovate, acute, flat, glabrotia above, but clothed with *%ai*\ down iM-nrath; corolla *1 ite. 1. Native m the Miaatona of the Orinoco, in the iaUnd of Panumana, in place* formerly cultivated. Leavea membranous, 6 inehea long. Corolla with a downy tube and funnel--l'april limb ; and ovate, aevttah, equal iignjiwu. I'rrhipa a variety of /'. *aitxt.*

Soft 1'lumtrra. Shrub procumbent.

13 I Lin. apec. 307.) leave* lanceolate, prtiolate, •liitute : flower* racemotely pa roll* w| cuNat. !i America. P nivra. Mill. dirt. n. 7.—Catr*b. car. 2. t. 93.—Plum. won. t. Mi. Leavea like thont of OllihnW.

A«Mi-lr.«ted Plunuen. Fl. July, Au. l7M. in feet.

AIMIt I .IMMN. *:..* cu- on abort thick petto)*-*, obovate-oblong, *bor ueaied at ibe base while younjt. but r own dad tn ihe adult Mate, glabroti*, dtatantly ribbed ; panM-le* corymboae, glabrowa, rnanj • lowered, aborter than ibe te«*r*. br Sattv* of aii, in i ce of KM NMI.,, Corolla*, white.

' '•'• reiae ex LWHMM. 6. p. so.) leave* *ltort-acuminairil, «r rounded, glabroua on both surfaces, shining (above, and veined beneath; flower* racenanatly corymbose, involu (ralrd by keeled bracteaa; corolU with a •lender lube. an>1 obl> . »»il. tn the ;ro.

*PLmgeiht*n* Plumiera. Tree.

Ift P. PVuicA Jaeo* amer. *&7.* ed. ptct *1 *.) leaves oblong, flat, veined ; limb of corolla closed, as in *Ach* ravicus. •**ta nwiJ >y»a, where H is highly esteemed, and is there called *Donzelle.* Corolla flloww*. very «««r< 1 rath other for two tnoolb* together, and have an <K!0U* much more agmabli ikan that of any other •pceiea, or even any other tto*er.

I >h. 1ft.

17 P. ARTICULA'TA (Vahl, ec log. amer, t. , 20.) leave . af. liptic, glabrous, veiny ; spikes disposed in fascicles, articulated. M. !*•>»•* Ml ippS of ll«e br tttered towards the *l«o r..u...toi. pnkt beneath Ih-i | | (•• | A) if mi*, elongalcl P"r1t"' ones disposed in something like fascicles, S$ togetl' ii*. (.-' Ip-el-! of n«f »trd *on* Uwj upper witli n *trx»h* at iW baM of TJ"TJ_, t«U, ar«M>f. I hM M a very doubtful Ma**, and may probably form a new r » « . .

Jointed-spiked Pluniirrs. Shrub or U re.

18 I kit* (Mil leave* lioear-lanceolai very long, thick, j ; corollas yellow. N .».•.* of Senr. ink red. Leave* D-10 tnche* long, *t* brad.

Afri•an Plumiera. Shrub or tree.

19 P. ACUMINA'TA lit. hort. *I'. vol. t. p.7'* icnttered, lanceolate, acuminated. «l • . , and Cochinchina. K reg. 114. P. .. P. obtuaa, Lour, toch, 117. Flo^ • amb. 6. p. IS. t. M. Leave* with many ira»ver»e terminal, in compound, .preading apr«hi " CorolU ux«d with red onwtde, and. imide; tube i Pollt

H> P. MEXICA'NA I odd. bot. cab. l. *\0UA* trave* •JP^T lanceolate, acummatrd; corolla* whn*. with a >cllow tliroat. ..1 Mr»ir... Prrhap the anm* a* ihe feUowmg. Jtfr*«-«»P. Uie.JuU lr* «*

ft P. l,4M*iaTi*M* | bot. reg. l. 13**.) lrave* ^ fc>Ha» wlnlr, with a yellow ihrual • •oar. I J. I» i Lood. > It differ* frot. *P. Klrrii,* in the Sower* being inodorou*, »«« in being a little larger, and in the »egmmu betng broader ami rounder.

*Umb*rt»* Plitmirra. Fl May, Aug. Clt. 1824. Tr ,* lo to 10 fret.

« P. TUBERCULA'TA ILNHI. bot. eab. «k J; p. M.J branche* lubereulate, • -"" o* l b r r*^ twit*; leave* ccirinttnn*. narrow-oblong, ubtwae. taper nn long wa> into the prlMiar*, downy bme«tn ; pednnelr* ^ ^ ^ H much aborter ihjo ih> leaves, many flu n in 1 " * ^^

Aug. lll" 1 s i*

† *jpmtm* endrr *tit fotlammg* namr* *mn* in *UM.* *•';,'*J^ **d j>.* 16., MU lAry *mr** *probably synonymous with the described above.*

Drastic Plumiera. Tree.

15 P. PHAGDNA'RIC reiae ex LWHMM. 6. p. so.) leave* cuneate-oblong, *ltort-acuminairil, «r rounded, glabroua on both surfaces, shining (above, and veined beneath; flower* racenanatly corymbose, involu (ralrd by keeled bracteaa; corolU with a •lender lube. an>1 obl> . »»il. tn the ;ro.

*PLmgeiht*n* Plumiera. Tree.

Ift P. PVuicA Jaeo* amer. *&7.* ed. ptct *1 *.) leaves oblong, flat, veined ; limb of corolla closed, as in *Ach* ravicus. •**ta nwiJ >y»a, where H is highly esteemed, and is there called *Donzelle.* Corolla flloww*. very «««r< 1 rath other for two tnoolb* together, and have an <K!0U* much more agmabli ikan that of any other •pceiea, or even any other tto*er.

I >h. 1ft.

17 P. ARTICULA'TA (Vahl, ec log. amer, t. , 20.) leave . af. liptic, glabrous, veiny ; spikes disposed in fascicles, articulated. M. !*•>»•* Ml ippS of ll«e br tttered towards the *l«o r..u...toi. pnkt beneath Ih-i | | (•• | A) if mi*, elongalcl P"r1t"' ones disposed in something like fascicles, S$ togetl' ii*. (.-' Ip-el-! of n«f »trd *on* Uwj upper witli n *trx»h* at iW baM of TJ"TJ_, t«U, ar«M>f. I hM M a very doubtful Ma**, and may probably form a new r » « . .

1 /'. «Mr*nlM. Lodd. cat. p. 1 '. cat. p. I ft. S / ' . ;.I*MM.III, Lodd. cat. p. U **~ *tU,* Lodd. cat. p /*. nMrroptfvA>. I*«W- c * r M A'artiMMK, Lodd. cat. p 16. 7 *P. irmm/^». ****' eat. p. 16.

m. All the •prctMof *ftmmth-m* M to 'w**? *rjTjT tInnom, and on that account '• gafuv^**\ Uerng of a rather «urcul< little water wh«n not in a free growing «taU. The br*t *O" then •• a nuxturr of peat, loam, and aand. !••' ibem*uik« r> the planta, if kept dry.

XXWJ CONOPII ARY NGIA (from ——— rone ; and **•>•»(, *fkaryj.* the ihroM i renwenc* to tl* •»**"* bmng eoatUtted NHO a enne, protrudmg fro* the threal «f lfcf corofia.) Phwrier* »|- ies, Lam. dict. 2. p. 542.

LIN. SYST. *Pti*4rm,* V.-.. ia. Caly , i ,oothed- Corolla funnel-shaped ; segments oblong, v l. »i* cor>- **de, and enneaie IMMW, rr*-Ur > <.,. ,,.,.'. ....,r aW-» Universal peduncles twin, often tbe centre, opening by a aaBaJlnola | tube widening gradually to tbe top. Stamen* i . a l k t throat of the lube, nauag each from the inauktof a icrwbiaU ; ai< »«wLir. very »cuir. •n< at lop, above the throat of the lube, m a enne wh« h claspe the atvte. KiyU •Wnder. hui tbiefcenad at top; .t«*ma »Mb bind at tb* ap.a rulhite* l*m. *Ji|i»|..haped. InicL 6**1?*

many-seeded. Seeds form of thoae of tb* (rapr, atlartwd to a slender central column.—Glabrou i ahruba or tree*. wtih opoo- ite leaves. siul t. TIIIICI.II coomb* of !)->«<'« J

1 C. RETUSA; leaves ovate-wedge-shaped, retuse; corymbs compound, pedunculate. ♄. S. Native o T Madagascar. 1.1. of France, &c. Pl iwera n no '•> Bois de lait. Leaves smooth above and nerved beneath, 6 inches long and 3 broad; petioles very short, stem-clasping. Scales Jli aru pedieek in tb* corymb. Flow ers form I M V M of jatrim

Retuse-leaved i (Mtopbaryngta Shrub or t rat.

2 C. LONGITÒLIA; le raa oMong-WMr ow, flat; co yrnb* na- nicles I, a*arl sessile. ♄. S. Native of Madagascar. Plu- mitta. lot gifòlia, i am. dic • * . p. Ji > oa a low long, on •bort. 11 ick, stem-clasping peti *+. keeled, without any mat ntt*i s. Under each divis wsof il>r corymb* arc f opposite, concave aruie teal' s; ulterior peduncles of the corymb 3- ltowerc); i lie -* 'lateral flowers pedicellate ittd tbr middle one sessile. Calycine segmen a canravr, i wind nb

Lamg-Uaird llotMapbarvngta. Clt. 1819. •hTttb.

Cult. Fo •r culture and propagation act *I'lwmirrm*, p. 94.

W W I I . \IN< .\ (from vinco, to conquer ; himtiK tbe species subdue other plants by their cre ppina; root*, or bind tlictn by their runners). Lin. gen. no. 293. JUM. Ul.— Pcrvmca, TWy arc ra.ly Tourn. t. 45.

LIN. SYST. *Pentándria, Monogýnia.* Calyx 5-cleft; segments linear or subulate, acute. CcjuilU ul*ef-mhapet! tube longer than tltt r alyx ; throat bearded; segments of II* tinilt flat, oblique, truncate at the apex. Stamena A, »i> thro at, ii>' loscd ; Uaanaati »bort; antbara anding rarh tn a ha incmUr»i>r at a|» x, which connive over the stigma; stigma bearded, seated on a flat orbicular disk, which is grooved round the circumference. Glands 2, alterni .Hue "iib the oraria| ^U- bro >< aa well aa them. '• ollicles 2, erect. tei»te, narrow , debo- cing lengih»w e, few-seeded. Aviluimen Aeaky. Sc*dt cylm- dric •l, ttaki • .—Creeping, suffruticose, >>r lift l»ari un» plant*. Leaves amoolli, ll ining, opposite. l •\tt% avillarj, toliiar^, alternate, peduiimlatr. b ue, pur V, and wliilr.

1 V. MINOR (Lin. spec. 304.) stems p rocumbrni ; l< ves ellip- tic-lanceo •l»tc, f(tal rous ; calycine IJIIMIIH lunar lamr olate, '»urni»K kfgnmii "I tm.lij bit > lt at tup i ll N» tive of Europe, as of Germany, Switzerland, France, Italy, «e- In l Britain it has been found in many places, in hedges and woo • !•. in ratlit-r damn situations. Smith, engl. bot. t. 917. Curt. lond. 3. t. 10. ihrnrk, iooa. l. US. Hi- kw. t. 9. Pervinca m tnor. Scop. ram. ntt <7S. —I'rt* im-a ni(«*n». l'a»k. tbr estr. 381, t. 1. Clematis daphrMMdtai l>odoa. p^wi t. 401. Flowering stems usually . i . • l flowers void of scent. Co* rolla blue; with white th roal, l arying to purple and white, of a smaller size than those of ' . fwi). This species varies much in the colour of ibe l* owers; they are also sometimes double; and the foliage ia totnriinw* . ariegated, either with white or yellow stripes.

Lesser Periwinkle. Ft. Mar. v ept. Brit. Pl. creepir

2 V. MAJOR (Lin. spec. p. 304.) stems erectish; °*«'<\ at i te, ciliated; calycine teeth linear-subulate, ciliated, "•wily *with* awnall to, th on each side at the base; segments of carol l* broad. obovate. ♄. H. Native of Europe, as of France, Sp ly, Switzerland, &c. With us it is n cammoc) tlian V. minor, in moist i txat* and bedgn ; but the M ar« |<i..|»t<lf both escapes from irardrM, Smith, engl. bot. t. 514. Curt. lond. 4. t. IB PUndt. icon. l. III \Vinca media, Delile. Per- vinca major, Scop. carn. no. 274.—Garid. aix. t. 81.—Lob. icon. t. 636. This species is larger in all its parts than the preceding. Corollas fine purplish blue. Flowering •« m» rtr< l , Itarrra uatn creeping. T•tra i» • variety of this with variffjatrd leaves.

Orrmlr Periwinkle. 1 Fl. Mar. Sept. England. Sh. 2 feet.

J • . HERBA'CEA (W ddM H Kit. pl. rar. hung. 1. p. 8. t.». Hook, bot. n^ fOOf.) stems herbaceous, procumbent, root- oblong-lanceolate, nwiui. .d <w t)* edges .jonng; « r •Bbwlata, kill. FloWm pwrphih h|or. <Mt rlrganl plant wtu Moaaaam.

FIG. 18.



Herbaceous Periwinkle. Fl. Juru July. l t. Ulfi. l'l. CTMpanf.

C'* p lant* drlifht tree* and bi*«]n *, tbrjr may bt pUocrd m ifcrabtonm, wbtt pr«ad and ground , ami a* ibrir lrate* ntiaHawa g ww all iW "til U»r a gc d rt llwwvrt ap|x at iMirt of ill au^S in iln*

XXXVIII. CATHARA'NTHUS (from καθαρος, *katharos*, pure, and ἀνθος, *anthos*, a flower; in reference to the neatness and l eauty of the flowers).—Vinca species, Lin.

LIN. SYST. *Pentándria, Monogýnia.* Calyx 5-parte l . *r ment< •tiliulatr. Corolla u l t i *t* »lta|H .1 . argmanta neat aided, tibuvaic. nmcronatr ; throw braril*. tla*atr at tup >• <»*. A< >ia t .ij.it »tr, marginalr, Uardrtl at (ni»lx<l with a cup-ahaprd mambraM WU><«r, which «l>c»e\« tittprr pai I h tMMiynoua tiUittU t, IW—» t *tO* in . «rb altaakad UMi«iiudmally to each atd* o/ iW di»»pirua»i, small, ovate-acuminated abo *t* KtwrvMl ami najgrd fr.»m > tic *idr, i.xi .m.KMk. oo tbr utbrr ttdr Allwmnt flesby. —Small shrubs or herbs. l«« »r. opposite, evergreen, cori- arvova. FV>»rr» rlrgam, anlUi». »J»t • tWM lt laaaMMaft l — , obtuse, mucronate; petioles bidentate or bistipulate at the base; flowers »• illary, solitary, or twin, sessile. ♄. S. Native every where within the trop <*, ban |<rulial-ly wrifinall) from Madagascar. 'Vinc •' tnwa. Lm. tpw. 908. Mill. fig. t. 186. i urt. bot. niaf. *ti*.* (iwrtn. ftili'l. t. p. l7«, l, l l . • 5. Flowers bright cr •Man, or pradi or roat-oaiourvd, pakf nn ibt under side, with • dark purple eye. Calycine »c|(-nr*u dilated.

Var. a, ruber; flowers rose-coloured.

*t'mr. jl, all** i flowers white.

Var. γ, ocellátus; flowers white, wi it a parpW CM ' .' *2, villósus*; leaves vi Joan, rotutdrtl at top* mucronate. Lin. spec. dict. 5. p. 199.

Vlnca K M , I[1]. Aw tiaraathua. H. fab, l7W lira.

[1] wwii Wtbaceowa. trMadtaaydar, awxtb W m d travra lancrolata at man 1—imiau aAaMBtaa : rurmabad

N I. *t* f. 1. Vinca parvifiora, Retz. obs. » p. 14. no JJ

...Gaud. mem. ed. 2. vol. 2. p. 67. Copa vesta, Blanco, mem. ed. 2. vol. 2. p. 67. Flowers size and colour of those of *Lithospermum officinale*. Pollicles longer than those of *C. thevetia*.

Zone. Cultivated. Fl. Aug. Ch. 1778. Pl. (1) 10 feet.

Cult. &c. *alstonia* is a very elegant and delicate shrub, of easy culture: and is increased readily by cuttings or seeds. As it possibly, being annual, is only to be preserved by sowing the seeds in a pot full of light rich earth, and plunging it into a hot-bed.

Tribe V.

ALYXIEÆ (the tribe agrees with *Nerieæ* in the fruit being drupaceous). Ovules double. Fruit drupaceous. Albumen even, terminated or fleshy.

XXXIX. ALYXIA (from *a*[illegible], *alyxis*, watery, *chief*; glossy appearance of the shrubs). Banks, herb. ex R. Br. prod. p. 469. Cunningh. in hot. mag. no. 3012. Gynopogon Forst. char. gen. p. 36. t. 18.

Ids. exot. *Pentandria Monogynia*. Calyx 5-parted. Corolla salver-shaped, with 4 naked throats. Stamens inclosed. Ovaria 2, connected. Styles side-adherent. Stigma obtuse. Drupes 2, pedicellate, one of which is usually abortive, simple, containing a semibivalve 1-seeded putamen. Seed semiquadrate. Albumen ruminated fleshy. Radicle erect, straight, or curved. Shrubs, glabrous, or obscurely tomentose. Leaves verticillate, 3–4-cornate, opposite, connate, conjugate, or alternate. Flowers axillary or terminal, sometimes spicate, rarely corymbose. Habit and structure of flowers as in other Apocyneous plants, but differs in the albumen being ruminated, and easily separated into lobes.

* *Leaves verticillate.*

1 A. acuminata (Cunningh. in hot. mag. no. 3313. *Gynopogon virgatus*, Forst. prodr. n. 117. gen. p. 36. t. 18.) flowers axillary, pedunculate, peltate; peduncles 1–3-flowered; calyx bracteate; leaves 3–4 in a whorl, petiolate, long-lanceolate, glabrous, with revolute edges, glaucous beneath; with midrib sulcated, parallel veins; petiolus only half the length of the leaves; drupes oblong, membranaceous, 2-seeded, abortive. ♄ ♄. Native of New Holland, on the shore within the tropic at Endeavour River and Moreton Island.

Egg-leaved Alyxia. Shrub.

2 A. spicata (R. Br. prodr. p. 470.) spikes axillary, flowers verticillate, sessile, subcoriaceous; leaves 3–4 in a whorl, ovate-lanceolate; petioles shorter than the peduncles; with a simple base; ♄ ♄. Native of New Holland, on the east coast, within the tropic (R. Br.). Endeavour River (A. Cunningh.).

Spike-flowered Alyxia. Shrub.

3 A. tetrastigma (R. Br. prodr. p. 470.) spikes axillary, flowers verticillate, sessile, subcoriaceous; leaves 4 in a whorl, oblong; petioles longer than the peduncles; with a glandular base; ♄ ♄. Native of New Holland, within the tropic Lizard Island. A. Cunningh.

Tetragonal Alyxia. Shrub.

4 A. tetragona (Forst. ex Schultes, syst. 4. p. 472.) peduncles axillary, pedunculate, much shorter than the leaves; calyx bracteate; leaves 3–4 in a whorl, lanceolate, acuminate-serrated, smooth, attenuated at the base, sessile; stipules capitate, bearded (see Spicæ p. 36. t. 18. f. 2). ♄ ♄. Native of the Society and Friendly Islands. Gynopogon verticillatus, Forst. prodr. n. 117. gen. p. 36. t. 18. Banks, herb. ex R. Br. A. ramiflora, Roxburgh. A. [illegible] Lour. cochin. 1. p. 84.

Three-leaved Alyxia. Shrub.

5 A. triphylla (R. Br. prodr. p. 470.) spikes axillary, 3-flowered; calyx bracteate; leaves 3 in a whorl, ovate or subcordate; petioles short. ♄ ♄. Native of New South Wales, on the north coast.

Blue-leaved Alyxia. Shrub.

6 A. caerulea (Gaud. in Freyc. voy. pl. bot. p. 421. t. 67.) pedunculos terminal, usually by threes, 10-flowered; calyx bracteate; leaves 3 in a whorl, oblong, rather coriaceous, terminating in a rounded, emarginate, short petiole; stipules ciliated. ♄ ♄. Native of the Marianne Islands, on the mountains of Guaf.

Laurel-like Alyxia. Shrub.

7 A. laurifolia (Gaud. in Freyc. voy. pl. bot. p. 421.) peduncles axillary, solitary, 2–3-flowered; leaves 3 in a whorl, elliptic-oblong, acute at both ends, coriaceous; stalk short, furrowed. ♄ ♄. Native of the Sandwich Islands.

Olive-leaved-fruited Alyxia. Shrub.

8 A. [illegible] (Gaud. in Freyc. voy. pl. bot. p. 421.) peduncles axillary, solitary, 2–3-flowered, exceeding the petioles; leaves 3 in a whorl, elliptic, subacuminate, running into the petioles at the base; drupes olive-shaped, ripening into the petioles at the base. ♄ ♄. Native of the Marianne Islands, on mountains from Guaham village.

Farrer's Alyxia. Shrub.

9 A. erythrocarpa (Banks ex Schultes, syst. 4. p. 440.) flowers almost sessile, solitary, terminal, solitary or twin; leaves 3–5 in a whorl, obovate, or wedge-oblong, blunt, attenuated at the base, shining, veinless beneath; drupes berry-shaped, ovate-globose. ♄ ♄. Native of Norfolk Island, in the inland parts of woods. Wall. cat. 1650. Ludlow, Forst. herb. Banks, Br. pl. mscr. t. 119. A. Farrer, Cunningh. 1827. Gynopogon Alyxia, Forst. prodr. no. 116.

Gynopogon Alyxia. Ch. f. Shrub.

10 A. [illegible] (Cunningh. in hot. mag. t. 3011.) leaves verticillate, axillary, or terminal; leaves 3–4 in a whorl, lanceolate-oblong, elliptic, or rhomboid, obtuse-mucronate, shining, veiny beneath; supported by a short, petiole-like base; branches straight, somewhat, verticillate. ♄ ♄. Native of Norfolk Island, in dry shady woods.

Duplicate-like Alyxia. Ch. 1831. Shrub.

11 A. [illegible] (R. Br. prod. p. 470.) flowers [illegible], terminal; leaves 4 or 5 in a whorl, broad-elliptic or [illegible], obtuse, attenuated at the narrower end; [illegible] angular; the orifices and margins rather [illegible] ♄ ♄. Native of the south-east coast of New South Wales. Lodd. bot. cab. 1811. Cunningh. in hot. mag. 3318. A. Richardsiæ, Sweet.

Lily-flowered Alyxia. Shrub.

12 A. [illegible] (Cunningh. mss. 1828, and Cunningh. in hot. mag. 3313.) leaves [illegible] ♄ ♄. Native of Moreton Bay, [illegible] Island. A. Cunningh.

Rosemary-leaved Alyxia. Fl. April, July. Ch. 1820. Shrub. 4 to 6 feet.

** *Leaves opposite.*

13 A. [illegible] (Hook. ms. in Bennett voy. Pl. bot. p. 89.) leaves opposite, ovate, obtuse, rather membranous, shining on both surfaces, obscurely and parallelly veined; peduncles axillary, solitary, 3-flowered, one half shorter than the leaves; flowers yellow-tinted, [illegible] ♄ ♄. Native of the Sandwich Islands.

Fascicled-fruited Alyxia. Shrub.

14 A. [illegible] (Banks ex Schultes, syst. 4. p. 440.) peduncles axillary, 3-flowered, longer than the petioles; leaves opposite, oval, oblong-elliptic, bluntly mucronated, shining, with parallel veins; fascicles clustering. ♄ ♄. Native of the Society Islands. Gynopogon verticillatus, Forst. prodr. no. 116.

Glowing Alyxia. Shrub ♂.

15 A. [illegible] (R. Br. prod. p. 470.) flowers usually twin, interpetiolar; leaves opposite, oval or obovate, smooth on both surfaces, terminating in a callous point; stipules small, bearded. ♄ ♄. Native of New South Wales, on the east and south coasts; also of the island of Bass's Straits, as also in the northern regions of Van Diemen's Land.

Bay-leaved Alyxia. Shrub.

13 *A. obovata* (Wall. cat. no. 1669.) peduncles axillary, 3-flowered; leaves opposite, or 3 in a whirl, obovate-elliptic, tapering much to the base. ♄. S. Native of Chapedong.

Smooth-crested Alyxia. Shrub.

14 *A. stellata* (Wall. cat. no. 1667.) leaves opposite, oblong, coriaceous, shining above, glaucous beneath; corymbs axillary, many-flowered; throat of corolla crowned. ♄. S. Native of the Straits of Malacca.

Glaucescent Alyxia. Shrub.

Cult. For culture and propagation see *Tabernæmontana*, p. 97.

XL. CERBERA (so named from Cerberus, on account of its poisonous qualities). Lin. gen. no. 294. Juss. 143. H. B. et Kunth, nov. gen. amer. 3. p. 122. Illust. hujus. p. 103. — Alstœm. Vouru. nut. 454. Jacq. amer. 48. Thevetia, Juss. in ann. mus. 15. p. 241.

Gen. char. *Pentandria, Monogynia.* Calyx 5-parted; segments persistent. Corolla funnel-shaped; tube pitcher-inside at top; throat 5-toothed; teeth opposite the antheræ; limb 5-cleft; segments oblique, or unequal-sided. Anthers seated on the top of the tube, sessile, included, acute, adhering to the stigma. Ovarium didymous, girded by 2 hypogynous scales or glands, bifloriferous, didymous; stigma dentoid; having the margin crenulated below, but convex and evaginate above. *Drupes* two, one of them usually abortive, containing a fibry 2-celled nut. *Seeds* usually solitary. — Lactescent trees or shrubs. *Leaves* scattered, quite entire. *Peduncles* extra-axillary at the tops of the branches. *Flowers* showy yellow or white.

1 C. Thevetia (Jacq. amer. 48. t. 24. ed. pict. t. 41.) leaves linear, with subrevolute edges, almost sessile, glabrous; peduncles generally 1-flowered; calycine segments ovate, lanceolate, acute, ½ lower shorter than the tube of the corolla. ♄. S. Native of New Granada, in hot places; Mexico, Cuba, Martinique, &c. Lin. spec. 305. Lam. ill. t. 170. f. 2. Hook. bot. mag. 1209.—Plum. nov. t. 18.—Pluk. alm. p. 233. t. 207. f. 2. Jacq. hort. vind. 445. f. 2. Axils of leaves furnished with some scarious scales. Corolla yellow. Drupe half orbicular, truncate at top, 2-celled, size of a bean; cells hippuric.

Thevet's Cerbera. Fl. June, July. Cb. 1733. Tree 18 ft.

2 C. ahouai (H. B. et Kunth, nov. gen. amer. 3. p. 122.) leaves lanceolate-linear, acute, veiny, glabrous, with revolute edges; nerves and veins pilose beneath; flowers crowded at the tops of the branches, on short peduncles, sometimes 2 on a single peduncle; calycine segments oblong-lanceolate, acutish, ½ more shorter than the tube of the corolla. ♄. S. Native of New Spain, in temperate places, near the town of Tasco. *Leaves* 4½ inches long. *Segments* of corolla doubtfully obovate. *Drupe* glabrous, size of an apple. Corollas yellow.

Thevetia-like Cerbera. Fl. April, July. Cb. 1800. Tree 12 ft.

3 C. Peruviana (Pers. euch. 1. p. 287.) leaves linear-lanceolate, crowded, glabrous; peduncles short, few-flowered. ♄. S. Native of Peru, in woods. C. Thevetia, Ruiz et Pav. fl. per. 2. p. 27. t. 135. f. b. C. Thevetia β, Pair. suppl. 4. p. 231.? According to Cav. dissert. p. 108, this differs from *Thevetia* in the stamens being tetragonal, not round, in the peduncles being few-flowered, not 1-flowered. Corollas yellow, with wedge-shaped, oblique, truncate segments, and a villous throat; having 5 tubulate teeth, closing the tube.

Peruvian Cerbera. Tree 18 feet.

4 C. Ahouai (Lin. spec. 1. p. 303.) leaves ovate-acute, glabrous; peduncles terminal, short, few-flowered; calycine segments reflexed; segments of corolla undulated. ♄. S. Native of Brazil. Cav. hist. exag. 137. Aubl. rip. 121. Lam. ill. 2. p. 192. t. 170. f. 1. C. Thevetia. Lin. hort. cliff. p. 72. Vor. ic.

Alstœm. Iter. amœn. p. 66. Corollas pale yellow. The wood is very hard; and the fruit is a deadly poison. The Indians are said to put small arrows into the empty nuts, using them, and feathers, to shoot their bows when they dance.

Ahouai Cerbera. Fl. June, July. Cb. 1739. Tree 10 or 20 feet.

5 C. ovata (Cav. icon. 3. p. 55. t. 270.) leaves oblong-obovate, green above, rather downy beneath and yellowish; flowers terminal, usually 3 together; calycine segments ovate, acute, reflexed; segments of corolla ovate-oval. ♄. S. Native of New Spain. Corolla yellow. *Fruit* nearly globose, size of a walnut, compressed, slightly truncate.

Ovate-leaved Cerbera. Shrub 5 to 6 feet.

6 C. cordifolia (H. B. et Kunth, nov. gen. amer. 3. p. 121.) leaves oblong-cuneate, rounded at the apex, pubescent above and downy beneath; peduncles subdichotomous, few-flowered; calycine segments oblong, acute, hardly shorter than the tube of the corolla; segments of corolla distinctly obovate. ♄. S. Native of Mexico, on the western declivities of the mountains, between Zumpango and Mescala. *Leaves* 3 inches long, and 2 inch broad at top, with some scales on their axils. *Peduncles* hairy. *Corollas* yellow?

Wedge-leaved Cerbera. Fl. April. Tree

7 C. myrtifolia (H. B. et Kunth, nov. gen. amer. 3. p. 122.) leaves oblong-lanceolate, acuminated, with subrevolute edges, glabrous and shining above, but hairy beneath; flowers racemose; calycine segments ovate, acuminated, ½ more shorter than the tube of the corolla; segments of corolla rounded. ♄. S. Native of New Granada, at the mouth of the river Sinu, and near Carthagena. *Leaves* 3-4 inches long. *Corollas* white, about the size of those of *Vinca rosea*, both downy outside. *Ovaria* girded by 2 combined glands. *Drupes* roundish, fleshy, 2-lobed, 4-celled; cells 1-seeded.

Shining Cerbera. Fl. March. Shrub.

4 *Doubtful species.*

8 C. alexandra (Willd. mss. ex Roem. et Schultes, syst. 4. p. 708.) leaves lanceolate, obtuse, roughish. ♄. S. Native of South America. Humb. et Bonpl.

Garlic-scented Cerbera. Shrub or tree.

9 C. cuneata (Willd. l. c.) leaves elliptic-obovate, tapering into the petiole, glabrous, paralelly veined beneath. ♄. S. Native of [ ]

Cuneate-leaved Cerbera. Shrub or tree.

Cult. For culture and propagation see *Tabernæmontana*, p. 97.

XLI. TANGHINIA (*Tanghin* or *Tanghin* is the Malegasse name of *T. venenifera*, the juice of which is the ordeal water of this island). Pet. Th. gen. nov. p. 10. Poir. suppl. 5. p. 185. Beaucm. Hook. bot. misc. 3. p. 270. t. 110.—*Cerbera* species of authors. *Cerbera venenifera*, Gærtn. fruct. 2. p. 44. t. 90.

Gen. char. *Pentandria, Monogynia.* Calyx 5-cleft; segments spreading, deciduous. Corolla salver-shaped, longer than the calyx; with a pentagonal, dilated throat; limb spreading; segments marcescent. Stamens 5, inserted into the dilated part of the tube of the corolla; anthers thick, fourcornered, hidden by an ovate filament-terminated inflated collar or scales, which rise from the throat, having an unilateral tubercle under each anther. *Ovarium* solitary, 4-lobed, girded by a hypogynous ring; style capitate, 2-lobed, inclosed in the throat formed by the anthers. *Drupe* ovate, containing a fibrous nut, which is acute at both ends. *Integument* of seed membranous. Albumen none, ex Pet. Th.; cotyledons 2, foliaceous, flaccid. Corculum flat, slender, somewhat ovulate, ex figure in Pet. Th.; none, ex Pet. Th. *Embryo* superior, terete. *Habit.* Trees, with the habit of *Mangifera*. *Leaves* alternate, lanceolate-

mate at the tops of the branches coriaceous. Flowers disposed

ia t. iituml i panic! ' IS4iiMIMMMIH leat* twice ternate. Corollas white, or pink

| tanoaoUl*. a

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base, coriaceous, quite entire, glabrous, vkh dense parallel

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XLII. I

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vhorl, oblong. « « » M U I. l»d-»caw tbr ,{<laW*A. nrar MOOWOK. 11'«»• " f»iJ U.w« n«rtnbr»nou«. t-4 Matbt* kA«. pf»rc^)ii»a* * abuMVaa^ barmg ih« n

i. H. bamuubjlU. W p. 10 L*a*. W^1> «ann»- C«olU*»b. .,tb tb*ck owtcaJ p4i. frwt . >«»iab.

Shining-leaved Rauwolfia. PL Juiw. Sap I Clt. 1752. Tree 12 feet.

4 J Brazilie'nsis (Spreng. syst. 1. p. 834.) leaves 3 in a whorl, elliptic-oblong, having the veins and nerves downy beneath; peduncles 1-flowered, axillary, thick, and rc, as well the calyxes, silky. ♄. S. Native of Brazil.

Brazilian Rauwolfia. Shrub.

5 R. r«xvitiòsa (Bert. ex Spreng. syst. 1. p. 834.) leaves 3 in a whorl, oblong-lanceolate, rather unequal; [xtliin, lr» |. flowered, capillary, axillary, shorter than the leaves. I . S. Native of Brazil.

SmmttJL

6 R. canescens (Lin. syst. 250.) leaves 4 in a whorl, obovate, acuminated, downy; corymbs few-flowered. ♄. S. Native of Jamaica and other West Indian islands. R. subpubescens, Lin. spec. 303. ?. hirsùta, Jacq. amer. p. 47. ed. pict. p. 259. f. 17.—Plum. gen. 9. icon. 226. f. 2.—Pluk. phyt. 266. f. 2. Branches rather tomentose. Leaves more tomentose beneath than hairy. Calyx-segments lanceolate. Segments of corolla nearly square, sub-emarginate. Drupes dark red. Flowers small, red.?

dmncent ltau«r>|fia. Fl. June. Clt. 1739. Shrub 2 to 8 feet.

7 H. tomentòsa (Lin. spec. 303.) leaves 4 in a whorl, oblong, attenuated at both ends, tomentose; corymbs few-flowered. ♄. x "•»»•« on rocks and walls, of Carthagena, in South America. Jacq. inwr, i8. obs. ,?. I. *35.* Flowers small, white. Calycine segments ovate. Fruit at length nearly black.

Tomentose Rauwolfia. !'" 1 Fl. April, Oct. Clt. 1823. -limb 3 to 4 feet.

* * *Species natives of the East Indies.*

8 R. Sumatra'na (Jack, mal. misc. 1. no. v. p. tf. ex Roxb. fl. ind. t. p. 649 Blum. bijdr. p. 1034.) leaves 3-4 in a whorl, cuneate-oblong, or obovate, glabrous; umbels or corymbs terminal, pedunculate, few-flowered; mouth of corolla shut by 5 fascicles of \1ll1. tj . 8. Native of Java and Sumalr , frequent in the neighbourhood of Bencoolen. This shrub resembles the *Manggalaut*, or *Vaughinia Mánghas*, in habit and foliage. Leaves 6 inches long. I Flowers 11111*11, white. ScgHWfM' of corolla roundish. Sn•ma peltate. This species resembles *R. nitida*, but is sufficiently distinguished by its inflorescence. The wood, being light, is employed by the Sumatrans, for scabbards to their swords, and krises.

Sumatra Rauwolfia. Tree 12 to 15 feet.

* * * *f >i^ncies native of Africa.*

9 R. vomitòria (Afz. rem. guin. ex Spreng.) leaves 4 in a whorl, oblong-lanceolate, on long petioles; branches tetragonal; flowers axillary, umbellate. ♄. S. Native of Guinea.

Vomit Rauwolfia. Shrub.

Cult. For culture and propagation see *Ta*

X 1 1 " DISSOLE'NA (*from* δις, *dis*, do ublc; aadr.*^. solen, a tube; the lower x of the tube of the corolla is different from that of the upper.) Lour. coch. p. 1 IB.

Lin. syst. *Pentándria*, */ I K . .I/.'»itf V «i« falja tttbtilai 5-cleft; segments subulate, erect. Corolla II. -nl. • long tube of two forms: lower thick, pentagonal, ^rw) •tan. uniferous; upper cylindrical: limb spreading, 5-cleft. Stamens inserted beneath the mouth of the lower part of the tube. Style shorter than the stamens; stigma sub-ovate, thick, scabrous. Drupe small, ovate, containing a compressed, scabrous, 1-celled, 1-seeded nut.—An upright shrub, with spreading branches. Lower leaves opposite; upper ones . Racemes subdivided, terminal. Corol ces black, glabrous. Nearly allied to *Rauwolfia* or *Ochrosia*.

I D. verticilla'ta (Lour. coch. p. 158.) . . Native of China, in the province of Canton. Cérbera Chinénsis, Spreng. syst. 1. p. 643.

Whorled-leaved Disso lm». FL f Cll. mi. Shrub 8 feet. *Cult.* For culture and propagation see *Tabernaemontàna*, p. «.

XLIV. OCHROSIA (from colour of flowers.) Juss. pa. i iv LaML i ert. cal. *is.* Cérbera species of authors.

Lin. syst. *Pentándria*, *I<-<*<,»*,. CaJy* .mall, 5-toothed, or 5-parted. Corolla funnel-shaped; segments of the limb 2-lobed, spreading, oblique. Stamens 5, inserted in the throat. Anthers inclosed. Stigma thick, 2-lobed. Fruit twin, or «oli , abortion, drupe •Towi, carh containing a T-4-cellnI nui * *t*»rh cell 1-2-3-seeded. Seeds oblong, unequal, flat, with membranous edges, albuminous?—Glabrous shrubs, with verticillate leaves, 4 in a whorl; and dichotomous corymbs of flowers.

1 <>. U>rhònica (Juss. gen. p. 145.) leaves 4 in a whorl; ov,«, -lanceolate, shining; corymbs terminal, and in the forks of the branches. ♄. S. Native of Bourbon, Isle of France. Ophióxylon Ochròsia, Pers. euch. 1. p. 266. li. 1 wolfia striàta, Poir. dict. 4. p. 85. no. 5 ide- ròta amplicárpa, Comm. mss. Cérbera Borbónica, Spr: i •jrai. 1. i) . 1 IJ(bit of *Ophióxylon serpentinum*. Stem yellowish. Leaves 2-3 inches long, greenish yellow beneath. Corymbs dense. Corolla cream-coloured. Drupes 2-celle

Bourbon Ochrosia. Fl.? Clt. 1823. Shrub.

2 O. maculàta (Jacq. coll. 4. p. 218. icon. rar. 2. t. 3 ll. exlusive of the syn. of Forst. Dryander, in Lin. trans. 2. p. 227.) leaves 3-4 in a whorl, oblong-lanceolate, acuminated at feadi ends, undulated, veiny, spotted; corymbs terminal, and in the forks of the branches, or axillary. ♄. S. ative of the Island of Bourbon. Cérbera maculàta, Willd. spec. 1. p. 1223. I Cerbèra ep. t. 130. The leaves only spotted in the dried state, shining, 4 inches long. Corolla white, with a red throat. Fruit yellow, acuminated, coc 2-celled nut.

Spotted-leaved Ochrosia. Shrub 4 to 6 feet.

3 O. ellipticV I.jhlll. M• t. cal. p. 25. t. 30.) leaves elliptic, 3 in a whorl; drupe 4-celled. ♄. S. Native of New Caledonia. An erect shrub. Leaves emarginate, coriaceous; pe- lioka furnialml with paj. llaeform or lamellose resin inside. Flowers sub-corymbose, interspersed tialar a» d terminal. Follicles sub-triquetrous.

Elliptic-leaved Ochro ia. Shruti *ttrct.*

4 O. paxvifiòra; leaves 4 in a whorl, oblong, bluntish, parallelly-veined, flat; cymes peduncular, sub-axillary, branched, divaricate. ♄. S. Native of the Sandwich Islands. Cérbera parvifiòra, Forst. prod. no. 121. Hoo an Arn. in Beech. voy pt. bot. p. 90. Very nearly allied to 0. m ecsiàta.

An..jji *ti, mll* M chrosia. Shrub 3 to 4 feet.

Cult. For culture and propagation see *Tabernaemontàna*, p. 92.

X (κόλον, *xylon*, wood; twisted root and stems.) Lin. gen. no. 142. gen. 321. Gærtn. fruct. 2. p. 129. t. 109. Roxb. fl. ind 530. Blum. bijdr. p. 1037.

Lin. syst. *Pentándria*, ^oaayyKM. i Calyx 5-cleft, or 5- "f l * i I • ' ' Co"Ma funnel-shaped, with a long tube, which is thickened in the middle, and a 5-cleft, oblique limb. Anthers almost sessile, inserted in the auJJW of thr tube. Ovarium didymous; lobes 1-ovulate. Style filiform, inclosed; stigma capitate. Drupe aaJMr, link. nf. <il a |«>a. u»in. of solitary by abortion, each con i '.IIIK a 1-seeded, wrinkled nut. Embryo inverted, straight, nearly a i lonaj a* (*hr* a)Hum?' , with round, cordate-cotyledons, and a sub-cylindrical radicle. Albumen conforming to the seed, greenish white.

o t

or climbing shrub, with verticillate leave and axillary, pedunculed fascicles of flowers.

1 O. SERRATIFOLIUS (Lin. fl. zeyl. p. 398.) ♄. ◡ S. Native of ...dies, in many places; in rich soil it becomes a climber or i*.»M-r i but in poor . J MMII. « « I throb. Wendt, in U.rm »rrt. 1- | 53. t. 7. f. 2. Jacq. hort. schœnbr. 3. t. 389. Sims. ... trifoliàtum, Gmel. ... t *nn. MJ ...uct. 2. t. 129.?—... 141. t. 64.—Rheed. mal. 6. p. 81. t. 47.—Rumph. amb. 7. p. 29. t. 16. Leaves 3-4-5 in a whorl, cuneate-oblong, acute, waved, 4-5 inches long. Cymes axillary, on long peduncles, erect, and M H W N droop* ing: pedicels and calyxes red, which, with the white corollas, gives) ill* c;nr* ft pi ...etty appearance. Dr. Wallich s•*•• to the *O. trifoliatum*, Gaertn. to be a distinct species, although ihtnk |b •it he knows nothing to be compared to it. In Iodia the root *O. serpentinum* is employed for the cure of various disorders, by Telinga physicians. First, in substance, inwardly, as a febrifuge. Secondly, in the same manner, after ibc lMW of poisonous animals. The juice is also expressed, and dropped into the eye, • -r ibe n n r porpoar. ' And, thirdly, it MBllwill- tered, in substance, to promote delivery in tedious cases.

Serpentine Snake-Wood. Fl. May, June. Clt. 1690. Sh nb> *Cult.* For culture and propagation see *Strophánthus*, p. 85. n

\I.VI. VALLESIA (named by the authors of tW r'lori Peruvian a, »flrr I. Vallesio, physician to Philip II. of Spain.) Ruiz. et Pav. fl. per. 2. p. 26. t. 151. f. B. H. B. et Kmib, nov. gen. amer. 3. p. 233. t. 241.

Lin. syst. *Pentándria, Monogýnia.* Calyx small, 5p. ted, permanent. Corolla salver-shaped: with a slende elong >, Died tube, and a widened hairy throat; segments oblique. Stamens inclosed; anthers ovate-sagittate, free. Ovari t two. Style didymous; stigma sub-clavate. Drupes 2, di .(inrt. sub-clavate, containing each a 1-celled, 1-seeded, fibry, striated nut. Embryo straight, central: with oblong, obtuse, planoconvex, fleshy cotyledons: and an inferior, thick, terete, radicle. Albumen thin, fleshy, white.—Small glabrous trees or shrubs. Leaves alternate, without glands. Peduncles opposite the leaves, dichotomous, many-flowered. Flowers small, white.

1 V. CHIOCOCCOIDES (H. B. et Kunth, nov. gen. amer. 5. p. 233.) leaves ovate-oblong, acuminated, somewhat conduplicate; peduncles opposite the leaves, dichotomous. ♄. S. Native of South America, in the province of Jaen de Bracamoros, on the river Amazon, near Tomependa. •»*re it is called *Chuviringa*. Segments of corolla obliquely ovate, obtuse. Corollas white.

Chiococca-like Vallesia. Fl. May. Shrub 5 to 6 feet.

2 V. DICHÓTOMA (Ruiz. et Pav. fl. per. 2. p. 26. t. 151. f. b.) leaves ovate, acute, undulated, shining; peduncles corymbose, dichotomous, opposite the leaves. ♄. S. Native of Peru. Leaves 2-5 inches long. Corolla white, with a greenish tube. Nut oval-oblong.

Dichotomous Vallesia. Fl. May, June. < lltf. Shrub 8 to 10 feet.

3 V. CYMBIFÓLIA (Ort. dec. p. 38.) leaves ovate-lanceolate, boat-shaped, incurved at top; peduncles opposite th dichotomous, corymbose, few-flowered. ♄. S. Native of New Spain. Rauwólfia glábra, Cav. icon. 3. p. 50. t. 297. Vallésia dichótoma, Poir. suppl. 4. p. 636. Calycine teeth small. Corolla white; segments obliquely-ovate, acute.

Boat-leaved Vallesia. Fl. June, July. Clt. lift. Skrub 1 to 6 feet.

4 V. PUNCTATA (Spreng. syst. 1. p. 642.) leaves al petiolate, oblong-lanceolate at both ends, full of pellucid dots; branches and petioles granular; fascicles of flowers prtlttMtiU'. corolla granular outside. ♄. S. Native of Brazil.

Dotted Vallesia. Shrub.

Cult. For culture and propagation see *Tabernæmontàna*, p. 92.

Tribe I II.

KOPSIEÆ. Ovari .m doubU. Frail dtup»c*ou«. All*"* K wanting. "» ..Uincd by ik* iirtbor-)

XLVII KOfslA (meaning not ex ... UMII, 5-wotKed, Blum. bijdr. p. 1030. i. O Lin. syst. *Pentándria, Monogýnia.* Calyx [•imaninl CoroIU •alver-shaped; (tibr ventricose at apex: (nro*t ft» ...rcetate, villous; •# ...egments of the limb sp or reflexed. Stamens 5, inclosed, free. Style filiform ...serted; stigma oblong, undivided, downy at top. Drupes two, or solitary by abortion, coriaceous, divided by 1)t ltyr,,n.pl«-«' tii» ...epiment inside, 1-se... Embryo inverted. Albumen •!. -! 1 none.—Lactescent trees or shrubs, with opposite leaves. an 1 al *IMI 1- iiun later ...terminal pe... bracteate cymes of flowers. I L tl ...ijdr. p. 1030.) arborescous; leaves ltlwm. l oblong-lanceolate; MgMbl ...s of corolla broad-lanceolate. ♄. ". Native of Java, on I <«d». on the mountains, where it is called *Kilatong*. Flowers white.

Tree Kopsia. Fl. year. Tree.

...VISCARTÒSA (Blum. bijdr. p. 1030.) shrubby; le ,V3 oblong-lanceolate; segments of corolla oval. ♄. S. Nati J*« ... on the Salak mountains. Throat of corolla red. ' ...sca-flowered Kopsia. Fl. year. Shrub.

Cult. For culture and propagation see *Tabernæmontàna*, p. 92.

XLVIII. CALPICA'RPUM (from καλπις, *calpis*, an urn; ... *harpos*, a fruit; in reference to th , J»p* w HIM! Mfffl fruit.) Cérbera species, Roxb. and Lam.

Lin. syst. *Pentándria, Monogýnia.* Calyx 5-cleft: ...ments lanceolate, permanent, each ending in a gland. C ihrMil funnel-shaped, with a slender tube, swelling at the throat; highly coloured and hairy, but neither furnished with teeth ... of limb obovate, oblong, equal-sided. Stamens 5, inserted round the bottom of the swelled part of the tube; anthers sagittate, inclosed. Ovaria twin, 2-celled; on the sides where they meet, there is a small subulate scale cover- ...re: cells 1-ovulate. Ovula attached to the middle Wg IM Ml of th ...on. Stigma large, with a 2-lobed apex, hid by the . partr converging anthers. Drupe, or rather capsule, usually solitary, oblique, urn-shaped, villous, with a slit down the middle, semibivalved, 1-celled, opening up the inside, and along the apex; pulp hardly any, the whole substance being thin, and rather fibrous. Seeds solitary, ovate-oblong; integument simple, white, pretty thick and soft. Albumen none. Embryo erect, with pale yellow cotyledons, conforming to the seed; and an ...it superior radicle.—Glabrous shrubs, with dich ovaw, HY«»iir, luawihrr branches; broad, ... leaves; and terminal corymbs ...

1 C. ROXBURGHII; leaves opposite, remote, oblong to lanceolate, glabrous, acuminated; corymbs at first termi... but afterwards in the forks, with sub-trichotomous, short divisions. ♄. S. Native of Pegu. Cérbera fruticósa, Roxb. fl. ind. 2. ... st. reg. 391. Flowers size of those of *Vinca rósea*, the mouth of a lively red the rest of a bright pink, rather fragrant, and extremely ornamental.

Roxburgh's Calpicarpum. Fl. year. Clt. 1819. Shrub 4 to 6 ft. f t ...? LAMARKII; leaves opposite, ovate-oblong, rounded or ... apex; panicles corymbose, short, in the forks of the ... were small. ♄. S. Native of the East Indies; and ... if Cérbera salutáris, Lour. be the same. Lactária salúbria, Rumph. amb. 2. p. 253. t. 84. Cérbera oppo- ...d. 1. p. 262. Cérbera salu- ....l—, t—•• »«^- i p. 68. rn, ...,033. Flowers red? Catáris, ...roch.

R 1151

lycine segments tma.ll. ctMitim-ui. •x Blume. Cyme * <m *°°f peduncles, dichotomous, many-flowered.

Lamark's Calpicarpum. Shrub or tree.

CWfc I or culture and propagation «t« *TaUrmrmomUti*. p. 9t.*

Tribe V til.

HBLOD1N1I I. I 11 I. •*>'"»' . ft[1]., \ ! I \ M I | < >(>l S I S (so named by Foster, from μηλον, *melon*, an apple; and δενδρον, *dendron*, a tree; in reference to the fruit being like a apple, •ml the stem i immu; .) Forst. C bill. Mtt. ral Jii%t, grn. 148. Schreb. gen. no. 425. VoMfaSiwt l. p. 29.

Lin. syst. *Pentándria, Monógynia.* Calyx 5-parted, imte. Corolla salver-shaped; segments of the limb oblique, twisted to the right: corona in the throat of 5 bifid or quadrifid segments, alternating with the segments of the corolla. Stamens 5, inserted in the tube, inclosed, with very short fila iimu, and ovate anthers. Ovarium ovate; placentas 2, fixed to the dissepiment. Style simple; stigma dilated, conical, with a bifid

berry globose, 2-celled, pulpy inside. Seeds many, ned a little, wrinkled, nestling in the pulp, albuminous. -

]~>»i(»- leaves, »rnl scent, erect, or climbing shrubs; with op oppoatie axillary rymra

Segments of corona bifid or quadrifid.

| I. *Segmm*

I M. nMtiin I .bill itn. c»l. p. *«. i- *3*-)* "mi errt-. cor«.' ioma,

Phyllirea-like Melodinus. Shrub 6 feet.

2 M. Bava'ai (Endlicher, prod. fl. ins. norf. p. 57.) leaves rlliptic-ol long, acute, ribbed, shining; corymbs axillary, opposite, tbarttr ilmn the leaves; corona of 5 bifid segments. ^, i. Native of Norfolk Island. .nrr. ill. |>1. in*. •orf. t. 140. Mid I. 164. Leaves 4 inch «»Krt1((, lltti v «|i>Ui»r. \rllow, ..ed, about the size of an orange.

Bauer's Melodinus. Shrub climbing.

3 M. scA'NDENS (Forst. •(tl. atuir. tin. IIS. Lin. syst. 256.) RUbrout aki. stem climbing; leaves oblong-ovate; cymes opposite, illary; corona of the corolla of 5 cloven, lacerated segments. ♄. S. Native of New Caledonia. Lam. ill. I. I. I - 9.

Climbing Melodinus. Fl. July, Aug. Clt. : 1775. Shrub cl.

Tiff turn of corona entire.

4 M. monóchyta (Roxb. a. ind. 2. p. 56. Ker. bot. reg. 854.) glabrous; climbing; leaves lanceolate, shining, acuminated; panicles axillary and terminal, sub-globular, brachiate, crowded; corolla 5-parted; segments sub-falcate; scales in (lir "KMii! of the tube, entire, ensiform; style short; stig 14- ovair, rilttlc at l op. ♄. S. Native of Silhet, where it is called *Sadsi*. Corolla white, friers i.- Extreme divisions of panicles 3-flowered > li.ii; 4 cornered, yellow, size o fan onui(«, con- t«<*)ing «)•! le pulp.

Monogynous Melodinus. Fl. July. Clt. 1820. Shrub cl.

A. eugenifólia (Wall. cat. no. 1616.) I^IH.IM, braodi* '.M(«i(ti ru«ty down; leaves •llrrnatr xina, ruotuna: CHO peduncles, and calyxes, clot elliptic, acuminated, with parallel, an almost marijiiu nerve; |«edu»clr» paiMclru, asiUarr i brajc- tvas foliaceous. ♄. S. Native of I . . I ruil »lf of a middling gooseberry. Scales in the throat of 'hr corolla undivided. Perha Nil' .istinct genus.

Eugenia-leaved >r,i Melodinus. Shrub.

Cult. 1or col <Uir MV propagation see *Eckites*, p.

L. CARPODI'NUS (from καρπος, *kar* |HW, a fi uii : am) *δενδρον, dendron*, to turn r •'Utnl ; a i name given to separate ii li om Melodin tt») i. Br. mss.

Lin. syst. *Pentándria, Monógynia.* Calyx 5-toothed. Corolla tuni l, tiatry. lrH left; segments lanceolate, oblique, reflexed; anthers 5, sa itiatr, conniving. Style 1; stigma muixl. Fruit orange-formed, 2-celled? many-seeded. Seeds flattened, nestling in pulp.—Climbing, cirrhiferous shrubs; with op poaitt lrav< and t*in, ajulUrr, 1-flowered peduncles.

) ' ' DU'LCIS; leaves >»»n- l«n. olate, glabrous; tendrils axillary; flow • r> almi»» sessile, twin, axillary. ♄. S. Native of Sierra Leone, in the neighbourhood of Freet»»»n, WIM re it l» ralU.t *Smrtt* A i i i a M, a nan, introduced by the Nova Scotia •rrtl. rs.

Sweet-fruited Carpodinus. Fl. Jurtf, Ji ly. Clt. 1822. Sh. cl.

2 C. a'cida; fruit rounder, <iu] miicli •malU-r >. . . S. Native of Sierra Leone.

Acid-fruited Carpodinus. Shruti fjL

Cult. For culture and propagation w • *Eckites*, ; 76.

LI. CH1UH \ i i • S (from χειλος, *cheilos*, a lip; and καρπος, *karpos*, a fruit; in reference to the fruit opening at one side.) Ilium. bijdr. p. 1025.

Lin. syst. *Pentándria Monógynia.* Calyx small, 5-parted. Corolla salver-shaped; tube thickened in the middle; aami segments of the limb 5, oblique. Anthers sagittate, sl IKMt •- side, inserted in the middle of the tube, inclo •«il. Stigma capitate, inclosed among the anthers. Capsule large, corticate, 1-celled, filled with granular pulp inside, dehiscing at the side when ripe. Seeds numerous, compressed, convolutely furrowed 1 on one side, wrapped in membranes which rise fro 1 llu parietes of the rap*n. Albumen horny. Cotyledons foliaceous.—Climbing shrubs, with opposite, simple leaves, and axillary cymes of flowers. This genus ≍ iii »rU alt ed to *Willughbeia*, but is easily distinguished from that ge \%, u the fruit being capsul »r. and in the seeds being albuminous.

I I. suave'olens (Blum. bijdr. p. 1025.) leaves oblong, glabrous, with five parallel veins; flowers sub-cymose, axillary; pedicels covered with imbricating bractess. ♄. S. N ative nf Java, on thr ntotiittai s, where it is called *Arey* 'imWt ; and *Tjankudak*.

Sweet-scented Chilocarpus. Shrub cl.

2 C. denuda'tus (Blum. l. c.) leaves lanceolate-oblong, parallri ly veined, glabrous; cymes axillary, few-flowered; pedicels Wart l us. ♄. S. Native of Java, in woods, on the Salak mountains.

Naked-pedicelled Chilocarpus. Fl. Aug. Shrub cl.

Cult. i or c ilturr ami propagation see *Eckites*, p. 76.

III. W1LLUGHBEIA (named after Francis Willughby, F.R.S., a friend and pupil of Ray; author of Ornithologia, 1676; and Historia Piscium, 1678; published by Ray, after his death, which happened in 1672, at the age of 37 years.) Scop. Schreb. gen. no. 417. Roxb. fl. ind. 2. p. 57. Blum. bijdr. p. I' 025.

Lin. syst. *Pentándria, Monogynia.* Calyx small, 5-parted. Corolla salver-shaped; tube thickened in the middle; limb of 5 oblique segments. Stamens inclosed; anthers ovate, free. Ovarium 2-celled. Style didymous; stigma conical. Ovula attached to 2 opposite, parietal p lacnrtM. Be rry large, corticate, half 2-celled, many-seeded. Seeds in rows, exalbuminous, nidulent. Cotyledons plano-convex.—Climbing, usually cirrhiferous shrubs; with opposite, glabrous leaves; and axillary, [illegible] flowers.

H.....> • '_ ' • »» ' petioles. ♄. S. Native of the Mauritius, Chittagong, and Silhet. Flowers pole pink. Berry very large, (tabular 1-celled. The milky, viscid juice, which flows from

every part of the plant, is dungnl into a bad kind of ebmic rubber, or caoutchouc, on exposure to the nr.

Edible Willughbeia. Fl. June, Aug. Clt. 1818. Shru i, c|.

2 W. JAVA'NICA (Blum. bijdr. p. 1024.) climbing, cirrhiferous; leaves oblong- MWrolatr blunti»li at ibc apex, with fine parallel veins; peduncles cymiferous, axillary, longer than the leaves. ½. S. Native of Java, in woods . on the N ribu and Salak mountains, where it is called *I'vy K*baltatak,*

Java Willughbeia. Fl. March, July. Shrub cl.

3 W. CELE'BICA (Blum. bijdr. p. 1024.) climbi itbtog; teavtr* elliptic-oblong, acuminated, veiny; peduncles axillary, cymiferous, about equal in length to the petioles. ½. S. Native of the Celebes.

*

Celebes Willughbeia. Fl. Aug. Shrub cl.

4 W. ARA'NA (Wall. ~l. rar. asiat. 3. 45. t. 272.) cirrhif , glabrous; leaves ovate-oblong, acuminated, parallelly nerved; berries globose. ½. S. Native of the province of Martaban, at Amherst, and Moalmeyne. Fruit yellow, lboui ih. size of an orange. This is very near allied to *W. edulis.*

Martaban Willughbeia. Shrub cl.

3 W. CORIA'CEA (Wall. c 20.) leaves coriaceous, shini it. no.) ^ abovr* and ru»iy ltvaraih. tlliptic, thort- acuminate .1. IIM but **fff-*

vighbea Shrub cl.

Cult. For culture and propafatiea *ec / Echites,* p. 76

.III AMBELLAMA. (Ambellani is *\U* Guiana name of the shrub.) Aubl. guian. 1. p. 266. t. 104. Juu gen. 144. Fagra'a species, Willd. Willughbèia species, Willd.

LIN. SYST. *Pentándria, Monogýnia.* Calyx short, 5-parted; segments acute. Corolla tubular, with a narrow throat; and 5-cleft, oblique, undulated limb. Stamens 5, inclosed; anthers sagittate. Style tetragonal; ifjma MTIUI) oo a IUI, orbicular disc; bi-cuspidate at the apex. Berry ovate, oblong, fleshy, large, 2-celled, many-seeded. Seeds broad, compressed, muricate, fixed to the slender receptacle or dissepiment.—A smr" lactescent tree. Leaves opposite. Peduncles axillary and t: minal, 3-4-flowered, unibracteate.

1 A. A'CIDA (Aubl. guian. 1. p. 266. t. 104.) leaves ovate-oblong, glabrous, quite entire, undulated on the edges. ½. S. Native of Guiana and Cayenne. \ Willughbèia ácida, Willd. spec. 1. p. 1231. J leaves 7 inches long, and 3 broad, on short, half-embracing petioles. Flowers whitish. Berry citron-coloured, warted. Bractеas at the base, of each peduncle, and each flower. The fruit, macerated in water, baa ft plraunl a- flavour.

Acid-fruited AmbvlUma. Shrub 6 to 8 feet.

Cult. armontina, p. 9 t.

I I\'. PACOU'RIA (I WowvnM u il the 'vee.) Aubl, guian. 1. p. 279, t. 10 i Guiana name of the shrub. Willughbèia species, Willd.

LIN. SYST. *Pentándria, Monogýnia.* Calyx 5-parted, permanent; segments obovate, roundish, acute. Corolla with a short tube, and a 5-cleft limb; segments oblique, undulated. Stamens short, inclosed; anthers cuspidate. Style tetragonal; stigma as in *Ambellánia.* Berry large, pear-shaped, flesh 1-celled, many-see Seeds hard, angular, nest p. —A lactescent shrub, with ose, nodose branches. Leaves opposite at the nodi. Raccmm MiHarj oo long prttuaci twining ,.. .aJrik tafi p hich are branched. ½. S. Native of

,-. ..'JiT* -armen- -wil MHIM. "k^oamth' ;|LJ,,,, M»aj«l, a •.,•»«... H. .

<Guiana. Willughbèia scándens, Willd. spec. 1. p. 1231. Flowers yel '•*• *Guiana* Pacouri *. Shrub d. Of I*. *Cult.* ! .uliur* and propagation we *EckiUt,* p. 76.

^ j 1 S

ANCORNIA (meaning known to us.) Gomez Ild. Oliss. 1812. p. 51. with re. Mart. act. bonn. 11. p. 84. Mangáibo, Pis. med. p. 76.

LIN. SYST. *Pentándr* small, 5-parted. Corolla salver-shaped; top; segments of the limb ovate-acute, horter than the tube. Stamens silose; anthers oblong, connivent. Stigma bifid, teated on » cyltmlre. Berry 1-celled, many-seeded. Albumen hard, fleshy.

1 H. SPECIÓSA (Gomez. l. c. ic, coriaceous, bluntly cuspidate, ; pe minal, usually 5-flowered. ½. S. Br of

Shr (Mart. act. bonn. 11. p. 85.) leaves oblong, acuminated, and are, as well as the branches, downy; cymes terminal, sessile, dichotomous. ½. S. Native of Brazil.

Dw Shrub.

Cult. F propagation see *Tabernæmontána,* p. 92.

•Jsr" •labfw .til.

«y IIMXOTM*. Tree *to* I.

i*ny M»nconua. r culture .iM

I \ I I (Mm I I"'1 * '—— J »" Beauvois, after M. Landolphe, a captain in the French navy, commander of an expediton to Waree, who was of great atuftunre to Palisot de Beauvois, during his stay in Africa.) Beauv. fl. d'ow. . . . 54. t. 34.

i LIN. SYST. *Pentándria, Monogýnia.* Calyx permanent; 5-6-cleft; segments MftaSMO sub-imbricate. Corolla tubular, with oblique segment Stamens 5. Ovarium 10-striped. Style thickened at top; stigma sub-bifid. Berry fleshy, nearly globose, depressed at top, 1-celled. Seeds many, ovate, compressed.—A shrub, with straight, tercir b branches. Leaves JPf ', p ovate-lanceolate, quite entire, acute, petiolate, glabrous, 3-6 inches long. Flowers white, disposed in terminal, nicied corymbs, with opposite branches; and very short pedicels.

1 L. OWARIE'NSIS (Beauv. fl. d'ow. 1. p. 54. t. 34.) ½. S. Native of Waree.

Guinea, in the inte

tfn'rr I^ul«il[>tii» Sbrtib.

CUI I .Imrcand propafi tion see *Tabernæmontána,* p. 92.

1 \ II COL'MA (Couma is the 'Car» IIM« B••••• •f **•*"** Aubl. Guian. suppl. p. 39. t. 592.

LIN. SYST. *Pentándria, Monogýnia.* Calyx, co roll*. *141 ens, 3 pistil unknown. Berry globose, rusty, compressed at top, 3-4 or 5-celled. Seeds 3-4-5, orbicular, flat, covered with rust- ,,,;«„.1 BM ii \ •••< v. •- • . •. .-* b«fcj at top; branch- (fa M lets trigonal, nodose. Leaves 3 , a whorl, at the nodi, stiff, IIPKIIH , oblong, glabrous, ovate, acuminated, le green above, but paler beneath, on short petioles. Peduncles rising single from the nodi, short, bearing , 3 berries o dicels, which are very palatable when ripe.

1 C. GUIANE'NSIS (Aubl. l. c.) ½. S. Native of Guiana and Cayenne, in woods. 1 Leaves opposite, or 3-4 in a whorl; the branches always terminated by 3 leaves.

Guiana Couma. Tree 30 to 40 feet.

i *Cult. For culture* and propagation see *Tabernæmontána,* p. 92.

iv* i\

\ M s M \ x DIEÆ. Fruit capsular, composed of 2 joined follicles, prickly or IMKMII. (Weil* ft»«tl t> a central placenta, of the figure of a buck iwrruw4e4 by a membranous wing- al Albumen wanting.

LVIII. ALLAMA'NDA (so named after Frederick, Allamand, a •.,•»«... of Holme, *bo «rr> to Guiana about 1769, and to Russia in 1776. H. .ent specimens and descriptions

°f pUnu m *Ummm.* Lto. mam. *:»5.* ft, *tit.* "«nn Cruel. I. p. *t93.* I. i.t. J«i». -<»«'li«, AlUmand.

-Jr!*' .*VIT< '''''»'«**"• y«<a. t'alyx 3-porttMl ; leg. act | orolla funnel-shaped ; *uh a narrow tube : and a swollen, large, inflated limb, which is 5-cleft at the apex.; fonts! - antltrrt. Antlirrt i, al. •tiffina «pil,. irted ii. the middle, adhering to the antli. r». Capsule eduaatcd, roaodUi alii] '•—l.artcM-rnt kltrtibn or *iib-»liru>M, witl •l and br nunv-tl rit—xli. *«« targr, jrcUow. Kn. pn,u, diffi roll*. I. v f«Aw.

K'«. u«»r* 3 m <, Mon/. ». xtuirtl ai the - v Of Bruil, •va«, .11 l...m,.l placn. amoof bmbts. h- ra Urgr. »JT / • r t a i w . U ^ Alkmaj rub.

A- U (« ' l- A. call.,. it «.n f Bruit, nn tlir l >*dr<l al |1M haar.

•VrAw/', Allamanda. Shrub 6 feet.

»i»cr«J«t<., actim.nate.) menta, which air • downy outside, and glabrous inside. n«tili -. air, iitn.illy • olitary.

^fj' "ivc or ll,,,,!,, ,n ,!* pr *m,* ..i bog^r pUcc., about U cyapoute. Rowm |a rge, yellow.

Marrow-Uarrd Allamanda. Sdrub

• inAl1' l><,1,llbr, >. WSUMUot; I •Uki * obov*lc, ohttlM- .cu«'''''. »«Ui ml v> - \ cathártica, Lin. mant. 214. suppl. 165. Schrad. in Wendl. ser - hann. : asc. 1. p. 6. t. 22. Gærtn. fruct. icon. p. flowers large, yelic said to be downy.

'•••^••'t AlUlMlwU. H Jin,, July. Clt in " A. Aim if n (l'oi.i |ir»« i , -eoratli. *IU anUm, Surinam; and in the Orinoco, near Carichana. A. cathártica, Rœm. et S .hultr., 'T.» P- 1B0.• xclusive of the syn. of Lin. and Willd. H. B. et Kunth, nov. gen. amer. 3. p. 229. Meyer, esseq. p. 129. Cur'• bot. m.K,S38- Ul() ,,, 303. t. 171. Orèlia grandiflora. Aubl. Sup. j. ;' " '• P. " 1 - i '"". -vl..,. d ,.- mjiMMo7 IS!*? *i"«•'Wia. II ,,- 7f7TJwl j™»l lia.rv br1M ath, . ^ n l l * ^^ br, s. 1. p. 75. Spreng. syst. 1. p. 584.) leaves usually 6 in a whorl, ovate-oblong, obtuse, quite glabrous. ♄. S. Native of South America. Flowers large, yellow.

Whorled-leaved Allamanda. Shrub.

Cult. All the species of *Allamanda* are worthy of a place in every collection of stove plants, for the sake of the beauty of their large, yellow flowers. :i

•. ami wlmrU of ahowy fulutf, n>'x« - ,m, Mm), and pear, *k* the best soil for them ; and cuttings strike root freely in the tine kind nf rartli, ui ''''l(d glass, in heat. They miuirr a iiroog, moul hrat (t> niakf tin m flower freely.

a buckler; and •r,t7,q, *tjxrma.* ., seed; in frrn> •»ape of the seeds.) Mart. nov. gen. „ (,rM. 1. p. 57.

Ltn. r.i. /•*estándria, Monogyn*ia. Calyx campanulate, i-pa> ted; segments lanceolate. Corolla 5-cleft; segments lan- ceolate, acute or obtuse, contorted. Stamens 5, adnate to the tuW; wbich i* ml ed beneath the throat; the rest free. Anthers erect, ovate, inserted above the base of the tube, filled with globose pollen, even to the base. Ovaria twin, combined at the base. Stigma clavate, umbonate, bearded or naked. Capsules solitary or twin, obovate, compressed, unequal-sided. Seeds numerous, surrounded by a membranous wing, peltate, with- es with spreading, squarrose, or refracted branches, nivnul utwaliv wit h suberose or solid bark; ovate, quite entire, alternate, sessile, petiolate leaves, which are usually • li.i ed with down; and terminal cymes of small white flowers. I fruit usually illv one in each cyme.

1 A. TUMI H1»I M Mart. br H.].] (Mart. l. c. p. 58. t. 54.) bark of branches corky; leaves cr> *dr<l al the tops of the branches into round heads, ovate, tapering at almost sessile, tomentose; cymes compound, densely crowded. ♄. S. Native of Brazil, in the mine provinces, where it is called *Pereira do Campo.* Leaves ovate or obovate. Corollas white, villous outside, and downy inside; with linear-lanceolate, acute

% A. w '

(Mart. l. c. p. 59.) bark of branches solid; leaves broad-ovate, sub-cordate, petiolate, bluntish, coriaceous, glabrous above, in the adult state; cymes compound, dense. ♄. S. Native of Brazil, in the mine p , be- tween Tejuco and Serra do Gran Mo fat Ilaik v arted, covered with soft down while young. Leaves coriaceous, clothed with dense white tomentum above when young, but always beneath. Cymes tomentose. Corolla white, jlobow at tlir ».»< ; with lance- '--- litiiM- MftDttitm, which arc imnetito** o< outside, and glabrous inside.

Large-fruited Aspidospermum. Tree 10 feet.

S A. (Mart. l. c. p. 60.) bark solid; branches ili< li"li>n»<.n«. r< (r*< li '1 l< av > • .* . . i • . ,l..» v i B M M I •impi. few-flowered. ♄. S. Native of Brazil, in the province of Bahia, in the wood* r«lU <l Cniti)(» of Cactete and Maracas.

Refracted-branched Aspidosperma. Tree.

wprnm

4 A. (Mart. l. c. p. 60.) bark solid; branches squarrose; leaves petiolate, obovate, obtuse, glabrous above, and clothed with hoary tomentum beneath. ♄. S. Native of Brazil, in the province of I' aiiltia, amoihtlHHMa.

Two-coloured-leaved Aspidosperma. Tree or shrub.

(Mart. l. c.) bark solid; leaves petiolate, ovate, acute, glabrous on both surfaces. ♄. S. Native of Brazil, in the province of Piauhia. . . . . «II.-'IHf)II»I«» II«H < •< elsewhere, on the edges of woods.

Pear-leaved Aspi lamrrma. Hhntb or tree.

Cult. I <•r rulturr AIM) |trtipaftrfoal *see Allamanda*, above.

Tribe \.

CARANDtl » (•l Ml |mtli,uUf i liai at -- (•i this be contains shrubs agreeing with *Carandas* in habit. Fruit solitary, baccate. Seeds peltate, naked. Albumen copious, rather horny.

lt

LX. CARI'SSA (*Krishna-pakpkala* is the Sanscrit name of *C. Carándas*, and *Gorinta* is that of *C. diffúsa*). Lin. syst. 251. Gen. 413. Juss. 149. R. Br. prod. 468.

Lin. syst. *Pentándria*, Corolla funnel-shaped; limb 5-cleft; throat naked. Stamens [illegible]. Berry 2-celled; cells few-seeded. Style filiform; stigma dilated from [illegible], bifid. Berry 2-celled; cells 1 or few-seeded. Seeds peltate. Embryo inverted.—Shrubs. Leaves opposite, furnished with intrapetiolar bristles. Peduncles axillary and terminal, many-flowered, erect, becoming sterile and spinescent. Flowers white.

* *Species natives of New Holland.*

1 C. OVA'TA (R. Br. prod. p. 468.) shrub spiny, erect; branches brachiate; branchlets scabrous; leaves broad-elliptic, acute, mucronate, glabrous, with rather branched veins; spines straight, divaricate, 3 times shorter than the leaves. ♄. S. Native of New Holland, within the tropic.

Ovate-leaved Carissa. Fl. June, Nov. Clt. 1819. Shrub.

2 C. SCA'BRA (R. Br. l. c.) shrub spiny, diffuse; leaves ovate, mucronate, scabrous [illegible] Holland, within the tropic.

Scabrous Carissa. Shrub [illegible]

3 C. LANCEOLA'TA (R. Br. l. c.) spiny; leaves narrow-lanceolate; segments of corolla lanceolate-subulate. ♄. S. Native of New Holland, within the tropic. There are 2 varieties of this species; the one glabrous, with [illegible] branches; and the other having the branchlets and leaves here and there downy.

Lanceolate-leaved Carissa. Fl. July, Aug. Clt. 1822. Sh.

* * *Species natives of the East Indies.*

4 C. CARA'NDAS (Lin. mant. p. 52.) suharboreous; leaves ovate, mucronate, or elliptic, obtuse, glabrous; spines often 2-forked; corymbs terminal and axillary, few-flowered; cells of fruit 4-seeded. ♄. S. Native of the East Indies, in wild, woody, dry, uncultivated places. Lam. ill. t. 118. f. 1. Rumph. amb. 5. t. 51. f. 2. Roxb. cor. 1. p. 55. t. 77. Lodd. bot. cab. 663. Cápparis Carándas, Gmel. syst. 1. p. 806. Echites spinósa, Burm. ind. p. 69. Carándas, Rumph. amb. 7. p. 57. t. 25.—Plukn. alm. p. 255. t. 305. f. 4. Branches dichotomous. Spines always in pairs at the divisions of the branches, and at every other pair of leaves, often forked. Peduncles terminal, usually twin. Flowers milky-white, jasmine-like. Berry size of a [illegible], when ripe of a shining black. The *Carandas* makes exceedingly strong fences; the number and the strength of their thorns render them almost impassable. The fruit, just before ripe, is employed to make tarts and preserves of various kinds, also to pickle, and by most people reckoned superior for these uses to every other fruit in the country, not even the mango excepted. They are universally eaten by the natives, when ripe, [illegible] tolerably pleasant [illegible] taste even of an European.

Carandas Carissa. [illegible] Clt. 1790. Tree 15 to [illegible]

5 C. DIFFU'SA (Roxb. fl. ind. 2. p. 524.) shrub diffuse, spiny, with dichotomous branches; leaves almost sessile, roundish-ovate, cordate, mucronate, polished; corymbs terminal, rarely axillary, many-flowered; cells of berry 2-seeded. ♄. S. Native of the East Indies, in the Ganjan district, and from thence northward to the mouth of the Hoogly. Spines as in *Carándas*, [illegible] Mucrone of leaves recurved. simple bifid or [illegible] Flowers pure white. Berries [illegible] when ripe, size of a French bean.

Diffuse Carissa. Shrub [illegible]

6 C. [illegible] VALLA (Wall. cat. no. 1679.) leaves ovate, acuminated, glabrous, shining; spines terminal and axillary, corymbose. [illegible] flowers terminal. S. Native of the East Indies. C. mitis, Herb. Hey [illegible] hardly of Vahl. Leaves [illegible] *red* Carissa. Shrub or tree.

7 C. VILLÒSA (Roxb. fl. ind. 2. p. 525.) shrub downy, tender villous; leaves from broad-lanceolate to oblong, acute, soft [illegible] downy while young; flowers terminal, by threes or sevens; cells of fruit 2-seeded. ♄. S. Native of the East Indies. C. hirsúta, Heyne ex Roth. spec. 128. Branchlets dichotomous. Spines strong and very sharp, less frequently compound than in the 2 preceding species. Corolla small, white, with a curved tube and linear-lanceolate, acute segments. Berries round, the size of a pea, blackish purple. Bark of the woody part of the plant

Villous Carissa. Shrub.

8 C. SALICINA (Lam. dict. 1. p. 554.) shrub spiny; leaves lanceolate-oblong, mucronate, veiny, narrower towards the petioles; flowers in sub-corymbose fascicles. ♄. S. Native of the East Indies. Spines strong, straight, simple. Perhaps only a variety of *C. Carándas*, with narrower leaves.

Willowy-leaved Carissa. Shrub or small tree.

[illegible] (Lin. syst. 251. mant. 559.) shrub spiny; [illegible] veiny, shining; peduncles termino[illegible] [illegible] covered; segments of corolla lanceolate; cells of berry [illegible] seeded. ♄. S. Native of the East Indies [illegible] 2. Lodd. bot. cab. 162. Thunb. jap. [illegible] Branches dichotomous. Spines 2 at each ramification, [illegible] the one above the branch and the other below it, red at top and shining, as in *C. Carándas*. Leaves small. Teeth of calyx subulate. Corolla white, [illegible] segments. Berry black, size of a pea.

Spiny Carissa. [illegible] Aug. Dec. Clt. 1809. Tree.

10 C. AXILLA'RIS (Roxb. fl. ind. 2. p. 526.) shrub armed [illegible] with simple, opposite, recurved spines; leaves oblong, on short petioles; corymbs pedunculate, axillary, many-flowered. ♄. S. Native of the Moluccas. Flowers white.

Axillary-flowered Carissa. Shrub.

11 C. INA'RMIS (Vahl, symb. 3. p. 43.) shrub without spines; leaves ovate, cordate, [illegible] peduncles terminal, [illegible] tern; calycine segments [illegible] ♄. S. Native of the East Indies. Like *C. spinosa*, [illegible] differs in the leaves being 3 times the size, in the flowers [illegible] larger, and in [illegible] spines.

[illegible] Shrub.

* * * *Species natives of Africa and the islands.*

12 C. ARDUINA (Lam. dict. 1. p. 555.) shrub spiny; leaves cordate-ovate, mucronate, nearly sessile; flowers terminal, corymbose; cells of berry 1-seeded. ♄. G. Native of the Cape of Good Hope. Arduina bispinósa, Lin. mant. p. 557. Lodd. bot. cab. t. 357. Lycium cordátum, Mill. dict. no. 10. Lodd. bot. cab. t. 500. Spines twin, simple, but usually bifid; in this last case the clefts point downwards and the other upwards. [illegible] leaves dark green [illegible] of box. Flowers white, small, sweet-scented. Berry red.

Arduina's Carissa. Fl. March, Aug. Clt. 1787. 3 to 5 feet.

13 C. EDU'LIS (Vahl. symb. 1. p. 22.) shrub spiny; branches villous at top; leaves ovate, acute, veinless; almost sessile; peduncles terminal, twin, or sometimes by threes; calycine segments subulate, ciliated; segments of corolla lanceolate-linear; cells of berry 1-seeded. ♄. S. Native of Arabia Felix, and C. Abyssinia. Antúra, Forsk. descr. p. 63. Antúra Hadiensis, Gmel. syst. veg 403. Spines strong, red at top. Berries edible.

Edible-berried Carissa. Shrub.

14 C. Xylópicron (Pet. Th. "Hi. *O\H.* pi. ial. au*ir. p. **. and 80.) ihrub, apiny; Inut ovate, acuminated, ftlalit ous, 3-5-nerved; peduncles lateral, spiny, 1-2-flowered ◁; bra., ches forming a pyramidal cyme. ♄. S. Native of the I.land of Bo »»bon, ab.ut St. Denis. Branches bifurcate. Segmer; 1i of corolla 1>c11 e. Berry midd: • • . . : .tale-oblong, aurculrni, an inch lon R, attenuated at IIK-BIR-X, with a bipartite i-Lcrtita, .on- taining IX-I 5 seeds.

, _ , Xylopicron «» *BUttr~woodtd* Cariaaa. Fl. *iv\y,* Nov. I Clt. 18*0. TrrrJfOfrer

15 C. CORIA'CEA (W dl. cat. no. 1681.) «pi<y; leave. elliptic. coriac ou», *»it: revolu to edge*, obttiae, tniiernnatr, v'*'''''''. shinin 4 above. I ,fl Sativo of IIK-Mauritius I. xylópicron, Telfair, but hardly of I L Th. Uavea Cor t\ incl..•* team Cori ved Carissa. Shrub.

1« C. MADA GASCARIE'NSIS (Pet. Th. l. c. p. SO.)ahrubapinv; leaves ovate-ro UIKIKII ; flowers small; fruit round. ♄. S. jfa- tive of Madagascar. Very like *C. xylópicron,* but '•mailer lit all its p i n t; and tin fruit ro md, not obloof.

Madmgm car Carissa. Tree 4|].

17 C. ABYSSI'NICA (R. Br. in S .It. trav. ap|» nd.) this species has not yet been described. ♄. S. Native of Abyssi,ta.

Abyzinian Carissa. Shrub or *am.*

Cult. S v *StrophitMii,*,, p. »&.* for culture and projMgah on.

LXI. III M'KKIA (na< ned by Rox >,uR|, after Will,«. Hunter, M.D., of the Bengal medical establishment; an emi- nent botanist, and author of various papers in the Asiatic Re- searches, of tl e History of Pegu, &c.). Roxb. fl. ind. 2. p. 531.

LIN. SYST. *I'tntaminn, Mmoginm.* Calyx d-pann), per- manent. Cotolla funwl-iliajHii havinn «hr" tubr gibboua at the lac, and aMcllrtl a tittle at the mouth; M-J-I, 5, »ith very iboti tilaimnt». and ovair, in*•• I an annular Ieshy ring, ovate, 2-lobed, 2- celled; with 2 ov IU in i arh, ait.iil.nl ▷y their ▷a»« ti the bottom of the partition. Stigma o vatr, K-lolM-d, im-l<». d. Berries twin, distinct, roundish-ovate, pulpy, 2-seeded.—Trees Mil. opposite, entire leaves; and terminal, cor >ml»M>, .mail. Ml ite flowy x.—This genus differs from *Carissa* in the species being unarmed, not . i i tborn); i the berries being twin, not solitary. IAJ™- «>»vnaoav (Roxb. fl. ind. 2. p. 532.) leaves oblong- late, obtuse, pointed, glabrous; corymbs terminal, decus- sate; lobes of calyx ovate. ♄. S. Native of the Prince of W land. Leaves 3-4 ltei* « *k» k»«, and l-t I road. Flowers nmtMM ous, small, white.

Corymbose Hunteric.

2 H. EUGENIIFÒLIA (Wall. cat. no. 1615.) downy in every part; leaves elliptic or obova •'•oblong, aciimitiaimi; panicles term at, tii. otomous; lobes of calyx rounded. ♄. S. Na- tive of Penang. Nèrium corâca, Herb. Ham. Leaves pur pliab jp* . Flowers rather l»r(tr.

"w-^arrrf Munlrna. Trc«. f

b J IU- ait- n0- ,, B lurtinft ah<»r and |talr U IM JIII, *nd latrral. ^njfaj

W all. cat. no. I !• avci o|>po«iip

aruminalrd, d<f|> utn-n aboTp and p> th; prditncln axillary trichotomous. ♄. S. S .,e of Tavoy.

Dark-green-le red Hun: ria. Shrub or If. e.

Cult. For culture anil *ftOfn* ation see SpAaWAaw, p. I 5.

† *Genera hardly known.*

LXII. MONETIA (»o dam. •! 1 \ I 11 eritier in honour of his friend Jean Baptiste Pierre Antoine de Monet, Knight of Lamarck, of the Academy of Sciences of Paris, author of Flora Gallica, and of the Encyclopédie Méthodique Botanique, &c.). L'Her. stirp. nov. t. 1. Axima, Lam. ex Juss. gen. 425. Lam. dict. 1. p. 343.

LIN. SYST. *Tetrándria,* Calyx ventricose, cam- panuUu', 3-4 K left. lVuti 4. linear, alternating with the seg- nw t ts of the calyx, somewhat reflexed at the apex. Stamens 4, inaerttd in t[1] e receptacle, alternating with the pe lalai nU- ments thickened; anthers sagittate, incumbent. Style short; stigma acute. Fruit rather fleshy, pea-formed, 2-celled; cells 1-seeded. Seeds orbicular, compressed, or peltate.—Evergreen spiny shrubs. Leaves opposite, entire, co fi»« c.iiii I |.,n< n axtllary, Military, i ssile, small. According to Lamarck, *Xixo* is ne.iily MIIII d to *Carissa*, but differs in the rtffulla bring poljr* petalous, • Hill III III< stamens being hypogynous.

I ^I. 111 n \ A'NTHA; leaves iM.ii -lanceolate, glabro tia, f m til at aprx; i|»un« stipular, 4 in a whorl. ♄. S. Native of the l:«m luJin M barlerioides, Ther. stirp. t. 1. 11 ma tetracántha, Lam. dict. 1. p. 339.—Seb. thes. 1. t. 13. f. 1. Branches slightly 4-cornered. Flowers axillary, few, in clus of threes at the top, green.

Four-thorned Monetia. Fl. July. Clt. 1758. Sh. 3 to 6 ft.

t M DIACA'NTHA (Wtiu), *|,,c. 1. p. 670.) spines opposite; leaves downy beneath, ovate, p •'inlatr. ♄. S. Native of the Eas • IIHIM*. Anrrn diacántha, Lam ili«t 1, n. 340.—Pluk. aim 7. t. 133. f. 3.—Rheed. mal. 5, p. 73. t. *if.*

Two-thorned Monetia. Shrub.

Cult. For culture and 1 propagation tee 17»pAaWA», p. W.

[AMI \I.\II\ (meaning unknown to u». IVt. Tli. gen. tnail. *no.* 34.

I.I*. »I .t *I'rmlAmJrut. Mut.* gynia. I alyx small, 5-l .brd. I ilUtttbolat ventricose; with a 5-parted twisted limb; seg- •Matt plicatrh iiiniiiiiil • n one side. Anthers acute, distinct, connivent; filaments bound by the pistil. Style filiform, with 3 {p endlages. Stigma capitate, acuminated, enclosed by the anthers.—A weak, climbing, lactescent shrub, clothed with numerous, tern iliuu, pnr|iliJi ||.i>< i« J. eaves opposite.

I \ I NOCA'SIUS (Rœm. coll. 1. p. 203. Rœm. et Schultes, . . 4. p. 456.). ♄. S. Native of Madagascar.

Petit c. Shrub el.

fW/. Kot tulture at, I . . . . . *Echites,* p. 76.

I \ I \. LEUCONOTIS (from λευκός, *leucos,* white, and ους ωτος, *ous otos,* an ear). Jack, in Lin ir.i s. 14. p. 121.

LIN. SYST. *Tetrándria, Monogynia.* Calyx 4-parted. Co- rolla tubular; limb 4-lobed. Stamens 4, inclosed. Ovarium •nu|>l< 2-celled; cells 2-seeded. Style short. Stigma annular belo . and conical above. Berry 1-2-seeded. Seeds exalbu- minous. Embryo inverted.—A lactescent shrub, with opposite leaves and axillary dichotomous corymbs of yellow flowers.

I I A'DENS (Jack, l. c.). ♄. S. Native of Sumatra, where it is called *Akar-Morai* by the Malays. Branches 4-sided. Leaves oblong-acuminated, smooth, having the nerves connected by marginal arches.

Two-edged Leuconotis. SPEC.

Cult. For culture and propagation see *Strephánthus,* p. 85.

mmtkcr, JUtti to ikt corjmtfUi «/ tkt Uigma, by tkt mpei ot a&ow *the* tniaV/i *of tkt tub, pemdmitm*,* fiat *n* 5 *a*'krr§, trparmblt tmto t patti* By a *lo*g\t.idimit* /arrow. *Jmtkert trrmimmUd by* « *membrane.*

) I. *mtmkmm tmkt mppmtUntUu. Cvnmm nmpU, U<*t«t.* iMjfcr* ow^ril* *tkt* Mtffcfl , *mmi* Kwliati w«Xa *a, m** immlt mgmnti btimm* lie *ctktr,* r» fir Maw arrirt.

41 Ascle'pias. Corolla 5-partc.l, refleird(f. IS. r.i. Uaflet. of corona «*»IIa». «t e d on the top of the t»ba of tbe ftbmrma: h**.n$_g$ a li,,lc fcun-fotmrd wgn^ent mnn,n« fro. ih. b-H^o of «ch, lyinc «. the *Mb**. Fdlkh. J«d«.

42 Polyotus. Corolla rotate, 5-parted, reflexed. Leaflets of corona ovat*~«oo> at the baa*. FoOtelea •tender, •moot!

43 Enslea'sia. < orolU 4- parted. I flat, tnaneat* ; the njawnU wwting in a bild conical. •tibilaawUai*. FOIIKIM .lender.

44 Gourniica us. Corolla 5-parted, reflexed. Leaflets of corona •ut>rt«rulUu>. (Wnmlwtt • ith a to-<h «» *meh* side, but without any appendage inside. FOUICIM u»fl»t#J, rtuatntaceous.

45 Ota'sia. Corolla 5-p •artnl, rtnVxad- Corona 5 Mated on the upper part mih ihe twbe of the Btamn nanJU £ a hom-fonatd procvaa natuunf from the bottom, and buurteuUir on the mud* at the bnac. rollu-U

46 Oxyve'xia. C fill* rotate, not a j l n d l*anVn of leoaa acMt<-, at •cuwtwattd, loothteaa tnaide. Kulliclea awoolh.

47 Irusia. Cor •II* rotate, LaaJUta of corona narrow at lr»« NW-MI •mooib.

48 Penta'troph. « orolU rotate. Lralbi* of corona MM to th« gynoateytum, m i w and ire* at l»p. Pollen masses fixed 'wTO-ath the a;

49 'Lapheite'mma. Jla rtapwuUir. Lcaltelt of to* rona elongated, (owprtr**. I Ibda* irmrtcoM. GyMate* n *(i|**-*nliv tiUte OUUMI-

40 1 « I M I I K (Corolla canpamiUt e. I >na i-lobed; loVa obtiue. (iynottewitMi fowled «>th i long membranous proaraa««, each procew furaiahed with • i lliform appendage. Follicles •n.ir^at.,1.

51 \ laaw. („„ ,11, dubtimparmlate. deleft. Corona .WloU.I . Uibr* compreMed, rapty ma»d*. bja«n witli a little segment M the apex iwnd*. I ollic, , •>

52 Xysmalo'bium. Co rulU «omei»hat campanuUt ventricose tube. Gynostegium exserted. Po tleo masses compressed. Leaflets of coro IM obtu. small denticulations. Follicles ventricose, ramentaceous.

53 Calotro'pis. Corolla, gynostegium, and pollen masses as in Xysmalobium. Leaflet t. <» aaraaa adnate, longitudinally v thebM. k. , «BK>> averse, recurved at the Follic ventricose, smooth.

54 Oxype'talum. C oroUa, gynoategtutn, and poUt* masses as in Xysm ,to*,««. Uaflrwoftofoiw t' fleshy, obtuse. Pollen masses fixed to the c „rt»i»rr« of tK» mocu-«, »hkti at length • rr ascending.

55 S n t l i ' m i. CorolU faitnrl-abaptti, venUieoat at (he bate- Gynoviefium rucried. f Leaflet* of corona adnaic to the lube of the ftUtncnU, lanceolate, connircnt. Folltelt'i unknown.

*« LMJIWOCTOJIA. Corolla aomewhat •alwr-ahaped : with a bearded throal. GyMMMfhm and pollen toMata *m* in *>**^ W*«»- J-*»««ia of corona hmatelv J-lobrd, flrthy ; **** !me*»-

« M«wa. ''

« l»t^ — « • - «• Af.awMfc.awi. Gym*.

•»-?«». -^ly ~ « « W «»• «*• ^ * ^ U ' t * > M

3. Arahy, roaadwh. ralbet cot>c**r *cale«.

5ft ARAV'JI*. Corolla rmwpanuUtrlv urceoUte (,'• *''• with 5 iwitliay at the bate.

of corona saccate. mkrd taaiiW. St»gm» bicornute at •! Ur V ^ ^ ^

59 Rana'«i* CorolU campanul.tr. (iTiic»lcr««n incl0^1 of (nrona dikied from the baar, avbubw. aimpk Tuiimi mmti tfttricoat. *dxaX* by ihnr •P rx "'** matic.

«« iMrio. Cr.rollauwol ate. 'Gynostegium „ i,x-l««ed- Leaflets of corona Amwaned rach with a w a l l parallel segment inside. Pol their apices.

§ 2. *Gynostegium appendiculate. Corona simple, of one piece: having its tube sometimes* /bjaitlni *with segments or keels inside. Cotvtls mkn-*

61 ttoiowit MM*. Cnrnoi soatiUr. quite entire. Pollen masses compressed.

62 Cynanchum. Mouth of corona 1-tO-deft. •*•• only 5-cleft. I the lobe* are oppnaite the anil ers.

63 Metaple'xis. ' urona S.partedt lobea »Jwme*"» '''' the anthers.

§ 3. *Gynostegium appendiculate. Corona* 2-3 *with a distinct insertion.*

*"'"• ***' * *rrtet

•»***»< "*''•

64 Dcta'sia. Corona double i otttrr one i-|»«'ted, with acuminated •firmer- ; segments of interior *t* one •horut and opposite th >oat of the MM er one.

ti Dalechia. i ufirr one* **pn*' ed, somelonger, and

Tarw .MarWeaWW .**-*- rrjaWVI MV1DtVIif tWaaW *«^ * att«matM(with the outer one : having- the aagmrwt* looa*''' free

to the bate. roUirte* tamentaceow*.

4C S*MO*r« MM*. 1'ortHU aa* double; outer cup-shaped or annalar, crenated . mnrr one Wmfvr and o-|Wfted ; both

i le* tUttiU-r, •tmvrth. fleshy.

KTU. Corona J«H»» le; exterior one annular, entir- undnlated ; mnei one in* • inserted on the top of the gyaoategina*, of $ enure, Aeaby segments. Corolla urceolate, • icbrtS, fanmhed with amaO segments; teeth between the segments.

•» Ki •!*'' ea. Co' >*a triple, each twapowd of I segments; outer one itiwtinl m thf thrnat >l the corulU, and opposite its segments t >nwimia of the awldW « tripartite; inner one undivided.

lr4

§ 4. *Stamineous tube*

' m Kymoiirfiium naltd. Corona wanting.

69 **MBTA*TC'IHA. Throat of corolla ratupanulatr, frowned *>y 5 teeth, which run down the tub*-.**

70 **MicnoiouA. Throat of eorolla urtvoUte, naked. Seaka in til,- tube 5, inclosed, alternating with aa many fateirlea of 'kin.**

71 **AsTK'FHA\UI. Throat of corolb itibiirreolatc. naked : rat I HT hairy.**

72 PENTASA'CHME. **Corolla rotate; throat crowned h lien maaart fi KHI above the middle.**

73 **HtinMiniA, Corolla rotair. Anther* gibbou« on the back. Stigma nn.**

Tuniv

SECAMÒNEÆ. *Pollen matut* **20, rrerl,** *tmooik, that U* **4 (u** *•acA antfitr, wkitk are /*ed to the top$ of tke 5 rxtmUaU tvr-pmtcttt of ike Mtigma. fitamenft commute, apjttmliemtmU omitidr-Corolla rotate.*

74 SECAMÒNE. **Corona J-IC«Md ; Wafteu cowprcwed laterally, filed hn !ly by llir margin*, iimpte, avrrw.**

71 **ToxoTA'arVk. Corona 5-lr«v,d, lt*flit. tlattiah on the** with a little segment.

76 GONIOSTE'MMA. Coron**4 tubular, 5-anj.-. bad,** ad* ring tti the bate ni the p(yiK>ai< ^n

TUNV,

I'taii-uVB*. *Potle** **am** *granular (rack granule nposcd »/* **4** *IJKH, lied tmgi wan to tke Htlattd tkc Stigma. I'tlamrnli parity Of aUefi-th t JittiHct. Ant km connivent.*

77 HEMIDE'SMUS. i **nil** cdtiihinctl at tlir **baH,** but •lis-tinct at <<•>>, :« the lube. Anihen coh< **irdtvaa. ;a*iei** aj>|>ltti •! **liy** Twnri to racli corputcle of the «ii(rma. 1 "iUa route; having i muiu- »!.»!.•• inwrit ihroal, under tin- sinuses.

78 It«*CHY'LEPIS. r»laiiwnt» Inoid, short, distinct, inserted * ''"' "|'|K' |>>'i l.irirtg. ItrardIru. Pollen itw.vt applied by foitr* to each **Mrpwi** -ina. ^<>">lla rotate: liavm^ i •hurt, tnutic ***rngmmti*** **in** tbr **ti •** uml **IMMHI** tubn clothed wnli « broad, Aralty »talr inside.

7» STnif$_{TncM}$ **ioj(.** FiUmcnt* diHinct, ioarned in the W*** AntLrr. rolicrmit by tlir lase, but free and bear [|$_{rM m}$, top. Pollen masses fixed singly to each corpuscle of the stigma. Corolla mbroi.,te ; throat crown<l \,\ :, ,l,,»rt ..ristate scales *'''**' 'he •inu*f«; ami ers flexuous, erect, filiform, mrai({bt at th ex.

" " 'ECA'LEPIS. **FBMMMI** flminrt. **inamtd** in tl" upper par (of tin- ihntai, alonjf witli the 5 u)>|<cr »raUr«, «od cottt-r*** • * * them to the middle. I nthers cobrrm$_K$ **at** base, but distinct at top ant) **bcwdlcM,** rodmn rack **ia * tab-**dilated appendage. Pollen >.IHrii»m>ir,$_r$i<iriih$_I$. Corolk subrotate, crowned by 5 **oUong-oval. (1>t. mutir mttm,** in the throat under the **untwa; ami fumwofd «ith 5 linrar, obttttr** scales **'» the lul** e.

Hl FISLAYSÒNIA. **FiUmetH*** distinct, ins**, rtt<l m the throm m.iUr** tubercles. **I tbm col..** **>»ted** by a brc ovate point. Pollm ntMOT at in *Hemide* **'«•''*•** Corol rotate; havin **R tb'** throat crowned by 5 **, t*t>cd lub*,r,** **clca, under tin- uritjtr* ; «wn« tuptllory,** ***trtct,*** **houkoi at a]** **gf I** **<** **•« com*'** **brarii** **lm RIUKI a;** **^ly io each corpuadt of thr** **:la route : having i aiiitaic *calr* in *iht*** **sa Paruavnu'EA. i** **lxird!.««. i** **MB in a dilait-d, feahaaaag iticmin** **naaan applied by four* to rach corputr** **'"a.** **throM naki** **Si I.KIVXMA. Aatban u** **i*« oW haa** **la, IVHfii m u m Hxrd by |wur* to aaca c** **lla rotate, Tui** **) n.'«h> »t*l« l** **the itiroai, wli.** **the penital*.** **Oram«KTiik'a*. !** **bcarJIru. F>>IU-» nun.** **Mfrma. '** **SC CaTrro*: lmttom • l'IPII. ii mat** **i.-h corpaad*** **«a. U of ralyx lonij, tao»oUtr.** **. ram|Mnuhv>** :i)n.I , lube luniicbvd «> ,'jiriii. **seal*** inside, which cover th• m.tlin , being opposite them.

Tril \.

ORTHOPHURA'MIÆ (from ὀρθος, *orthos,* straight, ami *fffmfiii, jtAmrnma,* **a mm** ; in reference to the pollen masses being erect). Asc tjitatlrn vene, part. R. Br. in mem. werg. •OC. l p. 21. i Poll in rlla•^es 10, erect (f. 15. *d.*) or connivent. **•moolli. ^** axy, fixed by pairs (f. 15. *c.*) to the 5 con **|>u*rlr« of the •li^Ttm ; tl** is 5 anthers, sepa **ibU into *t* part» by .•** longitudinal w. (f. 15. *c.*)

rmiu l. STArcus*. r<>ll«n eoaatri (t»»d by tin- hax <f Innrith d.r middle of the mlr, lymg on tlir •tijtma. \ntl.«r. anaptr at lop, that is, not terminated by a membrane. (f. 15. *d.*)

(1. ***Cdkmm*** *of fructification, or gynoste* **[aaataattVaai MIMMI WMTICMMIC** *

I. CEROPE'GIA (from κηρος, wax, and πους, *pede,* a fountain ; in reference to the waxy pollen masses). R. Br. in mem. wcrn. MM. 1. p. 21. Wight and Arnott, contrib. ind. bot. p. 29. —I.. ûrs, Comm. in Poir. encycl. 5. p. 185.—Stephanòtis, Pet. Th. nov. gen. mad. no. 25. in Room. aa tutu ll. p. 203. Juss. ann. 15. p. 347.—Ceropègia species, Lin. and others.

i i.arar. *Pentándria, Digynia.* Calyx 5-parted. Corolla funnel-Bliapfd, BK<e or less ventricose from the base ; segs •awn of the limb narrow, e t the apex. Column of fructification inclosed. Stamineous corona 5-10-15-lobed : the lobes '••triag » fixed by the base, with simple edges. Stigma mutic. Follicles cylindrical, smooth. Seeds comose.—Usually twining herbs or subshrubs, only sometim **diipnuJ in • Mag)ir or** titmi **l v** , , . . . ! ,, . , , of **l'lr at th** **l « U M** masses erect, oppoaiw I I * aiaimna, **and** alternating with the segments of the 1 • Nt • • . . MI ! . . I ves opposite. Roots fibrous or tuberous. The corona in this as in most of the genera in the present order consists of a single whorl of 5 leaves in Ceropègia the leaflets of the corona are mostly 3-lobed ; the lobes are sometimes distinct to near the base, form-

or nearly altogether united, in iiwumet the lateral •e. « H-ni a • to near the baae, <he back •n me lute them apparently an- united In near the aprx, nflc trrie* ofily w bmrd. ^ ••/• -t and Arnott, contrib. ind. bot. p. 30.

| 1, *('orma* 10-/u«rW: l*or* rfirpunrrf t* « rnnp/c trrirf, *tthftmalt o*t> i*V #aor/ert, pMfr, tfawc, *ntirt, or *rwub*JU.

1 C. LUCIDA (Wall. pl. asiat. rar. 2. p. 33. t. 139.) iabroua, twining; root fibrous; leaves fr is bruad-ovate to oUong>lan- ceolate, acuminated; peduncles many-flo wrrrd; i alycine seg- ments subulate, recurved at apex; corolla cl *al*. hardly M tricose at the base: segments of the lim ib attenoated, equal in length to the tube; later al t'kbea of the IraftVu of the corona united above the middle, w i)i piktM edjrr« : the primary onea recurved[1] «t tup. H. ^. - Native of purple : the segments ''Hi[1]'[1] * urted at top.

Shining Ceropegia. Pl. tw.

2 C. NIASU'RA (Wight, and Arrwjit. conlnb. md. buC p. 30.) suffruticose, hairy, twining; leaves from cordate-ovate, bluntly acuminated, to narrow-lanceolate, acute; pe uncles few-flow- ered; calycine segments filiform; corolla clavate, ventricose at the base: segments of the limb widening up-'ards, shorte- than the tube; lateral lobes of the Iraflru of mrona uniird to I be •«»» vlottcatrii an - I at the »p»* [follicles straight, glabrous. ^. ^. S. Native of the Neelgherry mountains.—Wight. cat. 1510.

Hairy Ceropegia. Shrub tw.

3 C. LONGIFOLIA (Poir. encycl. 2. p. 177.) twini glabrous; leaves petiolate, ovate, subacuminated; umbels erect, pedunculate, length of leaves; corolla long, cylindrical; with nearly filiform, hairy segments; corona unkoown. ^. ^. S. Native probably of the East Indies. Laawaa aa baft b - I ..-!.» an inch long, pale green or purplish. This species agrees with *C. tuberosa* in the leaves, and with *C. juncea* in the flowers.

Long-flowered Ceropegia. Pl. twining.

4 C. *su'ACEA* (Roxb. cor. 1. p. 12. t. 10.) latooa*. rathet fleshy, twining; leaves small, sessile, lanceolate, acute; ped m. cles few-flowered; calycine segments subulate; coro I > rUvate. curved, ventricose at the base: segments of limb br jilr.i up- wards, about equal in length to the tube, pilose; lateral lobes of the leaflets of corona united to the middle: the primary ones looked at apex. ^. ^. S. Native of the Circars, in hedges near Samulcottah, &c. Flowers large, greenish yellow, and elegantly variegated with purple. Root tuberous, with many- branched fibres. The plant is called *Bella-gada* by the Telin- gas, who eat every part of the plant.

Rasky Ceropegia. Clt. 1822. Pl. to.

5 C. AFRICANA (R. I i btrt. ti . t. 626.) glabrous, twin- ing; root tuberous; leaves ovate-lanceolate, fleshy; co •r..lla ventricose at the base; tube slender; segments of the limb bearded; corona as in *C. Wightii*. ^. ^. S. Native of the Cape of Good Hope, but more probably of the East I i«J.r». Lodd. bot. cab. 906. Flowers erect, with a pentagonal thr •»l. a green tube, and dark purple segments.

African Ceropegia. Fl. June, July. Clt. 1823. Pl. ''

6 C. WIGHTII (Graham, mss. Wight, in »«*•«**: 3267.) glabrous, twining; root tuberous; leaves ovate, acute, fleshy; corolla spherically ventricose at the base; tube slender; •K- ments of the limb downy; lateral lobes • of lead united to i the apr*. « prtaaary

pretar<! laterally, rurtcd ootwardly in the mi dle, hardly twice the length of the oth *tn.* IJ.^- 8, Native of the East Indies. v early allied to *C. ,4/ruiHHt* in the form of *the* corolla and *crown.*

Wight's Ceropegia. Clt. ! Pl. tw.

7 C. Lu'AHH (Gra *Ham, in edinb. new. phil. joiirn. « t w * tn bo*, mag. 3300.) tlabroua; iea»r« linear, acut car, ac channelled; tube of corolU inflated at the wgBMUt* linear. iMaty, •pproxirm EM^Iwdkl" tacfaraaWi neotii corotia lunaieijT ert. ax< - S an one*, which art etoofated, six! deep puqiie ami hairy within.

Dr. Lus >'(Ccroprnta I Clt.! Pl. !••

I f. Car*M aaawryml/y « *Jomblt trriu of tokrt* /rf# «rr *mmwlj fttr* l» /A* iwar; *tit Imttral* *•*•» «J aWim f. arnfmi—fi«a rJlr wnuiri w i, »»^ *}mf"f* fir«r oavtt.

* *Le* ,fcra/ U» o/ *the leaflets* •/ fa* *corona ligulate, longer than* fie #MM*Vm.

8 C. ELEGANS (Wall. ascl. no. 4. in bot. mag. t. 3015. Wight. cat. no. 1512.) iflhuiaMi glabrous, twining; root fibrous; tea* es oblong, or oblong-lanceolate, acuminated; peduncles 1-6- flowered, shorter than the leaves; calycine segments subulate, much shorter than the ventricose base of the corolla; corolla with a cla ite lube, a hemispherical > urti are modi i «n the tube. a< one half short *ft* thait the *fmmmry* ooca; nL^M> rurvnl fi-R t^fcja *ltwi-1* I*. ^. S. Native of the mountains of Dindygul and Neelgherry. Corollas purple.

Elegant Ceropegia. Fl. Aug. Oct. Clt. 1828. Shrub tw.

V \ MACRANTHA (Wight, contrib. ind. bot. p. 31.) suffruti- cose, twini Kt le»«w» o* ate, acuminated, ciliated; umbels few- iV,».i.,1, aaj .Kmi bfeJajaaVi. <alycine segments subulate; corolla ventricose at the base; limb rather dilated; M0Ma«V rounded-linear, villous inside; lateral lobes of the leaflet , of the corona lyrdbte, tunltt twice shorter than the middle ones. ^. ^. S. Native of the I Himalaya, at a place called Khurie- p»«. Koirle. The eoroUl of this species is from 2-3 i ches lon|t. and except tba ventricos i b»Mi •• nrafl> cylindrical, whuh rtadJy distinguishes it from *C.* nearly allied •pane*.

/•"/"' • :' •")«•.•<»• ttn*ni< .*\x»«nY.

rar. Mil. I p • *« ' . *m,* -an the I. ' ^ir^L I j

tir, aimoal ode ball •! *»•»). |rrec«; with a j*IU>« Urnb.

/ *Long-leaved* Ceropegia. Pl. ' ·.

11 * ANGUSTIFOLIA (Wight, contrib. ind. bot. p. 31.) downy, iwtmng ; *» ves narrow-lanceolate, much attenuated; peduncles manyw lowered; corolla hardly ventricose at the base: tube ahno.i cylindrical; segments of the limb broadest up rds, mtwh lailllll r than the tube; lobes of the leaflets of corona rtarr w, ligulate: lateral ones hairy, about one half shorter than the middle ones. ^. S. Native of Silhet. Ceropegia, Wall. ascl. BtM. t. 19. t 9. Nearly allied to *C. longifolia.*

Narrow-leaved f Ceropegi*. PI- tv«

** *Late rmt tobtt of tkt UaJUii of the eorma Ug*l*(t shorter than tkt ggmuttgtmm.*

12 C m i n A'NTHA (Wight, contrib. •«!. boi. p. 51.) twining, glabroua ; Iran-* lii.tarn, lanceo ilenuatrd i peduncles many-flowered; calyx rainu:, with filiform wgraent*; corolla ven iricow at thr haw; lube cluvate ; limb hemispherical : segments hmadrkt u|>wanl , long-ciliated ; lobes of l lets of corona li ilatc: latrral orn- shorter than the gynoatr* gium, hairy. 4. C. S. Native among lb* Neelgherry moun- Uirw__Wall. ax-l. *no.* t. Wtybt, cat. no, 13

Bcmmdjlowertd Cci Pl• W-

13 C. I ANCEOLA'TA (Wight, contrib. I. bat. ;• 31.) twining, |faAfOua; Ua»rt narrow-Ui imm»icil ; JXMIIW d es many-ito owered ; calycine segnwata i iliform, exceeding tlic ventricose base of the «oroO«: lube rlaran ; ! limb dilated : segments :niicli •hnrtrr tliaii I 1M tubr ; miiJtllr lobr* of ilir leaflets of the corona a little longer .an the gym- ft- Ufa al ones are shorter, acute, and ciliated ; follicles slender, glabrous. V ^. G. Native of N'tjMul. OrojK-gia, Wall, cycl. no. 12.

Lanceolate-leaved Ce"•litgia. I'll--

14 [1]. PUSILLA (Wight and Wn.iit. I c.) herbaceous, glabrou*, erect ; root tuberous ; leave , linear; flu ers solitary, ascendi^K• corolla ventricose at the base : tube cylindrical : segments of the limb much shorter than the tube ; tiiulillr lubta of the leaflets of th r corona a Imlr longer than ihc gynoatrftwn, but the lateral ones are a little shorter. 4. G. Native of the Neelgherry mountains. Ceropegia, A all. an*l. no. 7.

Least Cerope l(ia. PI, J t oot.

*** *Lateral lobes of tkr (tnfiet, tf thr tvrona aeumimatrd, approsima tint? tkt primary ttntt ; liuji.lt a* it fit as thctr titter at lobct inl< i broad* JINHMI *at tkrir apiert.*

15 C a o t a & U (K«xb. cor. I. [>, It. t. ?.: twining, giabroti*. rather flr»lt> ; \<*»\ lubcrou ; leaves from almost orbicular to lanceo •late, am inated ; peduncles many-flowered, shorter than the le UP*: t.iU. mi-argntrnt* n rolla i tiit> ; »<guMJUi ''>f base of the co ipwarda, tnurli tliurtrr titan thr tube, ciluiol ; the limb broadest t *"idill«].U-» of dip I. arlrt* ol p : latrral I>IM-» miitui. at the corona sub !:itp, mcui ved at to , acuminated, lying on the pr mary ones. V • ". ^ Native of Coromandel, Ne- at Samulror ab, :»|»atai.„ Allahabid, *he.* Wi^ht. in ll.wk. bot. miac I. p »B. t. I lie tilani i . Ay *M.m.li,* b • nn- gas. Root t (lailiili, Mtlnl, rtliblr, I l.ntcr* Ut^. erect, with a greenish lubr and a jmrjilr limb ; likting trw argmmU united ** till rt|n \ ^/Miow^rootwd Crroprgta. | Fl. April, Sept. Ck. 1M1.

16 C. ACUMINA'TA (Roxb. cor. 1. p. if. t. 8.) lirrbarvtMia, **••*. Rtabnma, ratln-r rt«*»hy ; toot tub. rous ; leave i linrat- ??*'' m*Wa BMWJ-A dL*V'" ventricose » '1* baar : tube •nix).. jinniary of tniodle lobea of Ud-ial ottrt uimulc. %.'' S. Native of Coromandel, at Swiulrotul), »l»rc it » MI *Comma-manda* by the Telingas. Roo l kulttl, (tat. L«1 es 2-4 inches long, and 4-6 lines bf.M . »»rtly «• it *C. bulbosa.*

Acuminated-leaved Ceropegia. Fl. June, July. Ch , *into.* Pl. tw.

17 C. STEPHANOTIS (Roem. et Schultes, syst. 6. p. 4.) twining, glabrous, frutescent ; leaves ovate, coriaceous, marginated, acuminated ; peduncles axillary, generally 3-flowered ; calycine «iTTti. 4ale. aruir , corolla RUbr"ii>. wr h ovate, arut* lobes ; corona unknown. b . C. S. Native of Madagascar, Isaûra allicia, Comm. in P oir. encycl. 2. p. 185. Stephanôtis, [1] et. Th. nov. gen. mad. *tf* 35. in Roem. coll. p. 205. Leaves t mcl.r* long and 1} broad, yellowish green. Co toll* p*k yell iw.

Cro»-**rc4fVroprfia. Shrub tw.

• • • • *fMtrrat LJtci of fkt t™fltt» of tkt* r«rmt *perf tkttrl, obtust, or aUugrtkrr cokrrimg with* fie *m'ttUU ont».*

18 C, ARXOTTI* • A (Wight, <n>tnb. ind. lx.' p. 32.) twining. gUbrotu; *trm« >'* tender ; leaves narrow-lanceolate, mucro •it »- tatr; peduncle* ahort, mat> y-flowered ; calycine segments Mr> row-subulate, longer than the ventricose base of the corolla ; tube short'. »i.l<-t>rd a little u| wards ; segments of the limb filiform, connivent, longer iltan \h< tube ; middle lobes of the lrafl> ts of the ronma ligul ate : lat ra| ..!><•, , short, obtuse, approatmarc, adnate to il back of the primary ones, even to the apex, with a •m-.ll »l distinct recess or sinus, ciliated a little. *V*; "*. ". Native o I htlli ntwwi *P* rome. Ceropegia, Wall. a»t I, no. 3.

•*l- ott's* Ceropegia. I'l iw.

I![1] C. WALLICHII (Wight, in bo* mag. *Sit:*) erect ; root tuWrou< ; leaves ovate, sessile, approximate towards the top of the stem, ciliated ; peduncles lateral, short, 1-flowered ; calycine segments subulate ; corolla ventricose at the base ; tube widened upwards : segments of the limb broadest at top, connivent, densely ciliated ; primary lobes of the leaflets of the corona filiform : sublateral ones short, obtuse, ciliated ; follicles *«*ry lonu, ttlabrtmi. X- **« S. Native of the Himala y*. Royle ; near U b i M at, in Kamaon, Lindsay. Ceropegia erécta ?, Wall. a><' no. 1.

Wallich's Ceropegia. Clt.? Pl. erect.

20 C. PURPUREA (Wall. pl. rar. asiat. 2. p. 81. t. 187.) herbsovou*. i Mtu ng ; stems glabrous ; leaves ovate, finely acuminattil, il-i- ny on b -It M r i w H : padttOcWai many-flowered, shorter tlian tin- UtVW] OH olla cylindrical, hardly ventricose at the lxam segments of the limb broadest at the base, somewhat cordate. tajtrring ujtwarci , and connivent ; primary lobes of the leaflets of the corona »ul» ulate, recurved at top : lateral ones marginaitng the primary onr* or altogether adnate. 4. C. S. Naii• e of Nipaul, on mount Chandaghiry. Corolla glabrous outside, villous inside at the base, with a purple tube, and yellowish pentagonal limb. l eaves 3 inches long, ciliated.

Dowry Ceropegia. Fl. tw.

f I< C. PUBESCENS (Roxb. cor. 1. p. 12. t. 6.) herbaceous, glabroB*, twining ; leaves fro *m net* rly orbicular to oval or ovate, cuspidate, at alao lax ceolate, finely acuminated ; peduncles nasal ly twin, few or many-flowered, longer or shorter than the leaves ; calyx small : with subulate segments ; corolla ventrieoa* at the b se : having the tube widened upwards ; segments of the limb • •ItDW, I-. rly linear, villous, one half shorter ti...i the tube, with approximate edges ; gynostegium stipitate ; Middle I'.|H-« < of the leaflets of the corona ligulate : lateral ones marginating the primary ones, or altogether adnate ; follicles slender. V C. S. Native on the Coromandel coast, frequent ; »H1 til M) dy places near Negapatam, in Tanjore. Wight and Arnott, contrib. ind. bot. p. 33. i ight, cat. no. 1516. C. mutronata, Roth, nov. spec. p. 179. C. bulbosa, Lin. spec. 309.? l C. candelabrum, Rottl. herb. Roxb. fl. ind. 2. p. 27. but .ot of Lin.? Flowers said to be the colour of those of *C. bulbosa.* 1 his is a very variable species as regards the foliage, but is constant in the shape of its flowers, the slender segments of the limb with their margins approximating throughout their whole length, and forming a straight beak to the corolla, and in the stalked gynostegium or column of fructification.

MUTO« «] ferofwgu \pril. S*pc [a] « - •» «'• Pl. «r.

22 C. LOUREIRII ; herbaceout, BUI.IOIL*, procumbent; UST« ovate-lanceolate, with revolute edges; ttnabrl* pnwiul ; corolla with a large, globose law. sad • email, 5-rlrt; limb. U." i. Native of Cochinchina, amoojr bui! >p**M C«IK' labrum, Lour. coch. 114- Flowers white. StifSMMmaW, htfhl i follicles slender.

/.a* .'I*. Pl.I«i *lw ir. ruck 114. > ttttninft, glabruu* ; W-avr* nwpMUtr 1 oblong, obtuse; peduncles shorter than the leaves. ♃. ♡. S. Native of Cochinchina, in the suburbs of Hueo. Flowers paler than those of *C. tuberósum*, from which it differs more in the shape of the leaves than m the 0o*t ; the follicles are also slenderer.

Blunt-leaved Ceropegia. Pl. tw.

m.

† *Sp • mi kmrdlf immm*

*t** C. t t i n u n i M (Lin. •pw. p. 401 H«««nf Maiabar.—kl»n*l. DUI. 9. t. It. I •w, ttmrro- I- ftnt MCMM u - segments. I hw M Bhewir'm n^urr It utmt to U I b* U* « ». ot U»». rva of mat nwxfam awibor* »» waiiimb*. *h*TM**.*

*(tm*Ui.*

ti •. TICNÉTOSA (law. i>i». p IS. i l). , horiiix f»vii(tl>f veins and midrib white above. ♄. S. Native of the East Indies? Flowers? Leaves 1½ inch long.

Dichotomous-stemmed Ceropegia. Shrub 1 foot.

26 C.? CAMPANULA'TA; root round, depressed: leaves linear; corol ate, 4-cleft; calyx small, 4-5-tooth . S. Native of the Gold Coast, at Accra, among KniM. i'orulU riatk («ir|4i u aUo arnxhrr •|MTCW« gt.-wuif «ta«|(>here M itvr fit* j the roots of both *iu-* stable. 8trm \ i V owered i• both, I lowers termin•].

Can owered Ceropegia. Pl. 1 (b«. 27 C.? APHYLLA (law. syn. IS. m>, V.) plant AW ; branches dichotomous, articulated, weak, terete; leaves stipule-formed, adpressed. ♄. ♡. S. Native country unknown.

Leafless Ceropegia. Mb 28 C.? SITIDA (Poir. dict. •«pf>l. t. p. l 78.) leaves lanceolate, bluntish, s ipMf aNjvr ; umbvU on short peduncles. ♄. S. Native of St. Domingo. Stem woody. Branches slender, elongated. Leaves • nix , - , acuti- al tkr apri, I-I webva loaf, an- broad.

Shining-leaved Ceropegia. KnkM 29 C.? SINUATA (Poir. dict. suppl. 2. p. M lidii n.iiTni) lanceolate, sinuated, acute at both ends; umbels 4-6-flowered, much shorter • i W M n i i It ' d N»im (if iln i . • of Good Hope. Horn. str. p. 26. t. 15. Root a fascicle of fusiform simple tubers. Corolla tubular, pale red. There is oly one follicle comes to perfection from each flower; it is pendulous and long-acuminated. Seeds numerous, oblong, brown. Said to differ from *Microlóma sagittáta* i and not sagittate at the base. • ««r wn aamaj HHMBV

Sinuated-leaved Ceropegia. w. H July, Au,i Cl. .11. Pl. tw.

30 C. CORDATA (Lour. coch. 114.) leaves cordate: umbels on long pendulous peduncles; segments of corolla ovate, connivent. ♃. ♡. S. Native of Cochinchina, in hedges. Flowers greenish yellow, in large, hemi»f.t«-n.»!. axillary mi bels.

f

Calycin • "in C^ «« *-.f. ments small, ovate, acute. Perhaps the same as *Cordifólium*, Retz. fasc. 2. p. 15. no. 37.

Cordate-leaved Ceropegia. Pl. tw.

31 I . ftb. C. STAPELIAEFÓRMIS (Haw. in phil. mag. 1827. p. 121.) branches, prostrate, fleshy, thong-formed, lurid, terete, nearly leafless, simple, clouded with brown. ♄. S. Native of the Cape of Good Hope. This species has .he habit of *Orbea*. Branches rough from tubercles. Leaves v ute, ternate, most invisible, and as if they were adnate t tem, cordate, flowers sessile, rising from the axils of the leaves.

7T

Stapelia-formed Ceropegia. I l. July. Clt. 1824. Pl. prec.

Cult. A mixture of peat, sand, and vegetable mould is the best soil for these plants; cuttings of then roo« rr»' '" ^ ^ if |iUrr<l in heat, without any hand-glass over them. •IMHU !«»«• Itiib or »o < ter, when m - dormant state, particular* *t* t>Hlbou».ttto4rtl kinds.

I' tlx"

11 MI I RNIA (named .ftrr J«Mloa H ^ , ^ U * earliest collectors of Cape Plants, and from whose u of *Stapélia* was taken.) R. Br. in. mem. wern. soc. 22.—Stapé *rW , Lin. Jusr. Mass.

LIN. SYST. *Pentándria, Digynia.* Corolla campanulate: limb 10-cleft, the accessory segmen TI HI < ! and tooth-formed. ("»Jamil of (rue ification inclosed. Stamineous corona double; which are subulate from the gibbous base, alternating with the segments of the outer corona. Anthers simple at top. Pollen masses erect, fixed by the base, having one of the margins cartilaginous and pellucid. Stigma mutic. Follicles sub-cylindrical, smooth. Seeds comose.—Succulent plants with the habit of *Stapélia*, natives of South Africa.

I H U TICULA'TA (R. Br. l. c.) branches pentagonal, denticulated; teeth spreading; corolla 10-angled; tube bearded inside, widened into an elevated orb. ♄. S. Native of the Cape of Good Hope, rEILZir I U I ' ' • of rocks, toward Olifant's river. *Stapélia reticulàta*, Nass. stap. p. 9. t. 2. Sims, bot. mag. 1662. Jacq. stap. t. 20. *S. reticulàta diffórmis*, Jacq. stap. 19. Corolla with a purplish bottom; yellow limb dotted with purple. ! n or tern. Branches deep green, with purple spots.

Reticulated-flowered Huernia. Fl. July, Aug. Clt. 1795. Shrub ½ foot.

2 H. CAMPANULA'TA (R. Br. l. c.) h olol; corolla sub-campanu U botu** ""'^*Ht*kjt* 1 horizontal pil; ligulæ repeatly truncate, dark ' —, ♄. S. Native of the Cape of Good Hope. Stapélia campanulàta, Masstap. p. 11. t. 6. Jacq. stap. t. 22. Sims, bot. mag. t. 1227. Branches glaucous, clouded with purplish marks. Limb of corolla sulphur-coloured, with numerous rose-coloured dots outside, and with numerous dark brown elevated dots inside, and striated with dark veins towards the base. ll airs in the throat blackish. m of co JU),Uk l . .lifer* f in the bottom of t'« MTB(U Wit* i a M r *-*-(W»«r«««l. Campanulate-flowered Huernia. Fl. July, Oct. Cl. .!'•* Httrwb ½ foot.

3 H. VENU'STA (R. Br. l. c.) branches 4-5 angled; branchlets spreading, divaricate; teeth of branches spreading, acute; corolla with a glabrous tube, widened into an elevated orb. ♄. S. Native of the Cape of Good Hope. Stapélia venùsta, Mass. sp. p. 10. t. 8. Jacq. stap. t. 23. Corolla large, – • sulphur-coloured limb, dotted with red; having the bottom and elevated orbicle also dotted with red. Flowers solitary or twin. Peduncles deflexed.

Graceful Huernia. . »l. ;,.,.. July. Clt. 1795. Shrub ½ foot.

incbea pentagonal, spreading, furnished with hooked teeth or tubercles; l«itttim <ll' vonilla girded by a concave, elevated orbicle; lltrnair scfftnrnlB of the corril)a obsolete. ½. S. Native of the Cape of Good Hope. Stu<f»*lia tentiginoaa. l t, mag. i branched at i taaresM tiih //. ,-^tUita, in the colour ami form «s the flowers; but in H. guttata i thr piduncli'% «r l.utifi-r. rising h the **•* °« a •imple stem, am) having the lulu* the branches not booked t ami the spots on ihr limb <f the corolla arc lory.

W-floweml ll •••.». R July, Nov. Clt. 1795. ""•b \ foot.

* H. *Q*\IT**TA (R. Br. |. c.) branches tetragonal and pentangular, *"•'•>'; '.itli ,,i tut,, til. • l...i,/..t.l..l | BOMOMot' «-.it..ll.i yinlrd »ya cortcavr, elevated othicl.

re of the Cape of Good Hope. Stapèlia guttata, p. 10- t. 4, Att. hort. l ew. ed. 2. vol. •». ,,. 96. 5J£. ****** «•«. mag. 7. t, 41 l ,rvIU sulphur-col..l •" rt with red, wtlh a scabrous but; auncle. lrnKth .: flowers, by ihrees. V ner corona spotted with pur|»le ; h»k.

• *JJ*«'-«w«: I i! Hkrab

H- Br. l c.) branches 4-5-angled, spreading; n of btjuclpf. m •iiUry. t 8. S'atii Mass. Map. p. *M).* • 5. l ,4 „.((. a (aitip.i,w|«rr •lark i.urplr, umlul, '"'•'"'| •>nialliw>

Dmtrf 11 ' " 1. BAT* (II. Mr. [C.) bra, ,v , 1 ^ ^ irajionai; with larnt- teeih ; flowrr. v.l.ury ; corolla glabrous, lotted hud* ; cor ,>bed ; !„!>« nwodiah, rx Haw. r1.1 , <l HU|K-. SiajK-ba i.iltota, Jtt, *i^i .rt.Ua/flabrou..!. tr1 V !!' l •»»» -! l urn. u. • Urn?*?"** of lbe cor0"* " dc*cnbrd *. •** Hal COM of "ope. Sup. dumUfiBwVl., J*ci. (. *3S* an.l 34. footT f, ftl Clt. JM5. Shrub w'^IK of .. ^ brll.r, B ttMtutr llli vwl ety of one of the T»w «-«lii of M«a*T» K. Br l. c.) branc), K>•Co* >nffrlK... Mas*, m^ ,,. u. ,, ?< J,t,,. „; p. t. 46. »'«»ldfci •ml putj bnuM *1, t. -t the base - l li PL A.

[*Htm,* eyn. p. 2tf. «uppl. pi. «uec. p. 10.) »«h .|.n.. ling, stiff teeth; flowers solitary; corolla campanulate, dotted loaide ; li fu l« t-lobed ½. S.

Satire of tli. Cape of Go«l 1 l- 4. diar. lip* j t. but not I. *IMS,* pale Kr«-,-i„ livid ooaaid< irO yellow bwi'de, n T.,!!a blood-coloured dots, and ebvaf* hairs i -xterior corona

CiuK-krorimt' Fl.Julj.Nrtv. Clt, 179*. Shrub

n i l . . (RON >rsii<'hev +-J aii^li <l; < Ibe rest aa in i fi, »; • S. <1 Hope. Ntajw ocelhtta, Jaci| diar. IIJM. 18M. p. K70. st ap. t. 40. Corolla ,i*h ~ ''

Ocellated-flowered Huernia. Fl. Aug. Nov. *Cult.* For culture and propagation s *pèlia,* I u. r sh. | ft. -• "** 117.

III. P1ABA Mill and «.»K, M (a flowrr: in reference to the fleshy flowers.) H Br. in mem. »rm. aoc. l. p. t.1. 11 iTtT. *I'rnlaml* l M.li. r,m 11 lraflets the back. Am maaae* en by the base, Kith one • and | ^ol- licles unknown.—Succulent plants, natives of south Africa, .11). the habit of *Stapèlia.* Flowers risi H from the sides *of* branches, beyond the tui((lfi and leetb.

l l[1] lot Bfcment* some«liBi MragonaJ, corolb Unce< puiirima. Mass, i IB. *U ti.* Obt'»i* f pun. tata. lla»« syn. p. 43. l.lraiM-l- bent, crrepiiifi l uttatly i together, n dark .urple peduncle*. (*al)x dnrk pOTpl l 'olla with a deep red bottom, a i ted with blood-coloured dot*. Probably a true sperw *n.*

MaaMbwoPoi Piaranthus. Ft. July, No*. <

IP. K -inches utuaJU bexagooal. ', lo*on a|ttcr<Katr; »egmetti> «lla lanceolatr, tilky oh l pulta, Ma»« II.f.ai. lwt. nu«. 1641, Will.l N.. U«», rxrluktce *of* the >yn ta, l t.unl. Allf ltatOOk ifsrt. \ . « of braitrlir* a bltlr sinum. •list dark pur pit anlhoo. n. Aug. -ept. Clt. 1774. Sbruli ½ foot.

5 l*.f rA« -x-hultes, 6. *p* 10.) bi luuallv *hinaffonal,* will »pr nrar i Roggeveldsberg, on the Hanton hills. Branches d bent. Peduncles length of the joints of the branches.

fan tr-branched Piaranthus. Shrub decumbent.

4 IV r inches letra- 'IU Mil*.[1] narrow. Ha<. *ted on 11 than the &>» .ir^,u« l*!«i ' i i u m parvsi lora. l < NoJhl >.ll...- r ihoM •<"•>*• Pl Aug. Oi. l7»5. Shrub i foot.

l jwtehe* fflaaeow, letragnnal; angln toothed; flowers in fascicles beyond the angles, small; corollas glabrous. ½. C. Native of Sicily, on rocks. Stapèlia

Uuwotwana, Jacq. ex bot. *re*, t. 1731. **Corolla* yellow, •triped wil h brow i, and liuprd with purple.

GuMonei I'iaraitthu*. Fl. Ju.Jul. t'li. 1852. Shrub J fool.

(I> ; **braadial** numtnuis, erevt, tetragonal, florife-rous at top: with xim-ading, a cult U-eth; pedicels solitary; segme uti of corolla flat, ovate-ijnctrotaU:, setaccou .1 at top; bottom of corolla circular. **pe of Good Hop*-, in (he dl . allvil Karro. Stapelia aritla. Mat*. Map. p. SI. t *$3* Corollas siM of lh<m- of *Cyminchum vimctt6ttctim,* pale yellow, with • yellow, ireular bottom, whitr corona : i. I at the ba**-, and pilose at the ape*, ex mild. f *brand** lar to opine*.

Artd Piarantltus g. Cli. I b J foot.

UUi'n.'i; liraaclnicrvit, tt-tragoiml : with spreading, acute uwili; flowen aggregate, almou tc**ilr; segments of corolla narrow, flat, an ! i*t., o»tu>e, ex Tim nit. Native of the Cape of Good Unix-, in Sal dan ba Day. Stapclta nicarnau. Lin. suppl. p. 171. fhaab. pnd. I. p. *<i- fl. cap. 2. p. 167. Mass. *tap. p, *tl.* I *%tx.* p. 15. t. 7. f. 1. 1 ' edicels rising, as in other species, from the angles beyond ilit Ut-tii I eaten by tin- II ottentots, ex I Flower* small, flesh* coloured, si*c of those *o* tVra. Corona covering (he gynostcgwrn, «ith a greenish margin, of 5 yellow, erect, bifi '. augments, anil other 4 linear, inflcxtd OHM, KI (be centre, ex I'hunb.

Far. β, *albus* (1AM. stap. 1. c.) flower* wfail

Flesh-coloured-flo ovivf •! Pianadac Fl. April, Aug. Clt. 1793.

Shrub 1 foou

8 IV KAMHILAHU ; brandies hexagonal, bearing the flowen i it the middle : rurnitlif tt with lpuie-hkf, rrcurvitl tubercle*; pedicel* a| orter than the c flowers ; corolla glsbroas; tegmrnt* fanct'olate, with revolute edges. of the Cap* of Good I !••]•<. on rock*, aboul Olifant't river', ami towards the north, near i> ex river, in the **Kane.** Stapeluimantmtla.ru, I.m. nant. p. 218. Thunli. ; rod. 1. \>. M. ll <*p. iT p. ll*6.— B.jrm. **afr.** p. 37. t. **11,** IVdnvU uvually by four*.

MammUury Puraitihu*. !l. June, July. **CH. 1774,** Shrub.

CttU, Sr« *StUfiiut,* p. 117, for culture and propagaitoti.

^ I. (W*M» *of JntfUjkaiwm, or gy»»tUi[i*m, txmritd, or tcmi-ex*rricd, appendicmUtt o*t,idc, Foitc** MIMJ *ptUmrid* M INK *of tkf wtari*

IV. >l \l'l 1.1 A (named by I innæus, **lfb)t B«da«W a Stapcl, a pliytitian ofArmtrriUrn, Coinnti K. Hr. in nM.ni. wera. KH I:in, and otWrs.**

•r»r. *Pent >,m,a.* **Corolla rotate, S-cleft, fleshy. Column 01** fructification exserted. **Sumineoi d'>uble ; rater 1 K art.[<; interior <>n< mbulale Ivan, .lien m* by the base, having one of the edges cartilaginous an-! Stigma mutrc. Follicles tomewhat «>mose.— r leshy, lealtna, angular, usually tut>rrc-ular plants, na> rt plain* call< r the most pur but with a nauseous, t**

f I. *liranchrt vr tttmt aiattty Ulrag^mol, J,mnf.*

i, t,»*JH>liu>a*(Mass. sup. p, 3. t. II.) branches quadrangular, clavatr, downy ; tubercles or ie»lh rrrnot* ; corolla lai ge, flattish: with uvate-lanceolate, acute segments which si Itated on tlir edg* > vt of lite Cape of Good Hup.'. Haw. i>n. p. 1<>. no- I. IW grey, from down. Pe i*Mnf|rt lla Urge, dar • tK. bot-tom i but the iigimti are *U-j.*liter purple, cduued with grey ha»r», ami sinped with white.

Grtal'jUmtred Supelia. Fl. Sept. Dec. Clt. 1795. Shrub I fo

i. wnctAWOM lHaworth, tyn. p. 16. no. tetragonal, da »•* I |p corulU ovate-lanceolaie, furniahed from the **ban*** behind Ic with d«o*e red hatra, and having pale atripra on »• upper .urface. w«h black lipa. Ij. S. Native of the Cap* « Good \O\H:. Siaj^ha gramlirlorm. Curt. bot. **Bug.** 555, exclusive of the t\itonyma.

Xke? SU(K1U. J « . Cl«. 180*. Shrub 1 f« 3 S. **uuii** .»up p. I **Haw.** lyn. 1 brmncbet erect, quadrangular, clavs **tr, incuf v** corolla flal: with obloutf-lanceolate, acut< •re ciliated on th* edge*; leaflet* of tin •errated on the **back,** and umtlted *' **II. JH. J»** **S** **ttap. 35. Corolla** s co|our, variegated with trans verse, dark, violaceous stripe*, ba" 1g the edges of the segments of an obscure vtolet col"

AmUgttout Supelw. FL June, Nov. I Clt. 1795. Shrb 1 to 2 ••• et.

- toBOKiA (Ma, sup. p.23. u 39. Jacq. ttap. t, I*. ». **,•' branches divaricate, ((uodrangtilar , teeth remote, a** rvctJ **segmenu of corolla lanceoUiv, vdlout in the centre, and cltated oa the edgn- Lodd. bot. c tils dark verse rugec> Accoriim^ to Mtwm i, in habit: in the divaricate, 5-anv said hi be tetragonal at ti.e lop; it. in the srll'-otl'ittred rorolU. Bttm purplish. Peduncles • ipk. solilary, purt>**

i. VI. **July. Aug. Ck.17»7. Shtul.** Vll- **• did. ftium. p. SSI.) uirulla fl, i, and hairy disk, the N*t .ikdage* of inner crmre, • of tin- Cape of Good, I |n a variety of *S, frurut.***

.Y/>rr«rftNg-flowered Su]*lia. Fl. July, Awg. Ctt. |7tf< Shrub 1 foot.

U i u ' u (Haw. «yn. p. IS.) leaflet* of inner **•ub-dcltotd, bj , rocess iocurvrdly clsw aear of *<\\r *hmfHtH* I rroaa. r; Ca(>- defleu, Hurl. Jan). »Up. t. J mag. 1410. Very like the preceding, but one wail >f a icrrenish-wtnc colour, waved, contijtuou*, » the middle ; ronl lottg pixpli hair the base I egulae dusky, rufous, recurved, cuneate aird at i**

*ttr/b*rJ* *i(»jielia. V\.* June, Aug. Clt >(. kOfft lil«H»p. I (I I*. | m •, florif• roii» tn the ru IUII. **corolU with pilose edt Inning, and rath- r corona ottloog. ^ . S. Native of the Cape of Good Hope. Tbu s|- ecies is nearly allied to *S. m»» and *JrJUx* . from th. first it differs, in the branches not being ditaricau-, but en t; in the peduncle• betng si lla ; in the *wj* tb» corolla not t» in the botloai not bring vilUi «*i;ooii, •< irt'arly allied, 1Mn « '*'• at their bs»e, bui in the IUMIIUI- ; in tl* aatawMs of ib«i not Wing flat; m th* flowers being smaller, awl uf a colour I and from the third, in tbe leaflets of *>• in many other pur**

, StaprU. Fl. Jusr, Aug.

bottom of corolla campaniiUi ! tram* t) J*!**** of . rorooa UaKaxaV acuminated; *••• of thr innrt corona diverging; tppanrfaf; MM al tu». i dot branches floriferous in the middle. ♄. S. Native of the Cape of Good Hope. This i* M i...it!> allied to >V rr' braitclt.• being M.rr numerwua, and not bring floriferous M ibe U*r; in ibr M-fmrat more acute. Peduncle* aggngat*. Corolla* browniab purplr, 3-nerved.

f8**p- lia. Fl. July, Aug. Clt. r Shrub I foot,

§. 2. *Æquilaterales.* *Amgiti of *trmt 4, JUtl, tfwl, downy.*

9 S. MASSÒNI (Hort. Haw, »y». p. IK. i branch** targr, »f 4 equal angles. ♄. S. Native of the Cape of Good Hope. This plant has never been rightly examined.

Masson's Stapelia. Fl. ? Clt. ? >t>r«b 1 l

10 S. ASTERIAS (Mass. stap. 14. t. 14.) teeth of branches short, erect; corolla large: with ovate-lanceolate, acuminated segments, which are ciliated, and <ulatr, kmnwun unequally bifid. ♄. S. the Cape of Good Hope. Curt. bot. cab. 239. Corollas size of those of *Periploca Graeca*, but the lower branch i* pair:

Sfrry Buprlia. H. ? <lt. !. Bfcnib J M J foo».

2 S. HIRSUTA (Lin. spec. p. 316. Thunb. prod. 1. p. 46. n. exp. 2. p. 168.) corolla having the segments villously ciliated with white hairs. atxl il»- Uriloin tilU.u. frmii ruluua hair*. iltr rest wrinkled transversely, and glabrous; segments of outer corona acute, lanceolate; leaflets of inner corona spreading; appendages adnate, ovate-oblong, about equal in length to the horns. ♄. S. Native of the Cape of Good Hope. Mill. icon. t. 178. f. 2.—Bradl. •«««. pi- 3. p. V ,. M.- Roes, insect. t. 9. Branches floriferous at the base, hairy; with subu... erect ... with deep violet, transvers.. stripes, a pale re.1 bottom, aj..J .d nectaries, size of a French rose.

Var. β, ätra iaeq. dim. lipa. Itii. p. fW.) flowers deep purple. K< bot. rrg. t. t "

Hairy Stapelia. Fl. July, Aug. Clt. 1710. Shrub ½ foot.

13 S. HAMATA (Jacq. stap. t. 12. diarr. lins. 1814. p. 269.) corollas flat, ciliated, wrinkled above, with a hairy centre: segments of exterior corona i •margmaw \ KUMT aMawta of MMM* lanceolate-subulate, hooked; outer •n« paralU-l. with the beaks erect, a little toothed at tl r aprx. >. ♄. S. Native of the Cape of Good Hope. l Iodd bot. < ^b. f «. l MMit ittili, Aorifrrooa at the base. Corolla 3 inches broad, b... ....l-««4mir«"tl segments acuminated, with transve... '•«• «hn, stripes, ciliated with red hairs. Segments o... subulate, bifid, or hooked, rufescent.

Hooked-crowned Stapelia. Fl. July, Aug. Clt. 1820. Shrub ½ foot.

14 S. COMA'TA (Jacq. stap. t. diarr. lips. 1814. p. 269.) corollas ciliated, with a flat, hairy dis... the rest glabrous, and wrinkled transversely; taaflVtt of llUMT eofooa HM l. uu|; a ptwnda l «-nai«l. Mr,'.,...,, ai ••.. *kS. V.....1. . MMI) a,.liiar>. l«rotta p*W f aMoanttt ciliatnl »ii)i '*••) tuiir*, and >*«*•*-!• 15 S. MULTIFLORA (D. C. cat. hort. inomp. i corolla rotate, with a hairy bottom; < gmrnf* fUt | homt •tabttlair . wing* joiawd RIMMII with erect r»*tb * . •. '. Nnrly aj from winch it not bt imdttl 'KttlMKl, not irtdrntatp i aw) it* liguW *mn m* niargmtl Wr* purpW or whiw;

MmmyjtomvftJ StMfdmX FL oVpl < I 1*17. Shrub J lo

10 Maaa. »l*l>. p. lff. 1. *i».)* a^ramta of corolla trwng *% V* irai •lamrna dilated unnj porrteroaa at th« baar Lodd or a l tile larger, <>f *mn* f»l»o .»tt-<l HHll l>a*ttij(the bototi ifair<l. Coruna of ttrrtarium varirgMrd r* Wiili Haw 11 si i* on thr rdgr« of thr a j n nrtttt, and thoar

Shrub 4 to 1 foot.

17 S. PULVINATA (Mass. stap. p. 13. t. 13.) ^t kl«-.l iran*«> • '••rn of corolta rU-valnl baar; prtlir, 1. w.i •r Cannr». Sima, bot mag. 1240. | MMMaV gart. mag. IRU. p. 1 to, i 11 l Aonfrrou* onr* aacmdin^ •«« aagastata, *a

M M O M •.»<! r mn Hi t J>l t).. l|M.• ui.l «• t)i .i r '

'»-« fl.mrml Mtaprlia Fl. Ju. N>»* •

18 S. LANIGERA (Haw. suppl. pl. succ. p. 8.) stems quadrangular; angles equal, nearly flat, downy; corolla very woolly, dark brown, striped with yellow. ♄. S. Native of the Cape of Good Hope. Stapelia pulvinata, Donn. hort. cant. but not others. Nearly allied to *S. jmLrMHtln* at *S.* Mats.

• —*iitmrmg* 8u|v' Sept Clt. 1800. Shrub ½ foot.

19 S. FIMBRIATA (Jacq. . i . t. 7. ,at. lip* segments of eoroHa lanceolate, cu... ... p ,d , pr a*•iw volute, ciliated ed.. es, wrinkled t M *rw» W(corona subulate, bifi... !; of tW oti' .. bltuii ascending; pedicels aggregate. ♄. S. Native of the Cape of Good Hope. Corolla 2 in... ^aalkBa^BBal, rfta^a#a^aW4a* • 1 at yellowish green inside, variegated with fuscous, scabrous, (ran. verse stripes.

Cleft-beaked Stapelia. Fl. M) Nov. Clt. nil, Shrub 2½ feet.

« t

*S 9. liguia, or segments of the outer corona, rhomb-oblong or cmuated. Leaflet t of inner corona nntple, tubulate, u*dttl» Stemt glabrous, wtih 4 equal ttdct, but muck more tlemder than those of the former section. Thi* u probably the brtt marked tecttom of the genus ; neecrlheUtt the tpecies agree m habit, and teeth of branches, tnlk the last.*

tO S. co*d»XA(Ma*s. >tap. p. 15. t. 18.) branches glabrous, florifi .in-, with errtt teeth ; •egintnts of cofolla -lanceolate, acutr, cilia] lmn, tx Haw. *i- . -* Native of the Cape of < • 11 kirro. Heyne, term. bot. t. !fi. f. 8. Flowers ahous of those of *Anrmone* WMOTOM, flat, grey, with transverse, undulated. fuscous •tripe*, and white bristle* ; and a brown bottom, IV-dkeli purpltth, usually lmn, Segments of outer corona rmarginate.

11 Stapelia. Fl. *lit.* Aug. Ck. *\7'J».* Shrub *{* foot.

21 S. oLAHULLfrikA i Jacq. sup. t. 46.) branchca glabroua, Boriferous in the miiMW.-, corolla very villous; •egnieMs ovate, acuminated; villi sub-spaltihte, white; ltgulsr raomb-obiong, quite entire, horny, obtuse. Good Hope, Pedicel* twin or tern, l inn. Corolla itnall, yellowish, having the bottom ami mn nncentric, tran»rcrv ipes, rufous. Ligul«e yellow uh brown.

Gland-btartng Supelia, Fl. Aug. Nov. Clt. T Shrub) to \ fi.

ft S. tLkVtcoMA wppi pi. tticc. p. 8.) Kern* numerous, quadrangfUr, slender; angles equal, downy, terth krafforw, l, ami contiguous. (• . S. Native of the Cape of ~)©od Mope. Very marly allied to *S. gU*dm&jrra;* but the braachei are thicker, more numerous, ihorter, with the teeth Urser, more l« 1. and rtxirc close togrt:

Yrllowhaf i. Fl. July. ',b | foot.

tS 11 irnrtn. hurt. hafn. p. *til.)* M-gmritta of corolla acuraiuated, wrinkled transvencly, huptd from clavate hairs, replicat • and naked at apex : Moments of o .« or hgul.t- tntire, acute : ol •, eonnivent, pedteeli aggregate, ahuoat radi longer than the cor Native of the tape ot trom *li, conc'mna.* Mass, in the pediceu > | l.mi;, and almost radu menu of the corolla n < iliatrd, awl is «na beintf uti<'

// *irpid* Stapelia. Fl. July. Aug. 'Clt. 182 l, Shrub \ foot.

24 S. tiLAsm tin..!: v M 19. l. 19.) brancam gUhrou*, with erect, acute tt-ett -ui at the bate; p. twin or tern ; enroll. clothed wi ii white, cUvate, ietai» gland* : segrocnu ovate-lanceoUu, acute, spn-ailing. S. N;i- *m* Cape ll amoni; bu»ln «, about h Oltfant's river. Smitl 19. Jac<|. stap. t. 40, Branches >preailintf. CorolU •»« of those *S. emciasa,* sulphur-coloured. Oorotu orange and black, ex Willd. lVilirt>U purptith. CorolU about the sise- of thow of *Am-mime* «««»! d with drtp red dou; and th*

.,nd-fUmtrtd Supelia. I 1 M»y, NOT. Ck. (Shrub *m.*

Sli N! «*- »u(>- P- l*« i- 17.) bramhes glakftjW, BonTi rows in th* middk; petSotli ^Uhrmi., *tmkn 9%* •rolls ; •eginaati of cornlla ovate, i-u.j.i.Utrly i gU-ktMHV *? ' Nj'i" ..!''<• (.*[•<•"» (ii-xl llOJH . l:l Natna.)U» Und. Corolla* a In tie l« g " »han tboM *of ll. r* • •efrnciMa «ied with dark purple stripe*,)»pJd wuh dark purple. Segmenu of calyx m l, acute.

Acuminated-flowered Stapelia. Fl. July, Sept. Clt. 1795. Shrub ½ foot.

§ 4. *Anómalae. Anomalous species, without the characters of tie prrceilint; trrttam*, AIM whtth wtII genera, t>ut the tha to establish then getter*.*

** iil.ute * denial*. Angitt of branches trttk atmott oUttermud, or* **wry *Mmmt***

2C S. (M p p. S3. t. 37 S e at thr apex, glaucescent ; corolla flat, ofth near l ..ully Hilary. - •M Pfcmirt «.,l.,ur. bolt..n. black Perhaps > ipei •« t < Shrub 1 foot.

Open-flowered Stapelia. I. July, Aug Clt- 17« S.,l^o,,fMa«..Up. r.fl.1 « numerou*. erect, letiarmal, KUticrt<rnt i *ttmm* > sroihr; nrolla taiicrol. M nkj**1 *.• ' brvood PUtte Kloot .)«• Ca|w»r (..«-: ii »l«««n, rising from ii g • raneWs. without dk a circular whili

Branched Stapelia. July. Clt. 1795. Shrub 1 foot.

** * Branches terete, tubercular ; having a hair or spine rising each tubercle.*

/r«ai 1 p. »<• •• tub< • branchr* ntimer Ud each with a brutle ; (lowers *mmtOt* rjmi[Mi)nUte, with ovate. corooa bind. trtd bills, under boat Maaaon; beyond l Hartequas Kloof, Thunb. Flowers small, purulr, at the torn of tl branches, Lin Corolla size of that of *S. droia,* dark purple, with a red circle in the middle, ex Mass. Corolla smooth outside, but muricated by elevated callosities inside, ex Thunb. i n a ne genus.

Piliferous Stapelia. II. Ju. A Clt. 1790. Shrub. 29 S. Gonzóvi (Mass. st 40.) branches terete; •p. p. f4. l at ll* tubercles terminating rath m a spine; pedicels solitary, ioj» of the btan< es; corolla large, 5-toothed; teeth or segments broad. roundish, short-acuminated; exterior corona 5-toothed. >; S. Native of the Cape of Good Hope, in Groot-Namaqua Laml, u>war< the orange river. Corollas among the largest of tlte gri almost 2 inches in diameter, repandly 5-toothed, of a br.. »•»»» * whitish centre; aegincuts uf the Man k i . i » d « ^ l the margins. Follicles solitary, erect, long, acute. This differs from all othrt species, in the singular form of the co rolK*-*1" the Miln - follicles ; it therefore will hereafter constitute a new gratta, whtrh wr *• •olr baa. Shrub ½ foot.

Gordon's Stptta, ll July, ci.. i;v«

t *Tk* fMmimg* «prrtt* *in*g hmrdly* ***kmmm,*** *they* **»» *Mrrmrnged* •» *•> °f '** ****** •• "* •

30 8. aaaa>i x Haw. ijm. a, *it-* ** "*0 N» .pa of thi« plant btit the name.

Cordate Stapelia. : U Aug. (Clt. 1803. Shrub ½ to ½ foot. 31 S. CANESCENS (Hort. ex Haw. syn. p. 26. no. 29.) ♄. S. Native of the Cape of Good Hope. Nothing is known further of the species.

Canescent Stapelia. H.Ju. A g. Clt. 1795. Shrub. 32 S. ORNATISCULA (Hort. ex Haw. syn. . ji. X?. no. 31.) ♄. S. Native of the Cape of Good Hope. N l.jng bui tbe M I M [1] »»O»II of ibU species.

Small-serpent Stapelia «. Ft. Ju. Aotf. Cli. IftO*. Shmbpn*. 33 S. CAUDA'TA (Thunb. »_ prod. 1. p. *$. A- mp. f. p. III.) stem hairy, Uf l»«r» ..l.lowg.htir.r.Mrat, . ||.•«•••». axillary, pedicellate, solitary, drooping: segments of the lib lmrar. ♄. S. Native of br 'Cape of Good Hope. l leaves sessile. Pedicels much shorter than the corolla. Corolla flat, porjitr, scaly inside. Perhaps a species of *Ceropègia* or *Brac*, ma.

Tailed Stapelia. Shrub ½ foot. 34 S. CUADRA'NGULA (Forsk. descr. p. 52. t. 6.) stem tetra- gonal; branches divaricate, floriferous at the apex: furnish..1 with truncate teeth; flowers small, crowded, sessile; corolla »lt yclluw. 5-cleft. ♄. S. Native of Arabia Felix. Flowers greeni Calyx 5-toothed, permanent. Juice not milky, but aqueous. Forsk. cat. p. 108, no. 194. has also *S. quadrángula ra* 4JM, no. 194, besides *S. quadrángi* i/d, DO. 190. Si<)r* of Mctil lull an inch wide.

Quadrangular-stemmed Stapelia. -drub 11 i foot. 35 8. w< CTA'NGULA (Forsk. cat. tto. II»».) • tem branched, creeping, with fl-9 angles, ainl •» Ml « ; an^lrt liMXbnl; follicles tubulatr. ♄. S. Njiitv* of Arabia Felix. ik rl Ghorob. Forsk. descr. p. 52. Anonymos, Poir. ency. 7. p. Ml. The Arabians affirm, that this plant, after being apparently quite dead, by dtyinn for a !• ong time, if it is allowed to come Hl rot*- tact with moist earth, it will again revive. Forsk. desc. p. 51.

Many-angled Stapelia. Shrub. 36 S. CLAVA'TA (Willd. spec. 1. p. 1295.) s11-in »tni|il.-, \ hick, clavat f, rrticuUti-ly and ubaolriciv »»' ted, bearing the fr iK al the apex. ♄. S. Native of the Cape of Good Hope. . in umly fields., beyond Ktmitrtbc t£ SI»JM In, t'ltuti. Ira*, p. 57. I. 8. only the fruit.

Clavate-f-»L-tttmrd SupeU. Shrub. N.t.—There i a »prcks of *Stapttia,* wWh »»t colUrtrd n the Cape of Good Ho or, on ihr batik* <if i[1] new Roode Gebroken Klip, by L ittenstein, which Willd. has called, in his enum. suppl. p M , It *brevirátris*, but without j t a y character of the plant. In the Newsite b«t. *Art* U u i au Belvidere, the following names occur, but with MM any dug- nosis of either—1. *S. Buffonidna*, 2. *S. bifida*, 3. *S. tyrsica*, 4. *S. tridentáta*, 5. *S. virgáta*, and *verticillata*; but these names are very likely synonymous Midi *antHm* of those described aW« . There are several undescribed species preserved in spirits of wine in the Banksian museum. What is *S. dentáta*, [1] orsk. cat. 192? and what is *S. papillósa* of Tabl. de l'ecole, ann. 1815. p M'

Cult. Singular succulent, grotesque plants; '•rarinM rrmarksbW and singularly beautiful, star-like flower i, (itually «itti • very dis- 8 ••m it a tniM.it. t • «» N I ' ry HUM* IO >rt a little too much water supplied them. They re water, except when in blossom; and in the winter, the less given to them the better. They are readily increased by cut- tings, which ed to dry for at least a week or I" W» anrf (Ujr arr u k m off from llw moldcT pUm, before re set; after which they may be te pots, they will almost immediately strike root; tor.rpUtoi when first taken °>i «od M wl jMKT. they have r w y chatm la rat.

\'. GONOSTEMON (from γονη, *gonia*, angle; and *στεμων*, a stamen) Ha*. *v». 1. 27. Stapelia species of »nrl,,.r».

Lin. •tit. *Ptmtiadrim,* /Jify*. Corolla rotate, 5-cleft i LJ- gulate or annuwta of tbr • > terior corona distinct, rufous, oblong, nim-atrd and rwurvrti al the apex, channel-formed: those of the inner ruruna i rectangularly incurved, unciform or pediform, abort, rnfou*. lct>nih of the ligulae, and adn ate to them; bear- ing at the b»« large, didymous, yellow anthers. Between the corona and ih« angle* of tt>. style, there are 5 stigmas, 2 of *hirb arr *i ther-form..«d, ilw • ther black and an ib dot-formed; and from this dot there runs down an ..l.l.«ij{. very minute, bifid, jrllow lwular. — SawcaaWi shrubs, with the habit of Stapelia; but the branches a • more slender and divaricate. Flowers fascicled. Pedicels length of the corolline segments.

1 () DM ARICA'TA (Haw. syn. p. 27.) branches numerous, te- tra onal, glabrous, grad ually attenuated: with small, erect teeth; coroll aiaft dabcooa segments lanceolate, spreading, with revolute ciliated edges. ♄. S. Native of the Cape of Good Hope. Stapèlia divaricàta, Mass. stap. p. 17. t. -(• Sims, bot. mag. 1007. Branches floriferous in the middle, or at the base. Pedicels twin or tern. Segments of exterior cor ••oa roundish, obtuse, mucronate. Corolla shinin .-. itreMuah fal own outside, Corona orange- coloured.

Divaricate-branched Oonoatrmoa. II. Ju, *V* ev. Clt. 1793. Shrub ½ foot.

t '. TA'LIS *t brain IH-I «rrct, .)t..rt. tetragonal, glabrous: with •bort, dectdwona IMTII. corolla glabrous; segments acute, ciliated; pedicels aggregate, rising above the base of the branches; segments of outer - oraoa *|' reading, in the figure sub-tridentate; of the interior one erect and blunlish. ♄. S. Native of the Cape of Good Hope. Stapèlia pállida, Wendl. foil. lt. p. *VJ.* t. 51. (i.n.lla pal« yellow, »fjiiii,> to flesh- rolourrd; llw argmrnU ti|i[Mt] wiih greenish yellow. Corona yellow.

Pale-y allow honour mon. | *hkj,$n* Clt. 1818. Shrub b

3 (;. n.. ta IL« suppl. pl. succ. p. 12.) corollas naked, rt». branches erect. Native of the Cape of Good Hope. M.I-IM --- • Ma^bAHg.tMT. ltrai.rt.rt .)• iHl.-rt-f ihan in the preceding.

Straight Gonostemon. Fl. Ju. Nov. Clt. 1814. Shrub ½ foot.

Cult. For c ure ami propagatiofi *r. *Stapèlia*, »*,tt.*

VI PODAN1H1

.<, i«UU, a II •| with a broad. rompanuUi

Lin. syst. *Pentándria, Monogynia.* Corolla 5-cleft, wrinkled; bottom, girded by a tumid orbicle. Ligulae, or segments of the exterior corona, combined to the middle, channel-formed, rhomboid, deeply emarginated, or cu- neately 2-lobed; those of the inner corona simple, short, form of a reversed foot, alternating with the ligulae, incurvedly and closely adpressed to the style; the rest as in *Stapelia*.—Habit of *Stapèlia*; but the branches are much more slender, effusely de- cumbent and weak, rooting at the base, obsolctely 4-5-angled; with mm li HRHPi ililt..u! -scuminated, ascending, thick teeth, bat IffMMIM by a IM 1st fest leaf.

1 P. RU ACA'TA (Haw. syn. p. 32.) weak and ' in.>ih branched; RII Han. ajn flowers l« in, semi-quinquefid, corrugated, with a minutely pilose bottom. ♄. S. Native of the Cape of Good Hope. Stapèlia verrucósa, Hort. but not of Mass. Flowers on long, bent pedicels. Segments of corolla deltoid acuminated, green out- todr, and tut|ihur~cok»ur*d •nside, •ant ; warts numerous,

ilark brown. Bottom of corolla dark brown, girded by a few

far, β, verr ticvta; branches longer and thicker, Stapelia verrucosa, 5 -ot. mag. 1786, but not of Mass. Stapèlia pulchella, lion, hut not of Man*. 'Corolla pale yellow, with dark purple mark*. Segments of the outer corona eroarginate ; tl inner o ne of ovatt- yellow rnrpnackn.

Fair PodaMMa. Fl. Aug. Sept. Clt. 1800. Shrub cr.

2 P. [RROKV II aw. syn. p. 33.) branches numerous, erectish, decumbent; pedicels usually solitary: corolla m m mt-qaiaqai till than the last, wrinkled ami bedewed : with Ianolaie, acuminated aegrnei .;>eofGood Hope. Stapèlia irrorata, Mass. Map. p. *It,* t. 9. 1-odd, bot. ab. If7. Coroll. sulphui ,1 spott. blood alow i having the b. tom blood-coloured, and the segments tipped 1 with pur(.! : his species differs from *P. verrucòsa,* in the flowers not being wmrted, at d in the sranl of the pentagooal circle, and eoloar, ex Willd. »pec. 1. p. I i.'.i.

Bedewed Podanthes. Fl. July. Sept. Clt. 1795. Shrub dec.

3 P. VERRUCÒSA (Haw. syn. p. 33.) branches numerous, ascending, tetragonal ; pedicels solitary or twin ; corolla quinquefid, rarted ; segmen ltll' ! the corolla scabrous, pentagonal. ½. S. Native of the Cape >f t' ood Hope. Stapèlia verrucòsa, Mass. stap. 2. no. 8. t. 8. but not . Sims, Jaeq. Map. t. *iG.* Corolla yellowish, Rpolled with blaod-colotar; hut with the ion of the segments, and about the bottom brownish. 'Segments < ,'lnbt'i; UanV tmer ondnate, obtaar, and retnse.

"'« *rted* flowered PwUnihn. Fl. Aug. 0 et. Clt. 1795. Shrub i ft

4 P. ROXIFLUA ; corolla 5-cleft, dotted, with an equal bottom; segments of the outer corona emarginate; teat! ts of the inner corona incurved, 2-lobed. ½. S. Native of the Cape of Good Hope. Stapèlia roriflua, Jacq. st <P t. 30. Willd. enum. p. 285. Orbicle none. Beaks gibbous, lying upon the stigma, ex Jacq. Corolla yellow, dotted with red.

Dew-flowing-flowered Podanthes. Fl. July, Sept. Ck. 18o«. Shrul proc.

5 P. PUTCHELLA (Haw. syn. 33.) branches numero m, tmmgonal, reclinate ; pedicels fasciculate ; corolla 5-cleft, wrinkled : with ovate, acute segments ; orbicle circular. ½. S. N«ti*e l>t ,hl Cape of Good Hope. Stapèlia pulchella, Mass. sta :.. |,. j 22. t. 26. Corolla yellow, dotted with blood-col our. ! |w of segments and bottom fuscescent.

Neat Podanthes. Fl. May, Nov. Clt. 1795. Shrub dec.

6 I CILIATA (Haw. syn. p. 34.) branches numerous, tetragonal, procumbent, radica it; |*diccli soliiar) ; corolla 5-cleft, papillose above, and ciliated on the margins : with ovate, acute, flat segments. ½. S. Native of t fie Cape of Good Hop <\ in Karro. Stapèlia ciliata, Thunb. prod. I. p. 46, fl. cap. 2. p. 168. \| ass. stap. p. 9. t. 1. Corolla yellowish, ex Willd., l','"l' lish green, greyish inside, with rufesc em papilla, *rx* 1'hunh Cilia clavate, white, e x Thunb. Orbcle beset with paoilua-, «!nc!i in with pur|

Ciliated Podanthus. Fl. Oct. Dec. Clt. 1795. Shrub cr. *Cult. For* culture and pro |uxaliou »e« *Sta/irlM,* p. 117.

\ II. TRID1 NTEA (from *tridens,* a trident ; in refer to the segments of • « outi corona being tridentate.) Haw. syn. p. 34.—Stapèlia species of authors.

LIN. SYST. *Pentándria, Mo nogymia.* All a< in *Stapèlia,* except th I Itgul* or aegmeiit - of the outer cor ona, whteJl are tridentiform ; ind those of the inner corona are unequ illy bipartite.—The species liave alu ost the habit of those of ^osUassW; but the branch ea are naked, and more erect ; and the teeth are smaller, and terminated by a very manifest green leaf.

1 T. OKMM> GONEA (Haw. syn. p. 34.) branches numer OUf. erect, tetr >gonal ; pedicel solitary or . -» in ; corolla corrugated ; segment* o«at< 1 with whits hairs, 5-nerved above. ½. S. Native of the Cape of Good Hope, in arid places, among hu.h... I.•>..!..! l'l.,tt, Kl roof. Stapèlia gemmiflòra, Mass. stap. t, Ii. t. I'. Jjicq. sup. t. *9.* u w o u a *w m w* » ™ - . . . . *? «,«hdarkhair^ < Orbicle none, ex Haw. Ligulæ deep p 'X! with paler dps, I Outer br *ncnes of inner corona dark purj. . inner ones tipped with white.

Var. β; corolla marked with golden yellow dots, Mass.

Vi γ; corolla wholly black, Haw.

G flowered Tridentia. Fl. Oct. Nov. Clt. Shrub | foot

2 T. STYGIA (Haw. syn. p. 34.) corolla black, tI *mm* \ *-Aim*, *w* rinLlctl* ciliated w with red hairs ; branches thick, short, yellowish, ½. S. Native of the Cape of Good Hope. Stapèlia Stygia, Schultes ---- ^ - ---- T',e branches of i»» *W** cies are *ery d.rtl r,„ from .(.,- preceding, being *mm*— thicker, and paler.

MnTrioeMM t. 1«1*X > f. MOSCH/T* II aw. syn. p. 25. suppl. pl. succ. p. 10.) corolU ciliat. •«-. ."'"I * J J J d, wrinkled from tubercles abo beneath; leal! >na subu ects of inner cor late, diverging dagss lanceolate. <;. S. Native of the Cape of Good Hope. :•*!« hirco**, Jacf). sUp. t. I W illd. enum. p. 2 Corolla br ownish purple, spotted with yellow. Leaflets of outer corona tripartite; th. middle segments much the longest.

Mtukw Trident- a. Shr *Au*

4 I •mneroiM. *tr* igonal: prdi .Ton.."'"1,1„1 lau . bluntly .cuminaled a« c, and wrinkh d ½. S. Native of the Cape of Good Hope. it,„ n I'untains,at I lex river. S ipelia vetula, Mass. stap. p. 15. t. 16. stap. t. 27. Atlg. gan. maa:. 181 8. p. 17. t.

nth a dark purple b, T^TZLw obioafi violaceous, unmated. 3-ner*rd above, ex »i)lu. ' ^ >t| ovate, ac inner bra .chrs ol acutr . inner corona subulate, diver • outer on. MIK-*I.«I indent- a true '• "'** • *rb- r* species of *Stapèlia.*

Stale Tridentea. Fl. May, Nov. Clt. 17 »8. Shrub *t* to • foot.

5 T. S H| branches tetragonal. erect : with thick teeth ; ment* uf corolla *S-ttet«* ved, ovate, acuminated ; ligulæ retusely tricuspidate ; branches of inner corona subulate. ½. S. Native of the Cape of Good Hope. Stapèlia vetula, Sims, bot. mag. t. 1234, exclusive of the synonyms. Stapèlia Simsii, Rœm. et Schultes, syst. 6. p. 33. Trid. vetula, Haw. syn. p. 36. Corolla dark. 1 rfulir yellow.

Sims's Tridentea. Fl. M«y. v ov. Clt. 1800. Shrub ¼ to ½ foot.

0 T. turn SSA ; segmenia of corolla ,iba* ligubr tr dentate ; branches of inner corona a little toothed, late, spreading. ½. S. Native of the Cape of Good Hope. Stapèlia ' ressa, ½ — diar. lips. 1514. p. —

fZ l J Inly, Aug. i

7 T. atootA : branrhes tetngonal, procumbrttt. but erect ; pedicels solitary ; corolla >.tmkWd. «labro«> afterwards of inner corona clavate, outer one terete, obtuse. ½. S. Native of the Cape of Good Hope. Stapèlia rugòsa, Jacq. stap. t. 21. Willd. enum. p. 284. Corolla 3 inches broad, pale green beneath, but marked above with dark purple and blood-coloured dots. Bottom of corolla orbicular, tumid, ex Willd. Orbicle spurious, depressed, surrounded by 5 crenatures, ex Jacq. l. c.

Wrinkled-flowered Tridentea. Shrub dec.

8 T. PANICULATA (Haw.) corollas flat, transversely nittOWi

hairy; segments of exterior corona, or ligulæ, obtuse, obsolete tridentate; horns subulate, connivent: outer branches of inner corona ovate, obtuse. ♄. S. Native of the Cape of Good Hope. Stapelia pannosa, Jacq. stap. t. 61. Corolla of a livid green colour outside, glabrous, brownish purple, and hoary with violaceous papillæ inside; hairs white.

Panicled Tromotriche. Fl. June, Sept. Cb. 1805. Shrub.

Cult. For culture and propagation *see Stapelia*, p. 117.

VIII. TROMOTRICHE (τρομος, *tremos*, tremor; θριξ τριχος, *thrix, trichos*, a hair; in reference to the cilia of the corolla being tremulous.) Haw. syn. p. 36.—Stapeliæ species of authors.

Lev. xvii. *Pentandria, Digynia.* Corolla smooth, revolute, ciliated with tremulous spatulate hairs. Segments of exterior corona, or ligulæ, connate at the base, horizontal, cuneate-rhomboid and serrated; those of the inner corona unequally bifid; inner branch recurved, longer and slenderer than the other, gradually thickened to the apex, where it appears like a stigma.—Habit almost of the first section of *Stapelia*; but the branches are naked, and very glaucous, or rather pruinose, erectly decumbent; the teeth distant, thick, horizontal, or a little recurved.

1 T. NEVOSA (Haw. syn. p. 36.) branches tetragonal, glaucous, erect; corolla glabrous; but the segments are ciliated with spatulate glands, acute, and revolute; ligulæ quadrate, obcuneated and retuse at top; outer branch of inner corona tooth-formed, acute. ♄. S. Native of the Cape of Good Hope, in Karro, under bushes. *Stapelia revoluta*, Mass. stap. p. 12. t. 10. Sims, bot. mag. 774. Branches floriferous at top. Pedicels solitary. Corolla pale, violaceous, ex Willd., greenish yellow outside, and purplish inside, ex Mass; dirty dark red, with a pale circle at the base of the lobes, ex Haw. suppl. pl. succ. p. 11.

Revolute-flowered Tromotriche. Fl. Ju. Sept. Cb. 1790. Shrub 1 foot.

2 T. GLAUCA (Haw. syn. p. 37.) branches tetragonal, very glaucous; corolla glabrous; segments ovate, acute, revolute, fringed with clavate glands; ligulæ bi-tridentate at apex. ♄. S. Native of the Cape of Good Hope. *Stapelia glauca*, Jacq. stap. t. 10. Willd. enum. p. 279. Very like *T. revoluta*, in the mode of growth, colour, form, and corolla; but differs from it in the segments of the exterior corona being tridentate, ex Willd. Branches sometimes hexagonal, ex Jacq. Pedicels aggregate at the tops of the branches. Corolla livid green outside, and striated; blood-coloured inside; with a white bottom; ex Jacq. Lobes of outer corona obtuse, and a little emarginate at the apex; therefore the plants of Jacquin and Haworth are probably distinct.

Glaucous Tromotriche. Fl. Jun-Nov. Cb. 1793. Sh. 1 to 2 feet.

3 T. PATENS (Haw. syn. p. 37.) branches bluntly tetragonal, erect, with recurved teeth; corolla with flat, ovate, pilose, or downy segments, the down appearing like powder; ligulæ serrated at top. ♄. S. Native of the Cape of Good Hope in the dry regions of Namaqua Land, among heaths. *Stapelia patens*, Mass. stap. p. 24. t. 41. Corolla blackish, lower path white with spreading hairs, ex Willd. *Stapelia papillosa*. Flowers small, solitary, twin, or tern, towards the tops of the branches, purplish, ex Mass. Perhaps a species of *Piaranthus*.

Prostrate-flowered Tromotriche. Fl. Ju. July. Cb. 1795. Shrub 1½ foot.

4 T. CILIATA; branches tetragonal, glaucous? corolla glabrous; segments ovate-acuminated, bent, obliquely ciliated with clavate white or purple glands; ligulæ bidentate, acute. ♄. S. Native of the Cape of Good Hope. *Stapelia obliqua* Willd. enum. suppl. p. 18. Corolla dirty yellow, marked with confluent, violaceous spots. Exterior corona greenish yellow, dotted at top, and furnished with a mark at the base.

Oblique-flowered Tromotriche. Fl. Ju. Sept. Cb. 1803. Shrub 1½ foot.

5 T. FUSCATA (Haw. suppl. pl. succ. p. 10.) branches tetragonal, erectish, glaucous-green; corolla glabrous; leaflets of outer corona 2-3-toothed; shorter branches of inner corona obtuse. ♄. S. Native of the Cape of Good Hope. T. glauca, *β* Haw. syn. p. 37. *Stapelia fuscata*, Jacq. stap. t. 55. Flowers brownish purple. Corolla pale at bottom, striated transversely with red; ciliated at top with clavate, white-coloured glands. Ligulæ dark brown.

Brownish-flowered Tromotriche. Fl. Ju. Nov. Cb. 1818. Shrub ½ to 1 foot.

Cult. For culture and propagation see *Stapelia*, p. 117.

IX. ORBEA (from orbis, an orb; the orb in the centre of the flower is very large and elevated.) Haw. syn. p. 38.—Stapeliæ species of authors.

Lev. xvii. *Pentandria, Digynia.* Corolla 5-cleft, starry, the whole of the inside corrugated, furnished with a large, elevated orb in the centre. Segments of outer corona, or ligulæ, long, spreading, bi or tridentate at the apex; those of the inner corona unequally bifid; the inner branch recurved, longer than the outer one, style-formed, clavate, and stigma-formed at the apex.—Habit of the species of *Podanthes*; but the branches are more robust, and less ribbed; and, when old, become decumbent and creeping: the teeth straighter, and horizontal, not ascending.

1 O. MACULATA (Haw. syn. 37.) corolla smooth, ciliated; ligulæ tridentate; orb convex, downy, ex Haw. ♄. S. Native of the Cape of Good Hope. Stapelia maculata, Jacq. stap. t. 31. Willd. enum. p. 283. Sims, bot. mag. 1855. Stap. nigra, Donn. hort. cant. Segments of corolla ovate, acute, dirty yellow, red at the apex and edges, almost covered by confluent, rubbed, large spots. Orb waved, elevated, but small for the size of the flower. Ligulæ 3-toothed at top, brownish grey, pale at top, and marked by a large, distinct, brown spot, ex Haw.

Spotted-flowered Orbea. Fl. Ju. Sept. Cb. 1804. Shrub 1 foot.

2 O. SENTA (Haw. syn. p. 38.) corolla glabrous, with ovate, acuminated, wrinkled segments, an elevated, papillose orb, and bifid ligulæ. ♄. S. Native of the Cape of Good Hope. Stapelia senta, Mass. stap. p. 23. t. 38. Flowers drooping, of an obscure violaceous colour, wrinkled with transverse yellow stripes, and a yellow orb, beset with brown papillæ. Very nearly allied to *O. variegata*; but differs in the form of the teeth of the branches, and in the flowers being twice the size, in the acuminated segments, in the elevated, papillose orb, &c.

Mixed Orbea. Fl. Ju. Sept. Cb. 1806. Shrub 1 foot.

3 O. VARIEGATA (Haw. syn. p. 38.) corolla glabrous, 5-nerved on both sides; segments roundish elliptic; ligulæ tridentate, middle tooth small; branches spotted with brown. ♄. S. Native of the Cape of Good Hope. *Stapelia variegata*, Linn. et Schultes, syst. v. p. 37. Larger than *O. variegata*. Corolline segments sulphur-coloured, less spotted than in *O. lutea*; but having brown spots on both surfaces in certain places; and the fimbriæ and exterior corona, are more deeply cleft than in *O. lutea*. Ligulæ yellow, having a blood-coloured spot at the base, but with the rest brownish dots at the apex.

Five-nerved-flowered Orbea. Fl. Ju. Sept. Cb. 1806. Shrub 1 foot.

4 O. LUTEA (Haw. syn. p. 39.) corolla glabrous; orb large; ligulæ emarginate; branches thick, green. ♄. S. Native of

the Cape of Good Hope. Supelia Irinilc*. Jaoq. »up t. 61. Corolla c t with <Urk rufooa dota; orb pUr~colotircU ; ligubr yellow ; with • Urftr tU-cp brown mark M the lute, an<l dotted tt tbe ape*.

7"ir«»./iirro»fJ Orbea. Fl. June, Sept. Ot. I80.J. HVrub 1 foot.

5 O. r.««iEo\ 11 Haw. *tyn.* 40.) corolla itUbroM, contra tbelabe; *sign** Ba\, •***•(large, t' tbc CaiM of Good Hope, • of mountaiftt, at l-vuweberg, and rU*wb« pelia varwi-ita, Thunb. prod. l. p> 46. It. cap. t. ; *i»'<\-* (tap. i. t«. m:*c. 1. p. *7. t. 4 f rait. 'Se* t. la. but not of Fomk dnc. p. 31 grmi*, but it probably an Aporyr 43— Burtn. afr. dec l. Fiowvn -y, large, drooping. Corolla •ulphnr-t-olourrd, >aiw|>N<l m f n v wrinhtM, a*d itrrfraUr brownmh-uurplc •pota : th orb hi tbe bottom pal- e.

'H*ffW-«n«tr<fd Orbra. R. Jwoe. Sept. Clc ITt7.

T Iaw. *%yn.* p. 40.) corolla ttttphttr-coleorrd ; >pitia *antgftia, C«i. bat. n»f. (- id tbe *ynomme«.

mb I ft. , Sat; orbtumtd; Ira*' of tb» Cap* ra Jarq. Map. Poir. j p. 2 thv it,. branewta. pal" Krttnl with l>bckiah purple. •pwi. m ihr rorolU flat.

•dfr* of corolk dark purple.

Pl, July, SOT. I Sb, proe.

••wiargiwau ; *"lit«ry.

Rom. M «. «. p. 39.

*** ***"*• nob, a* t»rll aa tbe

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HA'Ltii corwlla itf.ghhrM.

MM wtw • blunt 10Mb b*t«Nit oatb ; orb Cape ol Ja«|. .u *imt.* tip *mrwgMm,* lmt ditl and Itnlar diapoatd in regular parallel row*-

. 1 * teWJlblfki ufbtumtd of Wood prba drpeata. Java, braacboa of the IraSna of

0 or* roundtah, amnunaird a*gwnu ,pc rla.el* twttrgttUUr 1« orbKiiUiM, Andr. U- ertct, curved at iHe baav v«waw: ria MMJ •IIIIIIIII—aM. H » » — orb j t.ed • .it. bro«« . bottom d#*p • * » " * , - b^br.mgtdOtbra. 1 foot.

Haw. luroLr biDd, obtM* ; orb IMw. tiood Hop*. MapeU bWMa. Jacq. l. I• •»' *'*; •*if.:'.* Wild, rnutn. p. W3, Siwa. bot. «««; dlaufe*ce«H. U aoliUr •"• H* ^° y bro»n purpte. aad »tri| . rlLi«. Jttne. tkwt. Ot.

U M, eoroE «... «*.b«r obtMv: orb *U| and »' FtJ

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'h Mack an.l white, nd from all the reel id tin bottom dark brown.

Painted-flowered OrWh Fl. J* Sc|». Clt. 1799. Sh. ½ ft.

19 O. Woonrorma'ba (Haw. syn. p. 42.). ½. S. Native of the Cape of Good Hope. Stapèlia Woodfordiàna, Hort. Haworth h[illegible] it not went] [illegible] flowers of this species; but the p*''• is very like *O. au[illegible]* o.^awd *0 picta.*

^wdfW'i Orbea. Cli. l«lu. Shrub J foot.

-a (Haw. aupnl. pi. MI .lla (tlatiTtni*; orb tumid; ligulæ obtuse, emarginate or retuse. ½. S. Native of the Cape of Good Hope. Stapèlia lépida, Jacq. stap. t. 15. Willd. enum. p. 280. Hodánthes? lépida, • l aw. syn. p. 34. no. 5. Very like *O. variegàta*, but the branches are green, not glaucescent. Pedicels usually twin. 'Corolli i gratiwh yrllow, with purple spots; ligulæ gr[illegible] r.n. -l»''·· [illegible] ''1 < • it. f lif'i»t(t of inner corona subulate, acute; inner one obtuse.

Pretty Orbea. Fl. July, Aug. Clt.? Shrub ½ foot.

21 O. [illegible] ringed, spotted; teeth •li of branch** spreading; ligulæ tridentate; inner branch of inner corona <ia> vate. ½. S. Native of the Cape of Good Hope. Stapèlia mutábilis, Jacq. t. 59-60. Spreng. syst. I. p. 838. Stap. rùfa, Mass.? Corolla greenish yellow, with numerntt* tiar verse purple stripes, ciliated with red, clavalp, tremulo i* luttra. This species seems to be intermediate tarlm • ii *ft'rtm* and *7'tvmft-* ische. *Changea* We-flo«.t..i Orhaa It. June. July. I'll. ISfU. Shrub ½ foot.

22 O. tsotòba (Haw. suppl., pL MM. p. I [illegible] coro« HaV phur-coloured, spotte! with dark brown, »<entless; leaflets of outer corona emarginate, shorter than the largr orb. drnrtf i-tl, rather flexuous. ½. S. Native of the Cape of Good Hope. Inner branches of inner corona incurvol. a littl. stitnuaird at the [illegible]; outer one longer and incurved.

Scentless Orbea. Il[illegible]uly, Sept. ' i. 1789. Shrub l ft. *Cult* l. . . .llure atttl jiri>[«iK«nuti »r<* *Staptlia,* p. 117.

X. OBESIA M\ (oornu, fac; flower*). Haw. »yn. p. 42.— tilt linn.

Lin. syst[illegible]r. *I'cmtAmJrm, h^'inia.* All aa in *Slajtclia*, Inn the exterior c•irona ia 5-lobed, therefore there are no li lulavi the *>'[illegible]> >r ring I aU<> wandrii*. Lraflrt* • f inner coro it4 tit- partite, yellow, small, thick, and truncate, thickest at the apex; outer branch spreading; inner branch semicylindrical, closely incurv[illegible]'I «IKI»I the table of the style.—G[illegible]-laawaaeani plain* witit the habit of *Stapèlia*. Joints of branches short, almost oblong, very thick, obsoletely tetra gorfcl, ri dicant: Miili itnall, bun* zontal teeth. Flowers small, usually twin.

1 O. ormina'ta i Il[illegible] (Haw. syn. p. 42.) joints of branches pro- liferous, creep tig, tutHital, (il>- curely tetragonal, floriferous at top; flowers usua llj twin. outer corona 5-lobed; margins of se[illegible]ts of corolla revolute. ½. S. Native of the Cape of G[illegible] >»ope. Maprl geminàta, Mass. stap. p. 18. t. f *5*, Sims, b[illegible]''*• mig. 1316. Lodd. bot. cab. p. 500. Jacq. (Up. 1. *i.* Corolla orange yellow, dotted with blood colour; segme HI* lan- ceolate, acuminated, rather hairy inside, when examined b[illegible] i • l« l i t. ex Mass. Lobes of outer corona trides Mir.

Twin-flowered Obesia. Fl. May, Nov. 1 lt. 17t>J. Sh. er.

2 O. decòra (Il... syn. p. 43.) joint* of branches <.bl..n[illegible]f, [illegible] obsoletely tetragonal, at base; flowers twin; outer corona 5-lobed; segments of corolla scabrous from dots above, lanceolate, acuminated, with revolute edges. ½. S. Native of the Cape of Good Hope. Stapèlia decòra, Mass. stap. p. 19. t. 26. Corolla yellow, beset with dark purple, elevated dots. It differs from *O. geminàta* in the joints of the branches being smaller, in the teeth being stronger, and in the flowers being rather larger, and scabrous from dots.

Graceful Obesia. Fl. May, Nov. Clt. 1795. PL i, fted. *Cult.* For cult <»« and propa^aajMtM Stopr/w. p 117.

M l.i \ \ I ! V i named after H t Duval, of f'arii; •<uthor of Enumeratio Plantarum Succulentarum Haw. sy[illegible] in liort<» Altnconio). .i. |>. 11. — • Stapèlia sp[illegible] #ajaj «>f authors

Lw. »Y»T. /W6a.T MI at in *Stapitm;* but ihr M-V'ITH nt« of ibr corolla are more or lwa bent to one tide, the •rb »• t!< vated; the lobai of the outer corona are rniir*. bifid, or emarfpnate at «|x 11 l the segments of *i* the imwr corona. are m muif, Kullim . rrMtnlt ling a bird's l . ad, and incur»eil ly ad- prr*ac<l to tl,, anfile* of the style; the table of the style is round, a lntle repand, with *&* angt, lar depressions.—Habit of *Stapèlia*. Branches short, proliferous, almost as in *Piarànthus*, often shorter (tin) niorr i/loi te, and throwing out numerous roou, u»uall> glaucescent.

* *Corollas cili*

I D. atiukATA (Haw. »)ti. p. 44.) corolla with lanceo- late, ciliated, repli raU- »« ,» ents; an elevated, convex orb; In.»iii|.» tt i[illegible] ' [illegible] t.im tn ill. in l.ll. . w[illegible]Min nt» c.l <·»' terior corona bifid; leaflets of the inner one galeately booked. ½. S. Native of the Cape of Good II ope. Stapèlia reclinàta, Mass. stap. p. 19. t. 28. Jacq. stap. p. 4. Sim *m,* bot. mag. 139. Cilia of corolla clavate. 1 edicel- aolitary or aggregate. Corolla small, dark purple.

*Rec**tmU-6f* wered Duvalia. FL July, Sept. I Clt. 1795. -hrub cr.

2 D. s'rzoana (H iw. •>!>. p. 44.) rorolb with oXiotd, acuminated, ciliat' d MPgmrnta, w)mli ate clothed with long purple hairs inside, and a small, elevated orb; segments of the outer corona purplish; branches tetragonal, floriferous i the middle. ½. S. Native of the Cape of Good Hope. Stapèlia élegans, Mass. 19' t. 27. Sims, bot. utag. II 84. Pedicels twin or tern. 'Corolla hispid, fr njted, »malk r than those of *O. reclinàta*, dark pur ;'lr, wiih a rir rescent, p nta^on.i

Elegant Duvaha. Fl. July. Sept. Clt. 1795. Shrub cr.

3 1' cestrìòsa (l law. syn. p. 45.) coroll 1 with lanrcowtt, acute, replicate, ciliated segments, an elevated orb; segments of outer corona bi i<l ; lca(1< t...l tin' n,i i r depressedly booked; joints of branches crowded, tetragonal, floriferous above the base. ½. S. Native of the Cape of Good Hope, in Karro, under bushes. ttapebi caapuoM, M ass. stap. p. 20 >. t». Redout, l.iu.. i. lilt. Ja. q. stap. t. 2. Corollas size of ,!,,,,,. of *D. ele* |«au, dark |n urple; having the orb and corona green. Segments of the corolla c iltated lt om the base to above the middle; the apex naked.

Tufted Duvalia. Fl. May, Aug. Clt. 1790. Shrub proc. 1 ". Jacutixia'na; corolla with ;«nc*olate aagmetii , having their edges reflexed and cili .(«!. and an elevated orb; segments of outer corona bifid; lrafleta of the inner falcately booked; joints of branches oblong. ½. S. N*t»t. of the Cape of 0«H1 l! ope. Stapèlia radMta. Jacq. stap. t. 37. Stap. Jacquiniàna, I orm. et Bcbvltea, «)»i ti j» t. I lowers d ,^p purple.

Jacquin's Du »•!•*• r i J uly, Sept. C t, t*OI. st proc. 5 D.? delia'xa; corolla wrinkled, ciliated, downy in tl* centre i acgmenii w«h nreltttta td^,. the whole str , ^ 1 anj ,1 .; , ; segments of the outer corona beaked, acute, gibbose at the base, erect; leaflets of the 'iwer corona • ubrotate. ½. S. Native of the Cape of Good II ;.. Stapèlia deflèxa, Jacq. stap. diar. lips. 1814. p. -IA, I branches ascending a foot high and more. Pedicels aggregate at the baaeaa*] in the middle of the branches. 1 urolla)rlltf« itmde, ln id graMl • outside, with rufescent s ripaj

Deflexed Duvalia. Shrub.

6 D. tubercula'ta (i law. syn. |. ·•· »oj»|»l |J n>rr. |i. 1 branches oblong, tetragonal; teeth l»rir«, r*cut*ed; 01% bail segments of corolla ciliately pube Metit. datk brown. lj,. S. Native of ttir <ape of Good H ; ~ <lia tub"

Hon. Plant wnulltT than *I). rutUita.* I.igulir tngular, entire, pale rufoui. Segment* of inner corona pale red.

*TuberrUd*Duvsita. Fl. July. Sept. Clu 1808. Sh. proc.

7 D. nm'UA ; trgroenla *of* corolla replicate, lanceolate, ciliated on the cdg«. M'gra*-ni« of outer corona obtuse; •rgim-nuofiunercorona falcatrly hooked; branch** cotuiKttar. not oblmijj, a* in *L>. i,r>/>itvui* ; pediccli usually aolitary. !- . >. Nllti ipeof UoodHojw i luru-lla, Jacq. itap. l. IV. Willif. HMMD]'. 145. Haw. »yn. p. 26. • uppt. pi. Mice. [>. 10. Corolla livi< urjjlr irui<ir.

Watry-flowered Duvalia, Fl. Jul. • 5 pcoe.

8 D. M**TODW ; tegmentt of corolla replicate, ciliated at the hate; orb elevated, glabroua; hrjnclni hexagonal ; tuberdi*» of branches flatmlt, tn.imnnljarY. *h* . S. Native of the Cape of Good Hope. Stapelta m»«t.*lr«, Jicq. «tap. t. 56-57. CorolU browimh purple. Pedicels in faicicU-*, near the topa of the branches,.

Teat-tooiitd I>ii\»!ia. Fl. July, Aug. Cli.t Shrub proc.

* • *Segment* of evrotU naked, mot ciliated.*

9 D. lOU'ri (daw. syn p. IV) corolla with narrow, distant, replicate, naked •eminent*, and an elevated orb : segment* of the outer corona obtuie, eni nta of branches »liort, tetragonal; pedicels twin. *h* . S. Native of the Cape *of* Good Hope. Stapelia rmliita. Sim«. but. mair- 619- l*odd\ bot. cab. 891. Inner corona of 5 tongue -shaped, concave bodies, ditpoaed in a «telUw maiinrr, bending back upon the centre of the corolla, at the apex. Corolla dark purple. In Jactj. Map. t. *9, the corolla i« ciliatrd.

k-ncctaned Duvalia. Fl. June, Sept. Cli. 1793. Sh. proc.

10 D. urUBA.Ya (Haw- 1. a.) corolla with UnceoUle, rej.licate, naked aegn>ents, and an elcvaied orb ; »<j*m<-nt« of the exterior corona obtnie ; ivaAeU ol thr interior corona falcately tinrtnatr. Native of the Cape of Good Hope. St*-ptlia repltcata, J»c<|. iup. Will.), *mum.* p. 886. Branches Is u*iially tolitarv ' Ua livid green out-•tdr. bladtiah purple inside. PerSap* the same aa *l>. rmd»*

*R*ptie*H-tow*ttti* Duvalta. Fl. July, 8ept. Clt. 181S. ID proc

11 D. UEVIOA'tA lllaw. %yn. ; BfL (.1. «UCC. p, i orb large; *» untat. I; . S. Nat; the Cap< ipelta Uevt^ata, *lion,* '• nearly allied to *I), ratitota.* Orb larger and pelata more boritontal lliaii tit an) tit In r «p>

•Mil Duvali*. Fl. *Ju* (.'It. 1800. Shrub proc.

IX I). riLOMntATA (Haw. »jn. p, 4t>.) linwrr* initially 4 together ; (Cftntent* of corolla conntvent, except at the top*; orb rather ilimny ; branclu % DtoMrai at \nn slomcraia. I loft, Sitnwni* of inner corona linittl) of f Corolla thick, dark brown. Orb very lihim, *ti)>rt-pand, with a pale ba*e.

-mrrair-branchrtl Uuvulw. Clt. ISO*. Shrub proc.

II U.COMM •• Han syn. p *tUmw* u*u»li\ twin: tc^nuTtli of corolla dark purple, rvlrofnwteil ami cattail I of *»ylf Md itamtn* juinU of bramhr* densely . lomerate, an inch long. ' ' Suite ni the Ca|ie of Uood »cta, Ham. et ScUnltr*. «y»t. (i. p. 40. Siunnnti ol inner corona like a bird'a head, a liltir paler than if tlie «yle : the re»t aa in the o Braachea proaUate, rooting a' > -mailer and more compact than

,,,,,,,,. . . . . Fl. . . . . Ck. t»00. Sh. tufted.

culture and propagation tea *Stfitim,* p. 117.

VII CAUL RCULcYBM »'•»> *canmtMla,* a Bcahy protuberance ; top* of inner corona carunculate). Haw. «yn- P- i[« !ia it>vcie« of author*.

Li*. *MT. *FtnUndna, Dig^m.* All a* in *Slapelia,* «p the aegments of tlie outer corona or ligultr, which are »liort and cma^inate; tcgraenu of inner corona bipartite, rccurveil.compreatml, attenuated downward!, globoae at top. and ^ratiulatcly caruncwlaie; granule* of verj ditltrent foriB*.--Mt>i'» -branched plaint, with the habit of *Stapetia.* Branch** tetragonal.

1 (Haw. «y». p. 534.) tepnco" of coroJU baeeolair, with rcvoluie edge*, and fringed angle*; braocne* •r, tetragonal; jiedunclea »ery long. *!• 5* ,<aunculau, Ma*». •up. p. 1 Haw. «yn. p. «. AUg- tcutach. gird. tnag. I. p. 309. t. 3 -,'bot. mag. t. 7«S. Janf •'•P* \ 51-52-53. Segment* of corolla lanceolate, t- .], cilwieu with pedicellate gland* on ihc margin* at the ba»e. Brant'** tomewbat dentate, (oriferoua in the mnM!' e» W illtl. •»«• '• P- 1284.). There are browmih-purple aiit! ytll< rirtiea of tliia *prcict. Branchw ptaucoua. 1 ^Q**' *t*t* • <rolla green out*i<lr.

Pedmnulate Cam I 1. June, Nov. Cat. ITW.

f C. (isu »e; tegmenu rtvoluu <* thectlge*; lafHWi rona oblong, inincate, •*r^"p at apex ; IrahVt* . *v* corona booked and S-k»W0 . outer lobe wrrated; pediceli twin. H . S. N«ti»c of il»- * •!" 11 Baa Mb «rrulita, J«4. «ap. t. * 1 • A*T- *V* 1814. p. *89. W.lli n.um. p. *Sti. CorolU brownUh-yellow, campannUte; corona yellow,

S4miate4 CaruncuUria. I I c, Aug. Clt. 180*. «•• *Cult.* For culture and propagation •«• *Sttpitis,* p. 117.

Mil I'K I IS \ KI \ (from *ixetin,* a comb ; in "f 10 the inner eoron* *of* il .Lately mult.BdJ. Haw. auppl. pi. MICC. 11 Stai ,

! *tdndfa, DiMjmim.* All a» m *Sutfilut.* bill lh# corolla taiuberculate, and the branch*-* ot tl»e plant t"r^'; and tlw- outer c the cor«IU lacerateU snail nitTc! plant, with the habit ol ; jointi of bra irticulately and obsoletely —CT (urnulicd with a tntall •] • T<SJ' papilla or warti above; vnili iri-iii^iilar »ej;ii»*nu. ^ur~. mammill. |in. |>rnbauly W genu«, and « |>erhap« HIM aa /*. *mi*

1 P. AIIKVUTAI Haw. I region, of *R,VK* i'« «rlicl1,, lata, Mau. .tap. p. M. t. 30. Brai firroua at the ape*. Howrri •ohtaiy. I ,rclr* on the brand.. • -• • n «'> Tior,, gar by t' n#, and raw by tlte I lottciitoia.

Jomtrd Peciinari*. H.Juty. "b-

*C*it.* For culture and propagation ace *Stitpilm,* p.

MV (1| U U \I \ .i , - ,*l»cind<m,* ia «mll«l < ««««r,. tn wern. »oe. awm. l.p. *5-

•TtT. /Vaidw/rut. *l>>xy>"* Corolla rotate (f. U- *•'- drcpty * -olrft (f. 15. •rona in a aimpte aeries, 10 IIC '*?'"et? arc undivided, ami opfmiw the anther*, the rr«l 1 1*. c. . and hgtiUii-. Anthen airo|ilc at lop; pollen ittaaae* >>gonaT(f. 15. at), fixed by the ba«-, pellucid on *vtv* .nihew I -.itwootli. Sawda comoM tw ! ,cd along the angle*. the a\il« of th <««J rown in tint geimt, aa in *lrt»)<gut,* con*t>ii of 5

leaves: the lateral I lobca united by patr* into $ liffttlalc forked lea''''••alternating with tl* lobe, and w»h Uw aiamraa. 1 C. itmuMn, tii ||r. i, r., UraarbM aleader, —caWing, bea''•f each a » olitary flower at top; avgmreta of corolla re- flexed •i ita r<tf<«, ». uni naii.l. ^ijlm.ii iiy^r of Coromandel. Stapèlia adscéndens, Roxb. tor. 1. p. M. t. 30. Corollas **ae of tkoat of *ftftfU,na (ir,r'ca, \tHimi»h ; »rg- ments tipped nth tiolrl. Stems rooting at the base. Flo ran variegated with purple and yellow, ex Roxb., -ituall v drooping. *Ascending* Caralluma. Fl. July. Cl ;. 1SU4. Sh. 1 lo 2 C. rimbaia'ta (Wall. pi. asiat. rar. l • p. 7. i. & • elongated, aiirQuatnt i Hmtni axillary, sol tarv, •ubcampanu- late, drooping; segments •| co- rolla falcate at top (f. 15. *c.*), with replicate, fringed edges. h. S. Native of the Burmese empire, on sterile sandy hills at Yenangeum, the banks of the Irrawaddy; and among the ruins un « top. Biauujiu of corolla itli „ I'H'iilf ; upper margin

PIG ii.



e

•I atlli arltriiUtrtt vacillating straight and downy, fringed behin hairs. Very closely allied to *C.* ra, but that species differs from this in the •bacwee of the loan * • illating ha ra to UK: . corolla. Stapèlia subulata, Forsk. cat. arab. | 108. t. ;. i* I|M> MIIW. or I MIJ all ml kiM-ttr« 193. t. UUIIM. < ->I>ruti 1 loot. very ne (f. 15.) For culture and probation n *Fringed Cara* lt. 1829. *Cult.* *Stapèlia*, p. 117.

XV. BOUCERO-I<L (from *βουτρος*, *bouktro;* flimlltlj wit^ b f U l' horn* in reference to the curved lobes of ,|,c corom »). Wijtln and Artie ' p. M. Caralluma speci », Haw. and Wall. -tapèlia species, Roxb. l ««. i m. fWaafaaVr, / bcaippanuUlc, 5 triangular, with aruir recesses. —mm of fructification hardly exserted. Staminéous corona 15-lobed; lobes disposed in a double series; the 5 inner ones opposite the stamens, and lying UJBWI ll anthers; the rest ex- t erect, r • I****** incurv 1 at ajw». adhrrntii to tbr back -7T' the inner o i.lc . Anthers sim at the apex; pollen masses erect, tetragonal, • rial, • ellucid on the one aid* at ilie margin, Si c. [ollicles smooth, terete, attmuaird at i rtn>a mm seeds comose.—Fleshy, leafless, erect p lania. will the habit of *Stapèlia*. Branches and stems tetragonal; with toothed angles. Flowers numerous, terminal, umbellate. — III *(ittadmm..* the lateral (lobes of each leaflet of the corona are separated by means *•' the UW or i primary lobe, with the edge of which they cohere at the base: in this genus, on the contrarj', il.r edges of the lateral lobes of each leaflet i oKrir. ai line of junction • aUu atlarixil along (!.!• III! dle of the back of the primary lo W. In Ixttli genera lilt by the margi M *nli the lateral ones <>f t) ir m joining le so that in *Caralluma* we have a corona of 10 narrow ajaj '. broad segments, attached to each other by the edges only, and forming consequently a simple series, while, in *Boucerosa* the 5 broad segments are surrounded by the 10 narrow ones, and I •!... > formed. Wight, anil Arnott, contrib. ind. bot. p. 34. ' 11. *'''' «bt and Arnoti. •«««rott» rott» i fc of tbc aoulbrrn pro«inc*aof W

th» Indian peniitaula. in and platta. Carallnma umbrllata, *tUm.* .yn. p. 47. WalL aaail •©• » •'•''*)- lau, Roxb. r. 3. t. *41. Ntapelia CallamuUa, Haw. Flower* pur| 'MhH lawn ail PoaMcroaia. I I ? 1 NV^hi *utA* Arnott. wromu of eo- rolla fringed >iti tbr nt»<••. ' » s..• rmpir», on aandy tiMunitm., *ntmr* ll tram, on Irft dank of the lrr»»»».i<lv, oppmitr A>*. Caraliitma Wall, p). imt. 1. p. 0, i. 7. Corollaa tulr t: Mow, >rl<p*r abov*. MM) nrnammtnl with broaJii «hich Iwrome Mtro». M ifiry approac Thit it a amallcr. morv cotnpaci, and morr gloaay plant than loucrroua. Clt. I«i!i). 1 foot. itturr and propagaii»n *tet Sta/fttn.* p. 117.

m Hl plant W ghi ami Arnof

I *tin I* >lla aubea ii hardly acrwd. / i-oi.iiia : « . :,(., j : ilvr j MM lobai '» ra, tbr .c -''rmaiinir next 5 outside of the aaj 3 t Utrml)i furnished with 'iiii|>lr •' tt IIUIK margin on i>nr >H|l \ ll. \, l, ..lii •. • r, ; braawMa 1 lowrr* numerous, terminal, •ubumtifll and At. ntintuU of litdtit I 11 ral. no. :1 i (U Will) |>IIT|I)II!i 11»I< WltIIIt1. 1 ollicles not seen. *Imluih*) lutchinia. Shrub ½ foot. *Cult.* For ulturr ami |"opagation see *Stapèlia*, p. 117.

XVII. ER ion i\nM (from *τριον*, *erio«*, wool, and rirttXor, pr(*/oa, a nvul; segments of c tfolla utually dmariy I laaja m.nl. U .•• i, „ n trib. ind. bot. p. 15. 1 tn. stst. /'m(«a</rM, *Diggsia.* Co roll* subcampanulate, 5-- n>eti(» narrow, linear: with litiwid f ..<>-.. es. Sta- MMBMMM corona I3>lob*d; the 5 inner lube* Ivmaj Mpon t anthers; the 1 ' *tXttTMtt* Wl es erect, approximate, adhering to the inner series. Aiit Jict» Kttnplc at *m\n* \ | pollen ma>if i inj{h I)K> »w». h/iaj U(MNI tbc MigM, p*0nct4 oa tkt marf-n on <T side. f ollicles . . ,K l«Hfim. I erect, rather branched herbs. Stems terete. l -oak' formed, ad prt i tnnbellat* t awibr l or i*-f tlirtl with i|< ''- ' I .'Bui agTrc* tnhat it with *Microstémma*, » » ^ - hajM ii irtimbhi i in it • . tl> t, l,l Kali t -JVaaaja of corolla hardh lMftr than ll tube, woolly; corona exceeding the gynoste- gium or column of fructificatio n. x. - v« of Royle. A-j-M-rrrrrfErioprtalw, 1 Pl. erect. 2 2. atteuua'tum (Wight, l. c.) segments of corolla slender, attenuated, villous, twice or thrice longer ban lh* IDWI corona shorter MM tfca fpMMrftum. y. t. Name *ot* Doongie, Royle. y —frrf 3 h. i*Tt. i*tw H aa tl. tube; o«o*a~M)Ml m lwfiti w tba gynostegium. a t

Native in the wood* of Co*aala and Gorukpur. Gomphoearpua Urvinta, Ham. Micro»t£mma, Wall. aacl. no. 23.

Smooth Erioppiaturo. Pl erect.

Calf. For culture and propagation ace *Slajtitm,* p. 11 *T.*

W 111 ftdCBC '•' • ipoc> *mkro$,* small, and *rtfifiu,* jfrmaM, a crown ; in reference to the smalmeta of tbe stamineous\ coroiu It. I'>r in wcrn. toe. mem, 1. p. 25.

> «Yrr. *I'imlaniirta,* •!"•<!• (r.tla rotate. 5^-lcft. lurnn of fructification c\«rrt<<). Stamineoui corona undivided, fleshy, 5-lobed ; »ith the anther*; »tmple at the apev ; pollen masses in Mfttd '>y the mtddlr, lying upon the •tignu. Stigma muiic. l Follicles slender, aaaaotk. S«*dt comote.—Gl abrous er.« hrrb«, native*el N l ti>lland, with tuberoua fimtv Sterna *tmple at bottom, with iiute leave* ; branched at *W\\,* with linear, appmiie leave*. UmtxU lateral and terminal, airooat *e*aile. Corolla* blackwh purple, beardt-d inside.

l M. TVaimoauM fR. Br. prod. p. 439.), Native of New Holland, within the tropic-

Tmberov-rooted Micro*t< mma. 1*1. \ foot, f

For culture and propagation aee *t'troptgtm,* p. 11*.

XIX. LEPTADI.MV (from λεπτος, *leptos,* slender i and ανηρ, *aner,* R. Br. in wrrn. tor. 1. p. 34. •w/cii. a gland ; in rvtcrrnce to the •Wndcr pollen maaagi

LIN. it«T. *I'entindrui, [hgyitia.* Corolla •ub-routr, with a *hon tub?, fiinu»lwd with *i* icale*. one between each atgimiU ; limb bcardtrd, valvate in s-vtiratton. Column or gynoatrgium nearly glob<>«?. Stamineou* corona none. AntK< at »|r\ ; pollen maaar* by tbe baae, coai i prllucid at top. Stigma mutu amooth, Secaa comoa* rul». UMUIU grrjinh from powdery totnmium. liravea flat, oppoaitt l ljeti iMarpetiolar, •ooMtRne* cymoae. C'orputctct of (tiirma nunuir. Mr. P. Brown baa rxaimneu three fpecm of - *m,* none of which are yet tlr*crib*4, one of ibetn collected by h nrtkal.

l L. *fomuatUH* Aowrr* umbrllate. *%. n, t>* Satin of Arabia Felix.

*FortkitC** Lcptadrnta. Pl. tw.

L CTMotA ; flowfti rymuae. K . ^ B N n.\> *I* the Ka»i Imliea.

ow-flo* i

l and Arnott. contr, ind. \»*>t.* p. 47.) ig ; hark of tin- older branchea corky. glaLrou*; \oong branchrt clotbrd with citiereoua down, and •omettmrt tome tve* ovate or lanceolate, acute, u»uallv Mn«otln*h, *"•' "_____" ' '* ' ill thort • hite down i; ttmbrli latnal, many* flowered, about eq to th* of corolla with *rr* simple, •! -ma a obtune, often aolkar

'. a; leave* cloth' almott uUbtout; ped liole*, and the pediceli about n i> Ungt

tpftUtn, on tbe ».* <na»t, wbere it gr< .t. no. 1535. Cynanchum m ba. S. ,, Willd. ipec. 1 p. WJS. I atthmaticuir, H Ham. piaa tuberota, ltoxb. n. ind. *l.* p. Sn. J. or piaa voluhilit. Herb. Mat) Wall. ••<-!_ IM *tonne* cane«cen«, Smith, in lire*' *r* raocbJeU UMaMMMe ; leave* oblong-lanceolate; peduncle* »ery .hort. U»t of t

India, m tbe aouthern province*. Lepcadeoia brivipea, cat. r.<>. 1236.

Far. y; leave* browt-obtuae, rrlu« at the ba vety •*iw»th. *h.* ^.S. Native of Ava, at«r Pagonetna,aurantuica. Wall. aacl. no. 147.

HrittuUiai lrf-ptadcnia. Shrub tw.

4 L m i t n » (Wight, l. c. p. «*.) twining, glabroa. broadly orate or ctirdate, acumin*- '*'• "u'r^ l, about *«iual in length to the petw corolla rrvolute on the adge*. beardlea* •tmptc; .ngma afku ,Mi. 77. Tbe only certain charac: « |a»t, are the brardlew aeg«mu of (he coroll*.

Bmriku Lepu<! rub tw.

3 L. irt'invM 'Wuht. l. *c.)* auffruticoae. altnoW, macb branched ; • almoat aM ,r««eiit. of crwo bwska Simla* 'avanna, lHamilton: Hima t4iah, »„!. , ,«.- Gyaajalaajaj .; ••< <i". Wall. herb.

6 l tttab. oval, hardly emarginate at the baae. ronaci above, paler brneath, a girded •mail, •wcet-tcenUrd, iK>th or at tbe haar by a flV»l>>. i-l«>t *l a • « ' irj)hi..(f,i >;,,!,, „,... ii... ,,:.,t r*. "i watovi crown, friMn the other aoeova 4 Shrub t* lit. *Cmi*

\\ <»l!l HAN I Ml II \ *ml *a*iii>n,* oat'.*ttit,* an amhrf . anttu-r* ind, bot. p. i

n r r. *PtnlttdrU, ingjmtm.* t'.irolla ibe ratl ••a nooe. Anth< polkia a m m .ln j (,y tl*. (»*• Hpna aptcul rob. thr gywoatefitua. FtUnw • leaflet, at tttr baaa of e* '>"•••»• *l- gemaa i* perWap* i ilfm, by tJ. •• abaenoa orifice of tbe tube, and • rect anthers. 'n

1 ' I» '• \ pocinese vimlnea, Wall. cat. no. 7478.

Twiggy Orthanthera. Shrub.

, for culture aod pr*»r-«M*00,

XXI. BRACH *brachys,* short; and *σταλμα, stelma,* a crown ; rttroeia aboil.) R. Br. i

Lin. syst. *Pentandria, Digynia.* CorolU c**!"1^ 16 &.), having the sinuses angular. Oahaaaa l „ »nth*r». twalpwd. f « w i atanptr, 5-cleft ; lobes opposite the simp W on the back. Antber* naked at top. Pollen masses

erect, fixed by ih* MM*.—Suffrubeow. twintng pUM*- U * T « TP*H*. membrsiv '*m»* roundel wl«

Mranm (R. Br. l. c.)

leaves membranous, linear-lanceolate, concave;

I 10. 10.



«•«• of corolla l

of Good

<al)v »n.i |

* *ith itUlulut..

* « d { Ui bUckii

iih • on,.

brokt n i;t<M» line* (

<••'•• ' 1 - Lobr* *of*

Kuo4 a ruun.1,.1,

1 June, ! *Ay.* Ck. 18*1.

* » - « r * i Undl. boi. T*^. III9)|MIOM>I IM*n «p«*

JJ1*1 jmrnt* wf cof<4l. M Utnn a* //

than the Irav**.

»potu . it ihj... |*l. i«.

proptfttMA M* *Cttofxgt*.* p. IK.

XXII. FISC 111 1(1 A (nam*d aft. F. E. L. Fischer, M.D. Director of the Botanic Garden at St. Petersburg.;>,) I I C. cat. hort. •BMW. I Kl 3. p. I 12.

Lin. syst. *1'tnUinttu.i, litgymia,* Corolla rotate; segments undulately curled. SutniiMow eorana fleshy, truncate, but not otherwise lobed, girded at the base by a orctaril ((hr »)•• . «i, rwpKgm inside; pollen masses inserted by the middle of the side, lying upon the stigma. Stigma pentagonal. r 11 i Idllliir* l«r«.— A riiliilntut, tfCTpMl shrub. Branches long, terete. Leaves opposite, cordate at the base, oval-oblong, acute, petiolate. Peduncles interpetiolar, bearing simple umbels of pedi ollalr It wers. This appears to be intermediate between *Macrotísma* and *Hóya*; but it differs from them, and all the other allied genera, in the corona being entire.

1 F. SCA'NDENS (D. C. l. c. t. 67. ined.) ♄. ◡ S. Native, probably of South America. Branches downy. Flowers yellowish green. Very like Cynánchum crispiflórum, Swartz; but dif ") ing, not reflexed; in the corolla being rotate, not *\'u ,!•'* ^r"TO it, in the calyci tlfl •*lt'f*<wlU brwf •barter, pentagonal tube; and particularly in the cor < nh a ma MM) fiftitaU. Climbing Fische ria. Fl. f Cit. ' «bn»btw. Cult. See *Hóya*, p. 128., for culture and propagation.

Sub-tribe II.

HOYACEÆ. ,, ,, r..iifn nuiMWK •; • r .. •. »... lynfan the stigma, fixed by the ^ << M M S – << Anthers terminated lty . tnrmbtanr.

§ 1. *Tube* f A $ i h^a^p-Aft a ^a A^^a\^a^ai av^B^LaV J^ &^Lt A^^B^f

XXIII. HOYA (named in honour of Mr. Thomas Hoy, gardener to the Duke of North tumUrlantl. •• v • II ... whose merits, as an intelli rfrniMM! m ccessful cultivator of

nUnu, bar* bora Wag known ID ibf hotIIMttt "I 'I'1* country.) R. Br. in mem. wern. soc. 1. p. 26.—Asclepias species of Lin.

•AIR. <T*I *I'tmtimdrta Digynia.* Corolla rotate, 5-cleft. Staminous corona 5-leaved; leaflets depressed, spreading, fleshy, dr• »n c»cK out into a tooth on the inner side, which lies on the anthers. Anthers terminated by a membrane; pollen in Ml by tttr l. se, connivent, compressed Stigma depressed, mutic or sub-apiculated. Follicles smooth. Seeds comose.—Twining t, or decumbent shr M I - v . - . - I the East Indies, China, and New Holland. Leaves opposite, flesh •, «r iiwmbrnioM* ' Umbels many-flowered, interpetiolar.

§ 1. *1'trtmtmg, ttmndrmt,* or *decumbent shrubs, usually radicant. I.tmtrt Jlrttif, / eaflets of corona furrowed beneath. Hóya virr.e.*

* *Le* •<rt» *of corona flattish, broadly* <•>- *<a(„* or *mrmrif orbicular.*

i H. mi lr>> es oval, short-a M i . . ! , with revolute margins, glabrous above, and velvety beneath; corolla downy outside, and glabrous inside; segments broad, with revolute edges; leaflets of corona nr, ly orbicular, depressed, shining above: with the obtuse inner angles lying upon the umbilicate stigma. ♄. ◠. S. Native of ihr East Indies. Hóya, Wall. ascl. no. 39.—Rumph. amb. 5. t. 172.? but Roxb. refers his *Ascl. Saxwéda* to this.

Velvety 11 óya. Shrub tw.

2 H. ORBICULA'TA (Wall. ascl. no. 32. Wight and Arnott, l. c.) in ining; leaves fleshy, orbicular, glabrous; peduncles many-flowered, shorter M M 1 ill leaves; corolla downy inside; with acuminated segments; leaflets of corona obovate, or nearly orbicular, depressed, with the inner angles obtuse; stigma apiculated. ♄. ◠. S. Native of Ava, at Prome. Rumph. amb. 5. t. 175. f. 48. Leaves generally 4 at each joint of the stem.

Orbicular-leaved Hoya. Shrub tw.

3 H. PA'NDULA (Wight, and Arnott, contrib. ind. bot. p. 36.) twining; leaves fleshy, •l.i til ous, from oblong-oval acute to broad ovate, acu •MBtol, will revolute edges; peduncles pendulous, a little longer than the petioles, many-flowered; corolla downy inside; leaflets of corona oboval, very blunt, depressed, having ll.r • ner angles short and truncate at the apex; stigma apiculated. ♄. ◠. S. Native of the East Indies.

. s, *Rheédii* « ight, and Arnott, l. c.) leaves oblong-oval, . . . ative of Malabar and the Circ if • . . \ . ; pias pendula, Roxb. fl. ind. 2. p. M. —Rheed. mal. 9. t. 13.

I *at,* . \ , . A , r i « (Wight, and Arnott, l. c.) leaves ovate, acuminated. ♄. ◠. S. Native of Neelgherries. Wight. cat. no. I.'.il. H. revolùta, Wight. Hóya, Wall. ascl. nos. 27. and no 41.

Pendulous umbelled Hoya. Shrub tw.

4 II IOSCIRÒLLA (Wall. ascl. no. 40. Wight, and Arnott, l. c.) t«i ning, radicant: leaves fleshy, narrow-lanceolate, acuminated, attenuated at the base; corolla downy inside, with ciliated margins; leaflets of corona broad-oblovate, obtuse, having the inner angles lying on the stigma. ♄. ◠. S. Native of the Himalaiah, at Mussooree, Royle, Nepaul, and Singapore. Hóya, Wall. ascl. ◠ 6-12 lines broad.

ijr-«V«rrJ H,.\, Sl,tut. t»

al I. IDEA'RIS (Wall. ex ,). Don, prod. fl. nep. p. 120. Wall. ascl. no. 34. Wight, and Arnott, l. c.) twining, pilose; stems slender, radicant, leafy; leaves fleshy, narrow-linear, acutish; corolla rather downy inside, with ciliated edges: seg- t l'<1l< I I I I I U M I 1. i f l . l . , | , . . , , r a |, i . , t l \ orbicular . . " ' • v the stigma, ♄. ◠. S. Native of Nipaul. Plant 3 times smaller than *H. lanceolàta.*

lair intirf Mhf l. l /. . . *ear*-leaved Hoya. Shrub tw.

6 H- *PAtcwmim** (Wight, contrib. ind. bot. p 37.) t glabrous; bratichra si. udfi ; leave* fleshy, lanceolate, taptriag at both emit ; peduncle* ilender, about equal in length t<i the leave*, many-flo«cred; corolla glsbrou*: leafleU of corona lir.iad obovate, emar^mate, or obrordatr, with the inner anklet •cumniau.l, and lying upon (he Kigina, which it aptculac

Native of the I tut man Empire, at Mmlmeyne. Htija, Wall. atcl. no. 33.

SmaU-JUmmd Hoya. Shrub tw.

* * *LtaJUtt of corona jtattum abort,* MWk *or tamenUtt.*

T II. n V i (Wall. pi. *nr.* aiiat. t. p. 7*. t. ITS.) twining, glabrous ; leaves coriaceous, hardly fleshy, ltncat-oblong, acu» minated. irantvertely veined ; peduncle* my-flowt corolla gtabruut, with ubtuat segvMMn; leaflru of corona ovate, obtuM : with the inner anglea erect and juirr.iai. the «tgtna, which b i j U lj.*". paul and Silb* • llower* arc rather tmal), t.r.miml. coloured, and very numeroua. Uavt* ,6 tneb** long, and 1 or 11 broad.

Hrown-flowert-d Huya. Shrub tw.

8 H. HuoKtai**K*A* (Wight, contrib. ind, bot. p. S7.) twining, gUbroto; leavca flohy, oblong- lanceol. cle« ahort, many<fiowcred; cftrolta* segment- *< o(* corona *o*\ ate, acute, with the in,«r angle* »hort; *• gma obtuse. t • *"'. S. Native of Chittagong and Silhet. //. *\ttobiriet,* R. Br. m*«. n tbu or a very similar apexie*. Leave* 6-10 inches long, and 1 or 1J broad.

// < > II inb tw.

I ll V oi Mm.* (8 '». *ex* Trail, in hort. trani. 7 p. 29.) umbeb globu c-Ua- ceobtte. *h. *. i* Ur UUnda, til* iw.

10 H. FAB, Wall, a«-|. no. ». >od Amott. I. 'OP1"1" P" bmg. radicant, gUbrow; br. .labrou*. thuting. i erved at ihe bate, ubtong|anc«o)atc, menu V* almoat iwi«r a. »bort a* ike W M M , tnaoy-H. I*U *ub-nk>boM; eorolU yUl of corona ov»ie(acute, with tU- inner antic Ag apoii th* angina. *;. "V - •bind, at the p. 4*. and n„ 'I. acum. ll caMab. cd. ll, , ll <at. 1»,M1. } 'grant, yellow ; nun— r than tlie and darker at– l bMHMk, /•<•• tw.

ara (Trail, in hor >rm; leavrt vari.ii nated, pale gneo btw > Urown •; *t*h grrni i ove, with P gk»bo*e; •esmem* „ corolla sharp-pointed; the and end* of whirh an reflexed.

—— r—» (t»« l«n«'yn> l. Corona of .w,t|.a .ttmilnew,,.

/Afrr-^rrrJ-leaved lloya. H, July, Auir. Shrub t».

i, and Arnotu toot rib. ,nd. b>< KlabrotM t Invet (!«•.)>t ,.,4|, -nmhiuj •:• t lltM the leave*, iMut.flowct**) - vtfJLobi lgbrry *momutaiom,* and Smg*pt>

Wight, caL no. »5«. Wall. M* no. .91, «3.' «><1 «' M very nearly allied to /A par*Jtl*ea.

(htti-tti 9 rub tw,

it. AMMIII o«tTaK^I pL.hr !e*liy, bro»d-«v»ie. ar rolls downy intuir s w • br. awpKUu teginen"1 - ^ ^ rona oval, lomewhat •nmMtatnl, *nli the inner jraj short; tngma nmtn. *h* . ^ ." Njiiw of Nip»"l- "°? ' Wall. «scl. 00. 35.

Armotl'i lloya. Shrub l».

14 II. **rumunud*A* (W'tght, I. c ttcm intocHb and •hming ; umbel* MM dm. ill] leaflets of com (Mntbranotn, prltuod, vrry narrow, k* **mas-. . of the** witboat a namr.

*\akf4-*mtk*rtd* lloya. Shmb t

• • • *Ltq/Utt of nnmm cm*** rrrWKir *tti>*

|« II- BOT W ight, 1. c. > twining, flab"*" l obaolnel) tetregonftl; Ware* lies' , corotia rather ftWiy. gkbrottt miUKlr. brarde»l tfcwv *rs0j ljl •*** y , '

«*»

•'. I! loya. Shrub twining.

16 H. CARNOSA (R. Br. in wern. *oc mem. 1. p *7> twining, glabrous ; ste- •*nm* and brancbr* uret* ; leaves fleshy -oblong, acuminated ; umbel* prmUlotM. on abort pedicels ly p«bew«M ; corolks »bro« out***- pilous fleshy, gl bot bearded inside ; leaflets of corona ovate, acute, drawn out at top, convex above, with revolute edges ; membranes of anthers rather large, huhnt; the stigma, which is blun ;l« •|«ful*n«i . prtlurk ly marginate on one side. U.t f. p *pn rr—aiRIU. J**n relog. no. K. Srhul) Staitdd, noM. l ••<•• <:. •. , • *b, «-«u». ai«l air IDIHII - t*

Fiisky, or Common Hoya. Fl. Jul. Aug. Clt. 1802. Sl ,.

17 I! Pörsn (Trail, in twri. *UB* r •Utxlrr, grerm*i -,m<|-.*ll eordct*. acunuAMed, wtth a ra*ty Main

Pots's Hoyas. Fl. Ju. Aug. Clt. 1822. Shrub tw.

18 H. AUSTRALIS (R. Br. mss. ex hort. trans. 7. p. 27.) leaves from elliptic to obovate ; corollas bearded ; leaflets of corona furrowed beneath. ħ. ◠. S. Native of New Holland, within the tropic. Hoya carnosa, R. Br. prod. p. 460. Flowers white, or pinkish.

Southern Hoya. Clt. 1820. Shrub twining.

19 H. CRASSIFOLIA (Haw. suppl. pl. succ. p. 8. exclusive of the synon.) leaves petiolate, obovate, obsoletely spotted, bluntly acuminated, very thick. ħ. ◠. S. Native of the East Indies. Leaves 4 inches long, dark green above, and pale beneath. Very like *H. carnosa*, but the leaves are thicker, more obsoletely spotted. Branches warted, producing roots from the warts. Flowers unknown.

Thick-leaved Hoya. Fl. Cl. 1817. Shrub tw.

20 H. LANCEOLATA (Wall. ex D. Don, prod. fl. nep. p. 130. Wall. ascl. no. 36.) twining, glabrous ; stems slender, leafy ; leaves fleshy, lanceolate, acuminated at both ends ; peduncles

rr than ih* le«r« ; corolla downy UMkl-
; Irtlku ofnwooa ranvr&ab
baring tbr itwirr angles rlottyttrd, obtui
I uigma I Nat
M8itWt. V •:•• If rrt.»..»u. but much •nialUr.

" * • • *LrmJUn of nrmm tt,m,mud,* lifctfdi

*' H. tAtittuAt raad-o»«r, acuminated.
thr b*M-.
iMajf4a» coraltookm» • i' • ·:* •
tatmg tbc JMOT a,
l. bat. i
'fit ; but ttw »J
•o murli immUtrd. »• to be impossible to say
•v that it lwlong* to the genus. Leaves 7-10 inches
atHi 4*10 broad.

twining.

OH f4f MHMT *inglrt. J'ttkap* tjtrttrt o/*
Of 0
't Java. 111 CSJICWOU* ·< ^1, a' I
iUk, MIX
'ijmk.in. ami *mttf KiiamL I ittlakL"* [· ' '!· ·« I
*, in the lca*r« IK ing i m m l, largrr, iiuininalcd; and
being 1
- tw.
II. coria'cea (Blum. bijdr. 1065.) leave• almoat veinless,
oval, acute or BCIIIIIated, coria t-rouk, glabr<xia , corotla •ilky
inside. N ative of lava, among buahrn, at tbc fool
ik.
I lloya Fl. Oct. Skmb iw.
ti II *m>* bijdf. p. IMS.) lr«VP* Tf
°*»l. a«»nr, with irtntvid «<lgfB, cun.u'ron*. i
*»M»Ha» Kla lif. Native of Jav^ laoontaiM
•fdhaati a ttph. atnb. 5. 1. I
|Hrn. »lw« U u called *A*9 Kl Hampakam.*
rub lw.
11. l'ljilr. 1 ; abotr, and convex !>COralh ,
eormia
Itmtcn-
ten
Batavia.
i: .-at,
t(l,ittt. St*mt»>
tit
net mmftlt dram* out a considerable length.
bu.
[jmrnimnian
leaflets of corona inner angles ascending.
IHum bi^lr. p. IOC») stem shrubby,

climbing ; lravr* Lunao—M, almost veinless, oblong, acumi-
• l. gUbrou* ; rorolta ca panulate, glabrous.
yr»r. Shrub tw.
f x i , ,/(a»iWf»i«w. Blum.
k|ir. p.
II IU wmti fttlum. bijilr, p. 1065.) IMTW >rinl«*>
g l l a t r . aeuminatrd, ftr*hv, (tabrou*, flat, and |>
utky i> i »••,
and UM Malacca*, on tbr ntouitiami.—Kumptt. an>b. 5. t. 175.

I mr. ,1, tomfttfulm (Ilium, t. c } !«·»»·· *Urn,*
reevned nl|(t* t cotolli glabrous. '; . "V H»»
i* '>(Mrgantrnduog.
Mammku M iw.
90 I <lr. p. I Of.,',) IMVM •m*ll, vtiftlaM,
of«i II* KIM . nbangm, on trvc* by <kt
sea-side.
Downy Hoya. Fl. Oct. Nov. Shrub HT,

† *The ftmrr* o/ fkf J.Jlomug tkr ve species are w Jttom . (mi, tKtrrtktittt, %i >> ftrvUbU ikry btttmg to tht mrttam I*

•if. gla>>>
Imig- lancrolaU". bluir
•d ab. ve in the dried state, veinless bec ..••(lt, on ahorl
petioles. probabi*, of Pecang. Hoya,
leaves 5-7 inc »r« toug. and l< bfmul.

•*Ai* II twintngi v' • riTu
•lobloag, pblam it both rtxU, ru»|ntl«i
1 and obtt iwd brnvath, in tbr
dried »tatr; |>rduncle* almo*l <tn*-b*lf *b*>tirr than i
h
Wait .«•! ao. J m the VB-
Mmib M.
I»*rt«
narrow-lanceolate.
M l ,
V *. *l*m*€* mtmhrmmimi, Isqfltf*
• rm kern..
II IW—li
t'raqiMM ; »n 1 ·! Motang am)
t and "•
Native on the coast of Coro-
mandel, Gongachora, and Sillet.
all. ascl. no. 24, exclusive of f. 26. and 60 c. Wight, in
Hook. bot. misc. 2. p. 58. suppl. t. 1. Asclèpias volùbilis, Lin.
suppl. 170. Roxb. fl. ind. 2. p. 56. Asclèpias viridiflora,
Roxb. in. mus. or. t. 611. Apócynum tiliaefòlium, Lam. dict.
1. p. 214.—Rheed. mal. 9. t. 13. flowers green.
) .1 *a, alpina* (Wight, and Arnott, contrib. ind. Hot. i> 39.)
flowers larger ; segments of corolla obtuse.
cat. no. 1523. h. Wall. ascl. no. 25. Native of the Neel-
gherries.
II. aa
I I •
Cl. ? Shrub tw.
(Ham. herb. ex Wight, and Arnott, contrib.
ind. bot. p. 29.) twining ; leaves between coriaceous and mem-
branous, cordate or ovate, acuminated, downy above, and velvety
beneath ; segments of corolla obtuse ; leaflets of corona with

urt, mbula[1] mn*r angle*, rj.^.S. Satire of the •t Indie*, at Kortna, Il ntiiln>n, and at Scgaen, Wall. Ham. t>. DO. 770. Wall. Md. no. U, f. U6. and 116, witboot a *Lahm* of tl.c Hindoo*.

Hoya. Shrub Wr.

taaj oVarnirJ *by tail, under tkt gntric* am* *of Sperh h ntimt <mght to takt ftrnr,lr*tr of ffbym, btmg k nr hutt mil rrtamett, <M utttmnl if tkat Utmg g**<*» '• ,fx,iti an pnbmblf kox tUtmbtd «bvtt.*

H. T«BT«CIIL*TA | •Un ; Iravn 4 in a who . aruinitiatrtl, arutr, aalac •Il.1 tiian^uljt. acute atbt •- outer , complicate, lascrcUt*. »tlh an rl, « in and a carrc*ponding funo« an the itpj- iiclei &•» ittg, gUbrou*. > >f Uw Ea*t Indir*. SperUngk tttiKilUta, Vahl. m act hafit. 0. rjvi-J 11'•>.» Sir rub twintng.

11 -nut*. IJ.r -i»# of tbt lotli .t. Vah), I. c. p. 114. Nurnmu- Uria f. 1. \ like /)>v uppo*iti< lca*<r«. thr nar- row tr petiotea, which « i beneath, ami cuofatr above: •rhilr, in ibat »prcK I and inch l< I war hand*otnr « i \. J J in ti • loam, pt-at, awl MIMI. and J are readily propagated > ., m a moitt b*M.

W i mi .a wiog; aiul - *trlmui,* a crrmn ; IcaoTU of b

I /' ..Jrm, *I>ig\,r,,n.* C'irolU '-cta?l\. Hfxcd siilr*: having tkt drawn owt into •nbulatr, i.atvi] by a rot tnbrattr*; iba Uack of Oir corpii I >hrub. Leave* oppo- rather U'gr. Co- l •l > the oa, and w the doraal not lateral i viva •f «nWt lma. Hi <bot«, for culture and

w\ pin . *i* frown ; kadru oir ot. p. 3>.

puoaite the anther*. \ • *n* lerninaud by • •llrff.nr pan Sc«« |. i!,''tf, f j n . i,vr • . »!•• maM

the l«flet» of the corooa. * Pollen m«^« fi*"[1] *? erect. Marly cylindrical. Stigma .!• pt«•» * Leave* oppo» •_ »t avuminatnl. L'mbeb Utrral, on loogiab awdunclr*. frw-rV- large. once duitngiuabea from it, and ctrry «»t' • un of ike rHayknt,, ihrre bring 10 «!»-»»» «* ^ J f 4it (Wight, caMrib.Md.htf.P-*-> J* pan. Wall. a^t. no, 1J0. »iib«a • **•«*• • PI," IIIIIIIM Shrubs- *A* propagstwa M* /^if^ «*"*

nru

K. l!f, in m m . I, p. M$. Corolb .....& BUrgMW. muir. !m MMKrih. atimtulrd <*m* ow »MW. S«e4a conw anbabraba. LMIW OMoaiu, *t—mUmom,* ••*- PrtioUr. or diiBiwii! a)KTM«*)y tkMkj • rTowat* ttauaily •mall.

f n i l t o * i ** f t i i j r w ^ . « . ; torona readily •aMMMiwh •. bat which diftVt* «i the •ow aVnWd, thai , >nnrt *m* twaaiirid n » '

r g l a m ** c : rU«atWbra» MIII. WtU, «bo«t 1 I ua»b#bM« a ' •U Hut I In)lut > * '

acuminated, destitute of rutpt or fx**ti ••side, shorter '*«" **V gynostegium.

6 T. CARNÒSA (Wall. Met no. 1 9. Wight, cat. no. 1537. contrib. ind. bot. p. 49.) twining, glabrous; stems and branches slender; leaves fleshy, ovate, or subcordate, mucronate, shining, pale beneath; peduncles flexuous, bearing at the flexures many filifor of corona fleshy, nearly orbic... ces ascending; stigma convex; follicles glabrous, usually solitary by abortion. ◠. S. Native of the Burmese empire, at Amherst; and of Ceylon, at Colombo; and of ibc |rt ovince of Tanjore, in sandy places. Leaves 1-2 inches long, and 6-9 lines broad. Flowers purple inside.

Fleshy Tylophora. Shrub tw.

7 T. TENUÍSSIMA (Wight and Arnott, contrib. ind. bot. p. 49.) twini glabrous; branches slender; leaves oblong-lanceolate, somewhat cordate at the base, cuspidate, veinless, with subrevolute edges; peduncles flexuous, bearing many filiform pedicels a flowers small; leaflets of corona ovate-oblong; pollen masses ascending; stigma convex; follicles diverging, glabrou . . 8. Native of the peninsula of India, Wight; Bengal, xb. Wight, cat. no. 1538. Asclépias tenuíssima, Roxb. d. 2. p. 41. mus. ind. or. t. 1383. Leaves 2-3 inches broad. There is a variety of this, having the leaves twice the length and much narrower in proportion.

Very slender Tylophora. Shrub tw.

8 T. PAUCIFLÒRA (Wight and Arnott, l. c.) twining, glabrous; branches slender; leaves on longish petioles, broadly ovate, from the base, or somewhat cordate, gradually attenuated to the apex, rather waved on the edges; peduncles shorter than the leaves, flexuous, bearing filiform, twin, or tern pedicels at the flexures; flowers small; segments of calyx and corolla obtuse; leaflets of corona broad-elliptic, obtuse; pollen masses ascending; stig glabr ;ma ron»r\ ; f.i'.l , > tirou*. *h* . '. .* \ative of the East Indies, at Courtallum, Wight; northern provinces of Bengal, Royle; Wight, cat. no. 1539. This species is easily distinguished from the rest by the almost triangular form of the leaves.

Few-flowered Tylophora. Shr tb ti*.

• r. man • a (Wight, contrib. ind. bot. p. 49.) twining, sh broad-ovate, acuminated; peduncles about equal in length to the leaves, flexuous, bearing sessile umbels at the flexures; pedicels filiform; flowers small; segments of corolla ovate, obtuse, undulated; leaflets of corona ovate, somewhat acuminated, obtuse; pollen masses transverse; stigma obtuse; follicles slender. ½. ◠. S. Native of Nipaul, at Chandaghiry '• »«xl Sank,*. Gymnèma hirsùtum, Wall. tent. fl. nep. p. 50. ascl. no. 46. Leaves 3-5 inches long, and I *t'3* broad.

Hairy Tylophora. Shrub tw.

10 T. ITALÍSSIMA (Wall. ascl. no. 47. Wight, cat. no. 1540. contrib. ind. bot. p. 49.) twi ves oval, or cordate-ovate, acuminated, mucronate; peduncles twice or thrice longer than the leaves, flexuous, bearing sessile umbels at the flexures; pedicels filiform; flowers small; segments of coroll ovate, obtuse, undulated; leaflets of corona truncate at apex or roundish; pollen masses transverse; stigma obtuse; follicles downy. ½. ◠. S. Native of the East Indies, on the Neelgherry mountains, and on those of Dindygul. Perhaps this is too nearly allied to the preceding differ ntly in the size of the leaves. Leaves 1-2 inches long, and

Very soft Tylophora. Shrub tw.

11 T. MOLLISSÍMA (Hamilt. herb. no. 739. Wall. ascl. no. 120. ex Wight and Arnott, contrib. ind. bot. p. 50.) twining, downy; leaves round or roundish-ovate; peduncles shorter th

fa * rMM <(OMI,\ • 1* U bw ^, frtwn »li fnnr,,,T " .>'»'fH I (,,,..,1 •1i

tt e leaves; pedicels long, filiform, u«u«l! disposed in 2 fascicles near the top of the peduncle; flowers rather large, glabrous; leaflets of corona fleshy, short, adnate to the middle of the gynostegium; pollen masses transverse; stigma obtuse. ½. ◠. S. Native of the East Indies, in elevated fields, east of Camroo and at Dongtala, and Hebora. Leaves about 2 inches broad.

Round-leaved Tylophora. Shrub tw.

12 T. FASCICULÀTA (Hamilt. herb. no. 738. Wall. ascl. no. 55. Wight and Arnott, l. c.) erect or twin rut • little; leaves approximate, ovate, bluntish, rather fleshy, decreasing towards the tops of the branches; peduncles erect, flexuous, bearing 2-3 few-flowered fascicles at the flexures; leaflets of corona oblong-ovate, bluntish; pollen masses transverse; stig apiculated. ½. ◠. S. Native of the East Indies. The corpuscles of the stigma in this species alone are herbaceous, and slightly united, but loose and divaricate at both ends. Leaves 1-2 inches long and 1 broad.

Var. α, parviflòra (Wight and Arnott, l. c.) twining a little at top; flowers minute. ½. ◠. S. Native of the woods of Mithila, at Sukanagur. T. fasciculàta. Herb. Ham no. 738 Wall no. 55.

Var. β, macrántha (Wight and Arnott, l. c.) root fascicled; stems woody, erect; fascicles approximate; flowers rather large; segments of corolla ligulate. ½. S. Native at Neelgherry.—Wight, cat. no. 1541. Wall. ascl. no. 51. without a name.

Fascicled-flowered Tylophora. Shrub tw. or erect.

13 T. LONGIFÒLIA (Wight, contrib. ind. bot. p. 50.) twining, glabrous; leaves oblong-lanceolate, acute, rather cor ate at the base; panicles shorter than the leaves, many-flowered, composed of flexuous branches, bearing a small umbel of flowers at each flexure; segments of corolla obtuse; leaflets of corona almost one half shorter than the gynostegium, broadly elliptic, obtuse; pollen masses transverse; stigma convex. ½. ◠. S. Native of Silhet.—Wall. ascl. no. 48. without a name. Leaves 6-8 inches long, and 1½ broad.

Long-leaved Tylophora. Shrub tw.

lt T. EXILIS (Colebr. in Lin. trans. 12. p. 358. ' lt. Wight and Arnott, contrib. ind. bot. p. 50.) twining, glabrous; leaves ovate-lanceolate, acuminated; panicles rather large, twice or thrice longer than the leaves; having the branches flexuous, bearing umbellate pedicels at the flexures; segments of corolla acutish; leaflets of corona broad-elliptic, very obtuse, shorter than the gynostegium; pollen masses transverse; stigma apiculated. ½. ◠. S. Native of Silhet. Pergulària exilis, Spreng. syst. 1. p. 844.—Wall. ascl. no. 51. unnamed. Leaves 2-3 inches long and I bnMd. Very nearly allied to the preceding species.

Thin Tylophora. Fl. June, July. Cl. 1823. Shrub tw.

15 T. HICRA'NTHA (Nouv. ann. mus. 3. p. 377.) glabrous; leaves narrow or ovate-lanceolate, acute, rounded at the base, petiolate; cymes shorter than the leaves; calycine segments led, with membranous edges, shorter than the corolla; segments of corolla longish, obtuse; follicles acuminated, glaucous. ½. ◠. S. Native of the island of Timor.

Small-flowered Tylophora. Shrub tw.

16 T. VILLÒSA (Blum. bijdr. p. 1061.) corollas bearded; umbels usually twin; leaves elliptic-oblong, acute, a little cordate at the base, hairy on both surfaces; branches sarmentose, villous. ½. ◠. S. Native of the west side of Java, on the mountains, where it is called *Areg Katak*.

Villous Tylophora. Fl. year. Pl. tw.

17 T. CRISPÍNEA (Blum. bijdr. p. 1061.) corollas glabrous; corymbs trichotomous; pedicels subumbellate; leaves ovate-oblong, acuminated, rather cordate at the base, smooth. l ½. ◠. S. Native of Java, at the foot of Mount Salak.

CutMt-Ukt Tylophor*. Fl. year. PI. tw.

18 1 11 (Blum, bijdr. p. 10M.) coroUaa glabroui; panklet axillary; pedterU tubumbellatc; leave* lanceoUu, acuminated, «imeiimf» cordate at ihe baae, 3-nerved, glaafOwa ; follicle* very acute, fe. *\ 8 Native on the wni coaat of Java, at the bottom of nvuwuin*.

SUmder Tylonnora. Fl. year. PL tw.

19 T. airi*Tan bijdr. *y.* 10*1.) leave* otaie-ate, acuminate*] ;>le-nerved, gUbroua ; IUHKI< • blunt-iah. ^ , rt. S. Native of Java, among the Parang I on roclu. Nearly allied to /.

Reck TylopUora. PI. tw.

| S. *Lxafmtt of wtamutmmM* c r«/*rr ^ ami*, arriW My IT *i*

SO T. IP/udU (Wight, contnb. ind. bot. p. 40.) t g , •lender, tmoothiah ; leave* narrow-laneeolaU. attn.uau.l at tt.e apex ; peduncle* filiform, much hmK.-r than ibe lra»r.. brtrMf («nt, 2-3-flowvm) fa.. rotU drepJy 5-d*tt; Irafl «| rorona rxwcdtng tb* K> n.»teKium. ovair, Anrlj art.mitutrd at the »IKI ; pollen mum irtMttnt; atigaia obtuw *3m of Nipatit, at Purpubna: awl tb* UtmaUiah. moUMtyin lenerhnia, Wall. a*cl. po. *9€.* IU. Lra«e« l-t he* long and 1-4 linn broad.

* Firry irm(rr Tyloj.Hor*. Shrab tw.

^ 4. *Lnjtett of* MreMj *ftfj)fti*td,jUtky, ctaiptmf the UM »/ Ike gymuUgimm, tack dtwn* MIMIOI *cutpftrrmtJ,* rrrcf *tootkUl mtlke ajxjc, mttdc.*

! < trrAkibtroLU •WI«!,I and Amott, contnb. ind. hot p. II ng, glabroua; brmnche* alettdvr ; Irate, *t* oblong, mucrrnnatt 1) amminaied, euriareoua, rettrulately ibel-furmnl, almoat ar*aile*t few-Aowered) •mail. M rorolla obttiae, gtabroaa ; leaflet • of raaadaV tied on the main* at the aj* •otr Wight, eat, 't ac no. 1342. A«.lrpta* lentua. lltvne. herb Wall aact. eat. no. IM>. *tt.* Leave* *mt* tnche* lon|(.and i-7 line*broad. no. I «

f«mwrn-/«Mrf Tytopbora Shrub tw.

i rvirCm (Wall. Mai no. 50. *n* Wtght and Amott. contnb. nut. bot. p. 51.) twining, glabrutM leave* iu brat date-oblong, mucrona' about I'fjual in length to the leave*, •mail fataclr* of fltiwera; argment* of mrntta of CM kdith, i-Uaping the bate of the gyaoategiaan. niabed wnb a ahori tootblet ina*dr at the aprv j pollen itiaaae* tranaverae; atigna obt.... h s Native w« ihe banka of the Irrawaddt.

*l'*rpU* Tylophora. Shrub lw.

rtiHATi t and Amott, eootrih. md. hot »vrny; braitche* atender ; leave* o* , cau-d, uauallv contale at tW ba*e. ^Ubrou. • beneath; peduNctM ahorter than tW leaie^ bran»g each f.J ataade. frw.fl, 'uh.1. ««war.

(wrpluth; tntnHfiUof corolla «f corona fleah; ng lh* ha* of iKe Iurntane<]

i maMm mi,. ugaaaohtwait

natMaj Ko^b. fl. ind t. p. 13. U,iu Waft. aacLao. 117 \ •••• Baaka. |{<>*b mw*. n aaaha. WaBd. »,. *vim,* lam. diet. I. p. tnanchaM v mag i. IfI>. Knreag. *y*t. I. a. II

i pUniflora, Wall. a~l.no. 117. *b.*\ I • ,. 117. a., aiao Wall. a*el. no*. II ... f. 7. ThwpUi " Ilota vihdiflora in MMforeigna ^^^ on the coast of CoromamWl a« a Mbatiwtc for lp«« caiaha.

ar.a, pate*<» (Wight. 1. c.) tlie upper auHTacn of the lea* I r. ,\. ^U*e« (W^ht, 1. «.) gUbrwM m *rrrrj*

Jttkmatii Tylopbora. Sbrub tw.

14 T. Tt.Kl'jl !!>••. t* ''''''^lij, ovate, roucrunate, «l 5 -flowered. *J * rt. rf •" ctmn loowotowura, Lam. am. •• p> to the preaatM acction.

ntf»ar Tylophora. Shrub tw. re and propagation te*

W IJthi aad Anan. eon n *ftmiimJnm,* it.arahy.n the mulillr ol i)><-a-ynottegium, ai 1 by a wwmbranr ; ; gUAc»* •

i £2

laaavarwaTy aavef ine «ii«i«^ T»ining, looarly d»*ny avalBi than tht leave*. differ* ««tl> m that the leafleU they a^, at ngbt angle* with ibe

Mnn I''

in si ▸

II irb, MM maar botaav hi* particular atad of turning tbe aneatkoat of UrtanMi» u> otam to the caaipa '), and to a •aaciia of that

Ulr. Ihtrvrnd/ Stafam aiaally ai a an* diftWe* tVon *r<f*t*U,-* rhMly w • u> the coroaa ; n M th»r«fct» an ad lu obliia Hlltwf daWM hat lf aawafaaaal Bnai ll

M itin

1 M. M

) « * » turning, Wavrt cordate, brr»*.U,»a'. ,»i«l, •***» h»*, aoA • cyme* urobcl-fortnrd j throat of rornlla ml ")JP"» imiiic. fe. ~, v Native of Ne„ Holland, * within the tropic.

Velvet ••

2 M. BAURONIA'NA (W ,-ht and Amott, cort' rib. ind. boi. p. 40.) twining. Ktat.rou«; ka*r« brtwl cordate, acuminated; pedunces •ban*? than the prUolra i flowers cymose, largish, glabrous; aegm. ttJU <.IMUM> ; baflcti of ronma attr- sunted, about MIUI in length to ih« nnmtrgittm; »ti|n«« bluntly •iNc.ihica. IJ. ~. - Nati*/of the Ea»i I»i near J-lunuU. \V,h.t,t. CM. no. IM4. THr eynwa*IT small; but the Rowvn ar, ib. lar,,-r»r . 1 ibr irmit*.

B

3 M. PLAVESCENS (Cunningh. n bot. may. t. MM.] (Minute ; leaves oblon ruminated, brou • •bo*«.. but cloth^l « ith hoary tomentum beneath ; ped «n- cles twice the length of the petiolei; nrmt many-flowered; corolla sub-rotate; stj jrma muiic. Holland, on the am *than.* Klowm >. U«t« I i»f $ ftwhy trrth. uo.trd to thr back of (he anthers, which latter •*» diiwhawn n *m*\ ibr extremity. Migma flal. Yellowish-flowered .... Mandn. i I J*. J... Clt. 1823. Shrub b to,

V *$ t. Throml iff* Mrotti M *mtil m* tk* tub* Wdraf. //«*/# *the tube dispoint in 5 reflc ies.*

4 M. TINCTÒRIA (R. Br. l. c.) tlrm* twining t 1« r ohUit- wwothnb. ftmuabtd *itb a gland towa <rd« the baa* abt i r«f lain at ; throat <t corolla bearded; flowers small; leaflets af corona about r<|ua) in length to the gynostegium, not ovate; stigma mutie. Native •*f Hnita tra, Silhet, and Pro i se. t aronro-ahkar, Marad. sumat. p. 78. Pergulària tinctòria, Spreng. syst. I | > . > 44. Asclèpias tinctòria, Roxb. fl. ind. 2. p. 43. m •a. md or. t 611.

^ all. mu tnrrou*, sniall, yrlloM. The leave* MI lil more and bettrr indigo lliati *Indtfnfr T* hmr- ia awl burgh bat r. Dr. Rox commended an extensive culti- vation of it.

(V' -unvati* lixi.go. Khruht w.

5 M. VIMINÒSA (R. Br. l. c. p. 50, prod. 461.) stems i» twining; ; leaves oblong-lanceolate, smoothish, ob •« at the base J ink of corolla villous inside. Native of the New Holland, within the tropic. Pergulària viridiflo <>r». Kprcng. syst. 1. p. 844.

Green-flowered Marsdenia Shrub tw.

6 M. HAMILTÒNII (Wight, contrib. ind. hoi. p. 41.) twmtng, glabrous; leaves urdatc-oblong, at *am* •ubrapt- tate, many-flowered. •hortrr titan l IMMkll tube of corolla ventricose, closed by hai i • i I—nVt> of corona longer than the gynostegium, taper ing at the n apex; pollen masses oblong, fixed by minute corpuscles; stigma apiculated. | | i. at Sukana^ur. I .att- Native of the East Indies, at * all. a«l. no. M . C reticulàtum, Ham. herb. no. 750. ascl. no. 57. e.

Hamilton's Marsdenia. Shrub tw.

7 M. RÒTHII ; leaves roundish-o >»l, olriuar. glabrowa, a* well as the *iu». whx *U* an iwining; corymb* a^illar^, *A* Ma tomentose inside. Native roUaa >•!• hi Uai h,,: .. \ tack, beset with scattered >nt ouiiMle. and clothed * grevi- tomentum inside ; hwdly a linr in diwnetar. Marsdenia. Shrub tw.

8 M. CLAUSA (R. Br. l. c. p. 50.) leaves lanceolate, acute at both •ft** Mar, wrinkled a little above; throat corolla densely bearded. Native of Ja- .irtii tmningt - « . 01 : Pergulària clausa, Spreng. syst. 1. I " U end«.gUW

Shrubiw.

9 M. »» «» (R. 111. I- c j .ten. UocvoUu-. gUbraua. wialm-. wolla with * "f.! J and a bearded •hroat. h . ^. S. Native of New ll.»lUnd, without the tropic. Rui Iff, in I.m. Iran*. 10, p, *VJ9.* I. fl. f. 1. laV. hot. rrv t. 489. Pergu iarta ana Ua aktll MfamiU ciltatrd. Vilainrm* br<Mil, inaerled h toothnl rontcal nrctarmm, r« Kodgr. Fluwiw "b .Sirrrr-ir««ileJ-l|..*frrd MafMlcl..., Kl J«lj, Aug. Clt. 1816. Shrub f t o S i

10 M. HMIf Hr I , »irni . *Vfl ny, br*rt with a bttie - < *n, ytu* half an inch long; corolla *ubrm.i I of N« within tl>etrop*c. Prrgwlina rimriicam, Bfreog. »y 1. p. 844.

Grygia l Marwlrait. Shrub l to J Cart.

| 3. *TmU «/ c«rofU downy* awt*.

11 M. l Wight rt Amott. contrib. ind. twt. p. 40.) twin <ng, tomrtttoM- ; lra»r» broed-conUtr or ovate, acuminated; cymes aborter th »n the *J****•;* calyx hairy; oarotU hairy inside: throat cr .word by j pltcjr. which *rr op posite the sinuses; leaflets of corona much longer than the gynostegium, filiform at top; stigma bluntly apiculated. h . ^. S. Native of Kenour, Royle ; Simla, C •«M»aa *at* tfcalhouaf. II. velu- t'n». • Royle, herb., but not of R. Br. The pli* at the bottom of the recesses, between the a aginili of the corolla, almost rcarmbl thickish scales.

HotfU't MarMtmua. Shrub i».

It M- ind. hot. p. i ing, much branched . stem, l'UKAM, and padiMkcW* d owny ; leave I altixMi aeeatW, lanceolate, giabrou* m the adul state ; cymes twin, few- flowmrd, .bnrtrr than thr Wave* ; *U* atlrta o corona »h'»fi<T than thr gymMtemum ; ttigma truncai< Native on lull* at Protne, Maratknia. Wall, awl. no. M , - ltumph, amb. 5. t. ••. f. 1. ?

Narrow-leaved Marsdenia. Shrub tw.

§ 4. *'oml o/ rorJii MU tmU»fmr,mtlwf*lem, Urn* if* cowna area^MA. irwoate or atjU «* (V 4 , t f l . *» **«r iA* fc..K. aw •raaaMMaW fat*. «aW aweiir kttiyvmmmm i *tmtirr Urg*.*

IHM HII« *«frntmmity form m distinct genus.*

13 M CALESIA'NA (W . ht, contnb. mu. bot. p. 41.) twining, downy; leaves cordate, or rdatr>i)*atr. MMMMli ovate, acuminated; cymes toae on both anrfaMa; cyaara largr, many- AowTfrd . n(tomentose, hairy; of corolla narrow, ante, wki revolute e'tgeai lanHati corolla ventricose, *cotttnm* drvply bind: Hat)<>br« t« lmtgi r than th» iwuwr. Native of the East Indies, on the hil »• upon the anthers, the other *h©rUt and keeled towards the base; stigma apiculated. h . ^. S. Native of the East Indies, at ,-wa a|. I itang. IVrguUria Calruaji*. Ham. herb. Wall. ascl. no. 57. e.

Cale's Marsdenia. Shrub tw.

I* Nt. TENACISSIMA (W Hi and Aroott. mntrib md. bot. p. 41.) twinin |; k«av< cordate, acuminated, tomentose on both surfaces; cymes »rge; iifwaaili of corolla broad, obtwar entire at the apex, or bifurcate; stigma bluntly apicu ', Native of the East Indies, on the hil '•VRijianlilandCb.tugony Asclèpias IPHrfimna, Ro»b. c. Si. (. I. mus. p. 844. fl. ind. 2. p. 40. •J Whan.1 lit) tarU^HMtomeaH.-. II •" "•a* Ueie| Wniru of corona broad, twmm, and tw > ' 1 ' "'* lleiti. ma<ir. < • % miurtna IraMClaminiMli, ^|»*rn|| »>»t t Pergulària clausa, Spreng. syst. 1. p. 844. l lowers greenish y . . . . . Corollas salver-shaped; segments gt> nish towar U the win re, with the outer half t

IW. UM >ng and 3-4 brow!.

vitrelalb-nu-
cumtVrvi

rr. with ut

cot fiber

IV

I ll TANJORENSIS (Wight and Arnott, l. c.) twining, glabrous; leaves broadly ovate or oblong, short-acuminated, obtu*r or corJaic ai tl«r l«w ; prduo.

ffbbroM; 11. .1 B*M

Ho. iV*. - 1 - 1

broad.

XXXI. PERGULARIA (*from pergula*, an arbour, in reference to the plants, fit for covering arbours). R. Br. in mem. wer... p. 51. Blum. bijdr. p. 1053. Pergulária species, Lin.

LIN. SYST. *Pentándria, Monogynia*. Corolla salver-shaped, with *n ltrcr* olace tube. Staminiferous corona 5-leaved; leaflets compressed, undivided at top, and furnished each with a little segment inside. Anthers terminated by a membrane; pollen masses erect, fixed by the base. Stigma mutic. Follicles ventricose, smooth. Seeds comose.—Twining plants, with membranous leaves; interpetiolar cymes, of yellowish, sweet-scented flowers, for which they are cultivated in China and the East Indies. Throat of corolla usually hairy.

i r ODORATISSIMA (Roxb. and Smith, icon. pict. p. 16.) leaves cordate, acuminated, soft, downy; umbels shorter than the leaves; calycine segments shorter than the tube of the corolla; segments of corolla short, obtuse. ♄. ◠. S. Native of China, Cochinchina, and Sumatra, where it is called *West coast creeper* by the English. Andr. bot. rep. t. 185. Pergulária minor, Sims, bot. mag. 755. Perg. tomentósa, Lin. mant. 53. Cynánchum odoratíssimum, Lour. coch. p. 164. Flos Sámicus, Rumph. amb. 6. p. 58. t. 26. f. 1. The Malay name of the shrub is *Tankí* or *Tonkin*. Bark corky; young branches downy. Leaves rather downy while young, 4 inches long and 3 broad. Flowers middle-sized, greenish yellow, exceedingly fragrant. Seeds surrounded by a membranous rind, and ending in a long tuft of hairs.

Sweet-scented Pergularia. Fl. Ju. Jul. Clt. 1784. Sh. tw.

2 P. ACUMINATA (Blum. bijdr. p. 1056.) leaves ovate, or oval-

oblong, acuminated, rounded at the base: having the margins and veins downy; cymes pedunculate, twin; calycine segments obtuse, shorter than the tube of the corolla. ♄. ◠. S. Native of Java, Sumatra, Madura, &c., by the sea side. It differs from *P. odoratissima* in the leaves never being cordate.

Approaching Pergularia. Fl. year. Shrub tw.

3 P. minor (Andr. bot. rep. 184.) leaves cordate, obtuse; with an acumen, downy while young; umbels shorter than the leaves; calycine segments about equal in length to the tube of the corolla ◠. S. Native of the East Indies. Curt. bot. mag. 755. f Tratt. tab. 718. P. odoratissima, var. Smith, icon. pict. 3. p. 10. I his is probably only a small variety of the first species, the leaves are rounder, with a more slender recurved acumen; and the corollas orange-coloured or yellow, but also very fragrant; M d the segments of the corolla are blunter and shorter. I eaves 1½ inch broad. Mid the H M m length.

Smaller Pergularia. Fl. May, Aug. Clt. 1790. Shrub tw.

» P. parvifl'ora (Blum. bijdr. p. 1056.) leaves subcordate- acute, downy on the margins and veins beneath; umbels pedunculate; calycine segments obtuse, shorter than the tube of the corolla. ◠. S. Native of Java, about Surabaya, in calcareous soil.

Small-flowered Pergularia. Fl. May, July. Shrub tw.

5 P. villo'sa (Blum. bijdr. p. 1057.) leaves subcordate-oval, acute, very soft beneath; umbellules simple; segments of calyx shorter than the tube of the corolla. ♄. ◠. S. Native of Java, on mount Parang, in the province of Tjanjor.

Villous Pergularia. Fl. July. Shrub tw.

6 P. pallida; branches downy; leaves oblong-cordate, acuminated, downy; umbels simple or compound, on short peduncles, many-flowered; corona length of tube, but the calycine segments are shorter; segments of corolla narrow, with revolute edges; tube glabrous inside. ♄. ◠. S. Native of the East Indies, at Gongachora and Munghir; and Penang. Asclèpias (Mil: da, Roxb. fl. ind. 2. p. 48. P. limbàta, Wall. ascl. no. 6i. r viridis, herb. young shoots beset with small recurved hairs. Leaves 4 inches long, and 1-2 broad. Petioles, pedicels, and peduncles villous. The flowers are pale yellow, and not fragrant, or in a very slight degree. The length and narrowness of the segments of the corolla, and want of fragrance, seem to be the most obvious marks by which this can be distinguished from *P. odoratissima*.

Pale-yellow-flowered Pergularia. Shrub tw.

7 P. sanguinola'ta (Lindl. in bort. trans. 6. p. 72. Sims, bot. mag. 2532.) leaves ovate-lanceolate, quite glabrous; cymes many-flowered, shorter than the leaves; segments of corolla acuminated, obtuse. ♄. ◠. S. Native of Sierra Leone. Plant trailing, full of blood-coloured juice. Corollas greenish yellow.

Bloody-juiced Pergularia. Fl. Jul. Aug. Clt. 1822. Sh. tw.

8 P. purpu'rea (Vahl. symb. 3. p. 44. Willd. spec. 1. p. 1248.) leaves cordate, acuminated, glabrous; umbels proliferous, shorter than the leaves; corolla with a villous throat, and narrow segments. ♄. ◠. S. Native of the East Indies and China. Asclèpias cordàta, Burm. ind. p. 72. t. 27. f. 2. Branches rather villous. Pedicels and calyx downy. Flowers purple?

Purple-flowered Pergularia. Shrub tw.

9 P.? Japo'nica (Thunb. b. i.t> 111 • Willil. I e.) leaves cordate, glabrous; umbels simple; calycine segments shorter than the tube of the corolla; segments of corolla obtuse, spreadingly reflexed. ♄. ◠. S. Native of Japan. ii. SIMM |Ul> rous. Leaflets of corona 5, subulate, erect, compressed, each furnished with a tooth outside. Stigma ending in a long thread. Perhaps a distinct genus, from the stigma terminating in a thread.

Ja Pergularia. Shrub tw.

10 P.? indi'ca (Thunb. pr M). p, JP. II. cap. 2. p. 151. act. nov. petrop. t. 14.) stem herbaceous, filiform, twining; leaves ovate, acuminated, glabrous; pedicels capillary, aggregate; root large, succulent, size of a human head. ♄. ♃. ◠. S. Native of the Cape of Good Hope, in Karroo. Plant glabrous, with alternate branches. Leaves green above and pale beneath. Corolla an inch long. The root is eaten by the Hottentots. Perhaps a species of *Ceropégia*.

Edible-rooted Pergularia. Pl. tw.

N. B. What is *Pergulària lùcida* •ml *P.* **£*> *tifblia*, Fisch. hort. gorenki?

Cult. The greater number of the species of this genus are much valued for the fragrance of their flowers, and are wrll jilaj.t. .1 ; •• . i|(up rilWi of trrlln work, in •tovn of ion- servatories. They grow well in a mixture of loam, peat, and •t»d ; •*»>' cuttings strike roqt rr«.ii'\ in l.. at, under a hand-glass.

XXXII. DISCHI'DIA (from δις, *dis*, twice, and σχιζω, *schizo*, to cut: in reference to the bifid leaflets of the corona). R. Br. in wern. soc. mem. 1. p. 32. prod. 461. Blum. bijdr. p. 1059.

Lin. syst. *Pentándria*, *Digynia*. Corolla urceolate, 5-cleft. Staminiferous corona 5-leaved; leaflets bifid: segments subulate, spreading, recurved at apex. Anthers terminated by a membrane; pollen masses erect, fixed by the base. Stigma mutic. Follicles smooth. Seeds comose.—Herbs hanging, perennial, lactescent, besprinkled with white mealiness. Natives of the East Indies, especially of the Moluccas; and of New Holland, parasitical on trees. Stems rooting at the joints. Leaves opposite, roundish, thick, fleshy. Flowers small, subumbellate, usually white.

] D. Bengale'nsis (Colebr. in Lin. trans. 12. p. 337. t. 15. Hook. bot. mag. 2916.) plant yellowish green, glabrous, fleshy; leaves oblong-lanceolate, 2-edged, flat; umbels few-flowered, from alternate axils, on short peduncles; corollas small, urceolate. ♄. S. Native of Silhet, on trees. D. lanceolàta Wall. ascl. no. K. 1 Of.

Bengal Dischidia. 1 Fl. Sept. Clt. 1818. Pl. creep.

2 D. cuneifo'lia (Wall. l. c.) leaves cuneated, subretuscly cull-i date, mu as well as the branches, scurfy. ♄. S. Native of the Burmese empire, on the banks of the river cb •tMUMtail M dM liic »Ml air •• •• V11 u n on trees. Nearly allied to *D. Bengalénsis*.

Cuneate-leaved Dischidia. Shrub creep.

3 D. Rafflesia'na (Wall. pl. rar. asiat. 2. p. 35. t. 184.) leaves roundish-ovate; ascidia or reservoirs crowded, pendulous, petiolate, oblong-ovate, angular, obtuse, large; lobes of corona oblong, obtuse, incurved; follicles smooth. ♄. S. Native of Singapore; also of Malacca and Salangohr, upon trees. A fleshy, pale green, glaucous plant. Umbels axillary. Corollas pale yellow.

Raffles's Dischidia. Shrub creep.

4 D. clava'ta (Wall. l. c. p. 36.) leaves roundish-ovate; ascidia or reservoirs crowded, pendulous, almost sessile, cylindrically clavate, arched, marginate, bluntly cuspidate; lobes of MaoHMPOTM corona oblong, obtuse, incurved; follicles downy. ♄. S. Native of the Burmese empire, on the banks of the river Aitram, in Martaban, near Assamee, on trees. Habit AIM! MM4V 4 of growth that of *D. Rafflesiana*, but the reservoirs are of a different form.

Clavate Dischidia. Shrub creep.

5 D. rumula'ria (R. Br. prod. p. 461. Blum. bijdr. 1059.) fleshy; stem roughish; leaves roundish-ovate, mucronulate, convex on both surfaces, scaly beneath; umbellules on short peduncles; segments of corona subulate. ♄. S. Native of the East Indies, Java, and the Moluccas; also of New Holland, at Endeavour River, creeping upon trees. Col-

lyris ulnor. VahL aci. aoc. hint. nat. bafn. 6. p. 1M. ? —Kumpb. lib. 5. t. 176. f. 1.

Me- -.r«irotf-l< aved Dischidia. Fl. year. Cl »f PI. cre*p.

6 D.Tiaosi ann. tnui. 3. p. ,177. t. I7.)leave* juiut <>let; ••*.•«]•.• , ntle, oblong, .L , .- i, pendtiliw* at thr bate of the branch** ; «rny inuoV; lobe* of corona lnwrir, •Iw taUnd of i morphology. Pl. creeping.

7 1>. WAUICHU (Wight, cont rib. ind. bot. p. 4S.) flethy, glabrou»; leave* orbicular, lianlK tn.jly ♄. S. Native of Singapore. Walk., a*cl. no. 14.—Rumph. amb. 5. t. 170 f. tt. Perhaps this is - *Catlyru* MMOT, Val.l, in wh»li he HJ the leaves are oblong-ovate.

Wallichii l'f Uiwl>tdi«. Slirub crteping.

8 P. •—a il LU ilium, btjdr. p. 1059.) Mem gUbruui . ravn rhumb-ovate, obttur, flj(above and emu. \ IMI • da en >hon peduncle* ; sefmmto of corona l»nrar. blunt. ♄. S. Native oi'Jui, tn wood* on mnanii StLik , Gede, asd Burangrang, upon trees.

Rhomb-leaved i *ii* Duchtdw. Fl. year. PI. crtYptag.

9 D. SPATULA'TA (Blum bijdr. p. lo*>(>. • »urn ^Ubroua ; rave* •(wtutate, t convex on both surfaces, rather mealy; um• rllule* nearly »tMile ; •eymi i i it Urm-oUte. ♄. S. Native •• »f the itlant) uf Nu««-Kmi&bmnga. by the atrn side, creeping upon trees.

Spatulate-leaved Dischidi i. Fl. year. 1 ng.

10 D. COCHLEA'TA (Blum. bijdr. p. 1060.) Htm d. wny; leaves roundish, convex above and wrinkled, rooctv? Uri umbrllatr* on tlwrt peduncles; segmenti ol rorotia obtuw, inflexed. ♄. S. Native of iW island of Nusae-Kambanga, creeping on the *'runVk* wf tree*, by tlie sea shore.

Spoon-leaved Dischidia. ; l. year. Pl. creeping.

Cult. Vegeti ibla mwU .. iky. kl.i soil <or tat apecir* of *Dischidia*>; aittl ihejare ea»ly increased by K-psratiaf Iba loutt-d sloots.

\\\111 I! LEPTOSTE'MMA (from λεπτος, *leptos*, narrow ; and rn^ijio, rtrMma, . crown ; in reference to the corona, which t» narrow.) Bin bijdr. p. 1057.

Lis. If**!, /'(••fun.fna, .(. f•«!»•• .m.l tatkai •>ll» tubuUr, with a c onstricted throat, which is sometimes closed with scales or fascicles of villi ; limb semi-quinquefid. Sta liioeou* crown of 5 free, cordate M utfittatr. und< *•" lets. Anthers terminated by * mem> ll« nu«M* erect, fix 'it by tbe b«tr, Stigma mutic. Follicles •JDOofh. Seed « with a mil i : , rooung «, tm ; hairs at the end.—Herbs PI .1 itmU with o posite or verticillate, fleshy leaves ; an illulate flowers. Ln inter nMdttU gtnM.brt««-n/V gulariu and *Dis-* rMMa,

* *Throat of corolla closed.*

I [.. LANCEOLA'TUM (Blum bijdr. p. 1057.) lea •aV acuminated at both glabrous ; leaflets of co ravi« Uneeolai.-, the apex. ♄. S. Native of Java, in iMMtntain «uoda.

Lanceolate-leaved Leptostemma. Fl. year. Pl. creep.

2 L. SAGITTA'TUM (Blum, bij.lr. p l057.) leaves lanceolate, acute or obtuse, glabrous; leaflets of corona sagittate, bluntish at the apex. ♄. S. Native of Java, upon trees, about Linga-jattie, tn the prmiac* of Cheribon, where it is called *Kikondal*.

Sagittate-crowned Leptostemma. Fl. Aug. Sept. Pl. creep.

3 L. LATIFOLIUM (Blum. bijdr. p. 1058.) leaves oval-lanceolate, acute, glabrous ; leaflets of corona minute, acutish, with tumid margins. ♄. S. Native of Java, on Mount Salak.

Broad-leaved Leptostemma. Fl. year. Pl. cr.

4 L. FUNCTA'TUM (Blum. bijdr. p. 1058.) leaves ovate, acuminaitd, convex, and ,Ubroo« on both turfacr* ; leaflets of co roal rounded at ihe • [- . lla bet.el wiih_.-_.. btft. t, in low wuod*.

Dotted-flowered Lep KMlrmma, H. vrar. PL creep. Sum. I. < bfoui. ral waih ; leaflet* < t; . S. Name of Java, n wood*, on the *h* July.

* * *Throat of corolla closed.*

6 L. HH • «• ovate, acute, hairy ; throat of corolla rl< apev ♄. S. Native oi Java, about Romp*' the provin*' of Buitenzorg.

Hairy Lepto .etnma. PL M. Pl. creep.

7 L. FASCICULA'TUM (Bl •im. widt. [. 1058.) leaves ovate, acuritti, nrarU (."*'»' ous; throat of co '*"• closed by 5 fascicles of villi ; lea !'-• of corona nrandrd at thr apex. ♄. S. Native of Java, on the nrffytftt*- of I'anl-jar, in the province of Buitenzorg.

Fascicled-flowered Leptostemma. Fl. July. Pl. creep.

Cult. For culture and propagation see *Dischidia*, abovr.

\WI\ T1IPI OSPE MA (τριπλοος, *triploos*, triple ; and σπερμα, *sperma*, a seed ; the seeds are disposed in 3 ranks or series, i ifrnM, a n the tullKk*. i Stapvlta Cochinchinénsis, Lour. coch. p. in 1. Lin. syst. *Pentándria, Digynia.* Corolla with a long slender tube, and a 5-parted limb ; segments acute, connivent, covering the genitals. Staminiferous corona fleshy, flat, stellate, of 5 acute, Urje, expanded l •> litta. A ^fi' bct"r" aububic* the c . . , lean •" Seed. U«4(, t. .,—rd wJW« 'ΛT(,,ιιι,,lc —A creeping, suffruticose plant. Stems terete, I**i*« ffWiy, opposite, ovate. Umbels large, simple, thick, common peduncle. Corollas • in!' . funnel-shap lycine segments acute.

11. COCHINCHINE'NSE. ♄. S. Native of Cochinch on the mountains. Hòya Cochinchinénsis, Spreng. syst. 6. p. Stapélia Cochinchinénsis, Lour. coch. Mi.

Cochinchina Triplosperma. Shrub creeping.

Cult. Fe ure and propagation see *Dischidia*, abov«.

XXXV. MAI RISON : \ nomedby II .1... «•» ' b r «D Mrs. Harrison, of Æghurgh, near Liverpool, tirti iu introdttc* thr t>Um front Brazil.) Hook*" to! 55. t. 2699.

Lin. syst. P •fiaJrM Digynia. Cor ' •«•?"*** with a tiaktd ihrtMtt. tiimwct it laa, iuri.••>«•] Mitli a i Oatf. «*r«n Ivaby ar I M»*t»rt » • ' ob« a little spreading. Hooker describes the pollen red *i* Irmb mat erect ; but we much doubt the correctness of this ; but should it be so, it is a very remarkable genus among the tribe of Asclepiadeous plants, in which the pollen masses are erect, and the anthers terminated by a membrane.

1 H. LONGIFOLIUS (Hook. l. c.) ♄. S. Native of Brazil. *Honeysuckle-like* Harrisonia. Fl. Sept. Clt. 1825. Shrub erect.

Cult. For culture and propagation see *Gomphocárpus*, p. 142.

Staminous corona inapprndiculate outside.

W W I \ ONCHOPHYLLUM (fro- ••x*, *conche*, a shell ; and φυλλον, *phyllon*, a leaf ; leaves conve above.) Blum. bijdr. p. 1060.—Collyris, Vahl. oct. hafn. 6. p. 109.

Lin. syst. *Pentándria, Digýnia.* Calyx small, 5-toothed. Corolla sub-globose, with a [illegible] segments of the limb short. Staminous [illegible], inc., |<MMJ, 3-aJtflrd. mapjwmliculate outside. A*tl»<rs term<i*i*d by a mrmbnuw ™'JW« W«t, Axed by the tu. ^tna tnuiw. F> °PP°»a*, iom> what inl nralr, t! , "°**t and ti-inlrt* brrtra: l Umb.-link* l win, pedunculate, interpetiolar.

l C. m*,, *nlwm.* bfldr. p. l- N ^|^rw. Wall Mta, i. | M, tn •"; »oc. ln.t rui. hafa 6. n. lll amb 3. l. 175. f. *• bad.

Imbricated-leaved Conchophyllum n. Fl S« l[1] creeping. *Cult.* For culture and propagation see *Dischidia*, p. 134.

XXXV [illegible] mus, naked; and [illegible] the staminous corona being st ent, . W«M, a aiwn*n(A Wnt. ,rr Wft tt»k«l.) 1! .urnt. «*ra. «N*. l w.bsed p M| L». [illegible] syst. *Pentándria. Monogýnia.* Corolla sub-urceolate, <> *"'*Wft; ilintai uni.llj rnmnr.l by *> arat *•• H»«^« l.. [illegible] tween th f M-itmrttt* of ihr corolla Staminous w.i corona [illegible]nting. Anthers terminated by a membrane; pollen masses [illegible]ect, fixed [illegible] Follicles smooth. Seeds y*U», tf.•!.- i .'. • ... >f|{iftalr. r.u»llj twining tl.rulx, Mli>n ..([illegible]e East Indies; tropical [illegible]ll [Mill [illegible] of New Holland, and Equinoxial Africa. Leaves opposite, membranous, flat. Umbels interpe-[illegible], cymose. In the greater number of the species, the stamens are not usually naked, but are furnished[1] with • glarx! Wly, or lic.i [illegible]y tuft, at the base of e[illegible]nt. .ich filaiir

| l. Tvac *of KorolUt* ptiow kMtfrj 'Area/ mwnn/fcy 5 *decurrent*, m(*tootkttttt* or a/.

1 G. lactífrum (Rœm. et S[illegible] lmltr.. »v.t. *C.* p 57. ex R. Br. l. c.) glabrous; stem erect, or [illegible] miiiiiiC a ltd [illegible], simple; leaves 'In *fc imtrvilrd, miulii utx-r|.ialsided; umbels many-flowered, sh[illegible]<>tt>r tlian tli^ i>. - irnat of ,„ [illegible]all corolla crowned by 5 fleshy tubercles; tube furnished with double pilose lines, running from the tubercles. ♄. S. Native of Ceylon. Asclèpias lactífera, ! in. spec. 314. fl. zeyl. 111.—Burm. zeyl. p. 24. l lie mill. of the plant is substituted for cow's milk, where that is scarce; and the leaves are boiled with food, ** Bu [illegible]. Very nearly allied to *G. fUittrt.*

Milk-bearing Gymnema. Shrub.

2 G. sylvéstre (R. Br. prod. l. c.) twining; clothed ! witli soft d[illegible] in every part except the upper surfaces of the leaves; [illegible]—"' [illegible]uated at the base and apex, to ovate or [illegible]ovate, acute; peduncles equal in length to the petioles; umWU> [illegible]win, sub-capitate, many-flowered; flowers small; stigma bluntly conical, much longer than the stamens; follicles slender, attenuated, glabrous. ♄. ◠. S. Native of the Peninsula of India, frequent in China and Ceylon. Wight, and Arnott, contrib. ind. bot. p. 44. G. parviflórum, Wall. tent. fl. nep. p. 50. Periploca sylvéstris, Willd. spec. 1. p. 1252. phyt. l. | [illegible]. 7. t. 5. f. 3. Asclèpic [illegible]ata, Roxb. fl. ind. 2. p. 45. Segments of corolla ovate, acute. Scales in the throal lonn and thick. /pogynous scales linear, obtuse, covering the genitals.

Wild Gymnema. Shrub —

3 G. ormina'rum (R. l[illegible]r. prod. p. [illegible]2.) leaves o>atr, [illegible]: smoothish; branchlets downy; pedu[illegible] IMTIM ihoftfr than *//-* petioles; umbe[illegible]" i" [illegible]n; corolla with a crowned thro[illegible] • *ai« ano MH* tube. ♄. ◠. S. Native of Ne*m* Holland. «i(bin ibr l[illegible]epic, on the sea-shore.

Twin-umbelled Gymnema.

[1] M mttrh braadird: TCWIL' branches, and under surfaces of leaves clothed with hairy tomentum; leaves downy above, from DftnaavoTMv to nafrow^MtoMf|« •^••niMi «^ * i •* M * shorter than the petioles; umbels •ub-capiui*; flowrri small. ♄. ◠. G. Native of the Neelgherry mountains. rnnntw ^ l, cat. no. 1531. Wall. ascl. no. 70. l his may eventually prove a vat > ty of *G. lactifrt*m.*

//•<»y <• .r«b tw.

• *M.* atd. no 72. b. 143. 151. Wight, and Arnott, contrib. ind. bot. p. 15.) mining; >- ung branches rtothm] wtth Mll'l putirMvncr . ka'ves from bro ad-cofdai o*atr. arumioamt. rioihwl »ith aol down iwm-atli, smoothish above; umbr 1» capitate, allDCMll M*»«ilc; flowrt* •mall, stigma tnmc*xr, Kardly l *n lk» Wamina; foil* S l ba*r, and gradually tapering to the apex, velvety. ♄. . S. Native of the Burman Empire, on the banks of the lrt. waddi.

Soft G nmrmt. Rhrittt iw.

6 G. acuminà'tum (Wall. ten'. (l. nep. p. 50.) twining; b*fk of stem corky; y <MMJ W W H A Mraili r tomentose; leaves oval-oblong, acuminated, glabrous above, and tomentose beneat. length almost naked; peduncles shorter than the petioles; umbels sub-capitate; flowers small; scales of the throat exserted, one half shorter than the segments; follicles thick at the base, conical, short, woody, coriaceous, at length glabrous, 2 inches long, a nes thick at the base; seeds large, surrounded [illegible]. ♄. ◠. S. Native of Chittagong, [illegible]t, Tavoy, and Mauluyne. Asclèpias acumi-J1a. Roxb. fl. iod. f. p. i'• < • ifliiun *i* [illegible] itiftrr ^l'tirt»n' tftati ll • ••; • *mttmlnl*

7 G. latifòlium (Wall. asclep. no. 68. 144. Wight, and Atn.-it. omtnb. twl. b-H. p. 45.) twining; young branches daoarly aVway; lr«ip* ltraad-oval, amn ated, sparingly pilose on l*.i!i turfam. |>nralL lly »ritvnl; unit.. ls shorter than the peiwlei. cynn>-J. ltotkctTtl rmed, many- flowers small; scales of threat bdawai follicles rather 'lendrt, fl cuminated, warted, 2 isdan lung, ami 2 lior* thick ai the baa*. ♄. ◠. ? S. Native of Tavoy, Silhet, Saluer,. ami ll. Peninsula of India. Leaves lt, bdkM lOML arnl 3 bjMji,

Broad-leaved Gy «mrmt. Shrub IM.

8 G. ela'stica (Wifkt, etminb. mil. !«.• p. 45.) twining, glabrant; leaves ov in of cor.[1] late, acuminated, parallelly veined; follicles large, oblong-lanceolate, acuminated, ligneo-coriaceous, gUbi s, 4 inches long, and 6 lines thick in the middle. ♄. ◠. S Native of the East 1 odies. Wall. ascl. no. 150, without a [illegible]ery nearly allied to the preceding, but quite distinct.

Glabrous Gy•ttiwroa Shrub i«r.

| ff. *Tktual of corJU* /kliltl [illegible] with 5 decurrent, pilose lines. —*The plants of this section have larger flowers than those of*

/A* /..»!, qk<J. o«iv H l** *prdttxt,* lK.it[A] *longer,* Ac Wt*J «nr ltfrtfrr, (ioa^A *JrwrrJltmrTrit,*

9 G. r'lvgara (Wight, et Arnott, contrib. ind. bot. p. 46.) mi»kMS bfBBcfcr. slender, glabtm, woody; the older ones rather warted; leaves cordate-ovate or oval-acuminated, with undulated edges; umbels on short [illegible]du.,„],. but not spirally elongated [illegible]M [illegible]. [illegible]..., as in the following species; p..l< [illegible]out r.,ual in length to the peduncles; flowers small; throat of co-,..11. fuM,,bed with 5 pilose lines inside; stigma obtuse, longer than the stamens; follicles usually solitary, acuminated, white, 5 inches long, and 3-4 lines thick; seeds marginate. ♄. ◠. S. Native of the mountains of Dindygul, Salem, and Columala, also of Segarn.—Wight, cat. no. 1534. Wall. ascl. no. 67, 155, unnamed. Flowers white.

Elegant Gymnema. Shrub tw.

10 G. TINOSPORA (Spreng. syst. I. p. 144.) twining, glabrous; leaves cordate, acuminated to oval; umbels or corymbs often twin, at first shorter than the petioles, and at length spirally elongated; glands of filaments one half shorter than the stamens; follicles cylindrical, spoon-shaped; stigma simple, oval, mutic, crowning the tube of the corolla, and therefore exceeding the stamens. ♄. ◠. S. Native of Pegu. Wight, and Arnott, contrib. ind. bat. p. 8. Asclépias tingens, Ham. ex Roxb. fl. ind. 2. p. 53. cor. 3. p. 34. t. 239. Asclépias montàna, Roxb. fl. ind. 2. p. 45. mus. ind. or. t. 618. Periploca montàna, Roth. in herb. Wight. Solenostèma Bidària, Ham. herb. Tylóphora Ariádnes, Ham. herb. Leaves 3-6 inches long, and 2-4 broad. Umbels compound at length. Flowers largish, numerous, pale yellow. Calyx 5-cleft to the base. Corolla having the tube as long as the column of fructification, furnished inside the rim with 5 double pilose ridges, which are ciliated with brown hairs. Cordate divisions of the corona covering the stamens. Style simple. Follicles ovate-lanceolate, smooth and fleshy, 4 inches long, and one in diameter.

Dr. Hamilton, late Buchanan, informed Dr. Roxburgh, that from the leaves of this plant the Burmese prepare a green dye.

Staining Gymnema. Shrub tw. Fl. July. Ht 12 ft.

§ 3. *Corolla without any pilose lines inside. Filaments usually furnished with a fleshy appendage.—The plants referred to this section ought to form distinct genera; they differ widely from the rest of the genus, in being compressed and spatulate; the pollen masses differ also from the retinacula are thickened, and sometimes very long.*

11 G. VIRIDULUM (Wall. tent. fl. nep. p. 50. t. 38.) leaves oval or ovate-oblong, acuminated, glabrous, glaucous beneath, and minutely reticulated with fuscous veins; common peduncles sometimes shorter and sometimes longer than the leaves; umbels compound, many-flowered; flowers subcapitate, on short pedicels. ♄. ◠. G. Native of Nipaul. G. columnàre, Wall. cat. no. 73. a. A large, much-branched shrub. Corollas yellow, urceolate, valvate in æstivation.

Nipaul Gymnema. Shrub tw.

12 G. COLUMNÀRE (Wall. ascl. no. 73. b. Wight and Arnott, contrib. ind. bot. p. 40.) leaves subcordate at the base, linear-oblong, acuminated, glabrous, pale glaucous beneath, and reticulated with fuscous veins; umbels compound, about equal in length to the leaves, many-flowered; flowers almost sessile. ♄. ◠. S. Native of Nipaul? Very like *G. Nipalénse*, and differs chiefly in the figure of the leaves.

Columnar Gymnema. Shrub tw.

13 G. SAGITTÀTUM (Wall. tent. fl. nep. p. 50. ascl. no. lit. and no. 83.?) leaves oval or oblong-ovate, attenuated to the apex, glabrous, whitish glaucous beneath, with the veins of the same colour; peduncles slender, about equal to the leaves; cymes compound, loose, with filiform branches; pedicels distant along an elevated spiral line; flowers small, usually caducous; follicles slender, glabrous. ♄. ◠. S. Native of Silhet. Anthers subsagittate. Cymes puberulous. Corolla subcampanulate, Wall. l. c.

Sagittate-anthered Gymnema. Shrub tw.

14 G. WALLICHII (Wight, contrib. ind. bot. p. 46.) oval, short-acuminated, glabrous, paler beneath, with the veins of the same colour; cymes raceme-formed; pedicels disposed along an elevated spiral line; corolla ventricose, pilose inside; gynostegium furnished with 5 fleshy leaflets at the base. ♄. ◠. S. Native of Singapore. Wall. ascl. no. 135. named. The large fleshy glands or leaflets at the base of the gynostegium or column of fructification, render this a very doubtful species of *Gymnema*, but the three preceding species have them also, but not so conspicuous.

Wallich's Gymnema. Shrub tw.

15 G. FINLAYSONIÀNUM (Wight, l. c.) twining, glabrous; leaves cordate, ovate, acuminated, glaucous beneath and reticulated with brown veins; umbels dense, many-flowered, longer than the petioles; corolla subcampanulate, glabrous; gynostegium short, naked at the base; retinacula elevated and spirally twisted in the middle. ♄. ◠. East Indies.

Finlayson's Gymnema. Shrub tw.

16 G. TRINERVE (R. Br. prod. p. 462.) stem erect; leaves oblong-lanceolate, 3-nerved, downy; umbels sessile; corymbs naked. ♄. S. Native of New Holland, within the tropic, on the sea shore. Perhaps the gynostegium is naked at the base.

Three-nerved-leaved Gymnema. Shrub.

17 G. ATTENUÀTUM (Wall. tent. fl. nep. p. 50.) twining, smooth; leaves lanceolate, very much attenuated; corymbs slender, flexuous, rather longer than the leaves; corolla somewhat rotate, with a naked throat; pollen masses divaricate, almost horizontal, ovate; corpuscles bidentate at the apex. ♄. ◠. S. Native of Silhet. Perhaps a species of *Tylóphora*.

Attenuated-leaved Gymnema. Shrub tw.

Cult. For culture and propagation see *Pergulària*, p. 135.

XXXVIII. SARCOLOBUS (from σὰρξ, *sarx*, flesh, and λοβὸς, *lobos*, a pod; the follicles are fleshy.) R. Br. in mem. wern. soc. 1. p. 34.

LIN. SYST. *Pentándria, Digýnia.* Corolla rotate, 5-parted; throat naked. Staminiferous corona wanting. Anthers terminated by a membrane; pollen masses erect, fixed by the Stigma mutic. Follicles ventricose, fleshy or coriaceous, sometimes solitary by abortion. Seeds marginate, scabrous.—Twining, glabrous shrubs. Leaves opposite, broadish, firm. Umbels or corymbs interpetiolar, many-flowered. Follicles solitary by abortion.

1 S. BATAVUM (Roem. et Schultes, syst. 6. p. 58. ex R. Br. l. c.) glabrous; leaves broadish; umbels many-flowered; corolla rotate, with a naked throat; follicles fleshy. ♄. ◠. S. Native of Java, near Batavia; and of Princes Island, where it was collected by Sir Joseph Banks. Follicles ventricose.

Banks's Sarcolobus. Shrub tw.

2 S. GLOBOSUS (Wall. asiat. res. 12. p. 377. t. 4.) leaves ovate-oblong; cymes bifid; corolla rotate, with a very short tube, villous inside; follicles large, fleshy, globose, blunt or retuse at both ends, muricated. ♄. ◠. S. Native of the south of Bengal, in sandy places, on the shores of the Hoogly; Rangoon; and on the banks of the river Salwen.

Globose-fruited Sarcolobus. Shrub tw.

3 S. CARINÀTUS (Wall. l. c. p. 378. t. 5.) leaves ovate-oblong, rather fleshy; peduncles few-flowered; corolla with a very short tube, glabrous inside; follicles oblong, smooth, keeled below. ♄. ◠. S. Native along with the preceding species.

Keeled-fruited Sarcolobus. Shrub tw.

Cult. For culture and propagation see *Pergulària*, p. 135.

Tribe III.

GONOLOBEÆ. Pollen masses 10, fixed by pairs to the retinacula of the stigma, transverse (f. 17. g. h.) adhering by the outer extremity (f. 17. h.), dehiscing transversely in respect to the cells, hidden by the stigmas. Staminiferous corona undivided (f. 17. d.), lobed. Anthers terminated by a membrane.

XXXIX. GONOLOBUS (from γωνὶα, *gonia*, an angle, and λοβὸς, *lobos*, a pod; in reference to the ribbed fruit.) Rich.? in Michx. fl. bor. amer. 1. p. 119. R. Br. in wern. soc. trans. 1. p. 33.—Cynanchum species of Lin. and Jacq.

LIN. SYST. *Pentándria, Digýnia.* Corolla sub-rotate, 5-parted (f. 17. a.). Staminiferous corona saucer-shaped (f. 17. d.),

lobed. \nthers dehiscing transversely, te mitnatrd by a mna- brane; pollen masses fixed by the outer extremities, in respect to the cells (f. 17. A.), covered by the stigma. Stigma flattish-depressed, 5 ed (f. 17. e.). Follicles ventri ieoa*. a !<•' le ribbed. Seeds comose.—Twining, suffruticose plants, natives of America, ptnioak ely within the tropics. i Leaves opposite, broadish. U mln 1- interpetiolar, pedunculate.

1 G. MARITIMUS (R. Br. l. c.) leaves cordilf, hairy, tomentose beneath; umbels sessile; calycine segments lanceolate, acute; segments of corolla ovate, acute, hairy inside; tube very short. ♄. ◠. S. Native of Tierra Bomba. Lindl. bot. reg. 931. Cynánchum nu' timum, i n. mant. 14. Ja< amer. p. 85. t. 56. pict. t. 82. [1] nilla dark purplr, rt I.ui. Ktrm h. Corolla greenish, ex bot. reg.

Sea-side Gonolobus. Fl. lunr, Ju' y. Clt. 1826. Shrul '.*. 2 G. SUBERÒSUS (R. Br. l c.) leaves *variant,* wunw ated, with an open recess, rather hairy; <*ajycittfl aaMOjajvjfai Mirroit j segments of corolla lanceolate. ♄. ◠. S. Native of Souib America. Cynánchum suberòsum, Lin. hort. cliff. 75' •PM- P- 310. Willd. spec. 1. p. 1255.—Dill. hort. elth. 308. t. 296. Stem reddish, chinky at bottom. Flowers at fir»t green, afterwards verging to blackish purple. *tt.t.*

Corky-stemmed Gonolobus. Fl. July, Sept. Clt. 173*. Shrub tw.

3 G. CASSIFLÒRUS (R. Br. l. c.) leaves ol lt 1U l the recess closed, n i<)_\ liakrd r. ove, bu ath; umbels many-flowered; se jmrnii ol corolla curled at apex. ♄. ◠. S. Native of Jam •im, am) at I be Isthmus of Darien. Cynánchum crispiflòrum . '•nart*. {rod. 52. Ait. hart. kr«, l. p. 302. -. .tz, fl. ind. occ. t. p. 5.1'—Plum. i ii. tit). t. 216. f. 1. Stem downy. I i.. i. an wttnr *ut<ulalr glanda at the recess of the leaf. Corolla «lutr, |iaitilrtl »ith green lines at the base of the segments.

Curled-flowered Gonolobus. I l. .'uly, l ug. Cfe 1741. Shrub tw.

4 G. PLANIFLÒRUS (R. Br. l. c.) leaves cor • I Utr, g l a b w above, and UMMWoat bmr.v brU tub compound; calycine segmen tt LiKTolati, acuminate , •rjttii. .llniuui* dish- ovate, flat, spreading. ♄. ◠. S. Native of New Spain, on the precipices of Mount de Ii Pops, about CuthaajMia : a d of Trinidad. Cynánchum planiflòrum, Jacq. amer. 82. t. 86. pict. 43. t. 81. 1 n. syst. 257. Leaves ciliated on the petic :lr«. willi rusty stiff pili. Corolla flat, veiny, and rusty.

Flat-f Wtnrf GoatoMwa. Fl. Ju. Aug. Clt. 1818. Shrub twining.

5 G. VIRIDIFLÒRUS (Rœm. et Schultes, syst. >'».p.f|.)Irilr. ovate-cordate, or ovate, acuminated, glabrous; umbels few- red, shorter than the leaves; calycine segments lanceolate; segments of corolla oblong, acute. ♄. ◠. S. Native about the Essequibo. Lindl. bot. reg. 1126. Cynánchum viridiflòrum, Meyer, prim. ess • <|. p. 111. G. Guianénsis, Spreng. syst. 1. p. 845. Stem hairy while young. Corolla greenish yellow. Staminous corona margined with white. Very nearly al u.l to *G. planiflòrus*; bit! diffi •, in the leaves of that species being downy beneath, in the umbels being racemose, and in the calyx being longer than the corolla.

Green flowered Gonolobus. Fl. Sept. Cl I. 1»16. Shrub tw.

6 G. GRANDIFLÒRUS (R. Br. l. c.) hairy; leaves cordate- ovate, acuminated I. iflauroat lirnratli; *Mgmnt*a* ol corolla o»alr. acuminated, coriaceous. ♄. ◠. S. Native of South America. Lindl. bot. reg. t. 1053. Cynánchum grandiflòrum, Cav. icon. 1. p. u. t. 21. Willd. spec. 1255. Stem and peduncles beset with rufous hairs. Petioles villous. Corolla coriaceous, larger than in any other species of the genus, greenish; corona purple.

Great-flowered Gonolobus. Fl. July, Aug. Clt. 1826. Shrub tw.

7 G. ROSTRÀTUS (R. Br. l. c.) *bmyi* bam oblong-co. with the rgpfaa ©prn | <*\ytima segments ovate; segments of corolla narro «lai»cc<«! ate, 3 times longer than the calyx, pilose outside. ♄. ◠. S. Nati Tris ánchum riMIti*. lutn Vahl, symb. 3. p. 45. Willd. spec. 1. p. 1254. hr . tem retrograde. Leaves 2-3 imrhn lons. ralSrf &*»*• Umbels few-flowered. Pedice 1. and aniilii hi '••'»»• acuminately rostrate before ex pMMMn.

Beaked-flowered Gonolobus. Fl. Ju S. • l«4. Shrub tw.

S <• Ktnxt fr-ftowrrni S. N >«> Cynánchum nigrum, Cav. icon. 2. p. 45. t. 159. Willd. spec. 1. p. 1255. Nearly allied to *G.* iirwMit.*, but il ffers, in >bc ovate, ac in the few- l a t m d ra*t-mra, ami in tkr cotolU being *i* imm targrr, and black or very dark p • \<lr,

Black-flowered Gonolob • • I Fl. Oct. Clt. 1825. Shrub tw.

9 G. SACCHÒRUS (R. Br. l. c.) glabrous; leaves ovate-cordate, acuminated; racemes simple, many-flowered; calycine segments lanceolate, concave, acute; segments of corolla lanceolat i. llai. revolute and emarginate at the apex. ♄. ◠. S. \ttnr about Carthagena, among bushes. Cynánchum racemòsum, Lin. mant. p. 54. Jacq. amer. p. 81. t. 54. pict. t. 80. Willd. spec. 1. p. 1255. Leaves 4 inches long, rum Um-ai . Flowers small, white.

Ra <<-«•.«- fl«.**rrd Uaawlobti s. I l. Ju. Au^ I lt. t«». Shrub tw.

10 G. C'AKOLIMK »ti* (R. Br. l. c.) s i m and | - tioles hairy; leaves ovate-cor latr, aruniinaird. downy, on longish petioles; flowers glabrous; segments of corolla oval-oblong, bluntish; follicles smooth. H. ^. F. S tive of North America, on the banks of the Mississippi, in hedges. Cynánchum Caroliénse, Jacq. icon. 2. t. 342.? Flowers purplish, umbellate.

Carolina Gonolobus. Fl. Ju. July. Clt. 1 oi l *| m

11 0. II CROPHYLLUS (Nutt. rti. amrr. 1 [i. 1' V i ttrmtand petioles hairy; leave ' larjpp, MrtMt, »bf«|. ly acuminated, puberulous; segments of c > irul la o*al-f.bJ.K>t' I I. Native of Carolina and Virginia, i I BKJMIV v woods. Cynánchu • i macrophyllum, Mic r. amer. 1. p. 119. \ -.-. x . uai gonocárpus, Walt. fl. car. 104. Go •olobaa bit»uiu», Lmid. but. < i b. 365, btrt not of <x\» rs. Asclépias gonocárpus, Gmel. syst. p. 446. Cynánchum macrophyllum, Pers. ench. 1. p. 274. Flowers darl purple, or dirty yellow.

Large-leaved Gonolobus. Fl. June, July. Clt. 1822. Shrub t«inua*.

12 G. HIRSUTUS (Rœm. et S baJfta, «yat. fl |> 63. Sweet, ft. gar.I, t I itrmi an.) itr ioles very hairy; leaves cordate-ovate, gradually acuminated, downy on both surfaces; segments of corolla L ear-oblong, obtuse; follicles oblong, muricated. ♃. ◠. F. Native from Pennsylvania to Carolina, in hedges, near rivulets. Gonolòbium hirsùtum, Michx. fl. bor. amer. 1. p. 119. \ Vincetóxicum acanthocárpus, Walt. fl. carol. p. 104. Asclépias acanthocárpos, Gmel. syst. 446. Cynánchum hirsùtum. G. echinátus, l odd. cat. ! lowers dark p le.

Hairy Gonolobus. Fl. June, July. Clt. 1806. Pl. tw.

13 G. VISCOSUS (Rœm. et Schultes, syst. 6. p,t» 4n, imM- late; corollas of t OfiMH with linear-lanceolate segments. ♃. ◠. P. Native of Virginia and Canada. Cynánchum discolor, Sims, bot. mag. t. 1275. Cyn. Virginicum, Herb. Banks. —*Oftm.* virg. p. 56.? Nearly allied to *G. Carolin* ,r*#u. MM *G. suberósus*. Corollas green outside and purple inside.

Discoloured-flowered Gonolobus. Fl. July, Aug. Clt. 1809. Pl. tw.

14 G. HIRTUS (R. Br. l. c.) stems beset with rufescent hairs;

leaves ovatr-cordate. k .rs. S. Native of Anwnca. Cynanchum hirturo. Lin. bort. tlift*- ;>. 79. Willd. spec. 1. p. 12.6. —Mor. hi»t. 3. p. ill. *men.* 16. t. 3. £ fil. Stem* chinky at bottom. Tin* t> a very doubtful plant. Leave* larger than in *G.* moerenu; and the nowm are larger and purpliah.

*Ro*gk* Gonolobtu. Shrub tw,

U G. rmn»T»ATi» (R. Br. I. c.) •tetaa proatmt, do» Wave* rrmfurmly cordate, acute, toaientoae beneath ; umbrla •null, firw-fl legmeni* of corotla linear, obtoae. *11.* rt- G. Native o. Cynanchum pro«iratum, Ca*. icon. I. p. 5. t. 7. Willd. ipec. 1. p. ItST. Corolla* green. Mnall. Peduncle* downy, almoat the length of the Wave*.

ProttraU Gonolobiw. FL July, Aug. Ch. UtS. PI. proa* trate.

1 It. Rr. I. c.) cUbroua; leave* oblong. matv.1 at the baae, nodulated ; umbel* < • ovate, concave, tpreadmR; arguwnu of corolla bluniiah, much »horur than ihr tube, *tj* . *\ 8. Native near Carthagcna, on Mount de la Popa I of rorolUdepreaaadly globose. Corolla* *n> noloboa. Shrub tw.

17 O. ALTtMiwt •y«. 6. p. 65.) Mem tomenioac or downy; Iravn cordate, t.imtntoae on both *urfacen ; umbel* iUn%*. calycine aegwwnta lanceolate, concave, tomentoae outtide, Iritgth <i the tube of tin* cnroUa; acownts cf la roinKliih, flat, ob(a*e. *H.* ' . S. Native of wood*, abou 1 igrna. Cynanchum aitiMtmum. Jact). amer. 84. t. 87. vam, ed 2. p. *tS.* Corolla* dirty purple. <iono|ol. 1'

18 *ii.* iiiilia.aw (BOMB. 6. p. 65.1 gU- brous; leave* otatr, acuaainatad, thiaii ; bU tl i\rii><* WiT"Mtii« linn "ii i, OHKIII, jcumitijir'j , H-^'HI»I> « ovate, acunttnaied, puW biwalh, Jttw, aaaong biaahr*. Cynancbuw nlilVirmr. Jan), atnrr. 8C. i Cynanchum Iracaathom. Jam. amer. p. laaajM . *buuog. l'nluocU^ twicr *Um*rt* than «K. •mall, tri r>nM»mMd Gondoboa. P). iw.

19 *O.* am H|5.) «tabroum; leavr* < acme, white brlow | wr >w« V- itt IV• lepiaa alba. Cm*. i*o« . | . tw n w ittaittw. tw. u. ci ^fimiie*, «\»t. 0. p. •••?.) toarri mentoK beneath. *X* . ^. S. Na- \n»rrti-a. Cayenne. ' A*ck>p(a* tCunnlfibiwni) ob* *ittunl'U-*. *I*\ tw- »DtH»I IM>t. Kg. L iong-cordate (Mgai. ul. • curooa in the throaL . ,• • , \| .!..»,.,. I. Shrub tw. B IIr. L haity ; |ra». • oraUQar •kona* titan the In late, acut>. M-gment* of earolla •> .and tuu; Unt ha* nrvcr Wr chwrn ol.JiqMiiiii. *3m* i |il»h. \uthers yellow. yw-rlowertd Ooaalobu* Fl. July, Aug. C :, m, Pl. t i (Spwr. syst. I. p. «*i.) glabroa*; firmly cordate. WMWirit, upon longnb pnioka,

auriculate at the base; segments of corolla linear-oblong, oblique; follicles ribbed. ¾. H. Native on the banks of the Mississippi, near St. Louis. G. viridiflôrus, Nutt. gen. amer. 1. p. 163. Flowers greenish.

Nuttall's Gonolobus. Fl. July, Aug. Clt. 1822. Pl. tw.

24 G. UNIFLÒRUS (H. B. . t kuntn. *oat. gen** ^ V \ acbnaml le*rr«da«iny; leave* oj*t»-o« ••« at iH« apex, ami aagtitauk cotdaw at peduncles •obtary. l-8op«fwl, a*NHi *• fco«lll/''LEn than the calyx. ♄. ^. S. Native near the town of Mexico. Flowers as large as those of *Philadilphus coronàrius.* Corona in the bottom of the corolla, short, annular, undulated. Very like *Cynanchum denticulàtum*, Vahl.

One-flowered Gonolobus. Fl. July. Clt. 1825. Shrub tw.

15 I otOOUoibt* >,ll, B. et kunth, nov. p. *Wt.)* branches downy, and Wave* beneath i abon-ammmated at lop, and deeply cordate at U many •flowered, hardly r*C**ding the petioie*; |H<1KI-1> downy ; tatycute •rgmenu o»ate, aculn corolla o*Btr-obtong, aruu. bMrdlew, 4 calv . <f tU | province of Carscca, in bjaaid place*, nrar (tut|{ne, and at Lake Coroa* and aathrr* M M O , rvawYMM.

IrimMki nalobtia. r'l March. ' ,— bjawM

1 Native < •blong. o"0* l. illary. ^ . ' . S. N. "'" D*m Khrub t» t« 'G. RIPARIUS (H. B. et Kunth. l. c.) branches pilose; leav• « ovate, acuimnalrd at a. • x, deeply cordate at base, rather pilose beneath; umbels many-flowered; peduncles and pedicels downy; calycine segments oblong-lanceolate; segments of corolla linear-oblong, obtuse, 3 times longer than the calyx. ♄. ^. S. Native of New Granada, on the banks of the river at*, bwc between Momoox and Morales. Corolla green, with a abort. unduUirK-cwrUt margin.

Markbwt.

River-side Gonolobus. Shrub tw.

29 G. BARBA'TUS (H. B. et Kunth. l. c. p. 209. t. 259.) bri at the bate. - gUbrowi umbeli ed, about ibe Ungth' <if the Wave*; |^IK*1*glabrtn**. hingvr • A than I)M- itrdunrlr I , *h . ,,H «•»»• • — U nblonat lanc^ofai*. arwawnatr. -*t«- *cottAU* , . , » .„ t *r,,ni,- nainl If. I ; ar«»*d on aa larf*> aa thow *utmem* •l**a.-hK. . . . . ^ , surrounding the stamens (f. 17. d.)



FIG. 17.

akon. Aeabv. MeMai* teeth of threat

Bourded-flowered Gonolobus. Shrub tw.

Cult. i >r cwltur* and propagation see *Gryptàlum*, p. 148.

XL. M\t E LEA (meaning not explained by Aublet), Aubl. guian. i. ,, i 77. t. 109. f. 1. R. Br. in mem. wern. •oc. 1. p- •p-HAMim. W.lld. apee. I. p. It74.

***• "*t. *r<*ti*d,* tUffmm.* Corolla , S-pa l**n»»»»oua corona saucer-shaped, lobcd- Anther* 2 er»m. "*••»•. S t a j M D ^ i ^ o W ^ r d ™« Mkrd.-Sl.mb crVrt. U t « omoaitr, bijtUmlular rai \ntil. I. • •*AtUMg^m**, a*»n»i»a limp!*. : w S o r ». W ill.l »j. tower* gf»t».

* M. u: ITOLLIA (Aubl. l. c. f, j.) Uvrn o ».-.. ! • . r » green. *f m r t J* Malclra. ub I to f »« itllurr IMI propagation, see *Calótropis*, ». 147.

Tril- III.

ASCLEPIE'Æ. Asclepiádeæ veræ, | M li I r. in mem. wern. •or. 1. p, /1. I'lillm n u i m 10, •month, 1 a|t|trrt to en :h anther, fixrd by pain to the «ntrou by their to Ml or brnraili tbrn ti)w, pendulous.

§ 1. *Stmmk* . ,,.;/,. MMMMli faMfNI *opposite the anthers, sub-cucullate, trrntrd on it* torn of lUr* loir o/" (Af *filament>, kartug* •• a// *ttgmrmtt, o*t ttttmrm tark yf tkt fargrr tmrt.* it *Ikt same series. Corolla 5-parted, r(xed.*

\ I.I . \ -< I I I' IAS (from Æsculapius, the god of medici i» , powerful on dicinal effects of some species.) R. Br. in mem. wern. soc. 1. p. 36.—Asc' pwa, spec. Lin. JUM. am) »tl . •.

Lui. rrtT. *Ptmtdmdrim, Ihgifmi'* < la i-|wrird, i flexed. Corona seated on ihe U| per part of the t it>c of thr fiUim • ts (f. !(• a. i, 5-lr«vrd '• lr*lU-i» ciu'iillau, liartng a horn-loaned prucrM |ir<,;rii<litiK from tin- bottom. Anther t irmiftiu i mewbt. H ^ ««•«•• *tmtftmrni^* IN«! b> iW i»|wr- *itm* dipciaaad. tnu i nWCtM ••••OOlh, Srr»l» COIIXIM-.- RfKI ^ Pi[10]*1'' awl lonwriwn altrmatc. Umbel* intrr-

T

* *Leaves opposite.*

I A . SYRIACA (Lin. spec. 313. IJIII •lit-i I. u. III.) stems **&; 1 leaves lanceolate-oblon (or ova |, f adually acute, to- Beneath ; umbels drooping. ¥ . H. Native from New

E HWjrvCiirk2 rt, • V mum, '^-11. nxmtaub. p. in \ link

*Z*****—nurk». i. ai.*

! • * 'ts of th •• MMIJ. act a* (IT traps. Lamarck has given, native country of this species Syria and Egypt ; snd adds, as synonyme, the Apócynum erectum latifolium, incanum Syria- floribus parvis obsolete purpurascentibus, of Tour. inst. ; as also a singular varie y of the same, the Apócynum Syriacum rectum ; caule viridi ; fl»r* axalbido, Tourn.

Syrian Swallow••«: Clt. ' M I'l HO 3 feet.

2 A. EXALTA'TA (Lin. awum. and. I. p. 404. spec. 315. Link. enum. 1. p. 251.) stems downy ; leave- obliwitf. ac«tr, |w • tiolate, downy on lh« serves beneath ; umbels drooping ? pe- dicels, elongated J Koma of corona rkmgairdV • '(Native of North America. A. Syrian, *)i,* rialtat*. W 'Hit. »|~ IMi. BLlmhw. Mit. 6. p. «!>. III- .. Mom* of corona »"•'• I, loogrt than lb» corolla.

t to 3 f«i.

3 A, MfYToLaonoipftt (Lynn. «* Pur*b, *ft,* amrr. trpt, ' 80.) stems erect, simple ; leaves broad-ovate-oblong, acute, gla- lateral and ter minal, * bfou*. |«li t twttralh j wnbrU '•*» on tlw •nwiniaina; t» wyll M on ihf baok* of tltt 1 <•! ArkanMM Slrm afiotlfld with |Hii|ilr. I-rnvi» lat^ » |» "Jl» Krrm ; corona «« ii tniBCMtf Uaftan <•• rk|. p. M.

• Fl. July. Aim. Ch. l«H- planl i on abort p tioles ; mnbrU I ..il trrminal, i '. fanoolatf. .1 tin** \oofp, Iwloa aja M i l a* (**'' •Cfpnrat* Um<-it

•* "• ''' |l'' -li (Mnli«. II. ainri. bor. 1. p I ' ! i t i l » v t i j v . erect, simp.] . . l. Ml and axillary, loose-flowered ; pedicels ea ——. ¥ . H. Native from New York to Carolina : in shady, rocky situations, near rivulets. Flowers white. Leaves I irj(r. IV f a, a* all - he rest of the species do, but far superior, being of a beautiful silky gloss, and extreme strength.

U,

0 A. r*a»n \, p. MM, acuminate, glabrous, attenuated at the base ; umbels late- I .11... ral. i solitary ; stems suffruticose, erect. ¥ . H. Native of ri«l«w MKtl Florida, in sandy fields. Pursh. fl. Mm. wpt. I. p. 180. I - 1W. I. 28. A. perénnis, Walt. fl. carol. p. 107. Flowers small, white.

Small- *Ummd* I mil | • ••!, |L July, Au«. CU I 774. 11 1 t Pl. 2 to 3

7 A. ROSEA'CEA (Walt. fl. car. p. 107.) leaves lanceolate, smooth, petiolate ; stems suffruticose ; umbels lateral and ter- mini«]. ¥ . ll Native of Carolina. This plant is not men- tioned by i'ursh ; but is probably the same as *A. paviflóra.*

Many-spiked Swallow-wort. Fl. July, Aug. Clt. 1825. Pl. 2 to 3 feet.

8 A. CURASSA'VICA (Lin. spec. 314.) stem simple, seldom a branched ; leaves oblong- lanceolate, tapering at both ends, glabrous ; umbels erect, soli- tary, lateral. ½ . S. Native of Curassoa, Essequibo, Cumana, Trinidad, and now found in most parts of tropical America. Meyer, Ess. p. 188. Lodd. bot. cab. 549. Ker. bot. reg. 81. A. bicolor, Mench.—Sloan. hist. 2. t. 129. —Dill. elth. 34. t. 30. f. 33.

FIG. 18.



H in MM • M t »(),,T Ji.wnv I Flowers of a reddish-orange colour, or scar- let. i ollicles muricated with scattered teeth, ex Lam. The

i 1

root* have been tent la K inland »• Ipecacuanha. The jaiea *at* the plant, made into a • -o be a powerful anihclnla. tk; it i* given t ibe West I mint. pate, from a era I The JUK*, and plant, i* iatd to be an esctlant styptic. The *t<*>*.* dried and *rr-* duced to powder, » fVniumtly usea by the negroes a* ait emetic, and hence in name oi Bastard Ipecacuanha.

i..wcr» wh

••trtn branched at tof ated.

N.B.—Wbai r«*aiMra. 1*0, of wWh he «*y*, that the ttrm* ai the flowers pale, and disposed m lateral, i m i umbel* . the l"!- lich-% vrntneote and coaxal , the seeds OTMP, covanaa coned, and *romom.* A native nrar Canton, in t'hma.

Cw Swallow-wort. or Bastard Ipecacuanha. Fl. Ju S«pt. Clt. 1692. Shrub 1 to l tret.

l 313.) items sim|4e; leave* oeatr- lanceolate, »tn. . umbeb erect, tenninaf. solitary. 1/ . ll Native from \ i «rot ma, on the bank* of rivers, in sand; and gnvelly «>,!. Sims, bot. man. >••*___*»»U- •'''• t. 29. f. 38. Flowers white, e* l'ur»h. CofolU «ree«, pur- plish ouuide, with whttr nectaries, •• i *n* nodow, pu- bcruluus. leaves totnentoae beneath, em SUBS, 1. \ , hke *A* ruMtiuinco.

>*y-fiowi'r«l BlWalaw a an. R. July. Au^. Clt, l'M. Pl. l to l feet.

10 A. vi«.,tT* (lUn.. tn cat. taur. 1813. p. U.) stems rnvt, simp!-; Wve^ linear-l.nceolate, glabfoua; umWU tr. ral, solitary: and terminal, twin.

« like .<. tin*, but diflers in the colour of tbe flow***, |

lWtJMf Swallow-wort. R. Jul. *Aug. Ck. l** ll ft.

ISJIAW* (Lin. ipee. 314.) aMaantt, branched and tomentose at top | lt'itr* UiKToUir, rather woolly on both »ur- fact- t<*•*, asaally twin ; l...™* t>f torona r» from Canada to '• m •«««mps, and on rivei banks, fumnwn- t. amer. 1. |>. l Jacti.hu- . vind. t. 107. -Ker. >wt. r»n. tio. Corn. «u». 9. t 03 Flowers red, or purp'

Flesh-coloured-flowered Swallow• *iv i ,ly, Awf Clt. 1710. Pl. 2 feet.

1* ri'itii** (Klirh ex Willd. num. p. 27».) stem d at top: Uravrt MM olate; umbels erect, twin; boms of coroaa exsert- ted. K.ll. Nil- i North America. itvcatnatj. .). Will.l. •pac l. a 1267. :urah. L aawr, sept. 1. p. 181. Flowt-rt n rplr. Tlni plant n »JHl, l be more hairy tlian //. tncariwi/tf, but in every ooM apan ao wise different. Se irvrtuiir* the leaves at »»»•, Six] only downy in those on the upper i]>»tt uf the ti lt-no* ».«\» it ii a earj (Ji*urtrt aaaa^aaj • remains so in cultivation; the leaves are shorter, and a little broader, ilow: h, at well as tl the top of the stem and branches.

fair Swailrt* wort. Fl. July, Aug. Clt. 1710. ri

13 A. in«ir<iLi* J* coll. 2. p. 290. icon. rar. t. Jia.) stems erect, simple, rather •iry ; l« . ves ovate-lanceolate, acute, repandly undulate !, ((laacons, and *m* nutely hairy beneath, firm; umbels terminal .ml Uu-ral, lalwii). luawsptiini •! % ll Native of Am• rica- l Root thick, fleshy. Leaves 4 inches long. Flowers white, size ami lit of those of *A. Cu* niiiiiM. *Orange-leaved* Swallow-wort. FL July. 4 «| Clt. 1818. Pl. t foot.

H I •Mafaaj' fOW* i,f .-ave. .l«oat K » , downy brari j iilMl'. *mi* T.. M «•" " ". '. . ▷(Meaaa, • ••• • , k t

T SwalU-wort. Pl July A

fekola of c^oa. rcupM-1 « Native of Virginia and Carolina, in shady swamps.—Dill. elth. t. 28. f. 31. Flowers purple. Habit of *A. S* irHMa. Stw brownish green at bottom. Leaves large, with nerve. Petals h: str— 1 with parpU at ih* b*w. r* IWL

/^..i-ltwewd »walWw.wo»l. R. July, Aug. Pl. tin 3 feet.

l« A. VARIEGA'TA (Lin. spec. 312.) stem simple, erect • > aves I- di- '• rt*. w)a, i'i ovate, petiolate, wrinkled, naked; u'bels almost sessile ; on dry, *tmmj* MOa, on ibe borders of woods. Sims, bot. mag. lift*.—Pluk. »lr wnef 1. p. 1 * pate* simple, rather tomentose ; leave* petiolate, c^ . minutely us ; uro' M » i van** ' l (WMl 1'97. Pl. 3 to 4 feet. _ \\$.) k « « * 17 A. ORTHOPHY'LLA (Michx. 6. bot. anw ^ . *Manftwrndrnk* * —-i • • • — nal. solitary, on long pedancles, many-flowered, glabrous; Se" r.f appendages of corona exserted. ℥. H. Native of from Jers. MM!*, along the Platte, on the M"••**>*•' ex Torrey, in ann. lyc. new york. 2. p. 217. A. *purpurascens*, Walt. fl. car. p. 105. Flowers large, purplr. 1% rhaps tbe same plant as *Gonioloba «*/• *sifolia*.

Var. β, latifolia (Torrey, in ann. lyc. new york. 2. p. 217.) Iravrs broad*naoea*. obouse, ending in a short mucrone, cordate at tbe base, glabrows oo both surfaces, with flat edges ; umbels almoost ile, axillary ; leaflets of corona cucullate, about equal in length 10 11" gynostegium, bidentate ; horns of corona ex- serted. « ll Native of North America, on the banks of the Canadian river. l - . v . t laclws low and 2 broad. r»il«» ••TV» ler than in the species. Calycine segments lances late, acute. l roll* rrfl. xed, pale greenish purple. Perhaps a proper species.

Blunt-leaved Swallow-wort. Fl. June. Clt. 1820. Pl

18 A. MELLIFE'RA (St. Hil. ex Spreng. syst. addenda, p. |I*) stem simple, erect; leaves petiolate, linear, elongated, acute, d»»ny beneath; umbels lateral, many-flower ,<l ℥. F. Native of Brazil, on the banks of the Rio Grande.

Honey-scented Swallow-wort Pl. i»«>.r2

19 A. ACUMINA'TA (Pursh, fl. amer. sept. 1. p. erect, glabrous, simple; leaves ovate, sub-cordate, acuminate, on «feo«t p< oles: superior ones sessile; umbels lateral, soli- tary, erect. V. ll Native from New Jersey to Florida, in deep cedar swamps, and on the banks of rivers. A. cordata, Walt. fl. car. p. 105. A. periplocifolia, Nutt. gen. amer. 1. p. 106. l eaves glabrous, but rough on the edges, acute. Flowers red and white. Roots very large, resembling those of *A. tuberosa*. Horns of corona inclosed.

Acuminated-leaved Swallow-wort. Fl. July. Clt. 1826. Pl. 2 feet.

20 A. LANCIFO'LIA (Michx. fl. bor. amer. 1. p. 117.) stems WW, gUbra* s ; leaves almost sessile, oval-lanceolate, gradually

narrow **A, wry arutc, gUbrout, roof Wli above, of) ll edges.
Y. H. Native of Georgia, •m ib* rit*r Atbai aha. l Flowers purple.
AlKr.l to A. m r M
I-Itatnl Swalliin-wiiM. I !. JtiJ-* I '< « • '
Laurel-leaved Swallow-wort. Fl. July, Aug. Clt. 1759. Pl. 1 to 2 feet.
21 A. CINS'AEA (Walt. fl. carol. p. 105, Gmel. syst. kp.4M)
stems erect'. fcimjilr, with an alternating down) Itnr I lea re* nearly linear, MOlk, MI< revolute edges; umbels lateral, few-flowered; •onta of corona u closed. Y. H. Native of Carolina.
EoaJ*niarin*»ra, Sprruu. »>*i 1. v 850. I lowers white. This species i» Jtlacrd Umrrn .V, *>. «•»••»•/.•. and A.p**ptr-ula, by Walt., bul i» not mrntKMM-*! by l'utth.
Or*, Kw.l)ow.wort. ll July Aug. Clt. 1825. Pl. 1 foot
** A. kt •«. H. 11. ft KttnHi, tn->. grn. atncr. 3. (>. M.) itMni >f«M .^..J. reddish, downy at top; leaves nearly sessile, erect, linear, with revolute edges, nerved, glabrous. Y. 1 \ Native of Mexico, on the declivities of mountains, near La Vente del Perigrino. many-flowered. Flowers white,
• liliW- l»ri£rr than ihow- o rolla sub-emarginate. Appendages of corona ex-
••MM. 1 he revolute edges of the leaves of this species -. and ilir two following, are perhaps occasioned by drying; ami arr, tl>< refore, probably flat in the recent state.
Red-stemmed Swallow-wort. Fl. April. Pl. ½ to 1 foot.
23 A. .ot i « ll B. et Kunth, nov. gen. amer. 3. p. 189.) stems erect, altikoti •nnitti, downy at top; leaves erectish, linear, 1-nerved, with revolute edges, puberulous above, and clothed with hoary down beneath; umbels 15-flowered. Y. G. Native of Mexico, Mai tM diwti ' < ivringa. i lowers structure and size of those of A. rubricaulis, but rose-coloured; and the appendages of the corona rather shorter.
Rose-coloured-flowered S v«U»« - »» rt. Fl. Jun r, Aug. Clt. 1«>». Pi. I to n ot.
t*A LISIRÒLIA (Hort. madr. ex H. B. et Kunth, l. c. p. 190.) stem suffruticose?, be >ndMM haviim a r on CWM side onl j, leaves on very short petioles, IMMat liin;u it lanceolate, acute, with rather rev >lut* cdfn, T einy, membranous, glaknous; umbels »U«it 10-flonrrr.l; |m •awag ai one side; appendages of corona hanJl •y <• Vditot- exserted. i MM. A. Will-ei&lia, Lodd. bot. cab. t7t. I lowers white, size of those of A. sieea.
Flax-leaved Hwtloir wort. Fl. July, Aug. C<i. 1818.
U A GLAUCESCENS (11 lt. rt K unth, l. c. p. 190.) stems erect, simple, glabrous; leaves on very short petioles, linear-•Mai* : acute, somewhat cordate, flat, vein thickish, glabrous; RI»nrr.,, „i l beneath; umbels interpetiolar and terminal. Y. G. Native of New Spain, betwixt Acapulco and La Vente de la Muxonera. Leaves 2½ inches long. Interpetiolar umbels solitary, and the terminal ones twin? Flowers size of th OM ot A. Syriaca, sweet-scented. Pedicels and peduncles downy. Co-I**!»- at»prr rolla white; appendages of the corona sublunate, compressed, C •» > l serted. Follicles hairy or downy in the immature state.
Leaved Swallow-wort. Pl. 1 to 2 feet.
Leaves verticillate.
A. GUADRIFÒLIA (Pur.It. tl. ••> er. sept. I- V "*' •trma simple, •hktaai l<»»<« ">:>•'• J< iniiiiiiati >l. |- i-.l.ii . •inbiai- ulillr i l the stem larger, and 4 in a whorl, the rest opposite; umbels twin, terminal, loose-flowered; pedicels fili-fo . ' Y. H. Native from New York to Vir I«. (MI I me-stone rocks. Jacq. obs. 2. p. 33. I idd. b0! cab. 1258. Flowers sweet-s,(rt]t «,,h wUar Mt*k *"• "d nec-taries.
Four-leaved Swallow-wort. Fl. May .J uly. Cl, 1820. Cl 1 foot.

*« A. m i CILLA'TA (Lin. spec. 315.) stems erect, often branched, having a downy line on one side; leaves very narrow, linear, thick, quite glabrous, usually verticillate, but sometimes scattered; appendages of corona exserted. Native from New Jersey to Carolin a l tad on d ik»f>*a». the upper part of the Mi bk. H MT. l. a. Hi P«t»k. l p. 183. Lodd. bot. cab. IM7.—f'luk mant. t. 336. f. 4. l rolbt «»l>• jrti»" green p- tal» aiwl white nectaries.
Verticillate Swallow-wort. Fl. July, Aug. Clt. 1759. Pl. 1 to 2 feet.
f A. MEXICA'NA (Cav. rt con. 1. p. 42. t. 58.) ttrtna i li »irv 1tMar-iMKrola' erect; a »»|j.»rl: upjtct nnn 3 in a *»!»««l. or op with revolute edges; lower ones 4-6 in ltovrrrrtl. K. < posite; umbels M y-liitolut linn pf n>at>v fthori Ira^ es. Corollas white, size of those of y/. «tr«w. 11 differs from A. verticillata, in the Iran* bring aiadi browltr, ait ilkm-wx in the flowers being larger.
Mexican Swallow-wort. Fl. July, Aug. Clt. 1821. Pl. 2 to 3 feet.
f9 A. »*uwn u M B.nK unth, nov. gen. amer. 3. p. 148.) •trtn >>• lnnwihad trttti 4 > ows of hairs; leaves • tn a »' ubby, branched, almost sessile, erect, linea', »nti ••revolute edge •. l-nerved, glabrou l| a|iptada|ri <>iu aw ('formed, aint ex-•Tft. d. ½. G. Native of New Spain, in temperate parts, between Valladolid de Mechoacan, and Lake Cuiseo. Leaves 2½ inches long. Flowers size of those of A. sieea, white. Follicles vary from abortion. Umbels about 10-flowered.
G -wort. Fl. July, Sept. Shru
wttrl
in— fii« ftwlkw b.
• • • i IrrmmU or tcmttrrtd.
90 I LISA'RIA (Cav. ic it I. | 42. t. 57.) stem shrubby? branched?; leaves scattered, approximate, sessile, linear, filiform, acutely mucronate, with revolute edges, smooth, II ll it)i, nut. Ma et Kur amer. 3. p. 1*2; " leaves linear. »iibulati-. tliiniti llt.l | IMITIH-U |: l ; iill • • i • .• Utrral, tii*n%-flowered. Civ, 1. < ½. G. Native of Mexico, at Chalco, and elsewhere. Flowers white. ppendages of corona clavate, ex 1 Cav.; small, horn-formed, ex Kunth; corona yellowish. Branches down, ex Kunth. 1 K unth's character of this plant do••no* exactly agrrt «ritb tl at of Cavanilles.
Awl-leaved Swallow-wort. Fl. July. Clt. 1802. Pl. 2 6.
31 \. * m t i > (Spuag. %y%t. i. |. 849.) stem suffruticose, bes' i mill ti trngracl prickles; leaves ovate-oblong, glabrous; peduncles cymose, lateral; horns exserted. ½. S. Native of New Granada, Bertero. t
Armed-stemmed Swallow-wort. Shrub erect.
32 A. LANUGINÒSA (H. B. et Kunth, nov. gen. amer. 3. p. 193.) stem simple?; leaves alternate, petiolate, ovate-lanceolate, rounded at the base, woolly on both surfaces, white beneath; umbels extra 4-aaillary »n . terminal, sometimes proliferous; appendages of corona includ .. G. Native of Mexico, between Cassava and Pacbwr*. ll erb fetid. l'eduncles woolly. Plant down, \ at top l-limrri .1 out the size of those of A. Curassávica, white; •MiaraM rtnarrinnu
Woolly Swallow-wort. Pl. 1 to 2 feet.
33 \ M OK : n. spec. 316.) leaves alternate, ovate, acuminated; umbrU t<jni|MMUMl; tirro rw t, simple, - 11 Hi tive of Virginia. Gron. virg. 27. Flowers red.
Red-flWatW ••allow— ort. Fl. July, \w<. f Cl. 1825. Pl. 1 to 2 feet.
34 A. TUBEROSA (Lin. spec. 3 lt.)a««n s erectish, divaricately branched at top, vrry hairy; |ri ves scattered, oblong-lanceolate, hairy; umbels disposed in a terminal, sub-corymb. Y. H. Native of North America, in stony, sandy fields, and woods, common. Purah, 1. p. bot. rrg. 76. Lodd. bot.

cab. 1X97.- Dill. rlth. i. SO. f. M. Flowm my tbowy . corolla and corona bright oranf< cat>.«> jrattotr. Umbel* dupoard a* >f it' ••! rurvmb.

jTaom^t-rooiwl 9 wallow* wort. Fl. June, July. Ch. IMO. PL i to i r-

Si A. Dtu'HMM (Mil), diet. no. 10. Willd. tprc. 1. p, ltlS.) »tren» decambent, hairy j lrav« Unerolatr. »«ry hairy: umbel* lateral. 1(.U of Carol irrrrt BrU»! A. iwbrTrt^t mbro., Pur»h, 1. p. 1 h* ·'· "d nrcunc* bright orange- Colon red ; and fill '*nt. hat ·POM H^hl, ' ·] Ju'). I L 1731. P). (Wumbrnt.

+ Vnr* »oJ *t*JL,cnt!₉* tarn.

36 A. TAKILLA (Raftn in a liter, mwith. ^>um. 4. l»T. ISIK.p, 39.) Bteiu .imple, downy ai top; l*aw (mpotile. lane

IT a v *T:. B·abroi: · *»•>'•• kaeftbtgn.

1 <win lilac, bavtng the anM ll».

VmMm aetin

37 A. T KLAmoTttiiMA (Rum. . 1« <vrl Opnoaiiiui Klaproth. A. acummftta, Willil. i 1. C.

lfftVM fCTul 1. p. » ; opjKMtir, «itl ". X- »I

*tit f mm-*l-leaved Swallow-wort. Pl.

4«». 4«c ; umbel* m- th a ·ubulat* «ppmd^». *11* 11 IHUIli IphlJt

MAKOAI iTmanaefB w Willd. reliq. mas. ex Schultes, syst. 6. p. 03.) leaves oblong-lanceolate, acuminated at both ends, klat,ro« solitary. ⊙. S. Native of Brazil.

*Peart-*ft

*, *J * ·watn_ - ·U H'1 P- 1 » Lmk. '" l1 pttolare, oppoaitc. cimla

TrvHcntr Swallow-Wrx

† † *Plants referred to Asclèpias by authors, but none of them evidently belong to the genus. Leaves of all opposite.*

42 A. HCCRORA'TA (Thunb. · H p M a p . 2. p. 155.) Ntcms errci, herbaceous, hairy; leaves oblong, obtuse, mucronate, glabrous; um s axillary. ¼. G. Native of the Cape of Good Hope, beyond KaflNta'a r. reduncles shorter than the leaves; pedicels downy.

*Mucronate-*leaved Swallow-wort. Pl. 1 fo.

i \ co ivotrt LA'CRA (Willd. spec. 1. p. 1269.) stem twin- >i l l* aves roundish-cordate, rather pilose ·· well u it* stems: lobes distant; umbels compound. ♄. ◠. S. Native of Guinea. Very like *A. Jtrltda.* Common peduncles longer than the leaves, pilo

vfifius-iikt Swallow wort. Shrub tw.

44 A. ZILLIÓRHIS (Lin.. tuppl 169. Thunb. prod. 1. p. 47. fl. c· p. f. p. 154.) stem erect; lea ves long p**lurnlr«, 5-0-(!o* lateral, on ·l ·if, Native of the Cape of Good Hope, at Kr river.

Margins of leaves revolute. Follicle »olittnr elliptic. This and *Cyn chum fliforme* and *Apócynum fliforme* are probably one and the same plant.

Filiform Swallow-»ort. PL I to « '

45 \. GRAMÍNEA (Lam. dict. |. p. t»3.) stem branched; leaves linear, grassy, glabrous, with revc edges; horns of ect, mucronate. ·y S. Nat ire of the East Indies. Stem rather angular. Leaves an inch long. Corolla white, with undulated edges. Calyt l

TrIratedSwallo--*.^ Pl. 1 to * * J t j^bby;

46 A. SPIRA'LIS (Fors

leaves p*tmlair !<<<< t Urra *fW'**T£* kSift Imtr, «Mral. hairy inside; corona o ovate, white. ♄. G. Native of Arabia Felix, on the road to Djalia ·nd Mrorira, *mmtmm i'**»* *dichótomus.* Segments of calyx linear-lanceolate. Corolla spreading, with greenish yellow segments, and white corona. Stigma operculate. Follicles edible. Shrub not milky.

*Spiral-*petalled Swallow-v

47 A. CANE'SCENS (Willd. stems ascendin· at top, bat praCMMbftBt M "* * J w j | - leaves ovate, veiny, acute, downy; umbels few- lary, ·fl »horl peduncles; follicles ovate, acuminated, downy. ¼. H. Native of Ca #> ndolcia and Galatia. Asclèpias orientàlis, flore *ifwi, |o*jfn. cof. *M*^ Buxb. cent. 3. p. 17. t. 30. 1 lowers green.

Canescent Swallow-wort. Pl. procumbent.

48 A. PARVIFLÒRA (Humb. et Bonpl. in Willd. rel. mas. ex Schultes, syst. 6. p. 82.) stems scandent; branches fascicled; leaves elliptic; flowers solitary, terminal. ♄. ◠. S. Native of South America.

Small-flowered Swallow-wort. Shrub tw.

49 A. CLEISIFLÒLIA (Horsfield, in Willd. rel. mas. ex Schultes, syst. 6. p. 82.) leaves obovate, fleshy: umbels axillary; stems twining. ♄. ◠. S. Native of Java.

Clusia-leaved Swallow-wort. Shrub tw.

50 A. FERRUGINEA (Humb. et Bonpl. in Willd. rel. mas. ex Schultes, syst. 6. p. 83.) clothed with rusty hairs; leaves ovate-cordate; stems twining; .n.U I. axillary. ♄. ◠. S. Native of Caracccas.

Rusty Swallow-wort. Shrub tw.

51 A. FORSKA'LII (Schultes, syst. 6. p. 85.) twining; corolla M spanulate, green, twisted; petals linear. ¼. H. Native of Arabia Felix, at Lohaja. A. sirves, Fors k. egypt. 31- •* A. nivàlis, Gmel. syst. p. 444.

Forskal's Swallow-wort.

52 A. MACROPHY'LLA n '•• • tiit i»l- (Humb. c· ·> ....l ut W ill»- ex Schultes, syst. 6. p. 86.) ,,i r- «u-ro» I* ' S ,i l · > ining; leaves ellipt cor- date, acute; umbels nearly sessile. ♄. ◠. S. at Cumana.

Long-leaved Swallow-wort. Shrub tw.

53 A. EVSANCUINEA (Humb. et Bonpl. l. c.) leaves oblong- Illirr.iUl.-. ^rv.ir, i;Ul,fu«i. | nil.tM-lt terminal. ♄. ◠. S. Native of Caracccas.

CpmmKtmm

4» A. •« TA'TA (Bungr, in mem. acad. peterab. 2. p. 117.) M«ai lwiiMikc, nUbt ·Mtk, tW bwwUff b ·MMyAowrrW. V ◠. G. Native of China, on the mountains of /M. wey-scan. Flowers white, sweet-scented. Perhaps a species of *Daemia.*?

*Hastate-*leaved Swallow- wo< l tw,

Cult. Asclèpias is a genus of extre rttely handsome ers. They thrive best in peat earth, or light rich m generally increased by dividing at the root in spri ad* *Amy* »(r

and sometimes by Mvdi. l. are or scarce species should «!«>>• be grown •n pew aotl. and hatr * fitilr nroUtUoa during * frost by •niching tlw roota. Tbr grvmbooae and *iove species require *M • M M trauaaaal as outer HIUIIUUII Movt and green-house plants.

XL. II POILYOTUS (from πολυς, *polys*, many, and ους ωτος, *ous otos*, Nutt. ear; Uaft Yu of corona auriru Utc at the baae). in HMr, p»,ij. .oc. trfcat, %o j. i, *new wet.* p. l » . - A e « - •«««•, Elltott.—AacU-pww »|«-oc« of mtbon.

•*•••»?. /Vw/4»«V«i. *Ihfpum.* ComlU rotatr, £.par ted, reflexed. [1]-K>(ia %Hni:.. ; .• , i M M k m M i <-.*«•»*€•, without any horn-formed process inside, auricula atr at i the base. Anthers terminated by a membrane; pollen masses compressed, pendulous, |)x.; i, th, , t..pering spices. Stigma depressed, mutic. ollicles smooth or villous. Seeds comose.—Erect herbs. s scattered, or nearly >ll-|KHltl 1 „ - U . . „ petiolar or trrmiaal.

1 P. HETEROPHY'LLUS (Nutt. l. c.) erect, villous; learn op* posite, °Wonaj-eiral«?, ajrnrtally *a-* ; rofuna nrarly >«|ual um in hrinlit. ," *uthh ;* an d of the Arkansas territory, from Fort Smith to Red Rivrr. Airliniii virtdiitora, *Pwnk,* fl 1. j>. 1M, t . U M M - phocarpus viridiflòrus, Spreng. syst. 1. p. 849. Ascl. grrro Corolla greenish, with yellowish corona. Umbels n*.Hy w ile.

Var. β. ta; leaves from oval to ovate-l.nrniUlr, flat or undulated, downy or smooth. ¥. H. Found at New Haven. Corolla greenish, with a brownish corona.

Variable-leaved Polyotus. Fl. June, July. IM. S l.. 3 feet?

2 l' LANUGINÒSUS (Nutt. !• «• p- 200.) decumbent, hairy; leaves evata, M-atic-Tcd umbels generally solitary, terminal. ¥. H. N tif Arkan«a» l territory, below the confluence of the White riv.' »'<tt iba V inagaitm, issouri. Asclèpias atntr. l. p. t«t, Wlrrna. Nutialltina, Torrry. b Nutt. gen. lye. ww jr.,rL l. |>. M7. l M C lul. Mem ••« ann. f rlot>> , A doubtful •pMtm, which inches lath. s greenish requires to *be* rxsminrd in • living » ate.

Woolly Polyotus. l'l. ½ foot, decumbent.

3 P. LONGIFÒLIUS (Nutt. l. c.) jM.bcn»ioo.; itrm* crrciiJi; leaves •cattcr^l, Umn li.K-ar, aottc . un.brl. blnpMielM, pr- dunculate; corona atipttatr, shorter than iba a-ynilafiaiM; follicles villow. ¥. H. Nam. -n«i. ai«l Mkawtri to Red river, on the margins .f jxmU; and in plan* otarflowed by rain iiiKtntrr. lt •• alM. aO be fotn ntpt MMT the Atlantic AMHpkaj| |..<•.,r»|.,,i». HWui. M bar. »m. r. l. Georgia. plt 4tct . (I. i c. 116. Asclèpias longifolia, Ell. ske*ek boi p. 317. V.- incarnàta, Walt. ar. p. 106. Ascl. floridàna, Lam. dict. 1. p. KM. A. jMntprrriilj. Nmi, *grn.* aturt. l . l . l Gomphocárpus longi- i.»lu.m. tpMaJ. ijrrt. 1. p. M'», • F IDIHI. loose, nearly globose. l leaves l incbc. lon|(. and | an inch broad, downy beneath. ¹ we* •aafl, pnatili; petal. tij.|*-,l with obscure purple. Segments o i , corona fiukmg, rotM*v.. with a purplish line near the base. Fructification yell >*w.

Long-leaved Polyotus... H Jo, Jut. Clu JMO. l nil >itt. l, r p. 201.) atMnatrrct;)«>«>. *ʷl)f oppoaitc; iiml*L inWrnrttolat, nrariv » ile; corona rather longer than IU |tyttualrf|ium, *mr—ilt*; IMH. ts of corona wdaataiv at tlw ai» ¥. H. Native of the Arkansas territory, in dry prairies, from Fort Smith to the Red River. Stems naked at bottom. Leav •« NMnrwbai m a l t) sad scabrous on the "qpa.aruir t'mbclt vi vnVwrml. Flown greenish, with a mixture of white. Leaflets of corona concave and auri- culate below: having ibt CTtlll tooth of each small. This species ia nrarl* allied lo Ciiwf tir*>|iu and *Atcilpm*. particularly to *Ascl. cinèrea.*

Narrow-leaved Polyotus. Pl. 1½ foot.

5 P. OBOVA'TUS (Nutt. l. c.) leaves o'>ovatp, mucronate. tomentose beneath; umbe U alnvwl M I ; corona twice as long a# tlw ^ ^ nostegium. Native of Georgia. Asclèpias obovàta, Ell. sketch. p. 321. Flowers greenish.

Obovate-leaved Polyo (ui. n. turrand propagation M» ,/K trrMi, *l»ve.

Caff. For cu

Mill 11 Nhi named after Aloysius Enslen, an assiduous and practical botanist, patronized in tna reaMrcbr* in (hr United States by Prince Lichtenstein). N itt. grn. *mrr. t. [- 164. and in amer. phil. soc. trans. 5. p. 203.

LIN. SYST. *Pentándria, Digynia.* Corolla 5-parted, erect. < • t.a cifnplr, 5-parted, petaloid, Nat truncate: the segments .t, l tin :., a b.l thread. Stigma conical, sub-bilamellate. Tho rest ai irt *Asclèpias.*—A twining herb. Leaves (.|I[M>*ltf Flowers utuU ellate.

1 E. A'LBUS (Nutt. gen. amer. l. c. amer. phil. soc. trans. | r , v ^ . H. Native near Fort Smith, and other p im BJD· M ll>. IMIIL \>Lano». to-iml «Jao ritt the banks of the | Potomac, Scioto and Ohio, &c.

Whitish-flowered Enslenia. Pl. tw.

('*/*. For culture .ml |>fJl' gation see *Asclèpias,* above.

XLIV. GOMPHOCA'RPUS (fr Mi γομφος, *gomphos*, a club, and καρπος, *karpos*, a fruit; in reference to the ventricose follicles). R. B . wern. soc. 1. p. 37.—As ir,ua. species, Lin. and Th ,nt>.

Lut. itrvr. i *entándria, Digynia.* •Corolla 5-parte l r*. flexed. Corona seated on the top of the tube of the filaments; 5-leaved; lolmU m culiate, furnished with a tooth on both sides, rmpty in«i.i, An thers terminated by a membrane; pollen maafa eofrtpmard, Tiv ed by their tapering tops, pendulous. Stkma drprr. ed, mutic. Follicles ventricose, echinated by toft spines. Seeds c xnoar.—End larabi or subshrubs, natives of South Africa. 14am oppo> ite, with usually revolute edges. Umbels interpetiolar.

1 G. ARBOR'SCENS lt. |tr. | r. ,i *3$* and in 11 ort. kew. *d. l. vol. 2. p. 79.) stem villous, branched; leaves ovate- oWm,, glabrous, with an acumen. b . G. Native of the l Cape of Good Hope. Asc via. aibor*l«««.. 1 in. mant. 216. Wffl.1 spec. 1. p. 1271. Thunb. fl. cap. 2. p. 15(1 . ariMnl •ttfaW era- t w7

wWh brloag *t>. <.. ,,,.-fM,* H,,rm. »). .i| , j< •> amaltl. 18. t. 559. f. 3. Peduncles, pedicels, and «l villous. Corollas white, glabrous.

Arborescent Gom |*ocaf|m. l ! (lac. t irii, to • fcrt.

2 G. TRIFIDUS (R. Br. l. c.) stem downy; bjMM lanorala e, glabrous. ½. G. Native of the Cape of Good 11 |.. ! beyond the f e of mountains, abundant. Sims, but mag. 1628. Asclèpias fruticòsa, Lin. spec. 313. Thunb. fl. cap. 2. p. 154. A. glàbra, Mill. dict. no. 12. fig. 45. Apocynum salicifòlium, Medic. act. parl.—Herm. par. 23. t. 24. Pluk. alm. 36. t. 188. f. 2.—Asclèpias crassifolia, Lin. syst. p. 21 t. lira.,. l..-. .l,,,,l. Leaves 4-5 inches long and an inch broad. Flowers white. Peduncles and pedicels downy.

Shrubby Gomphocarpus. Fl. June, Sept. Clt. 1714. Sh. 5 to 7 feet.

3 G. SUBÒSUS (R. Br. l. c.) branches vil leaves glabrous. ½. G. Native of Arabia Felix. Asclèpias •rtoaM, 'ahl, •yml>. l p. *ts,* i. a. Forsk. desc. p. 51. Lnvc* an inch

lung. Peduncle* mod pcdkrW TIIIV ...r» p t s , Follicles bristly.

igllm OIWIIIMH «I [»•• Shrub.

4 G. caisrus (tt. Hr. 1. c. 1 branch* < downy; leaves lanceolate-cordate, undulated, hispid. ♄. G. Native of the Cape of Good Hope. Asclèpias crispa, I in. sii>pl Ijo. mant. 215. Thunb. (trod. I. p. 47. fl. cap. 2. p. 154. -Cotnnrl. nr. t 17. —Piuk. pl.yt. t. 13&. f. I.— Mor. hist. sect. 15. t. 3. f. 37. Peduncle i and calv\t» ptlt> e. Flowers greenish yellow. Lam. Umbels solitary, ti-rmmal. hrdunroh e, purple, ex Lin.

Curled-leaved 1 Gompboearpu*. I Fl. July. Clt. 17 j(i Shrub l i' 2 feet.

3 4. ANGUSTIFÒLIUS (L. M I I. p III.) stem erect, ..y; leaves linear-lanceolate, flat, glabrous. ♄. G. Native of Mexico. .Wi(-|»*. »n,fti t r l l. 13. Schultes, syst. 6. p. 70. Awlrpa. linearis, Hort. ; Leaves 2 inches long. Umbels *ilrrtut,* ti • minal, or nearly so. Corolla small, flesh-coloured or ahite.

Narrow-leaved Go inphocwpiM. Kl. July. AM. Clt. 1817. Shrub 2 to 3 feet.

Cult. These in blossom. T... ...oil; and »rv mcrewii by *r*d. wind. ,i|»»n W abttmW*.

X ...SIA (fro... ...ous stos, an ear; the leaves of ttwr corotui ire biaunruiau x th* h»*r). kunth nm •mjrr. 3. p. 1(9.. ^ • •»•

Asclèpias auriculàta, H. B. et K ...l. c.

Diglyàia. Calyx 5-parted. Co... ...xed. Corona 5-leaved, seated on the ... rolU 5 partnl, rrll ... tube of the filaments; leaflets cucullate, each running from the bottom into a born-formed process, bisuriculate on tb* *timxit* • t the base. Anthers terminated by a membrane; putWn mu... compressed, fixed by the tapering apices, pendulous. Stigma concave, mutic.—An erect, herbaceous plant. Leaves opposite, petiolate, reticulately veined, membranous. tmb.: ... interpetiolar. Flowers greenish yellow.

1 O. AURICULÀTA. ♃. G. Native of Mexico, near Acio, in *gr*...ves. Asclèpias auriculàta, H. B. et Kunth, nov. gen. amer. 3. p. 149. t. 228. Branches terete, downy. Leaves oblon... ute, ro... t the base, flat, membranous, glabrous. Umb... involucri... many downy bracteas. Style pilose at top.

^ « rU. PI. 3 to 4 feet.

Cult. For culture and propagation see *Gomphocárpus*, above.

XLVI. C... •XYSTBXMA A w * * ...ozys, sharp, and στελμα, *stelma*, I / ' " » n : m rrfcrrwrr to tK* ...foliola of corona being acute). n. Br. in we... ...hoU. p. 462.—Periploca species, Roxb.

Lin. syst. *Pentándria*, ...

Column exserted. Stamine... ...Anthers terminated by a membrane. Pollen masses compressed, fixed by their attenuated apices, pendulous. Stigma mutic. Follicles smooth. Seeds comose.—Suffruticose, twining, glabrous shrubs. Leaves opposite. Racemes or umbels interpetiolar.

1 O. ESCULE'NTUS (R. Br. l. c.) leaves linear-lanceolate, veiny, smooth; racemes longer th... • • iW» U« ...ves; corolla fringed with hairs; follicles oblong acuminated. * ... ^. S. Native of ilr I ...'• I. 1... ... •r.Ir;;.1 ,m| amongst bushes on the banks of water courses. Periploca escu... Lin. suppl. 168. Roxb. cot. I ; ... p. 13. t. 11. Asclèpias ... rtaM, Roxb. fl. ind. 2. p. 40. —I'!,,-. tlM. M. 19. I. 541 ... Ho* composed of filiform fibres. Leaves deciduous during the dry season, ••« ... inches long. Flowers large, beautiful white, with a tinge of rose colour. Roxbur... J» *dan* Ml A^ ttiM the natives ever eat any

ptrt of ... iU I HI•••I Ml it. It is the ... ...he Sanscrit, see Jones, asiat. res. 4. p. 268.

E...dent Oxystelma. Clt. ISt«. Shrub tw.

2 O. WALLICHII (Wight, contrib. ind. bot. p. 54.) leaves narrow, linear-lanceolate; margins of corolla ciliated; follicles short, oval, obtuse. ♄. ^. S. Native o... ,1 I'.- East Indies, on lbr WJU ... of the Ganges and Irawaddi; ar... the province of Tanjore, near Pathacottah. This is very nearly allied to *O. esculéntus*, ...harper and shorter follicles.

Wallich's Oxystelma. .Hhnib I ... - j ^ suboval,

3 O. CARNÒSUM (R. Br. pr... ...mucronate, glabrous; fascicles of flowers umbel-formed, pedunculate; segments of c... .,f,,,IU ltrtn'- ♄. ^. S. Native of New Holland, within the tropic. This species differs considerably from the rest, both in the form of the corolla, and in that of its corona.

Fleshy-leaved Oxy... lf t ...a. Shrub tw.

4 O. ZIPPELIA'NUM (Blum. bijdr. p. 1055.) leaves narrow-... ...r.l/... ...olate, cuspidate, smoothish; peduncles 2-3-flowered •I |W »prx . ronJU W v W tb* ... ...use and margin bearded. ♄. ^. S. Native of Java, about Bc... collected in the gardens of Zippeli.

Zippeli's Oxystelma. Fl. Oct. Shrub tw.

5 O. HOOPERIA'NUM (Blum. bijdr. p. 1055.) leaves cordate, acuminated, smoothish; fascicles many-flowered; corolla glabrous. ♄. ^. S. Native of Java, about Kur... ...an, in the garden of James Hooper; and at the foot of Mo... Salak, where it is called *Aroy tjapu tukur*.

Hooper's Oxystelma. Fl. year. Shrub tw.

6 O. BOERHAA'VIUS (R. Br. in append. to Clapp. and Denh. trav. p. 54.) flowers racemose; segments of corolla semi-ovate; ♄. ^. G. I-I ...icles inflated; leaves lanceolate, cordate a... ... differs from Native of north Africa, in Borneo. This species ... *O. esculénta* in the inflated !.. I . !r». and in the leaves being cordate at the base.

••TMM < M ...ystelma. H '". Cult. For cultu... propagation n see *Oxypétalum*, p. 148.

-. *mi* |

\ I \ I I Mill SIA (meaning unknown to us). Wight and Arnott, contrib. ind. bot. p. 57.

Li'... SYST. *Pentándria, Digynia.* Corolla rotate, 5-cleft. Staminous corona 5-leaved; leaflets fleshy, suddenly narrowed to iW apex. Anthers terminated by a membrane; pollen masses ventricose, fixed by their tops to the extremities of acceding, filiform appendiculi, or retinacula, pendulous. Stigma •M ...ic. Follicles smooth, attenuated ... glabrous. Seeds comose.—Erectish or twining herbs ... aves opposite. Flowers small. Umbels interpetiolar, •,!T1v gregate, or almost sessile at the heads of the peduncles. ... genus is very nearly related to *Tylóphora*, both in habit and structure of the flowers, but is separated on account of the truly pendulous pollen masses.

1 I. ACUMINÌFERA (Wight and Arnott, l. c.) ... S ...ose, twining, glabrous; leaves oval, cuspidately-acu... ... petiolate; umbels sessile at the flexures of the common ... disposed alternately; segments of corolla short; retinacula or appendiculi elongated, bent upwards at the base and downwards at the spex. ♄. ^. G. Native of the Neelghery mountains.

Many-flowered Ipho... Shrub tw. ... s. 32.) erect t*>>- 2 I. GOVA'NUS (Wight, contrib. ind. ...in], to lanceolate leaves almost sessile from broad, oval, acuminated ... acute; umbels simple, aggregate, few-flowered; pedicels as long as the peduncles; segments of corolla lanceolate, glabrous inside and hairy outside; retinacula ... ...iculi short, at first as erectish. ♄. G. Native of the H...

Shmb or l»
uliurc aad propagation see *Calótropis*, a. 14

XLVIII. PENTATROPIS (from *πεντε, pente*, five, *τροπις, tropis*, keel, in Sa|», i_r»*. append. ex Wight and Arnott, contrib. ind. bot. p. 52.—Asclèpias microphylla, Roxb

« Lin. syst. *PrmlinJrm, lUgytt*. Corolla ratal'

Corolla ... ivill l< ill l .j.j«iiiti· i;.. .l'.tln t«. ail·

mi** ertically to the gynostegium, averse, loose or free at apex; pollen masses ventricose, pendulous, fixed beneath their tops. Stigma Uilic l ollicles smooth. Seeds comose.—Twining subshrubs. l eaves rather fleshy, flat. Umbe interpetiolar, few-flowered, almost sessile. l ollicles obsoletely ingonal. fl»t-tish ide.

'· P u and Arii»it, l *niug** gU> t, tawcroMatc, rount!< l' < haa* corolla Bprra v«d; DM braad, m t u al i >l In tli

r£r; -

of rivers; particularly the river called Yamuna, in Bengal. *Km* K,.»b. U. in.1. S. p. 55.

Schultes, uiu». mJ. t. 610. Oxystèlu ta, Ham. herb. Wall. B M L iw. 110.—Asclep. alexic .a mittla may be this plant, but the figure in Rheed. mal. 9. t. 13., to which he refers his plant, has no ·fflniiv. (Will) · 'wfrt o«rAM., tl.jt ail. re am many ul vious reasons against

Small-leaved Pentatropis. Shrub tw.

2 P. cynanchoides (R. Br. in app pend. to Salt, trai ·. G. ative of Abyssinia. We know nothing of this plant but tlt« tia>

·*fmanclkvmiiie* Ptntatropii. Shn

f'a/r. l or cultii. SJMI propafaluM) M« *Oxypétalum*, p. l l l

XL l\ l:\l'lU>l1M\!A fW» fUf.t, *raphis*, MM, a i rown; in reference to the narrow, rlon- lea. u gated leaflets of the corona). Wall. pl. asiat. rar. 2. p. 40. t. i, I! ight and Arn. contrib. ind. bot. p. 54.—Asclèpias put- oxb.

Lin. syst. *Pentándria, Digynia*. Corolla ratnpaoul. lin parted; lawinal corona 5-leaved: leaflets compressed, elo d. Anthers terminated by a membrane; pollen masses fixed beneath their apexes, pendulous. Stigma bluntly conical. Follicles solitary by abortion, somewhat ventricose. 8 d b comose.—A glabrous twining shrub. Leaves largish, cordate. Flowers white, corymbose. Corona exserted, equal to the limb of the corolla. This genus, Dr. Wallich suggests, is very nearly »b 5. | a·aJ[1"] allied to Asclèpias, the difference appearing more in habit and country than any character afforded by the flower.

1 R. pulchéllum (Wall. l. c. t. 163.). ♄. ☉. S. Native of Silhet, Gualpara, Tavoy, Pe till, IK:i- Rangoon. Asclèpias pulchélla oxb. fl. ind. 2. p. 54. Pergulária? campanulàta, Hamil., herb. l Flowers large.

Neat Raphistemma. Shrub tw.

Cult. For cu llUtf and propagation ·M *<>jy)*fal*m.* j. 148.

L. l ROSTE M \ [frota MfM, ««r>i a tail. and *στελμα*, a crown; w (· l. rrm* to UM talk of ih# gynostegium). Bunge, in mem. acad. petersb. 2. p. 118.

Lin. syst. *Pentándria, Digynia*. ··· arted; with lanceolate, acute segments. Corolla campanulate, deeply 5-cleft; segments villous in ·· >MW, aMl at lrtk^tli revolute. CMM "'I.J.I shortly 5-lobed; lobes obtuse; gynostegium furnished

taom ttfccin. and raeh of fttnualwd «nlt · l.** Mflbral apptadajp, wti HaWn—l M ">· b Baa l M M N t-ii mimca ,M)l comoae.__A KSadaM or t · ining plant. Leaves cordate, waved, acuminated. Racemes axillary, pedunculate. Flowers pale, dirty reddish white.

l U. Chinénse (Bunge, l. c.). ♄. ☉. G. Native of China. China Urostelma. Pl. tw.

Cult. For culture a ·d prupafatMo MT ftiyyfcal—, *p. Ht.*

LI. AN VMM ERIX (from *a*, priv. M,d.^^-« *ἀνθερίξ*, an awn; there are no horn-formed processes fr « i the bwM of Uv leaflets of the corona, · m *i.rirfmt-*). Nutt. *gm.* ainrr. l. p. 169. and in amrr. ph.l. aoc. ttan». 5. p. 201.—\^»C,»IB. species of author >r«.

Lin. syst. *Pentándria, Digynia*. f-taWn*. /VjWa. Corolla ...bca. pan ulate, 5-cleft. [1] Corona simple, 5-lobed; lobes compressed, empty inside (** fliraiabgd with n tw, a *f*n furtii»l»ri| * i), incurved, a little segment inside, longer than law ajnoncgiaiMi * l which is sometimes pedicellate. The rest as in *Asclépias*.—Erect, herbaceous |ilantt. l^«»i» ahrrnsir or opposite, sometimes subverticillate, and the axils sometimes spinulose. Flowers large, umbellate, or panicled, terminal. Follicles muricated or smooth. This genus is very nearly illiwf 'o *Calótropis*, but differs essentially in the insertion .f tW ctwnna, ai.<! m the form and character of l((M«n»twta.

Sect. I. Lævi n u t (from \#».c, /»7 /*«, a 11 Stiimrt,.. ..f ror.M... MM* n ·

l A. O»it>t« (Ntrtt. (r«. amer. l- p. l6B. tmrr. phil. aoc trans. 5. p. 201.) leaves opposite, se ·ailr, obovair-obli.h_kr. tnu- cronulate, smoothish; umbels cauline, ·ubpanidad, few-flowered, very l errd; arfiwnu of coron. y *tg, ‹y* || N ative of the Arkansas territory, in damp pine barrens, near St. Mary's; ind (Carolina. Asclèpias viridis? Walt il. car. *m,* 107. \scl. on* nivens, Baldw. in l Ell. sketch. p. 320. i Podostigma viridis, 1.11 rfMlkatr. (J-.-i.^wlir,... >.,,.. ^ M H . v>.t. l'"p' 849. Corolla green. Corona purplish; fruc tihcaiM.t, Him, *Green-flowered* Anantherix. Fl. Aug. Sept. [1] lt. 1812. Pl. ½ to 1 foot.

l A panicula'tus (Nutt. in amar. phil. aoc irawa. 5. p. tOl.) leaves scattered, ovate-oblong, bluntish, mucronulate; umbels divided, subpanicled; corona one half shorter than the corolla; follicles minu-alnl. lf.il k«n*a» l Native of the A territory, in cedar swamps, near Fort Smith; atitl al- near the Red river. Asclèpias viridis, Walt. fl. c ,rnt. p. [37. l ·rsh, fl. 1 p. 185. Stem angular. Leaves scabrous on the margins, 4-5 inches i kma;. and ' ' ½ broad. l , . ls several, terminal. Corolla yellowish-green. Corona variegated with purple and white. *sacicled* iMMMal AHJ.MI1.. ,» \[l |a] |) „ ,

3 A .ir^MBawlstr. »iry long, antU(lOWIIMM «a\ >nalt corona abowl tajwal w kanftb to iktMnlu. n .11 af UM Arikawaai irrmory. on dry bill., nrar ttw . -i»- (!..,,». ..itl.. KaawWaW «Wa ttV H..t rfaaj M.m ralWv «n- fabr, l w lf iadwa lan«. U r n acabrowa o* th. «%*·. *Vmbt\B* aoUtuy. P i J i r i n d '*"«*<»(AMU

Sacr. II. ·) tla'ndra (from *ανηρ ανδρος*, a m«lc; lM r»k· ·ence to i.. gynostegium being pedicellate). Suit, in «4M*f : ' l · ran. & p. 203. Segments of corona destitute af il.. hole

Oe. Column of fructification or frynoMegfaa pedicellate. Follicles tmootb.

4 A. n m u ' i (Nutt. in amer. phil. »oc. (ran*. 5. p. tO3) !«••*.» linear, nearly opposite, »e*»ilr; wtfimtiu of OOTolk 4 times longer than the corona, fc. H pint barrens, m KflBgfcajn nl}r ife Carolina, Walter; near Fort 1 la, Nutt. gen. an»cr. 1 I. sketch. I. | . pedicdli fl. ear. p. 106. Pur»h, fl. I. p. 18 *tny,* gmeou of coroas lanriali Klnwi yellow. Plant .1 inches \u^h.

I

/)> f. Clt. I Si*. PL . 'r*P°~ near, acute, ^UKrcin hcnraili; but bamng the margin* rather hispid aboTe; p iniiui, dkhutwom. loose, many-floMrred. %. II aouauin. near Unaoan ... \ .,HM panirufra, \iianthcrix. PI. ', font

A. Toau ; leaves vate. *H* II YiUte of North Amcrtca, among ' the Rocky Mountains. Auai t>< rt*. not. *uee. . ^ y a r k ^ . p . m .

linear Isjuiwim, obtaat at tK« prtiolaie. •Ion* »rth ihe pnc«dm r « fsrrty. 1

U I XYSMALOBIUM (*Iwopa,* x*vo«, a thread, and λοβος, lobes, in reference to the follicles being clothed with raments). H. Ur. I

PrntimJrta, DiggnM Corolla 5-cleft, >prc«4w«, I trated on tbe top ol the tub« « of the p 'pdf |l0 oarU 1 *5* of paru are tlntiy, rountfith, nak< the oilier 5 are MM

uiuauun 1 · niiiaa^^H poll *V<MM* tricosc, rsn> of koulh ftfrict fer. Klower* \a

I \ UNDULA'TUM (R. Br. l. c.) stems villous, simple; leaves sessile, oblong-lanceolate, undulated, glabrous; petals ciliated. ♄. G. Native of the Cape of Good Hope, on hills, about Paradys, in Kamanasie, and elsewhere. Asclèpias undulata, Lin. spec. 312. Thunb. jiii. ji'rc|l. 1. p. 47. fl. cap. 2. p. 155. Asclèpias ciliàta, Lin. syst. ed. 271.—Commel. rar. t. 16. Lower leaves a span lo 15. a. ./ t , .. f, frequently sessile. Ctl ' bearded, " greenish," ex La lt.

Waved-leaved Xysmalobium. Fl. July. Clt. 1783. Shrub 1 to 2 feet.

2 X. GRANDIFLÒRUM (R. *if* '. stems simple, hairy; leaves pettoUr, obloM, lairy , umbrti p b« Cape of Ood II Kamaitaaw M , ri. cap, f. p. 1M. I '' t cb*<q»rrrd tike lljwc

Mil beautiful. " a.ul lit* leaflets of K. ! corona are keeled). Br. in mem. ern. soc. 1. p. 39. =A· ! sclèpias species of in. and Roxb. /VnlaWn*. *Ih,* jn angular lube : lr of the !»•* .Jattbe 1 , y •tabroot «linib«. natives of the East Indies, Africa, ersia. Leavr* broad, opposite. Umbels interpetiolar. i rets i«rg*« Leaves almost sessile, cuneate-oblong or broad-ovate, retuse, or subcordate at (A* s**r. J, p. 7S-J i.bori rorn wo0,1 Andr. I*. rep. t. 271. l^sV ii !• l< p. 280.— ",, . .] > i probably belotip W the t resent plant. C "»"*» wtvme ! at UMi bv a narpw st> ' "*'"'* * 'SL^T L!2£d ITS S,)ll:ll i—losi on roc** in BC jajro. aou •» —• • ,,,,r.-4. ' " HpU 0«JoVGorr». A^*Pr«K ^ * j P*! f ? ° ' ^ a ism. MsWh 'I' BM MNMi «"t•• '. I"'1 M well as sjoiaoajOM bMe< f l \ «4\ »• |,frt.«rril , . 1 \ »In

••para, acuminated at tSc baa* MK!

[redacted] M tH«. , pex. ♄. S. Native of tbr Ra»« Indies, '»

ous arts. C. procèra, Jam. in Lin. trans. 14. p. 426.

of the synop. Wall. ascl. no. [illegible]

Hort. bot. calc. The Persian C. procèra

the Indian one.

's Calotropis. Shrub 6 to 10 feet.

Wallichii (Wall. l. c. II segments of coro

of ttw •ynotiyma. \.

leaflets corona exceeding the gynostegium, acute or ob-

! ; it quilt dw-

base, and recurved, but incurvedly 2-lobed above the stigma at

*•• .! • • Jo» ♄. S. Native of the East Indies, at Mellore. n. C.

K'J»m. — - all. ascl. no. 91. b. af«m»>' lUvpHHiiMi

r distinction to the species in habit from the preceding, in

„f mrona (U M <Ml««i«tn. ublaur at i>< ies; the flowers are in loose, long-peduncled panicles, in place

n ! of contracted cymes of umbels.

Wallich's Calotropis. Shrub.

5 C. HETEROPHYLLA (Wall. ascl. no. 91. a.) MMMIWIrf

corona 1U •rectish; leaflets of corona equal in length to the gynostegium, obtuse and recurved at the base, having the mo••gin»

lying on the top of the stigma, 2-lobed: lobes thickish, sub-

diverging. ♄. S. Native on the banks of the Irrawaddi.

The flowers are smaller than in other species, and are disposed

in small, compact, long-peduncled umbels.

Various-leaved Calotropis. Shrub.

6 C. SUSSUE'LA; succulent and smooth; leaves peti

oblong, acuminated; umbels few-flowered; co

•Won. tin rt. ♄. S. Native of the Moluccas. Asc

Sussuèla, Roxb. II. ir.il. 2. p. 31. Coròna Ariádnes, Rumph.

»ti 5. t. 182. ' ia tx-arl; i bdaM u> .l.....t. r »l*t>

run expanded, ex Roxb.

Sussuela Calotropis. Shrub.

7 C. HERBA'CEA; herbaceous, erect, •IIHXMII; leaves petio-

Ut(oblong; umbels compo .1 ; (ornlla oil It • globular tube,

which incloses the corona; segments or petals triangular, spread-

ing; leaflets of i arena: »'orter than the ^tnostrgiti m, acute,

and spreadingly recurved at the base, but tridentate at the apex,

• »«>d lyinK u; on the gynostegium. ♄. S. Native of the interior parts of Bengal. Pa ltwka, Jones, asiat. res. 4. p. M7.

'itng aboota Rrcm. Lanw | ale green

Stems nearly simple. Ye paler beneath, furnished with a few bristly glands on the middle

nerve on the upper side at the b.!> [' IIIIIt II 1 t< longer than

the pedicels, mixed •nib «ubul»u brarira*. I !><* a

mixture of purple, red, »ad white \ ery •>•.' * <MaMMi

Root woody.

Herbaceous Calotropis. Pl. 2 to 3 feet.

Cult. All the species of *Calótropis* bear handsome, N*

flowers, and on that account are worth cultivating in every collection of stove pl tut*. A mixture of loam, sand, and peat, is a good soil for them; and young cuttings, thinly planted in a p.....l,, .^.. filled with sand, strike root freely under a hand-glass, I IHX. i, care is not taken with them, they are very liable to rot, as the le injury causes them to decay.

I . OXYPETALUM (from οξυς, oxys, sharp, and πεταλον, *petaton*, • |»rtal; in reference to the long, sharp-pointed petals). R. Br. mem. wern. soc. H. B. et Kunth, nov. gen. amer. 3. p. 197. Mart. nov. gen. bras. 1. p. 48.—Gotho *<• 'I*. BBpiM MM . iMBaaaaaaal r».. i.... few-flowered and terminal; segments of corolla lanceolate, acute, 4 times longer

Lin. syst. |*Pentándria, Digýnia.* I • Hi with a ilmft Mn. it.in i' < tube. ♄. ⌒. S. Native of New Spain, at Santa Fe

tricose d a 5-parted limb (f. 19. *e.*); segments ligu Bogota. Gothofrèda cordifòlia, Vent. choix, p. 7. t. 60.

at top (f. 19. *e.*). Stamineous corona 5-leaved; le attiifi rmiodiak, Glands solitary at the base of the petioles.

simple, fleshy (f. 19. *f.*). Anthers terminated by a membrane; p-4. *i,,ti,,lt* reda's Oxypetalum. Shrub tw.

2 * « . « t k len masses linear, pendulous, fixed to the curvitures of the pro- ngth ascending. Stigma terminated by an elongated, acumen (f. 19. *e.*). Follicles unk *ma*wm.—Tu iaiag A m U, » t

natives of ^>>oIK America. M»W» opposite. Umbels inter- petwUr, .u^orymboa* or CJOHM*. «owrr» sweet-scented.

1 C. ' n (Schultes, sys. p. 91. Mart. nov. gen. . p. 48. t. 29.) twinin ves ovate-cordate, downy; segments of cor linear-lanceolate, acum leaflets of corona rou ish; retinacula of . S. Native Brazil. ' HAKI. 1.6. first dis bra*. 1 g; l«i JowpliB»< in 1768. Corolla whitish, or cream-coloured; t>rillll II-i many-flown rrd. •ubror\Riboar

idh | lottnaculaof antbrn Mkrtl al lop •: . ^ " J«.- ummaUtl. rortiat< ' •* « MM -.-ptcrrd by 8tr Ira. ovate, downy; peduncles cy •*••, usually 4-flowered; segments of •iriNla fiarr row-lanceolate, acute, erectly spreading; leaflets of coro tia tout dish; retinacula of anthers furnished with a m ittbranou* appendage at ftnr«. I ⌒. S. Native of Brazil, in ihr t»t province of Minas Geraes. JNMa i ******"* n***r !*•«»*. betwt • en St. Joao d'El Rey and Villa Rica. Flowers pale yellow.

Appendiculate-flowered Oxypetalum. Sh. tw.

3 O. RIPA'RIUM (H. B. et Kunth, nov. gen. 3. p. 154. t. 231. Mart. l. c. p. 49.) MV« M L «ri leaves ovate, cordate, segments of corolla long-linear; leaflets of corona emarginately 2-lobed; retinacula of anthers naked at top. ♄. ⌒. S. N tive of New G •rmtuKU, *on* ib» banks of the river Mayo • in it Mamendoy; Mexico at Misantla; il«O of Hranl, ID lin g province 'I M : (M rai *, iw-al S1 Joao Baptist *- Cn orp corollas cream-coloured, pale yellow. (f. 19.)

FIG. 19.

River-side Oxypetal titn. Shrub tw.

4 O. MONTA'NUM (Man 1. c. p. 49.) ..HUM; leaves lanceo- ate, petiolate; peduncles cymose; petals linear, erect, reflexed at i..,,. leaflets of corona acute; retina- IHli < *(in! In r» • agittately dilated at top. ♄. ⌒. S. Native of Brazil, on the top of Mount Itam *M d* V.IU do Principe. I ...-.,. BMB«H coloured.

V • (i xypetalum. Shnib tw

5 O. BERTERIA'NUM (S prco(| "T*1- ' [' "'•" »»W (• lit. leaves elliptic, •HMtOMtr, do»ny; M a j UIrt- crowded; Huw.i* »tn«)I IJ.^.N S ... .. . i S, .. iQaMMajIt, i tero.

Bertero's Oxypetalum. Shrub tw.

9 II M

'Iw^l niih (i«»aiy du«n ♄. ⌒. S. Native of Brazil, at Rio Grande.

Rio Grande Oxypetalum. Shrub tw.

7 O. GOTHOFRE'DA (Schultes, syst. 6. p. ft.) I*MHii.' leaves

<• 'I. BBpiM MM . iMBaaaaaaal r».. i.... and

•Hi with a ilmft Mn. it.in i' < tube. ♄. ⌒. S. Native of New Spain, at Santa Fe

attiifi rmiodiak, Gothofrèda cordifòlia, Vent. choix, p. 7. t. 60.

i,,ti,,lt reda's Oxypetalum. Shrub tw.

* * *Erect shrubs.*

8 O. FOLIÒSUM (Mart. l. c. p. 50.) villous; stems erect, her-

S

• *Tw*mi*m* tarvif.

baceous ; U-avr* approximate, nearly sessile, ovate-cordate, atuir ; p. moaely c o r y t n l atnalc tuward* the top* of tbe bfaacbm ; trgmrntft of corolla erect, linear, *«tt<*; 1-jflrt* of coron* emar y i l y lb retinacula of anthers naked at top. ¥. S. Native of Brazil. Corolla cream-ctiltiviri'i!, with a iioUcvoua ba»r. Corooa rose-coloured.

Leafi Oxypetalum. Shrub erect.

9 C. Bftl CTI M ' Marl, 1, C, *r* mlf'tl e. acute, dam •lU linear-lanceoh -tv ; rriuuctula of anthers naked. ¥. S. Native of Brazil, in the province of Minas Geraes, in fields at Capao and Villa Rica. Corollas cream-coloured.

Erect Oxypet .him. I'. erect.

10 O. STRICTU H Mart. l <• | Mem erect, hrrbarroaa, ttra^lii; leaves lanceolate, cordate, almott tewtile ; argmenu of corolla no, ;•• -orooa profi>tu*lK bifid: men* branes ''"' *un>* ers elongated, but the retinacula art* naked. ½. S. Native of Brazil, in fields, at the river Paraopeba tween St. Joao d'El Rey, and Villa Rica. Coro- i 1.1 white.

Strn n^At Oxypeulunt. PI. «ri ect.

• I 'O. CAPITA* Tiw M art. l. c.) st<t berbaeeoiia, erect , U-ate« UiK-rolatr. acute, vUloui; Rower* CfOwdtd, in ₖl-.b.m- »!.... leaflets of corona bifid; ret IUCUU nak d. ¥. S. Native of the Brazil 4, in the Mine |>r-- r'U»« ers pale yellow.!

Capitate-flowered Oxy . peulum Pl. erect.

Cult. The species answer well for training up 'he raAer s, in a MOT*, or warn part of a grMmhaoae. \ mixture of loam, *%*wi.* and peat , or any light rich soil, suits them well; and cut- •.tfike *tf* t freely *m* aaad, under a hand-tjl***, in r^at.

LV. SCHUBERTIA (after H. B. Schube n, a professor at Erlang). Mart. nov. gen. b •«*. t. p 55.

Lin. syst. *f*r*tam.l* ria, *Digynia*. Corolla funnel-shaped; lubr f-ttittoaa at tl e base; limb 5-parted, spreading. Stamineotu corona n closed in the tube, 5-leaved; leaves adnate to the tube of the fl .<TK-(II«, lanceolate, connivent. Anthers ternunatrtl by a aaaa»bnu pollen masses pendulous, fixed by their attenuated apexes. Stigma turbiiwiie. plaao-f' convex at top. I lliclcaf S.nl, ramoa. .,,,, Uirj »hr«b., ... tives of South An: Oiadv placaa. deave* OlMN America, in n«l»tr. cmlai l , ,, mountains. vmllr brardod in- ••. t- S.i leaves cortUle* obovate, acute; u »beU nany.nowrrcd . tube of corolla glabrous inside, shorter lfcoa (if miamu. which a- & •" | i rorki. io the provfe nun. Sppnti

vate, »eii<. ; umbels few-flowered; tube of corolla bearded inside, ,,,u*! to the segments of the limb. ½. S. Native of Brazil. Corollas white.!

Great-flowered Schubertia. Shrub tar,

| s |0voiru>a* I M»rt l. t- | l.»%r. e»r<lau-. •!>,, iir, acuir. ...], ous; umbels many-flowered; tube of corolla very hairy inside, 3 times longer than the MKiuaMa, whwh a»r lat>c< ½. ^. I Sal ', S.J. t. 59< | pat 1 p Ml. C Corollas greenish white.

Img-Jk | Shrtih tw.

Culture and propagation see *Oxypétalum*, above.

LV1. L\t i NOSTOMA (from λοχνς, ••«•*»' wool; and στομα mouth; throat of corolla brarUcd M B. et Kunth, nov. gen. amer. 3. p. 19 I. t. tSA.

Lm..,«. *PtwO~t.* .p aomewhat aab ; ami a hrir „ pruir, rather an»am> *mmi* I ». *flc„ 3 the throat of the corolla, 5-leaved; le ely 2-lobed, fleshy. Anthers terminated by a masses compressed, laterally fixed by their tapering top dulous. Stigma mutic, peltate.— V n ng shrub; with ppo- site leaves; and interpet iUr raevmr* l •• '.' in •, approxi- MtMis u» an umbetUir mar T Ui ((«••• » J *Cynanchum* on one hand, and *Oxyp* is distinguished from them, in the form of the corolla, and corona, as by the mutic stigma, and in the corona m the throat of the corolla; and from both, in the filaments being adnate to the tube of the corolla, and in tlM throat being bearded.

I I. ROSIXUM (H. B. et Kunth, l. c.) ½ . ^. S. , r« of Srw (ir»n*. near Santa Fe de Bogota. Stems densely clothed *iib rintv hair*, at a>i as the petioles and luncles and ca- lyxes. ; eaves elliptic-oblong, acuminated, oJni|-' at the base, villous on both surfaces, and beset with rusty hairs on the nerves and veins beneath. Petioles 4-5 inches long, and 2 broad. Ca- lyx hairy. Corolla hairy outside; segments elegantly and rcl1, culately spotted.

Tiger-spotted Sowered LadaMHaaaa, 8hfwl» '* *Cult.* For culture and propagation see *Oxyp* ..., above.

I.Vtl M \CROSCEPIS (from μακρος, macros, long; and σκεπω, skepo, to cover; in reference to the calyx being ger than the corolla.) H. B. et Kunth, 233.

Lin. syst. *Pentándria, Monogynia.* Calyx •Mojaaj thr corolla a little, bracteate a I *thc* ba*»- Co thickish, with ose-ventricose tube, and a spreading, 5- parted limb; segments of limb obliquely ovate, obtuse. Corona *a(i* rtr»Jiy ara'.- , inserted in the throat of the corolla. Gyno- tegium saucer-shaped, hardly exceeding the tube of the corolla. Filaments connate, adnate to the tube of the corolla. Anthers terminated by a *mmknm* pollen masses compressed, pendu- lous, fixed by their tops. Stigma mutic, peltate. Follicles un- known.—A twining plant, with hairy branches. Leaves oppo- site, obovate, cordate, hairy. Peduncles interpetiolar, 2-flowered; pedicels involucrated by bracteas. This genus is very nearly allied to *Lachnostoma*, from which it is distinguished by the form of the corona, gynostegium, and beardless throat. There is also considerable affinity between this genus and *Gonioloba*.

twfa ralyi, b» tb« IUvcti

I M . N II I M K

^. S. Native of New Spain, on the shore, about Campeche. M. pàtens, Spreng. syst. 1. p. 851. Cynánchum hirsútum, Vahl. Leaves 5½ inches long, and 2 broad. Petioles and midrib of leaves on the under side beset with rusty hairs. Segments of calyx pilosely ciliated. Corolla glabrous.

Macroscepis. Shrub tw. culture and propagation see *Oxypétalum*, above.

LV III AH M Jl \ NMBtfd •' ,'flf. ^er Antonio de Araujo, a great promoter of botany in Portugal.) Bret. in Lin. tr Physiánthus, Mart. nov. gen. bras. 1. p. 52. Lin. syst. *Pentándria, Digynia.* Calyx large, 5-parted (f. 20.

a.) Corolla campanulately urceolate (*f.* 20. *b.*) with 5 swellings outside at the base, and a corresponding number of cavities inside; limb spreading a little, 5-cleft. Column inclosed. Staminiferous corona of 5 leaves; leaflets cucullate, furnished each with a horizontal scale outside. Anthers terminated by a membrane; pollen masses pendulous, fixed by their tapering tops. Stigma ovate, 2-horned at the apex. Follicles ovate, ventricose, bent downwards, semi-bilocular; dissepiment or placenta covered with numerous lamellæ. Seeds comose, adhering to the lamellæ of the dissepiment.—Twining, herbaceous plants. Leaves opposite, cordate. Racemes interpetiolar, few-flowered, cymose. Flowers white.

FIG. 20.



1. A. VERSICOLÒRA (Brot. l. c. t. 1.) leaves cordate, [illegible] glandules at the base of the petioles; racemes cymose, pendulous, few-flowered; root [illegible]. ♃. S. Native [illegible]ortu, from which place it was received by Brotero, under the name of *Apócynum Peruvianum*. Flowers white. (*f.* 20.) Sti[illegible]jia. Fl. ? Clt. ? Shrub Mr.

2. A. ALBENS; herbaceous; leaves [illegible] at the apex, cordate, [illegible] at the base; white and pruinose beneath. [illegible] sub-dichotomously cymose. ♄. ◠. S. Native of [illegible]. Physianthus albens, Mart. nov. gen. bras. 1. p. 54. t. 32. Graham, in bot. mag. t. 3201. Bot. reg. t. 1700. Flowers tomentose beneath, and beset with fine scattered pili above. Corolla downy, [illegible] tube length of calyx.

Whitish-flowered Araujia. Pl. July, Aug. Clt. 1830. Shrub twining.

3. A. [illegible]; twining, glabrous; leaves [illegible] cordate, denticulate. ♄. ◠. S. Native of Brazil, at Rio Grande. Araujia. Shrub tw.

Cult. For culture and propagation see *Oxypétalum*, p. 1[illegible] II.

LIX. KANAHIA (the plant [illegible] by the Arabs.) R. Br. in mem. wern. soc. 1. p. [illegible] Forsk. Linn. syst. *Pentándria, Digýnia.* Corolla campanulate, with a 5-parted limb. Column half-inclosed. Staminiferous corona, seated on the top of the tube of the filaments, 5-leaved; leaflets thickened from the base, subulate, undivided. Anthers terminated by a membrane. Pollen masses ventricose, fixed by their apexes, pendulous. Stigma mutic. Follicles slender, spiced. Seeds comose?—An erect shrub, native of Arabia. Leaves opposite, flat. Peduncles interpetiolar, bearing at their apexes many-flowered fascicles; pedicels imbricate, imbracteate at the base.

1. K. LANIFLÒRA. ♄. G. Native of Arabia Felix and Abyssinia. K. Kánah, Rœm. et Schultes, syst. [illegible] Asclèpias [illegible]. Forsk. descrip. p. [illegible]. Leaves [illegible] quite glabrous, tapering to both ends. Leaves of involucrum subulate, unequal.

Woolly-flowered Kanahia. Shrub.

Cult. For culture and propagation see *Calótropis*, p. 147.

LX. DIPLOLEPIS (from διπλοος, *diplous*, double; and λεπις, *lepis*, a scale; leaflets of corona furnished each with a scale inside.) R. Br. in mem. wern. soc. 1. p. 41. Linn. syst. *Pentándria, Digýnia.* Corolla with a short, urceolate tube; limb 5-parted. Staminiferous corona 5-leaved; leaflets obtuse, furnished with a tooth inside. Anthers terminated by a membrane. Pollen masses ventricose, fixed near their apexes, pendulous. Stigma mutic, elongated, undivided. Follicles unknown.

1. D. MENZIE'SII (Rœm. et Schultz, syst. 6. p. 95.) ♄. ◠. S. Native of Chili, near Valparaiso. This is the only known species of the genus. The Asclèpias vomitória, Konig. mss. agrees with this genus in many respects, especially in the form, [illegible] of the pollen masses; but differs considerably in habit, and in having a bifid stigma.

Mmitrt'i **Utplflplk.** Shrub twining?

2. D. [illegible]ARICULA'TA (Lindl. in hort. trans. 6. p. 68.) leaves roundish-elliptic, cordate, apiculated, shining, very villous, as well as the stems; stipules [illegible]. Flowers greenish.

Apiculated-leaved Diplolepis. Fl. Ju. July. Clt. 1[illegible]. Shrub tw.

[illegible] culture and propagation [illegible].

S X. *(iymotlrgittm appendiculate. C[illegible] having its laht* M[illegible] *times furnished with scales or keels inside. Corolla rotate.*

LXI HOLOSTE[illegible]MA (from ὅλος, *holos*, entire; and στεμμα, *stemma*, a crown; the corona is almost entire.) R. Br. in mem. wern. soc. 1. p. 42. Asclèpias species of authors.

Linn. syst. *Pentándria, Digýnia.* Corolla [illegible]ate, 5-cleft. Staminiferous corona inserted in the gynostegium, simple, [illegible]nnulai, obsoletely 5-lobed. Anthers terminated by a membrane. Pollen masses pendulous, compressed, fixed by their tapering tops. Stigma mutic. Follicles ventricose, smooth. Seeds [illegible] Ci[illegible]labrous, twining shrubs. Leaves opposite, broad. [illegible]mbels interpetiolar, on short peduncles. Flowers showy, white.

1. H. [illegible] Kitr[illegible]nu (Spreng. syst. 1. p. 8[illegible] Walt, fl. [illegible]. r. t. n. 51.) leaves broad-[illegible] [illegible]. S. Native of [illegible]; also at Gualpara, and Kinour. H. A'da Kòdien, Rœm. et Schultes, syst. 6. p. 95. Asclèpias annulària, Roxb. fl. ind. 2. p. 37. mss. ind. [illegible]. Asclèpias convolvulácea, Heyne, herb. Cynánchum annulàre, Heyne, herb. C. cordifólium, and C. grandiflòrum, Roxb. herb. Sarcostémma annulàre, Roth. nov. spec. p. 178. linn[illegible]. et Schultes, syst. 6. p. 115. Gomphocárpus volubilis, Hamilt. herb. Corollas yellowish or whitish, tinged with red. Follicles smooth.

Rheede's H[illegible]olostemma. [illegible]ining.

3. H. [illegible]RA'CHNOIDES (Wall. pl. asiat. rar. 2. p. 51.) leaves oblong-[illegible]; lobes imbricating. ♄. ◠. S. Native of the Burmese Empire, on mountains on the banks of the Irrawaddi, at Seendya, Promne, also on mount Taong Dong, not far from Ava.

Fragrant Holostemma. Shrub twining.

4. H. [illegible]RRACULA'TUM (Blum. bijdr. p. 1055.) leaves membranous, ovate, acute, deeply cordate at the base, paler beneath; follicles tubercular. ♄. ◠. S. Native of Java, on mountains.

Tubercled Holostemma. Fl. year. Shrub tw.

5. H. [illegible]RUGA'TUM (Blum. bijdr. p. 1055.) leaves membranous, [illegible] the base, glaucescent beneath. [illegible] Native of Java, [illegible].

Muricated-follicled Holostemma. Fl. Nov. Dec. Shrub tw.

6. H. [illegible]LA'VE (Blum. bijdr. 1055.) leaves coriaceous, oblong, acuminated, [illegible] at the base; follicles smooth. ♄. ◠. Native of Java, on Mount Salak in shady places.

Smooth Holostemma. Fl. Feb. April. Shrub tw.

Cult. See *Oxyp*[illegible] p. 148. for culture and propagation.

LX!. CYNA'NCHUM (from *κυων κυνος, kyon, kynos*, a dog; and *αγχω, anchō*, to strangle; poisonous effects of some species.) K. Br. in mem. wern. soc. 1. p. 43. Wight, and Arn. in Bot. mag. n.s. 1. p. 55. Cynánchum species, Lin. and others.

Lin. syst. *Pentándria, Digýnia.* Corolla rotate, 5-cleft. Stamineous corona, 5-20-lobed; when only 5-lobed, the lobes alternate with the anthers. Anthers terminated by a membrane. Pollen masses ventricose, pendulous. Stigma usually apiculated, but sometimes mutic, rarely rostrate. Follicles smooth. Seeds comose.—Herbs or sub-shrubs, for the most part twining. [Cynanchum, Wight, Arn. and Lindl.

tI. *Stamineous* CBraaa fnAniar. «i<* a *5-10 cleft border, inclosing the gynostegium; the 5 inner segments opposite, parallel witk tit mmikert* „...< *exterior lobes. Pollen masses inserted beneath their apexes. Follicles cylindrical,* .*Jrteal,* MMA *divaricate.—Stems twining.* Le HN *tmrdmtt.*

1. Dalhousie (Wight, contrib. ind. bot. p. 55.) twining, smoothish; leaves linear-lanceolate, attenuated, broadest at the base, cordate, pale beneath, and marked with)>roim trim; umbels few-flowered; pedicels longer than the peduncles; segments of corolla oval, ntxiiw* . corona rqu»l n .• to-rolla,]<I-IMU<1: * \ *U*nate lobes the smallest: the inner segment. «nwll, ubiu e, tooth-formed; stigma sub-apiculated, undivided. 1. Native at Simla, Countess of Dalhousie; Mussorie, Royle. Let»« 4-6 inches long, and 4-12 lines broad at t ase.

Countess of Dalhousie's Cynanchum. -Shrub tw.

2 C. acu'tum (Wight, contrib. ind. bot. p. 310., exclusive of -I i I. m. «: (he.ynoo,n»«. K. t(i mem. wern. BM< I. p. 44.) herbaceous twining, glabrous; leave* oblong, ovate-cortUtr, *meii<a of rorolU oblomft, obtitM; Uignia ..• Bieb. fl uur. I. j :77. ' acq. misc. I. *y* 16. t. 1. Schkuhr. hudb. 1 p. 166. t. 54. C. Monspeliacum, Brot. fl. lus. 1. *y,* it) ..»p.liac<. - .. . r a , n. 4<> Willd. act. nov. am. N. C. berol. 1799. t. 6. f. 2. Pers. 1. p. 273.—Tourn. inst. 93.—Clus. hist. 125.—Trew. ehrh. 44. t. 82. Flowers white.

Acute-leaved Cynanchum. I i. uly. Clt. 1596. j Pl. tw.

3 C. acu'tum (Bunge, in mem. acad. petersb. 2. p. 118.) corona double; outer one 10-cleft, having the alternate segments acute, ovate; the rest filiform and elongated: inner corona 5-cleft, with shorter, filiform segments; segments of corolla linear, obtuse; leaves cordate, acute, downy; stems herbaceous, twining. ^ . . !. Native of China, in ' hedges. I Flowers minute, whit .„ Nearly allied to *C. acutum*, 1-2 inches long.

Downy Cynanchum. Pl. twining.

' '. exci'sum (Desf. fl. atl. 1. p. tit) betbaMOiM i wining, glabrous; leaves cordate-lanceolate, acu- ous; follicles long, narrow, flattish, very acute. ^ . H. Native of Barbary, on the shore about Tozzer. Leaves like those of *C. acutum*, 1-2 inches long.

Tall Cy tiaaeant. Fl. July. Clt. 1816. Pl. tw.

5 C. Monspeliacum (Lin. spec. p. 311., exclusive of the sy- R. Br. l. c.) herbaceous, twining, gla rmifornt. coarctate at top, and semi-lanceolate; segment • of at . <>:*<]'.* lan < "l••*»•. Ham i ; stigma apiculated, semi-bifid; follicles cylin aricl. » .' . H. Native of Italy, south of France, Spai„ MM! Orwcr, b the sea side. Cav. icon. 1. p. 44. t. 60. Jacq 1-coU. I p. 106. icon. 2. t. 340. St. Hil. 55. t. 6.—Tourn. •at. *99.* * lus. hist. 1. p. 126. Flowers white, but flesh-coloured), arcardiag 10 Jacquin.

Montpelier Cynanc um. Fl. Aug. Sept. Clt. 15 ?«. Wirub

-ra •l longifolium (Bartens, ex Spreng. syst. add. p. 110.) herbaceous, twining; leaves cordate, acuminated, nerved; segments of corolla acute; exterior corona 10-leaved: the 5 alternate lobes cordate, acute, and the other uti lobra Unc r *i* .ub-cirnotKl and obtu**. . H. Native about Venice.

/.iitj ltaW Cynanchum. Pl. twining.

7 C. Chine'nse (R. Br. in mem. wern. soc. 1. p. 44.) herbaceous, twining, glabrous?; leaves ovate-cordate, wit a short acumen; segments of the corolla linear, acute, co pressedly filiform, entire. ^ . H. Native of China, in the provin *rof Peckley, Sir G. Staunton. Stigma ending in semi-bifid poin it. Follicles cylindrical.

Chinese Cynanchum. Pl. twining.

8 C. hirsu'tum (Hook. and Arn. in Beech. voy. p. 35.) leaves narrow, cordately-sagittate, with oblong-obtuse lobes, sub-coriaceous, glabrous; umbels many-flowered; pedicels and calyxes downy; tube of corolla urceolate; segments of the limb lanceolate, downy outside; stamineous corona »n»p' of 5 bifid segments; stigma long-beaked, deeply bifid. ^ . I . Native of Chili, about Concepti 1 on. Flowers white. U tbow resembling those of *C. acutum*.

Birostrate Cynanchum. Sbfub twining.

' - •»••»•»*«» *tk* gt/+o*Ugmm* . 1 - ' " l f ' *J*U*t* rounded

9 C. oaiMt >< M vTiglH, 1 e. p. 56.) twini „ tfIabrt»»; leaves cordate-ovate, acuminated, gl th; corymbs •MOM beoai the petioles, many-flowered; corona equal in length U«l<r than t altrrn^' to the corolla, 10-cleft, with th e lobes smaller, and the morr raiioa* wnpte; pollra m«M< fixed beneath their apexes; stigma apiculated, bifid. ^ . Native of Silhet. Cynánchum, Wall. asel. no. II.

Corymbose-flowered Cynanchum. Shrub tw.

10 C. reducu'lum (R. Br. in mem. wern. soc. 1. p. 97. prod. 463.) twining; common peduncles longer than the leaves; leaves cordate, smoothish; axils 2-leaved; inner carinæ of the corona drawn out into segments; stigma apiculated, emarginate. ^ . G. Native of New Holland, within the tropic. C. Brownii&num, Roem. et Schultes, syst. 6. p. 97.

Pedunculate Cynanchum. Shrub twining.

11 C. pedicella'tum (R. Br. l. c.) twining; common peduncles shorter than the leaves; leaves cordate, acuminated, quite glabrous; axils without leaves; inner keels of the corona drawn out into segments; stigma apiculated, emarginate. ^ . G. Native of New Holland, without the tropic.

Bundle-flowered Cynanchum. Shrub twining.

12 C. fasci'culus (R. Br. l. c.) twining; common peduncles about O|U« el in length to the petioles; leaves cordate, acute; axils usually 2-leaved; branchlets and flowers clothed with fine outside; inner carinæ of the 10-cleft corona shorter than the corolla, simple. ^ . G. Native of New Holland, within the tropic.

Reddish Cynanchum. Shrub twining.

13 C. Bonplandia'num (Roem. et Schultes, syst. 6. p. 98.) ining; branches marked b,.*mi y line; leaves lanceolate, uminated, glabrous; umbels almost sessile; calyxes downy; corona 10-lobed: the alternate lobes the longest, and alternating with the segments of the corolla: stigma conical, convex, emarginate. ^ . S. Native of New Andalusia. C. lanceolatum, H. el Kunth. nov. gen. amer. 3. p. 203. Flowers minute, white. Corolla rotate, with ovate-acute segments.

Bonpland's Cynan rfium. liKfubmi l»rrt aceous, twining; leaves MVtMHMOMg and lanceolate, acute, and arc, as

well as the umbels, glabrous; segments of corolla elongated and spreading; alternate teeth of corona shorter. ♃. ◠. S. Native of Montevideo.

Montevideo Cynanchum. I'l. • twining.

15 C. MUCRONA'TUM (H. B. et Kunth, no*. fUhMMf- 3 i[1] 203. t. 333.) twining; branches furnished with 2 rows of cuspidately-mucronate, acute at the base, glabrous; umbel. sessile; calyxes JgHMMi corofii 5« parted, with ovate segments, which ar» ligulate at the apex, alternating with the lobes of the corolla; stigma terminated by an emarginate tubercle. ♄. ◠. S. Native of New Granada, on the declivities of Mount Avila. Leaves 8-9 lines long. Corolla white, glabrous, with obliquely-oblong acute segments, having the middle nerve green.

Mucronate-leaved Cynanchum. Shrub twining.

16 C. MICROPHY'LLUM (H. B. et Kunth, nov. gen. amer. 3. p. 204. t. 204.) twining; branches furnished with 2 rows of down; leaves ovate, acute, mucronate, rounded at the base, glabrous; flowers solitary, twin or tern, or by fours; calyxes glabrous; corona 5-parted, with emarginately-bidentate, concave segments, alternating with the lobes of the corolla; stigma terminated by an emarginate tubercle. ♄. ◠. S. Native of New Granada, in frigid places, near the town of Pasto. Leaves very small. Petioles furnished with interpetiolar cilia. Corolla white, rotate, with obliquely ovate, acute segments.

Small-leaved Cynanchum. Shrub twining.

17 C. SERPYLLIFÒLIUM (H. B. et Kunth, nov. gen. amer. 3. p. 205.) twining; branches marked by a downy line; leaves ovate-oblong, acuminated, rounded at the base, ciliated a little; umbels sessile; calyx rather pilose; corona 5-parted; with the segments bifid at the apex; stigma convex, emarginate. ♄. ◠. S. Native near Quito, in shady places; and on the declivities of Mount Pichincha. Very like *C. microphylla*, but is larger, in the leaves and flowers; and also differs in the flowers being umbellate, in the structure of the corona and gynostegium. Corolla campanulate, white, with ovate-oblong, hardly oblique segments.

Wild Thyme-leaved Cynanchum. Shrub twining.

§ 3. *Staminiferous corona tubular, tntkm* 3-1< *-cleft border, including the gynostegium; inner* K|«nli# *carinæ wanting. Pollen masses usually fixed by their apexes. Stigma terminated*

J(n ^iA,/ pamf. Air. twining. I.imti lub-CatdnU.*

18 C. PAUCIFLÒRUM (R. Br. in mem. wern. soc. 1. p. 45.) twining, glabrous; leaves ovate, acuminated, uniformly cordate at the base; the auricles diverging; umbels few-flowered; peduncles shorter than the petioles; flowers j*lal>MHI», lMt short petioles; corona equal to the corolla, with a 10-cleft, plicate border, naked inside; the lobes opposite the anthers, lanceolate, acuminated, bifid at top, the alternate ones very short, and emarginate or truncate; pollen masses fixed beneath their apexes; stigma apiculated, obtuse, hardly emarginate. ♄. ◠. S. Native of the East Indies, frequent in hedges. Periploca tunicata, Retz, obs. 2. p. 15. Willd. phyt. 1. p. 7. no. 23. t. 5. f. 3. Asclepias tunicata, Roxb. fl. ind. 2. p. 55. mss. ind. or. t. 600. This plant has been removed by Wight, and Arnott, from the section in which Mr. R. Brown placed it. As there are no interior keels, but only folds of the corona, N > m l i v ise from contractions of its mouth, and disappear when expanded. Follicles ventricose. Perhaps this, and *C. angustifolium*, described with 5 lobes to the corona equal to l)M> corolla, somewhat 10-clttt; the IOIK>»O| i .11. n nii->- I !i«M l» I" MB thv «itb< i indium, Wail- M& no. w>. very short.

Few-flowered Cynanchum. Fl. ? Clt. 18[illegible]

19 C. WALLICHII (Wight, l. c.) twining, glabrous; leaves ovate-oblong-ovate, acuminated, cordate at the base, auricled; auricles a little incurved; corymbs shorter than the leaves, many-flowered; pedicels equal in length to the peduncles, or exceeding them; corona equal to the corolla, somewhat [illegible] site, longer, and bifid; [illegible] their apexes; stigma [illegible] mutic. ♄. ◠. S. Native of the East Indies, at Jeutaga and Chuna-Poonjee. Very closely allied to *C. paniflorum*.

Wallich's Cynanchum. Shrub t[illegible]

20 C. CALLIALA'TUM (Hamilt. h[illegible]ght, and rtb.no. 767. « Aroott, coot' # bur. wilti a tyiTuH WIKi r ilijn tin IM-u-ilr* . I" '. • •c anthrr>, bilwl *l \ . ive on the banks of the Ganges, and at Columala. Wall. ascl. no. 83. C. auriculàtum, Hamilt. herb. no. 768. Wall. ascl. no. 85. P ri|>Uxa luiM- cata, Herb. madr. Wall. ascl. no. 75. b. c. JII. lium. Stir ' • tijj.

Beautiful-winged-podded Cy[illegible] twining, smoothish; leaves of the older b randIM COTT ately auricled at the base: of the young floriferous branches, oval, cuspidate, cordate at the base, or emarginate, glaucous beneath; umbels about equal in length to the petioles; pedicels longer than the peduncles; corona shorter than the corolla, with a crenately 10-lobed, truncate border; the alternate lobes rather the smallest; stigma apiculated, bifid; follicles flattish on one side, with the angles marginately winged. ♄. ◠. S. Native of Coromandel. Wight, cat. no. 1552. Asclepias truncata, Roxb. in herb. Banks. The winged follicles, and truncate corona, will readily distinguish it from all other species of this section.

Winged-follicled Cynanchum. Shrub twining.

22 C. OVALIFÒLIUM (Wight, l. c.) twining, glabrous; leaves oblong-oval, acuminated; cymes many-flowered; peduncles longer than the petioles; corona about equal in length to the corolla, 10-cleft; stigma apiculated, somewhat emarginate. ♄. ◠. S. Native of Penang. Cynanchum, Wall. ascl. no. 82. The oval leaves, •md c ymose inflorescl liei, r< adily distinguish this species.

Oval-le rrrf Cynanrhitm.

t.1 l i, UM! ANGUSTIFÒLIUM (Wi Arnott, l. c.) [illegible] i ir f l M ; leaves linear-lanceolate, cuspidate, more or less cordate at the base; umbels short, many-flowered; corona 10-lobed, the lobes opposite the anthers, broadly linear-oval, about equal in length to the corolla; the alternate ones very short, and inconspicuous, all truncate and emarginate; stigma apiculated, somewhat emarginate. ♄. ◠. S. Native of Coromandel. Wight, cat. no. 1553. [illegible] es 3-5 inches long, and 4-6 lines broad.

Narrow-leaved Cynanchum. Shrub twining.

. Gynostegium or column of fructification stipitate. Vf* *Corona tubular, inserted at the base of the stipe of the gynostegium, 5-cleft, without any segments or inner carinæ inside. To this section, remarkable for the elongation of the torus or stipe of the gynostegium, belong [illegible] from the Cape of Good Hope.*

..^1 •". • fP"*'' s

" C. GRACILLIMUM (Wall MrUp. nt.M. Wuht. UMJArnMi. l. c.) twining, glabrous; branches slender; leaves cordate, *mm-*

conMWt tW JicnMto « M « WiagM ' padwd— about *wqu*

ihr iHi).t«i> i n a t o d , i ii[illegible] . , i i. M.lk ..i t f M v » i «

<-.,»„,. *UbrOMI Wnt Ob- poltM M.M.1M4 by .Kr „ HWM. t rttg** MUM, M|Mi, »-»JT.

M.

§ 5. *StiimiMtoHi* rorotM <fy>'.* WK/I *pp tkt ittuii tack mtlh a parallel tr^mtnl* I«WH£ . *l\,l!t+* fry iL-ir *nfwxct, 9f Utuulk them.*

t& C. ftCMCVU'TVM b. IIM|. b- W U M i leave* eordMe-ovatr, acuminated, ciliated, auricled M the bnw ; UIUIM-U C\ corolla 5-jMirtttl | eafOVa «»btu- Will

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§ 6. *St*

.inchum. Shruti t

27 C. » It. Hr. iti mem. *w* ·UIr-l *tttmmattd* fry «n rafir* ·«««!. Air«j rn IIIJOM[1] ; corona 10 llaly. . V\ itlil. -jn c, 1. p. *ing. Vk** • vnancliui • 1*U. Pl. I t *t** C. mill tx-rti. • ncfcum. Pl. I*>I>

j 7. .VAtRmrmn *roTitnit Mme*r-ikmptd,JUik) M. t'.4Un mm,*M-. *Jitrd* fr««-«* «iMMi*«t fry a* (Titiff. aery ti«r(*imtit.* • A. «r (»<».«>• a rrry bfl/r-

tt l ltr. itt mi-ill. ».rn » -i. 1. |> UtW | tirpbrl* >mi|i|r ; j» n» ,1-loln-d. K . I). Tin. b<« itum, '• I- «- l.u.U • N .*• 411M. L 317. Stem i on rack side. *n*tt, v* uminated, finely ciliated on the edges when young. Corollas white. *Var. ß, minus;* all parts of the P*Mt «r» OM half smaller than those of the species. *Vincetoxicum* Cynanch 1596. Pl. 1 to 3 feet.

(Spreng. syst. i. p. 852.) erect, glabrous; lea sessile, rather fleshy, veiny; umbels axillary; corolla coriaceous, with bearded edges. ¥. H. Nativ Crete, Sieber. Flowers yellow.

rca o*«tr,BMri r ol

Yellow-flowered Cynanchum. Pl.

31 C. (R. Br. I c. j» 48.) ste M | ining at tops; pedicels 5-lobed. Native

country unknown. Asclèpias mèdia, Hort. Allied to the *C. nigrum.*

Intermediate Cynanchum. Fl. May, Aug. Clt.? Pl. 2 to 3 fee i.

32 C. ? VILLÒSUM (Schultes, *mm. 6-* p- 105.) leaves ovate-oblong, villous beneath, auricled ; corona cordate ; I b M ; t ulli- bels erect, simple ; corollas bearded. ¥. H. Native country unknown. Asclèpias villòsa, Willd. enu, n , I. , 278. Balb. misc. 15. t. 4. Flowers white.?

Villous Cynanchum. Fl. Ju. Aug. Clt. 1821. Pl. 2 to 3 feet.

33 C. NIGRUM (R. Br. l. c. p. 48.) stems twining at tops; M . hat dlv *U*>V* r'LA bearded ; umbels simple ; pedicels peduncles ; corona semi-10-cleft. . H. Native of the of Europe. Sims. bot. mag. 2390. \sclèpias nigra, lin. , sec. p. 315. Willd. spec. 1. p. 1269. Leaves ovate-lanceolate, acuminated, finely ciliated on the edges, narrower than those of *C. vincetóxicum.* Flowers brown.

Black-flowered Cynanchum. Fl. July, Aug. Clt. L«*. Fl. 2 to 3 feet.

34 C. NIGRUM (Hort. par. ex Poir. sup . • „ *ISO)* stems twining at tops, rather hairy ; leaves ovate-cordate, f . l t . r ., . - . , , - n i l i . , : , . ! I 10»M«. - '' ct«inti» tinkmrwt Flowers dark | urplr. *RU,* flowered Cynanchum. Fl. '• . \ug. Clt. 1818. ri- 2 to 3 feet.

35 C. FUSCA'TUM (Link. enum. 1. p. 250.) stems twini_- -. tops ; corolla bearded ; umbels simple. ¥. H. Native o south of Europe, as of Spain. Asclèpias fuscata, W enum. suppl. p. 29. Horn. hort. hafn. suppl. 29. *C. vin*cetóxicum, β, Schultes, syst. 6 p. 104. Asclèpias lùtea, Mill. dict. I lowers yellow. : his is intermediate betwe-en the *C. rturwwm* ami *C. mign* m, but is latter. *Brownish*-flowered C • *mmthrnm.* Fl July, Aug. a t i*'7- Pl. * to 3 feet.

| «. .Vr«*,v«w N H M WVrp/y

*masses fixed h**s*ik their apices.—Decumbent or erect plants, sometimes twining a little. Umbels sessile, or nearly so.*

36 C. GLAUCUM (Wall. ascl. no. 133. ight, and Arnott, contrib. ind. bot. p. 58.) herbaceous, erect, glabrous or downy; ttrtn* tather cumprr*^ <), and i»i|Mrt •n|t««w' J •*'' ^ j ^ - ovate, or pale glauco neath ; umbels almost sessile ; corolla 5-cleft : segme- inside ; corona deeply 5-cleft ; segments obtuse ; r** ' << II. fixed beneath their apexes ; stigma obtuse, apiculated. Native of Nipaul.

Var. α, latifólium (Wight, contrib. ind. bot. p. 58.) leaves broad-ovate, obtuse ; umbels many-flowered. ¥. H. Native of Nipaul. C. glaucum, Wall. in Tr Ii no. 133.

Var. β, oblongifólium (Wight. l. c.) leaves oblong-oval; umbels few-flowered. > II Native of Nipaul. Wall. ascl. no. 132, unnamed.

Var. γ, lanceolátum (Wight, l. c.) leaves oblong-lanceolate, obtuse ; umbels sessile, many-flowered. ¥. H. Native of the I', n *tm* PTWL ola of India, and at Simi ight, cat. no. 1554. ascl. no. 134, unnamed.

Glaucous Cynanchum. Pl. ttttSINtl

37 C. KINOCRIX'SSE (Wight, contrib. ind. bot. p. 58.) herba- rr.. ous, erect ; stems and petioles hairy ; leaves oval, cuspidate, on et petioles, downy above towards the margins, and on the nerves and veins, hairy beneath on the nerves, which are conspicuous, and veins ; umbels few-flowered : corona deeply 5-cleft, equal to the gynostegium ; segments obtuse, separated by broad r stigma obtu... K- **—» t |«4k« M M N Bud bj iWt .|~

r Ktaotir, Royle. In thu %i*cica Ib* rl.

•nek, ami abf

*Xt*amr Cynmdbm* P

• C. AkMOTTI' ; Wavr P* ttoln ; umbrK aiaiiW, lB

dr. •, •t. ••]••.• • r 1 1 : .tteipma : •rjpnrittt ob> tuse, separated by broad recesses; pollen masses fixed beneath their apexes; stigma •pimlatrtl. K l'. Found by Mr. Royle, on his journey to Cashmere. The colour of the flowers will readily distinguish this from

Arnott's Cynanchum. Pl.

i ..ili. f allwtl >prr*«.

N i

7«5. W

luti-aunculatnl t»i th* b:. "H»»i »r*- r»oJ, mt«i|ii<mi <l; corolla r»< M>; corona «l<«-|«y :•

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1 HiKtBa •plntlatrd- TtH. Naiivr ofil

rap*, among rrc<l». Mamilt. Lravn 4-i mcbe*

« «. «i.l «l Inm bl-md, Pl. oVarf.

*** « • oval, niiirtimatt, ciliMtrt! at irtc -- p. 101.) wril M thr |w-

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ID a whorl; umbels MI BJM

1 ! c. p, 315. (Jrrwl. «ili 4. p.

no. XI. M *utmm.* B-III. i:. •• p. • i. :. i'i ••

n finr d grrcat»)i i» l

ofihr ld

Siberian Cynanchum. Fl. J ...JuU. Clt. 17'5. I'I *i*ec.

42 C. RTLÒBUM (R. Br, in mem. wern. uK-. l, p. 4C) tHiniag;

**•!» tbon ; coroma 10-cleft, length of the corolla; stigma terminated by a bifid point. ♄. ◠. G. Native of the Cape of Good Hope. Ker. bot. rrg. 111. Periploca Africana, Lin. spec. 309

t X f l " vriw*. Thunb. prod. : p. 47. fl tap. f.

AivJr. Uit. rvp. t. *SSl. J** 1. p. 13. t. 1

ir.t. la.- |»lukn

• 3- n. fill, *u*

<Wk

Pilose Cynanchum. Fl. Ju. Sept. Clt. 1726. Shrub tw.

43 C. CRASSIFÒLIUM (R. Br. l. c.) twining; leaves ovate, subcordat- •• obtuar, witli a mucrone, fleshy, and arr, •• well as the calyxes, ,KUbl ; umbels drooping, on short peduncles; corona 10-cleft, length of corolla; stigma terminated by a bifid point. ♄. ◠. G. Native of the Cape of Good Hop ods. C. obtusifòlium, Lin. suppl. 169? Thunb. prod. 1. p. 46. fl. ca i p. 159. Flowers green?

Thick-leaved Cynanchum. Fl.? Clt. 1818. Shrub tw.

44 < •. |Uk*MI ;

G Ni

i

Cape Cynanchum. I ' uly. Clt. 1820. Shrub tw.

45 C. FICIFÒLIUM (H. B. et Kunth, nov. gen. amer. 3, p. 202.) twining, shrubby; leaves ovate, acuminated, cordate, glabrous; racemes pedunculate, equal in length to the leaves; calyx downy; corol l* rtoitbanptu[1] ely rotate: segments oblique, obtuse; corona 5- with 5-lobed segments: the middle lobe elongated, longer than the gynostegium; pollen masses fixed beneath their apices by short stipes; stigma naked, convex. ♄. ◠. G. Native of Mexico, near Queretaro. Asclèpias *fic* i a. Cav. icon. . *t.* \ 45. t. 158. descript. p. 135. Flowers greenish yellow, or white, fetid. Branchlets puberulous.

Fetid Cynanchum. I July, Aug. I rub l" « C. rnniu ri-M ll B. et Kunth, nov s|m. amir. 9 105. i. fS*.) IM »ub-» cuminate l, |.iio*r »hovr, an.l |. M»til. ; calyx pilose; corolla sub-campanulate: with oblong, obtuse segments; corolla 5-cleft, ciliately fringed in the sinuses: with bidentate segments, short; stigma term inairti by r.ipn*u to (In corona in length; pollen masses fixed Wn*«ili 11 ir apices. ♄. ◠. S. Native in shady places near C »nui»» Mrl»| lexis fimbriàta, Spreng. syst. 1. p. 854. Leav m nwmbranou*, on long petiols. alycing segments ob Jonn, *BCUU* < atdaw JIM - white, glabrous, with a red throat. Perh distinct genus.

Fringed-crowned ' nanrfium. 11. July, Aug. Clt. 1826.

Slit|lt» *M

*? l . ' u ' n (Nun. *gen. amm,* l.p. Mrhat until l< A1< • aMood subcordate-ovate, acuminated: having the recess at the base nearly closed; margins and nerves minutely dow nv be neath; petioles very short; umbels interrupted, compound, on long peduncles; segments of corolla ovate-oblong, obtuse; corona cylindrical, retusely 5-toothed, nearly entire. ". H Native of North America. fl. b»r. amer. 1. • II:'. IUWt "I *C. sinecia i num.* «*rr» *mall ; UMIiJl n)„,'»

SmtJotM (\iistirliiifi), l[1]. erect.

441 1 pa4ua CIM; *wtgn-* naniK ix^ia palu«tn«. Pi^rth 1 «*»«! ttr«: ikrU* ui • IBMII

l'I. IK

40 (IK- •hnibbt*it* bm

tlw K>i..i»tr.iuiii. «i ,1 a« Bl . , • . Ox ronJU HI

v. Ben. intri 3. i |Urk •fk'MK-m. oblnoy

ancbum. Hhrutt i

† *Doubtful species: tkt grnttr nwmi.* s *do mot* **yiitiify bft'lg fo fir *grtmi.***

* *Spr<i*t* w i w i <•/ ,Vi«/A *tmmk*

50 C. TENUIFLIUM (Lin. suppl. p. 168. Willd. spec. i p. lt«J i stems sub-herbaceous, twining; leaves ovate- -.|.»R. «MPOIK small; umbels irregular, lateral, sessile, shorter than the leaves; follicles subulate, length of a finger. ♄. ◠. S. Native of New Granada, Mutis. Leaves about the size of chickweed. Flowers about the size of a *Galium*. Stem filiform. Branches alternate.

Slender Cynanchum. Pl. twining.

51 C. TENUE (Poir. suppl. 2. p. 427.) st' <m filiform

'tig. rinxpid ; Wvn very narrow, w«i(fr-. -.in corolla gMen. impaiMllitr BflW• aod !*••*•
Ho*** •»..!!. lateral, *u,n .?-» «ni l#tio-
lw eUnunpi.aatd.aotachloBg.
MI l'"U(L(vardiod.» «. P. «fi.) itrn,»w«p»f„ Upr«r. p mbrl. hair*. «x f U n k ; I» -twiHa*.£M
WK Mvate glabrous nortoth vane&tn ; apnhrl* aoJlarv. «x - I ... , oarna tuhulati. rr.rt. .U.,.. >« the CWioU*- V j T
Wy. on long prdunclc. .* of ««
Plain, cat. *. B«m>. wt»r. i. f7. l. t. »..—iilm n VT—. . . . .(*-,£
73. P«lw«t« «footlon,„ Uanog «* M «7. L .ch a>H| RN..• long, but still «mr »*" *•
• « UM a,>r,. inumr-i.
" l t * * . " »»» *!•".!. t.imnK. A/t/nr*. Cynanchum. Shrub 1 foot.
*3 U 1 a [«,. ,l,rt lWWa»f. tUlotlt ; »»».•
•J. •ub-coriiat*. nwrroniti., cUltrd with «hn# toiM«. Sw^al. Lr.*.'
tum beneath ; umbel, frw^o«, ,^1
.«*chum. Shrub tw.ning.
"*J™?**tth r«-'r«1{"<lc hair»; tram cordau, OUMMX, wunu- Pendulous-flowered Cynanchum. Sh„b l wining.
tut«d, dniioiL ...wothWi. *rxcrf* on ihr nb. and
'""trtl?"*? ' M«wrl" «.ll*ry, , flowwl; brwebad .- brutaW mWr fil.to.m . !« «• »> •
. " C« " ,MtTrM v*n «ftka pl.« p ,'„,"£, JM pk*'- ^
S ^ r . -v .^ irotU; l '"•. !• « *
wbkmg, .tK>rt-«rijinii, ,^,1,^ . t ^ ^ -
« Him i,-. ^
twiawg. glal<- U
|i«lunm: •vote
t>cbn long, i
»iu»< •*< , •!.- (irn brnr«th. and Masply bet* oroial*. *, (tkr
ci*-« loafrr than ibr prtiuln l'rd.rrU lanfa* iban the pw t^itna.
tattle. («fycim Nfmrai. *omt, ok* .«corolU. 0*M#. Mkriiaa*.
«5 I
not- -, tmd«U
breratfct; umbrU tonaanal:
U aomMa«Md, Sulatl*!
<f.
lib. rarr
tn* l*mtag ; • :>. M
<• on l»ng peduttda*. * - ^ r the i*>p.
Karr ^Mtrtrr tJ««i tt>r l«*»* ,
..'.it tmttA vjaaaohvaa. Pi. twminc. at tnr o*r. y l W M M at la* «p >
in'
b».
lfc««b. prwL l. p. W. «. ea>
« .ai«tba|K ^a^UBf
* "»«*y; pid—tUa p»loat ra|MiW,. CeralU
«t««Mt« orair. drawn out
rOM mai.y-..»«ntdto!»lj..LT
j t h *.
«ai U> b» Uibwc»», 6V«h«. i
M««M *r* taut to br Rumtrni.
fr* b-gk. rW lra .hm.i«. •• i,.r. v lUa j a r w * . l.M-af. • « • « *
U* aaaipM | th» U..1U.

•iriaakL 4<lrfi. tolltcW* "tiliMajt* acwmaiatcd. namca* tose. Stigma sessile, ovate-oblong, large.

Scentless-flowered Cynanchum. Shrub twining.

68 C. FUSCUM (Schultes, syst. 6. p. 111.) stem r.MHtfig Wl«* ·ndbn. brardnl at ihe baa*; oml« U axillary, r*ia> U- Nai.< | hinrhin*. oo <M wall*, and airwmjt ruliM. Asclepias fusca, Lour. ecch. p. 170. Leaves small. Flowers brownish purple, small; l<n ttt uf J ftur •les, without horns. Follicles 2, small, subulate, ventliu*Me •ut»Mr, and »Ut iiuaoV Seeds cur rrd, cc-ose.

Brown-flowered Cynanchum. l Pl. creeping.

69 C. MUCRONATUM (Andr. t. 515.) stems hairy; bcontair nuruiuii: imilw interpetiolar, axillary, compound; ·rollaa *t*- tate, greenish purple; segments acute, reflexed, twisted. ♄. ◠. S. Native of Trinidad. Pollen masses pendulous.

Mucronate-leaved Cynan*lturi>. Fl. July. A- Cit. 1S04. Shrub tw.

70 C. VENUSICOLOR (Bunge, in ·new. »r ua.) corona simple, bluntly 5-lobed; segments of corolla ·r»ir. aroM, downy; umbels axillary, sessile; leaves oblong-ovate, or cordate, acute, downy; stem twin ih|J. ^ative of China, on mountains, near l.un-iuan-**), and Zui-wey-shan. Corolla at first greenish, then brown. Stajly allied to *C. cirridiflorum*.

Parti-coloured-flowered Cynanchum. Pl. twining.

71 C. ATRATUM (Bunge, l. c. p. 119.) corona simple, bluntly 5-lobed; coroline segments oblong, emarginate lat dM a| ex, downy outside; calyxes and pedicels tomentose; umbels • Ell' lary, sessile; leaves on short petioles, broad-ovate- -oblonjt, »i utr. with undulated edges, densely downy above, tomentose beneath, as well as the stems. ♃. ◠. G. Native of China, near Sai-jui-sey, ati'l 'an-schan. Flowers dark bro«n.

-flowered Cynanchum. Pl. 1 to 2 feet.

s it — '·· That is C. cirrhosum, Swartz, in cat. horti i Ml. mio, and Hort. Gorenk.

Cult. For the cultur r» and |irapaf«tioo of the hardy »>- species, see *Asclepias* /'Mll, p. 144, t an for that of the tender species see *Pergularia*, p. 133.

IAI>> METAPLEXIS. *rnrlm*. -i.h. « 4 « HCMBMa lratU'Unf rontal).

·t»T. AafaWna, /iiWWt, (Witlla kubrotau. Staminecon n cartmt .Vlratt^i; irallrti anull. rumllalr. tlt<matins with the anthrrm. Aathrr* irrmmaicd by a mrtnl ane; il<n masses ventricose, pendulous, fixed by their sides. Stigma fur- '''''''''I with Ml undivided ftoonudl br- iwininK (flalii'»u» tulttliriili. \A »*t» ror< Racemes pedunculate, interpetiolar. Limb of corolla bearded.

s " «^l STAUNTONIA (Rœm. et Schultes, syst. 6. p. 111.) ♄. G. Native of l lkMM, in »l> (irnMncr ol t'rrkrli Sir G. Staunton. The only certain species.

Staun'·mi Mrt.r exis. Shrub tw.

2 M.? MUCRONARIA (Spreng. neuw. entd. 1. p. 269. sp. p. 854.) leaves su BJt 1 brwaini olilmn *mmcmamt*, claocou*, uU- rous; PrdiM>rl«t ui>,lxil»irly 6-fcV>w»r»d, abort* i than ih« petioles. ♄. ◠. S. Native of the Cape of Good Hope. A cl. aj» ronata, Thunb. Corolla urceolate, white inside; teeth alternatin lt *<1' the po Urn iwoir*. ·' a'ti-ct.Uvrrd and oblong lt muted uadri the plicæ of the column into a fulvous heap.

Mu '·*i(r-U-..,j Mnayluli, aVa* M *Cult.* '· **f *t'etfiniurwi,* p. 1 ill Of* am) propagation.

4 3. *'tuwtt* >r./aV

I \ I \ [111 A88A (from δις, dis, double W, and «••»*>, f«*»f. to divide, in reference to the double corona D Hi in mrm wern. soc. 1. p. 49. Mart. nov. gen. bras. H. t. p. 51, Lin. SYST. *Pentandria, Digynia.* Corolla subrotate. Staminecous corona double: outer one 5-parted; the segments acuminated; inner one 5-leaved, shorter, opposite the exterior ones and anthers. Anthers terminated, by a membrane; pollen masses ventricose, fixed beneath their apexes, pendulous. Stigma ending in an obtuse point. Follicles smooth?—Twining, glabrous natives of Brazil. l«tvr« QpnoMr. H interpetiolar.

1 I. (Rœm. et Schultes, syst. 6. p. 112.) glabrous; leaves ty (l<» rr. umh. late. ♄. ◠. S. Native of ;r,trt, nr«r i Janeiro, where it was collected by ^,r J, ^, : Banks. *Banks's* Ditassa. Shrnli ttr.

D. MUCRONATA (Mart. nov. gen. bras. 1. p. 51. t. 31. f. 1.) shrubby, erect; leaves sessile, approximate, ovate-cordate, with reflexed sides, inversely auricular, wrinkled, hairy; peduncles many-flowered; flowers subcymose. ♄. S. Native of Brazil, in the diamond district of the province of Minas Geraes, in rugged mountainous places, at La »ra* da l'mdatba. Stem villous. Corolla whitish green outside.

Decussate-leaved l Ditassa. Shrub er • ct.

p

5 MUCRONATA (Mart. l. c. p. 31. f. 2.) frutescent; stem twining; branches usually erect; leaves ovate-lanceolate, downy, on short petioles, bluntish, too mucronate, with reflexed edges; flowers umbellate, larger than those of the preceding species. ♄. ◠. S. Native of Brazil, in the province of Minas Geraes, on l.ill* at \\ orro de Villa J<i.

.V«*f,.a-.te-leaved i Ditassa. Shititiw.

4 D. PARRAENSIS (Mart. l. c. p. 55.) fruiescent, erect; 'itcrolalr, aruir, <|uil< entire, almost »r«ilr, a; proximate, with refle |pjaia|| utiitwlt ft «• riiinriril. ' '* SjliVr <! Ill in) <n tl,. .. • i>... l,.... —1 district of the province of Minas Geraes. Very like *D. sita*, and probably only a variety of it.

Passerina-like Ditassa. Shrub erect.

5 D. ACUMINATA (Mart. l. c.) frutescent, erect; Ct; lravn ltnrar. MWnrwhat arrr a «nWl, *i)Um* ; r1«»rf» sometimes 3-4 in umbellate. ♄. S. Native of Br •til, on mourn lumbr da Villa do Principe.

Acrrose-leaved Ditassa. Shrub erect.

6 D. LAEVIS (Mart. l. c.) frutescent, nearly erect; branches loose; leaves on short petioles, linear-lanceolate, mucronate, IM, glabrous on both surfaces; umbels many-flowered; peduncles shorter than the flowers. ♄. S. Native of Brazil, on the ascent to mount Itambe, in the province of Minas Geraes.

Smooth Ditassa. Shrub erect.

7 D. LINEARIS (Mart. l. c.) suffrutescent, twining; leaves • hott [K-IMilr.. liori ntrfa- <•, wutirli fr •l « ♄. S. Native of Brazil, in Morro de Villa Rica. I lir>< Pl larger than any of its congeners.

baaaaV-laawarl Ditassa. Shrub tw.

8 D. RETUSA (Mart. l. c.) frutes *tmm,* twining, leaves petiolate, oblong-lanceolate, retuse, mucro• ><tr nt«bnni, with flat edges; flowers umbellate. ♄. ◠. S. Native of Brazil, in the province of Minas Gera«••, on ih» ascent to Serra do Caracs.

Retuse-leaved ' >>iaaaa. "l'tnb l*.

9 I'. ORCADENA (Mart. l. c.) frutescent, twining; leaves petiolate, ovate-roundish, reflexed, complicate, glabrous on both

• Ma. *mm* umbellate. *h* . ' . S. Native of Brazil, in the province of Minas Geraes, in arenaceous places near the diamond district.

Obcordate-leaved Ditassa. SKrobtw.

Cult. For culture aud propagation K« *Ctlfyopu,* p. 149.

I \\ . | i l M I \ -lierrd (font the Ar»hic na* fc^7t I: Ur, m wern. toe. mew. 1. p. jo.—A» of aatbon.—Cyninehum »j*ci«*. Jaiij.

Lin. syst. *Pentándria, Digynia.* Corolla •wbfttH. with a short tube. Stamens inserted on the throat of the corolla; anthers ovate, parted 11 the alternate aegment* thort I inner one of 3 lt-> leaflets loose at tlie ba*e, undulated at apt* Anthers terminated by a membrane: pollen mawei eomprcaaed fixed by their apexes L-M». pendulou*. Stigma matte. Full it I< • ramentaceous. Kecda roiium-—Sum mining. Leave* oppmite, o rdate. Flo wen umbellate. Native* of the East 1*1 ies, and • qui- ——— Africa.

1> i KTK'R*« fR. Br. in mem. «. Up, H Wight and Arnott, «a«tnb. ind. fcol. | v, MrWaW; L r»undi*h>cordatc, acuminated, aeute, aanclet l at tlte baae. btnraili; ptdunr! . lon^atrd, nlifurm; nur^ioa uf corolla dfetrd. *h.* ^. S '• the Ealt lodiea, in rariout p.iru. at well as on the b*nk« uf .... (iantffd ; am] at Sumhata, in the Mimalatah. Cynaacbjum cor- *L.* oba. • l ib. rt. dif olium, Ren. t. 15. • clèpias echinata, Ind. 2. p. 44. mus. ind. or. cent. t. 616. Cynánchum extensum, Jacq. i on. far t. 54. \ l. vol. l. p. *303.* >.*i< bum bii-olnr, Andr. bi rlowCn Wwi

FiUmltJl HJtiiy, Aug. • lt. 1777. Shrub tw.

D. irot-Di uiBtf ; lr i l'ortti!> curdatr, *jtutt,* rtlloutlv ttxneflloae, aa well M the branches, &c. ittnbt U ctir)pnbo«e ; prdtcrl* hairy, } inch lonu- ♄. ^. S. Native of Arabia Felix, and in the .!«««•«• about Cairo, •. and on aid hills in llarbaxy, about Krrnu \ .epiai cordata. For«k. mb. p, 49. but n na. For«k. mb. p, 49. but n itnn fumw (ibbeda on the back. ^ J ^ ^ g J * ♄. ^. S. Native of Arabia Felix, in woods, which is *Pergularia tomentosa,* Lin. mant. p. 55. /./.<>.« (JUliwHM. ttc. l». **. f Corolla livid br rusty green. 4 lime* longer tfaaa lu* calyx. Co- VahL .yrob. l. p. *3. Desf. t). ail. l. p. ttt». 8 rmaUw. Wall. Md -' J* Ro>b. rona white. y green. 4 lime* longer tfaaa lu* calyx. Co- * a ! ll V»drpaM«r'y i'" MI m«a. md.

Cordate-leaved I>irmw. Fl. July, Aug. Clt. 1824. Sh. tw.

3 D. Guinée'nse; shrubby, twining, hairy; le>*«• cordate; lobes rounded bataWi ; petioles long; umbels racemose, downy. ♄. ^. S. Native of Guinea, in tnotu paru, Asclèpias scándens, Htv. A. JVwar. l. p. *{>*.* t. 54. D W B M Guinea Dæmia. Fl. July, Aug. Clt. 1824. Shrubtw. scándens, G. D m, m Loud. hort. bnt. p, !»•!. Flower* white, in crowded umbels.

4 D. Fousk'ii (Schultes, syst. 6. p. 113.) shrubby, twining; leaves cordate, acute. ♄. ^. S. Native of Arabia Felix, Asclèpias Dæmia, Fo t.lu a^typt. ll. i e« long, a litil* inrarr «tWt. Perhap* dtttinct from Follicles terete, subulate, 2 inches long, smooth, green, hispid from lent bri Asclèpias (Gonólobus) viridiflora.

Forskal's Dæmia. Shiub iw.

5 D. gla'bra (Schultes, syst. 6. p. 113.) shrubby, twining; leaves ovate, acuminated, flat, quite glabrous; flowers umbellate, white. ♄. ^. S. Native of Arabia Felix, at Tasen. Asclèpias glàbra, Forsk. ægypt. 51. no. 74. Probably distinct from the preceding.

Glabrous Dæmia. Shrub tw.

, . ilture and propagation •re *f>tTf*Unm,* p. 13J.

LXVI. SARCOSTE'MMA (from σαρξ σαρκος, flesh, and στεμμα, stem. Mra MTT. own; in reference to the leaflets of the inner cor .mabein; fleshy). R. Br. '* mem. wern. soc. 1. p. 59. Wight & Arn. ind. bot. 59.

t ami Arnott, eft-tt: - A K » P " >• » » d OUK

Lin. syst. *Pentándria, Digynia.* Corolla rotate. Stamineous corona double; outer «** eup-«b»r*<i or annular; crenate or 5-lobed; inner one; leaflets n»- : .i.:.. on* Stwfd, hi^brr thwi' fleshy. Anthers . irnainatnl by a nw membrane; pollen masses penaukMM. StiKraa »uuc or ap fixed by their apexes, iculated. Follicles slender, MMK SrrJ. con**- — decumbent, leafless, «ftwtilatcd ; or with di»tani *PP°V Flowers umbellate, ».erj. or tertn«> If 1,HJ .ad. M *rll M of S Natives of the East Indies and New Holland, South America.

• *Spttim* w f •»*

1 S. virgula'ta (R. Br. in mem. wern. »oc. 1- P- *'* ai«l \<-.. •. contrib. ind. bot. p. 59.) twining, leafless; umbels terminal; calyxes and pedicels aaiiCiat | o»» "V '" plicate, 10-toothed; t « & neatly • f £ corona flatlish, exceeding « i . uCr i sigma apiculated. ♄. ^. S. Native of the East Indies. Wall. ascl. no. 99. c. Wight, cat. no. 1556. Cyn mnrhum Timioal- ' *Mtbi** Willd. spec. 1. p. 1252. Lam. dict. 2. p. 252. : viminále, Lin. ..m.tu.ct ^rw. f Flowers white, V »»rti¹ l

Twiggy Sarcostemma. Fl. July. Clt. 1731. Sh. tw

2 S. Bacvonia'na (R. Br. l. c.) shrubby, twining, leafless; umbels terminal; calyxes and pedicels VV^M wd AnHMt. «»tr.b. iwl- ... it*, le umWU lateral, M w ; dicel., with a 10-crenated corona almost • ramacrwt r coratM MittpUc . outer corona buHlit : the alternate creo— oU<4< ahoricr than the *m • utma apirulatrd. ♄. ^. S. Native of the south h of CorOwMftdrl

ArMra'f Sarrmirntnat. Mitubi tw. . i^JbO i - ? ' l aod Arwou. L c

Short-stigmated Sarcostemma. Shrub tw. he abori lateral bra«« ^e ! ymUl* •erminal, or temutttiaff the and pedtcvU gbbrout; o«ter ca

Natives of New Holland.

4 S. australis (R. •r. p*"- p. 463.) leafless, articulated, w - — dtcmwtofll, Mcnrumr* t» unr^ | umbeU ! >^|||ir ,!i l the Uftn drawn out beyond tbe MMWI m ib* • ;ta< U of pedicell CO* X « i tu ««ih •*••*• 5U¹., \v MM! Am.. WKL bot. p. i t . iW c«»»- **•»!•" « aJl, awl prtb*|- ' |cna i>*¹ tan. iv.• >ptcta«, one aittb Uwi.l and the •*»" -n inflorescence.

Southern Sarcostemma. Shrub tw. or decumbent.

• • • *Species natives of Af* · *f««.

3 S. Tetra'gona; leafless, erect, branched; geniculately flexuous; flowers solitary, pedunculate. ♄. G. Native of the Cape of Good Hope, in Karro, beyond the Hartequas Kloof, near Hgarivier. S. aphyllum, Schultes, syst. 116. Asclèpias aphylla, Thunb. prod. 1. p. 47. fl. ca 155. Branche Lf* l P-

Thunberg's Sarcostemma. Shrub erect.

6 S. granu'latum (R. Br. in mem. wern. soc. 1. p. 51.) leafless, erect, branched, glabrous; peduncles axillary, tuberculed, solitary, twin or tern, bearing each a capitate head of flowers

at top; exterior corona cup-shaped. ♄. G. Nati. r of Arabia, Cynánchum fr mm fr life . ». p. M

16. ItiatiriK-* aan Mr* gram, rtwcru nnwmi, nlai and at tbr baar, lanceolate, »

<1, aitrtiuatrtl a(IW bayae. In of thr plant it uaed M

r S • . •.Trillin 1 ᵛKfut».

. it, 6*. p 1 («.> lrn •*bclt trrmuv <l|N and % iinuu', <-<▷• »ti»j-il, the in ti ods. Asclèpias stipitácea, Forsk., aral 1 p. tSJ. ' Stvma of an ob^ru >rni. about It m an uml- rted. < corolla with gree < »CKIHC«l j; rcdrmnl coroaa. »lcr. flat on one aide and convex on the trilirr. 3 inchr* long.

.wlemntB -

A. FoaaxtELi* > it abod braa> b« at in wooda near » flnww'i

(fy|M. p. 5. no. fill. !•»' ITtrrn. Jmnt a «pan *tanf. V* •f»l r<>rynibAM> at the J">iW ' an.- troti) *S.* natn.

rub rl* or t»r.

* • • * V|tfrici »o(tr<j *of troptr*! j4mt<*

ha from tkr* «V ^ecie. ; .W awy *probably form k* fcj LaaaBrf *<•»«•.

9 S. ot*tti w (H. I), n Kunth, nnv. gen. amcr. 3. p. 1 > M9.)twining; brancbr* trrrte.aud arr aaw«41a*ttir pedunclet and lea*TI gtabruut; learr* Unreo glahrout beneath: *t*\y* ciliated; umbels interpetiolar, on long pedunc "«a tiiiilulitrtl, antiular, flethy, j-]*»t' Mlet» tenna oi«t< -ultl.iin;, ubtuae, flr«liv, l <• anther*. *"U.*"\ S. Native ol l, < ^brlavata. %aflmr, an|tulir at the bur, and jjrnnulit. iu-«!, X<4obeii h i.

10 8. rv»i II. H. it Ktmili. I. c. p, : ''»*r« l, nceolate, acuminated, rounded at the 'uwr, imtubi, J nous, having the margins and middle nerves downy; •egavtUa d of corolla ciliated, downy outside, many-nerved; outer corona narrow; leaflets of inner corona ovate-oblong, obtuse, fleshy, Wl. f<(li» in height to the gynostegium, but three times shorter than the corolla, green. ♃. ^. S. Native along with *S. glaucum*. Flowers size of those of *S. glaucum*. Pollen mass linear-oblong, obtuse, the rest as in *S.* f(«k<«««* I Leaves nearly 2 inches long, and 1 an inch broavi. ^ * p « i» «nna* bva ...

11 S. CUMANÁ'NSE (H. B. et kunth. 1. c.) twining; branches and p - ckahr.-t obtuae at th» ba*a, tnembraTHui*. pubenil "«trr corona narrow, undulated; w,'nirni. o' - corona oblong, obtuse, fleshy; gynostegium as in the preceding. ♃.! ^. S. Native near Cumana, in sandy places. Leaves 2 inches long •»'• 2|-3 lines broad. Corolla white.

C-K^aWO ?**rro»t< tnma I I IW, prim. ISA.) Imnn; leave* lanceolate, aruminati prtiolar; pr.i rntfJU .-labrou* a little *Ut^tr* than the gynostegium. ♄.! ^. S. Native o •(Orrtiaorrat. Ja q.; island of Arowabish, in hedges, ex Meyer. S. clausum, Rœm. et Schultes, syst. 6, p. 114. Cynánchum clausum, Jacq. amer. 1. p !?• %• AC). f. 2. ed. pict. I - • A»»'• |•• •« mi • > •, *fiMA.* apcr. 1. p, l 270.!—Plum. *kvn. t.* IT. f- kV • lower leaves lar rr and hay*dish ovate-oblong; the upper ones becoming ^raduall narrower, with revolute edges: painted with white on the nerves, and greenish blue on the veins. Calyx small. Pollen masses oblong, a little curved, hairy, hanging by short pedicels rising from blackish ffiamU. l'edicels furnished with minute villous bractras at the base.

Sirrminnmi. MiruJ' tw.

13. S. SWARTZIA'NUM (Rœm. et Schultes, syst. 6. p. 115.) twining, filiform, glabrous; leaves l uMaolM*, glabrous; umbels interpetiolar, mil 'lar, I; M-pt; rorona ' leaflets of inner corona sessile, corona ' leaflets of inner corona sessile, ovate-conical. ♄. ^ S. Native of th l south of Jamaica, in sandy arid places. iniong bu*hr« by tin sides of rivulets. Asrlrtiiat vnnii, WtlJl \«r)rpiM • candens, Mill.—Sloan. spec. 1. p. 1270.! " hist. 1. p. 207. t. 131. f. 1. | Plum. icon. 27. f. 2. Pedicels naked. Corolla white. F llicUt oUong, artimuaM, compressed at the base, downy, hoary.

Swartz's Sa roatrmn Cli. 1820. Shrub tw. t4 8. u v u (Spreng. syst. 1. p. 853.) plant erectish, ber- <acroui . leaves almost sessile, linear, ^Ubro«M { a*u lary, many-flowered. ♃. S. Native of Cumana.

Linear-leaved Sarcostemma. *nun*.* Pl. erect.

Cult. For culture and propagation see *Ceropégia*, p. 112.

l. W I I PHIL1BI I.I I V (namnl after J. C. Philibert, who ha* nnttrn K W. works on elementary botany). H. B. et Kunth, nov. gen. amer. 2. p. 195.

Lin. syst. Pentándria, Digýnia. Corolla urceolately rotate, sinuately 5-lobed; lobes acute, inte by as many teeth. Corona double; outer one ring-formed, in the bottom of the corolla, entire, fleshy, undulated; inner one inserted higher up with the tube of the filaments, 5-leaved; leaflets entire. Anthers terminated by a membrane; pollen masses clavately cylindrical, fixed beneath their apexes, pendulous. Stigma bipiculated. Follicles unknown.—A twining shrub. Leaves opposite, cordate, soft, tomentose. Umbels interpetiolar, involucrated.—This genus is very nearly allied to *Sarcostémma*, from which it principally differs in the urceolate, sinu obed corolla.

1 I[1], *mr,* (H. B. et Kunth, l. c. p. 196. t. 230.) ♄. ^. S. Native o n itir batiV of the river \ mazon, near *»'<»n>r|«etWta.* and hoary brw—ih, Leaves green above, 1 inch rt..-rr..l. atx and more long, 4-5 lines broad. Umbels 8-10 out equal in length to the leaves. Corollas large, downy outside.

Solanum-like Philibertia. Shrub tw.

Cult. For culture and prop 133.

LXVJ1. EUSTEGIA (from *eu*, *eu*, well, and *στεγω*, *stego*, cover; in reference to the triple corona). R. Br. in mem. wern. soc. 1. p. 54.—Apócynum species of Thunb.

LIN. SYST. *Pentándria, Digýnia.* Corolla rotate. Co- rutta triple, • ach composed of 5 leaves; ou rr nor imwrtrd in the- ilirn [1] id leaflet* 1 ^ ^ - tH» •*«-. UK nt.of the limb ; the leaflets of the rest alternating with th- »€· of *ihm* outer, but opposite the anthers; leaflets of the middle corona tripartite, of the inner one undivided. Anthers terminated by a membrane; pollen masses fixed by their tapering apexes, pendulous. Stigma subnutic. Follicles unknown.—Dwarf decumbent herbs. Leaves opposite, hastate. Flowers subumbellate. Umbels interpetiolar. SB

1 E. HASTA'TA (Rem. et Schultes, syst. 6. p. 119.) branches decumbent; leaves hastate, ciliated. ¥. G. Native of the Cape of Good Hope. Specg. neue. entd. p. 268. t. 5. f. 5-10. Apócynum hastàtum, Thunb. prod. 1. p. 47. fl. cap. 2. p. 164, act. nov. petrop. 14. p. 314. t. 9. f. 6. E. minùtum, Lin. suppl. p. 1«*. Itr.n. [v] I

state-leaved Eustegia. Fl. June, July. Clt. 1816. Pl. dec.

2 E. FILIFÒRMIS (Rem. et Schultes, syst. 6. p. 120.) stems decumbent; leaves linear-filiform. ¥. G. Native of the Cape of Good Hope, in sandy fields at Swartland. Apócynum filiforme, Thunb. prod. 1. p. 47. fl. cap. 2. p. 160. Stems, peduncles, and pedicels downy. Leaves glabrous.

Filiform-leaved Eustegia. Pl. dec.

fuIl I ' |.|ti M *i* . * , ' ! > "W**» •wo f«wp»ii»u^n m 1 *trvjttgtm^* p 1 i . *(->nmi*

1\i\. \u TASTELMA (from *μετα*, *meta*, instead, and *στελμα*, *stelma*, a crown; the throat is crowned by 5 exserted teeth instead of a corona). R. Br. 1 Mm. wem. pgc. I. 1 52. —Cynanchi species of authors.

T LIN. SYST. *Pentándria, Digýnia.* Corolla subcampanulate; throat crowned by 5 exserted teeth, which are opposite the recesses between the lobes, and running down the tube inside. Staminous corona wanting. Anthers terminated by a membrane; pollen masses compressed, fixed by their attenuated apexes, pendulous. Stigma mutic. Follicles unknown.—A perennial, twining, glabrous plant. Leaves opposite, membranous. Umbels interpetiolar, almost sessile. Flowers small. ri (hr mm. 1

1 M. PARVIFLÒRUS (R. Br. l. c.). ¥.? ^. S. Native of the West Indies, among bushes on the mountains. Cynánchum parviflòrum, Swartz, prod. p. 53. fl. ind. occ. I. r. M 1017.—Plum. icon. 215. f. 1. Leaves ovate, subulate at the [1] Stems tetragonal. Flowers small, whitish green.

Small-flowered Metastelma. Pl. tw.

Cult. For culture and propag >u»r> *w* *PfTgwIirm, p.* IB

LXX. MICROLOMA (from *μικρος*, *micros*, small, *mi* *λωμα*, *loma*, a fringe; in reference to the fascicles of hairs in the tube of the corolla). R. Br. in mem. wern. soc. 1. p. 55. —Ceropégia species, Lin. and Thunb. Lam. ill. t. 179.

LIN. SYST. *Pentándria, Digýnia.* Co JU wrap fan, with » ventricose angular tube, a naked throat, and a short limb. - I Scales 5, inclosed, inserted in the middle of the under the recesses, alternating '•«> •• 1MB* fascicles of hairs. Staminous corona cone. !•*•!• sagittate, terminated by a membrane; pollen masses compressed, fixed by their apexes, pendulous. Stigma spiculated. Follicles unknown.—Twining subshrubs. Leaves opposite. Umbels interpetiolar. bfwiei p«BM j

1 M. SAGITTA'TUM (R. Br. l. c.) leaves sagittate, downy; limb of corolla acutish. ¥. ^. G. Native of the Cape of Good Hope, on sandy hills. Ceropégia sagittàta, Lin. mant. 215. I Thunb. prod. 1. p. 37. fl. cap. 2. p. 148. ivot K1

14. J«^. ho»t. ^b<«tl petrop. t. 1. p. 17. t. 38.—Burm. afr. 36. t. 15. Stems villous or tomentose. Corolla scarlet, ex Lin.; purple, but green at the base and apex, ex Thunb. :,, I l. July, Aug. Clt. 1775.

Sagittate-leaved Microlo Shrub tw.

2 M. LINEA'RE (R. Br. I. e.) lcftvr* IBM »'. 4*1 JUT • aaa limb of corolla very blunt, ¥. ^. G. Native of the Cape of Good Hope, on hills. Ceropégia tenuifòra, Lin. syst. 211. Thunb. prod. 1. p. 37. fl. cap. 2. p. 147. Periploca tenuifòra, Lin. spec. p. 310. Ceropégia tenuifòlia, Pers. ench. 1. p. 277.—Burm. afr. 37. t. 16. f. 1.?—Plukn. mant. 17. t. 335. f. 3. Stems glabrous. Corollas blood-coloured, ex Thunb.

Linear-leaved Microloma. Fl. July, Aug. Clt. — twining.

Cult. For cu

I \ \ I \^ Ik I'll ANUS -IMI. • pft*. •od*"t-'^V$_F$"T pharus, a co corona JtW i R. Br. in mem. wern. * p. 54.—Apócynum species, Lin. fil. and Thunb.

LIN. SYST. *I*tmmJr*t, Digýnia.* Co a l U *m* !.I»IT,.- t)., I'T... ,r. i Mi be without scales. Staminous corona wanting. Anthers terminated by a membrane; pollen masses P*nd HiUl < Follicles unknown.— Leaves opposite. Umbels interpetiolar. I lowers small. I his genus differs chiefly from *Microl* the want of scales within the tube of the co la. Iff.)

t \ REITLÒRUS (R. Br. l. c. Schultes, syst. 6. n. stems twining, pilose; leaves lanceolate, villous be Cape i>f bels generally 5-flowered. ¥. ^. G. Native o Good Hope. Cynánchum trifiòrum, Lin. fil. — Thunb. prod. 1. p. 47. fl. cap. 2. p. 161. ite. *Filaments* and anthers connate. 1816.

Three-flowered Astephanus. Shr*b n» i.r fff n ^ j j k tt(i^,-

2 A. LINEA'RIS (R. Br. twining, glabrous; leaves linear-lanceolate; lair**!. u»l terminal. ¥. ^. G. Native of Good 1 1 ^ n^ I Swartland. Cynánchum linéare, 169. Thunb. prod. 1. p. 47. fl. cap. 2. p. 160. long. Corollas white. 4 . l

Linear-leaved Astephanus. Fl. July, Aug. Clt. 1816. Shrub tw.

3 A. LANCEOLA'TUS (R. Br. l. c. Schultes, l. c.) stems twining, glabrous; leaves lanceolate, glabrous; umbels flowered. ¥. ^. G. Native of the Cape of Good Hope. Apócynum lanceolàtum, Thunb. prod. 1. p. 47. fl. cap. 2. p. 162. Corollas white. Leaves ' • J

Lanceolate-leaved Astephanus. Shrub tw.

4 A. CORDA'TUS (R. Br. l. c. Schultes, l. c.) stems twining, hairy; leaves ovate, rounded at the base, villous beneath and glabrous above; umbels interpetiolar. ¥. ^. G. Native of the Cape of Good Hope, in woods. Apócynum cordàtum, Thunb. prod. 1. p. 47. fl. cap. 2. p. 165. Leaves more than an inch long. Calycine segments lanceolate, acute. Corolla greenish, 5-parted to the base; segments ovate, concave, ,4.<«*' Filaments distinct; anthers combined; stigmas obtuse. Follicles 2, oblong. Seeds 2, filiform. J ^PVT* f '

Cordate-leaved Astephanus. Shrub tw.

5 A. MASSÒNII (Schultes, syst. 6. p. 124. ex R. Br. l. c.) shrubby; branches spinescent; leaves small, opposite, distant, cordate; corolla more urceolate than campanulate, the orifice of the tube furnished with deflexed hairs. ¥. G. Native of the Cape of Good Hope, where it was detected by Masson. The pollen masses are fixed by their attenuated apexes. The follicles are nearly cylindrical, and smooth, with the seeds of the usual structure.

Mmuam't Asterhanus. Shrub.

L. : •* (mint! VniiliiU. LMVM t?-U i rmuhtftl mill tmny (be 1M**«. l\»r«ll« 5- Hlobow Illttr , «t«1 rar al tttp, flrahv and r- i ljratr, Yrliott. Sltjftna c«. |p v.

7 A. B. lt>f. Rl-V ^ . *** - N

Bertero's Astephanus. Shrub tw.

Cult. For culture and propagation see *Ceropégia*, p.

lit, liJt*-«. WMI

LXXII. Ml. Pl

• W , a MMM hot. p. 60.

Lin. syst. *Pentándria*, *Digynia*. CoraRa »tii fta K'*'irAt> •MM the roc 11. n mi.

I P. CAUDA'TUM (Wall. ascl. no. 75. Wight and Arnott, l. c.) leaves lanceolate. JotM-aiirMiBi . ubtMr; •«tfmi routw. ¥. G. Native of Silhet, and the mountains of Ghore.

Tailed-leaved Pentasacme. Pl.

ALBUS (Wight, ... 30.) leaves lanceolate, acuminated; umbels almost sessile, few-flowered; segments of corolla linear, obtuse; scales in the throat small, gland-formed; anthers ... ; stigma beaked. ¥. G. Native of Silhet. Wal p. 74. unnamed.

Wall.'s Pentasacme. Pl.

Cult. For culture and propagation see *Alstrœmeria*, p. UT.

LXXIII. HI BANTHERA (from *Aybos*, a curve, and *anther*; anthers gibbous on the back).

B*J**C*»r. prod. IM. »

Lin. syst. *Pentándria*, *Digynia*. Corolla rotate. Corona none. Anthers gibbous on the back, terminated by a membrane; poll. n masses pendulous, fixed by their tips. Stigma mutic. Follicles unknown.—A twining shrub, with opposite leaves and interpetiolar umbels of flowers.

1 H. NORLANDICUM (Endl. l. c. Bauer. pl. ins. nov. t. 162.) ♄. ^. G. Native of Norfolk Island. Leaves ovate-ob petiols ... spidately mucronate, 2 inches long, glabrous, shining above and p ...rth. Umbels interpetiolar, racemose, 4-8-flowered, a little longer than the petioles. Corollas pale green.

*Big L>*4*Ur* Hybanthera. Shrub tw.

1 mil, K. culture ... propagatic

T... I \'.

• SECAMONEÆ (this tribe contains genera agreei ... particular characters). Polle ... smooth, fixed by fours to the top of ... the stigma, which are exsulcate. ... f trtth n HMMW XO, of «ull of ihr t nrJMjulu <l Filaments coniatr, ajipMkliculate outside.

I \ \ | \ . SECAMONE (*Spanmona* ... *S. Ægyptiaca*). R. Br. in mem. wern. soc. 1. p. 55.—Periploca species of ... Lm. ami others.

Lin. syst. *Pentándria*, *Digy* ... C< rolla rotate. Stamineous co ... f"« W ... ved; leaflets laterally compressed, fixed lengthwise by their margins, averse, simple. Pollen masses erect. Stigma coarctate at top. Follicles smooth. ... l'.i ... ect or twining. ... eaves opposite. Cymes dichotomous, ifUtirntK t|irutt» i ... is minute.—Natives of Africa, the East ... New Holland. From the extreme minuteness of ... determining than this.

' *Species natives* ... (''x *Umtt Indies.*

... RMI'TICA (R. Br. l. c. Schultes, syst. 6. p. 124. Wight ... ..., contrib. ind. bot. p. 60.) twining, glabrous; leaves from elliptic to narrow-lanceolate; cymes shorter than the leaves; corolla ... ; leaflets of corona cultriform, nearly one half shorter than the gynostegium; follicles slender, attenuated at the apex. ♄. ^. S. Native of the East Indies, at ... ts of mountains, among other bushes. Wall. ascl. no. 102. Wight, cat. mi. 1559. Periploca emetica, Retz. obs. 2. p. 14. Willd. phyt. 1. p. 6. t. 5. f. 2. Periploca cymosa, Roxb. Cynanchum vomitorium, Lam. 2. p. 235, ex Poir. ? ined. The other species mentioned by R. Br. l. c. is probably the *Tylocodryna Rozburghii*. The roots of this pi ... nt are used in place of ipecacuanha.

Emetic Secamone. Clt. 1816. Shrub tw.

2 S. FINLAYSONI'ANA (Wight and Arnott, contrib. ind. bot. p. 61.) twining, glabrous; leaves oval, acuminated, almost sessile; cymes longer than the leaves, with flexuous branches; corolla glabrous; leaflets of corona about equal in length to the gynostegium. ¥. ^. S. Native of the East Indies, where it was collected by Dr. Finlayson.—Wall. • IHI. M> 103. unnamed.

Finlayson's Secamone. Shrub tw.

3 S. MARITIMA (Blum. bijdr. p. 1050.) flowers villous inside, disposed in dense cymes; leaves elliptic-oblong, ... at both ends, smoothish, veinless above; stem twining. ♄. ^. S. Native of the island of Nusa Kambangs, by the sea side.

Sea side Secamone. Fl. Nov. Shrub tw.

4 S. AURICULA'TA (Blum. bijdr. p. 1051.) flowers glabrous, disposed in corymbose panicles; leaves oval, acutish, obsolutely biauriculate at the ... ory, glabrous; stem twining. ♄. ^. S. Native of Java, on the Salak mountains.

Auricled-leaved Secamone. Fl. Oct. Nov. Shrub tw.

5 S. LINEA'TA (Blum. bijdr. p. 1051.) flowers glabrous, disposed in loose panicles; leaves elliptic-oblong, acuminated, rather emarginate at the base, glabrous, full of fine parallel veins; stem twining. ♄. ^. S. Native of Java, in shady places, on mount Salak, where it is called *Aroy kalawalan*.

Lined-leaved Secamone. Fl. June, Sept. Shrub tw.

6 S. LABIOSULA'TA (Blum. bijdr. p. 1051.) flowers glabrous, subcorymbose; leaves lanceolate, acuminated, finely veined, glabrous, shining; stem twining; branches nodose at the insertion of the leaves. ♄. ^. S. Native of Java, in calcareous soil, frequent.

Lanceolate-leaved Secamone. Fl. May, June. Shrub tw.

7 S. VILLOSA (Blum. ll. luj'lr. p. 1050.) flowers disposed in ·ruaiof corolla villous; leaves oval-oblong, acutish, veinless above, rather villous beneath; stems twining, terete, clothed with fulvous tomentum. ♄. ◠. S. Native of Java, among bushes, about Batavia.

Villous Secamone. Fl. year. "iiruli tw

8 S. MACROPHYLLA (Blum. bijdr. p. 1050.) flowers disposed glabrous; corolla villous outside; leaves ovate, acuminate, glabrous, veiny; stems twining, tetragonal. ♄. ◠. S. Native of Java, in mountain woods.

Var. β *falcata* (Blum. l. c.) leaves acuminated, clothed with pubescence beneath, as well as the branches and peduncles. ♄. ◠. S. Native of Java, about Kurupad.

Long-leaved Secamone. Fl. Jul. ob tw.

·i. M«v >(.-

* * *Species* ***at*** **Km.**

9 S. ÆGYPTIACA (R. Br. in hort. kew. 2. p. 75.) twining, glabrous: leaves elliptic-lanceolate, or oblong, acuminated, on very short petioles; cymes panicled, shorter than the leaves; corolla villous inside. ♄. ◠. S. Native of Egypt, as well as the Cape of Good Hope, in Schultes, syst. 6. p. 125. Periploca Secamone Thunb. prod. 1. p. 45. fl. cap. 2. p. 353. Poir. encycl. 5. p. 180. Secamone, Alp. aegypt. p. 135. t. 134. Leaves paler beneath and transversely veined. Flowers minute. The Egyptian and Cape plants are probably distinct species, and even perhaps not of the same genus.

Sa* lootai. 8. Al|>«iu BMW, Lin IMl.t. p. f 16 cam-

* *Egyptian* Secamone. Fl. July. Cl. 1752. Shrub dr.

* * * *Species natives of New* ffaflaaaa[1]

10 S. ELLIPTICA (R. Br. hort. kew. ed. 2. p. 464.) erect; leaves elliptic, acuminated, glabrous; IM»

·a^ prOnttclr* ami twaaWU tap

->toln bvfMaia IM

Elliptic-leaved Secamone. Cl. 1824. Shrub erect.

11 S. OVATA (R. Br. l. c.) stem divaricate; leaves ovate, acute, glabrous; idaaaglM and peduncles smoothish; corollas beardless. ♄. S. Native of New Holland, within the tropic, on the sea shore.

Ovate-leaved Secamone. aaaaaati Samb »rr. i

·MCaM ·«f*ttt of* far *West Indies.*

12 S. OCCIDENTALIS (Spreng. syst. 1. p. 817.) corollas downy; paaMx axillary, solitary; leaves oval, mucronulate, villous; *i*

Western Secamone. Shrub tw. <*•. i or culture and pro·jpgatiafi »*t- *frtf--*

i.\w TOXOCARPUS (from τοξον, *toxon*, a bow, and καρπος, *karpos*, a fruit; in reference to the follicles). Wight and Arnott, contrib. ind. bot. p. 61. ikr arrta

Lin. syst. *Pentandria, Digynia.* Stamineous corona 5-leaved; leaflets flattish, ! y ^ > * t'«rplla mtg n.br iMTfc furnished with a little segment inside each. Pollen masses 20, erect, fixed by fours to the glands of the stigma, which are exsolcate. Stigma rostrate, rarely spiculated, undivided. Follicles smooth, divaricate. Seeds comose.—Twining shrubs. Corymbs interpetiolar, usually opposite, dichotomous, spreading, many-flowered.

i i i^- ·1811 (Wight and Arnott, l. c.) stems glabrous; young branches downy; leaves elliptic, acuminated; corymbs nearly sessile, with divaricate branches, longer than the leaves; flowers pedicellate; segments of corolla ligulate, ? Ukriw: W- throat rather hairy; leaflets of corona ovate, indentately truncate, 1, »i|V$_t$ apex, a flat, linear, much exserted segment, which exceeds the anthers, and is nrwhMU _!...- ike ltt'"* °* the apex; stigma rostrate, bifid corolla a little; follicles arcuately reflexed. ♄. ◠. S. of the East Indies, in hedges, at Vellangary, near Nepaul— Wight, cat. no. 1560. Periploca glabra, Roxb. in herb. Banks. Echites racemosa, Herb. madr. Wall. ascl. no. 113. unnamed.

Klein's Toxocarpus. Shrub tw. Orikai

2 T. ROXBURGHII (Wight and Arnott, l. c.) branches ,,J, with rusty down; leaves broad, oval, acuminated; corymbs on short peduncles, with divaricate branches, about MMBMMI ' ,'uU'i M M M ·)··>' '· «· ·rarmji avna a lasn, inKi. aca> rajaaJlaaaar to leaves; flowers almost sessile; throat of corolla hairy; segments of corolla ligulate, hardly exserted. segment is. MS which is equal to the anthers; stigma beaked, twisted, equal to the tube of the corolla. ♄. ◠. S. Native of the Circars. Wight, cat. no. 1561. Asclepias longistigma, Roxb. fl. ind. 2. p. 46. mus. ind. orient. t. 619. Asclepias microstha, Roxb. in herb. Banks. Echites dichotoma, herb. Klein. et Rottler. Wall. ascl. no. 113. b. The flowers are much smaller than in the last species.

Roxburgh's Toxocarpus. Shrub tw.

3 T. CRASSIFOLIA (Wight, contrib. ind. bot. p. 61.) branches sparingly-pubescent; leaves on short petioles, oval, acuminated, coriaceous, itlafcfpoa; (uttim MMMM4B *l·* the ·b/»r 1 IIHKI.II, ana a«^ ·· t ,,, rl.K ((»r< calyces, clothed with fuscous down; flowers sessile, in fascicles, small; segments of corolla densely clothed with white villi; leaflets of corona reflexed at the sides, cohering at top, and much exserted, equaling the stigma in length; stigma rostrate, higher than the anthers. ♄. ◠. S. Native of Silhet. Secamone crassifolia, Wall. ascl. no. 101. pWaaVf a bMtal <og ih» m r t arfmc*i — ··

·tv »tr«a)hjauiMl MW·

Thick-leaved Toxocarpus. Shrub tw.

4 T. LAURIFOLIUS (Wight, l. c.) glabrous; leaves oval, sometimes obtuse, but usually acuminated, coriaceous; corymbs sessile, divaricate, -^^-^--il^iU —_-– segments of corolla reflexed, bearded with white hairs inside; leaflets of corona rather fleshy, short, roundish-ovate, acutish; >*«a] ·>. im»rr . gynostegium; tips ffttktb*n^{U,K}^'J^H sub ariatate, obscurely apiculated above the stigma, » ihw**f^{111,} obtuse, inclosed, and incurved; follicles slender, horizontally. ♄. ◠. S. Native of Chittagong and Tipperah; and at Cawnpore, &c. Asclepias laurifolia, Roxb. fl. ind. 2. p. 49. mus. ind. orient. t. 1614. Wall. ascl. no. 100. A. microstha, Roxb. in herb. Banks. fl. ind. 2. p. 50.

Laurel-leaved Toxocarpus. Shrub tw.

Cult. For culture and propagation see *Periploca*, p. 155.

·a aW^{0*}

w ^ ' - f · ·· · t J -·· 1 62 i aav^MV* VtaWnw^M* tiwawaviajbiiai'. ^^ft* »»"' ·· · " * y · -—

about one Half »hortrf ilian the corolla. This genus is allied to both *Snmmimr* and *To**mrp*t.* b. re of tnr CTi-na. •» «1K> in ha I it. Br •*•*! daVftCtr > differs from both in the structure of Secundse was probably intend• d (u tmluilr all *thtrr* (fr-t era.

I G. ACUMISA'TUM (Wig >it. I. C). ^. *\ •- S»'l»« «* Silhet. Wall. ascl. no. 127. u itiarard.

•^rmajaMtn/. leaved Goniostemma. Shrub tw.

Cult. I or cvilturr MM! pfup*galM>n tcv *PrrgmUtria,* p. 133.

*Tril** V.

PERIPLOCEÆ (this tribe raMUM genera agreeing with *Periploca* in particular characters). i. Br. in mem. wern. soc. 1. p. Sfl. Wight and Arnott, contrib. ind. bot. p. tiS. I* masses granular, fixed singly, or by fours, to * d U d appendage, composed of 2 combined ones, which rises from the top j ol of the stigma, but are at length applied to it. Filaments partly or altogether distinct. Anthers conniving in the manner of a cupola, over the stigma.—In .11 the genera of this tribe, examined by Wight and Arnott, (except perhaps *Cryptostigia*) the corpuscle is dilated at the base into a kind of gland, similar to those found at the base of the pollen masses of an *Orchis;* and in all, with the above exception both the corpuscle and its appendage are at Icniph fi sally detached from the stigma.

LXXVII. HEMIDESMUS (from m *kt****\, *<•«(«(». half, MM) ἥμισυς, *hemisus*, a tie ; filaments joined at base and free at apex). R. Br. in mem. wern. soc. 1. p. 56. Wight and Arnotl, ci" trib. ind. bot. p. 62.—Periploca species, Lin.

Lin. syst. *Pentandria, Digynia.* Corolla rotate ; 5 mutic scales inserted under the recesses between the segments. Filaments connate at the b distinct at top, inserted in the tube. Anthers cohering, free from the stigma, beardless, »im- ple at top. Pollen masses 20, gr applied by fours in ihr reniform, solitary, appendage of each corpuscle. Sti .:n>a flat. tish, peltate, mutic. Follicles cylindrical, divaricate, smooth. Seeds comose.—Twining shrubs. Leaves opposite, shining Cymes interpetiolar. Flowers small. Corollas be- tw n coriaceous and fleshy. lit, but at irMnh adhere to a vised dilated corpuscular appendage.

1 H. PANICUS (R. Br. in hort. kew. 2. p. 75.) glabrous ; leaves from cordate-ovate, cuspidate, to narrow-linear, acute, usually oblong-lanceolate ; cymes usually almost sessile, but sometimes pedunculate ; scales of corolla adhering to the tube from the base to the apex ; follicles slender, straight. ly. Native every where in the peninsula of India, among bushes. Wall. ascl. no. 104. 105. Wight, cat. 1562. Periploca Indica, Willd. spec. i p. 1250. R « 2 mus. ind. orient. t. 212. Asclepias p*rw!<»*r* Roxb. fl ind. 2. p. 29. exclusive of many synonyms.—Rheed. mal. 10. t. 34.—Burm. zeyl. p. 187. t. 83. f. 1. ym. -TiuW r 559. : 2. (with broad leaves) and t. 261. f. 1. (with haff.»* leaves). This is a very polymorphous plant, varying iiirfl in ahapi and size of the leaves ; and when the varieties are better known may hereafter form several species.

(MM Hemidesmus. Ch. 1796. Shrub. tw.

2 H. PUBESCENS (Wight and Arnott, contrib. ind. bot. p. 63.) hkt, slender, clothed with hairy pubescence ; leaves lanceolate, acute, do BS| a* will as the pedoncles and calyxes ; cymes sessile ; scales of corolla fixed to > lt* tube. ♄. ☌. S. Native of the East Indi M, at v andalore. Wall. »» I no. 105. *»» unnamed. Wight, cat. no. 1569.

Downy Hemidesmus. Shrub tw.

i WALLICHII (Wight, l.c.) glabrous ; leaves narrow linear- a.ll acute ; cymes few-flowered ; scales of corolla subu- [•crolair, a late, free from the tube, but cu Wtin* » ith the base of the fila-

as. lew. unnamed.

Wallich's Hemide tw.

Cult. propagation see *Pergulària,* p. 133.

LX will. IIK* in ii i (from βραχυς, *brachys*, short, and Vine, *tefnt,* a Mi ; in reference to the 5 short truncate scales in the throat of ibr con. la). Wi *M* and ,\rnot(. lonttiV ir»d. txtt. [i. «J.

Lin. syst. *I'rntantir.a, Ihffa* ia. Co*A\\ MtbroUt', 5-parted ; segments spreading ; K a lr • 1' the throat 5, short, truncate, flat, mutic ; tube short, fully clothed by a broad, fleshy, adnate ring inside. : filaments very short, broad, distinct, inserted in the upper part of the iKraal along with the scales ; anil ers glued b v llir ba> e to the margin of the stigma, simple ami (••doing •(t..j,, il,, rest distinc . , and beardless. Pollen masses 20, granular, applied by fours to the dilated loose |>rt»!»jf<- <t m l i c irjiu«i n , >r((iiiij mm ic. Follicles divaricate, cylindrical, -itkXXll -—A twining shrub ; branches downy. I mi opposite, oval, abruptly acuminated, rather downy while . oung, glabrous in the adult state, and shining above, parallelly nerved beneath. Cymes interpetiolar, small, tomentose, shorter titan the leaves. I lowers small, crowded. Corolla hairy outside, glabrous inside, •ttbrouit* ; a«g«i*MM awnr«Hin|t • ' r the corolla is subcampanulate.

1 B. BRAVÖSA (Wight and Arnott, l. c.). ♄. ☌. G. Native of •Neelgherries.—Wight, cat. no. 1565. Streptocaulon nervòsum. Wight, mss.—Wall. ascl. no. 107. unnamed.

Nerved-leaved Brachylepis. -•tirub Iw CWl I or culture and pro p«m*l'.>M »cr *Pttgmtmrm,* \ 133.

LXXIX. STREPTOCAULON (from στρεπτος, *streptos*, twisted, • id καυλος, >'Wo*, a stem ; stems awisted). ♄. ☌. S. and *Krw* tt, cont h. tad. *hOL* p. 64.—Periploca species, Wall. ».d.

Lin. syst. *Pemiiwii* in. *Digynia.* \ ,mlU miai. .' tarwd throat crowned by 5 short scales, which alter air « I | | B C segments, aristate ; awns flexuously erect, filiform, straight at the apex. Filaments distinct, inserted in the tube ; anthers adhering by the base to the margin of the stigma, free above, plr ,ii. I'll • • the apex. Pollen masses granular, soli- tarv (or composed of 4 confluent ones), applied to the dilated loose appendage of each corpuscle. Stigma mutic. Follicles cylindrical, divaricate, smooth. Seeds comose.—Twining, or rarely decumbent plants, usually downy or tomentose, rarely glabrous. Leaves opposite. Cymes interpetiolar, usually spreading, and much branched. Flowers small. This genus is intermediate between *Periploca*, as limited by Mr. Brown, K...l his *Gymnema*. It differs from *Periploca* in the beardless anthers, which character is laid particular stress on by most authors. It differs from *Gymnanthera* in several respects, by the stigma, pollen masses, and shape of corolla, and its scales. Perhaps most of Poiret's species of ^ H N Ik-Luig li this genus. What his *P. Mauritiana* may be it is impossible to say, as the synonymes adduced are very different from each other ; thus Plukn. t. 336. f. 7. is *Tylophora asthmática* ; and Rheed. mal. 9. t. 11. is *Cryptolepis Buchanàni*, Roem. et Schultes.

1 S. TOMENTOSUM (Wight, contrib. ind. bot. p. 64.) bran I IK . pubescent ; leaves obovate-lanceolate, acuminated, somewhat cordate at the base, hispid above and t ment se beneath ; cymes large, diffuse ; flowers on short pedicels, crowded on the tops of the branches ; calyx and pedicels densely clothed with down ; filaments very short. ♄. ☌. S. Native of mount Taoog Dong, near Ava ; and of Cochinchina. Periploca tomentòsa, Wall. ascl. no. 125. and no. 126.

Tomentose Streptocaulon. Shrub tw.

dm Waves: ealy»e* ami | i«-naely downy. Native of (he Peninsula of India, but ihr locality

V '11. ascl no. U7, unnamed.

, Streptocaulon. ^irub iwiii

OITWAU-'ii -tH I. c.) branchea pubraccot; leave* elliptic, attenuated at the base and apex, cuspidate, clothed with io*n above, and fuacoua, velvety down beneath: cyme*. tltftu*e and branched, many - flow erttl, longer than tt.< having th* ultimate branch** raceme-formed ; pedicels filiform, and are, as well as the calvxca, glabrous, h . . S. Nam Penanff ami Singapore.—Wall. ascl. no, lit. unnamed.

rt-ftorauJoii. .Shrub iwtmng,

iinitM (Wight, l. c.) bfous; leave* oval, acumi- 1; cymea w h longer than the *It* flower* scam r U filiform, glabrous. *J. . S. Native o : Haogeon and Tavoy. Periploea ixtcaaa, Wall, aacl.no. U8.

Hxttudtd Sueptocauloti. Shrub twining.

vtiTKt i Wtjl.t, I.e.) procumbent, or twining a liujc ; stem» rather vtllous; leave* almost i***de, rmindwh-o• pidate, cordate at the baae, rath . oa both aurmoaa, bat moat so beneath ; cyme* fcw-flowered. abortrr ilian the W eta and i <hr l » i In.li 4itrygeta 1Periploca? sylvéstris, Ham, herb. no. 765. Wall. ascl. no. 140.

Wild Streptocaulon. Shrub twining.

r»vr* n*r- « • lanceolate, mag attrnu tated fdgaa. .liwwt **•«!• »hoa> police)* ; follicle* slender, auirulatvd, about 6 ii •caT Wall * 1 taV Tail blast diff»r»in habit from the other MMTIM. but the structure oflbcrV ·atlir- ', ;. .i [8tn pajt in . twunng.

† IbWM M(*sufficiently known.*

7 S. MADUTU R ; glabrous ; leave* otato. l«ins;-i cuminated. (rarw*er*rl> *nned, on i raeomra a\illary, composed of abort divanea' tunwahed with •kort, obtu»e acal** at the bax uUf lnd> es. Periploca Mauritiana, Poir. encyc. 5. p. 188.—Cynánchum papius, Rumph. 2. p. 23? ami 5. p. 14. t. 10, a t perhaps t. 11. I eaves like those of *P. Græca* ; but the (lower* arc much .mailer, aad iceawa.

-t Streptocmulon. Shr

I *6-* t'UBCA>* ; ifUbroaa ; l*«ve« or sir. »i •mall, on aV omr* Cw-rt..*. whtti

saaajaaji <,|I(..HK, r.« ••?!> ••••IMIJ**. ax-n'r I: " ' N*ti»r "" ibe I a albitana, Poir. encyc. A. p onamua padaawW.

glabrawa: U mwcrunal" . rl-t»i r« snull, twtn *at \mtn,* almost araaiW, oa lb* us ikfatm. i

' iPMMlaiMi. f»*e«

mU/Imm n aiai— Kmb t«mrng.

12

I \\\. IUc*iim, H3U*X FINLAYSONIA.

10 8. viao* Tt« ; glabroua t leave* lanceolate, obtu«[airro* twiggy, furnished with .tany lateral »•—™-l«- which bear tne flowers along their tops, in small fascicles, disposed in the manner of a spike ; flowers small. ♄ . . S. Native of the East bd ies. Periploca virgàta, Poir. .uppl. *5.* p. 192. Leaves small. Flowers whilr.

Twiggy Streptocau' . Shrub twining

11 S. ! Cochinch DIMII wborrou.: (Wy, «m late- oblon»;[1] arge, glabrous ; racemes short, rminal. tive o. Cochinchina. p f c i Cochinchinénsis, ... 167. \S odfiacci.l Branches spreading. Flowers pale blue. ,,(' ary girding the rved at the base.

Follicles 2, oblong. Seeds num crwu*. roundiah. ..ceptocaulon.

, f « - , NIXE'ASIS ; twining ; l eaves ovate-oblong, obtuse, glabrous; peduncles many-flowered; segments of corolla glabrous, linear, elongated, twisted. ♄ . . G. Native of China. Pergulária Sinénsis, Lour. coch. p. 169. Periploca Chinénsis, Spreng. syst. 1. p. 8 i.. Corolla > ellow. Corona of 5 arrow-shaped stipitate leaflets ; stigma conical, 5-furrowed ; follicles oblong ; seeds naked.

China Streptocaulon. Shrub twining.

5 S. DIVARICA'TA ; shrubby, erect ; »,rsn<tic* »tn»rl ; leaves ›J imdalalcd ;'peduncle* terminal, . ..*b.'t'j.*- .u.«.et»' , corolla »MbuUl», elongated. divaricate ; segments of corolla glabrous, ♄ . G. Native of China. Pergulária divaricàta, *Lour.* coch. p. 169. Periploca « div«rkam\ optog- •)•'• '• P- "» • ^ ^ ^ w.lhr omewhat aa! rkh 4 -xrow-ab-Pfd *<ale* at the moulh of tl« tube. Flowers yellow, suffused ed. Corolla over-shaped ; furnished Follicles aaaaaar: seed* a A H jjj-j luj|Himnlnn SI.rub.

Divaricate-pa *Pervulária.* n. 133. *Cult.*

J/^ im • an>) VITH . (*/»»*. a »r«l. and 5 m the of th* corolla.) Wigln, aod Aroot' I *faut.* CofuIU patted ; ihroai crowrw obkmg-ova). (Ut, muii tha atgiin th* srgn:. I I in the apper part , and • i by th* baa* to th* m>< I* stigan. <ard. •pMaaVg*. I'olUn ma granular, Military (probably coakdaaMt of « coatami imn . lag* of aach corpuaclr tmoouuab, aarab. Uave« n|iau,.... , Bwaifj asamamaBa* vymea aaaau, oa Kmgwn p*Qaacan« abortor than the leave*, wapoatd of rarrroeiormed bran Fkntfr* imall l.imb of rvrolla viltoMa ituulr.

LXXX. DECALEPIS (from *δεκα*, there are 10 scales, 5 in the throat, contrib. ind. bot. p. 64. *Pentándria, Digynia.* sub-rotate, 5-

1 1 I) HIM

cat. *no.* IMt. atartptaamila* '• tn**. ... IM.

bj Vladraa b«iUriam, ami aot n D . suggested ih* •preil'tc name.

.tid prt«agaiw« at* *Prrgmlinm,*)•

J \\\I I IM W named *m* awamwy of I he Wat paay , who made many «• *'«»t hutory aWmg ha* iiaaatare m th* E**< H p*. mr. asiat. t.

/*^ia»dm, *l*tj***» Cotalbi rota**;

—*ty, >* -4*d at tb aJM* ' : ." w*»r4 «r« lrw JI*

•wned w thi throat, -uh.n the wbtr Utbn glued b7 ^bMiotb«iddkorib»tigiM,bwnUMa,

— r-nT: riftr Tl— - - » . •——•-» - * ^ r ' ' T > ' ' .

»£. "I rarh corpaadr « bloag. d.

M.,;,!,! l.,k- ...'>'. i, ..,-..naJat the !...». l • ' !•« v . ' .. .. *«woa#; r» , than the corolla

divaricate, ovate-ventricose, .month, uncinate r br»k«J « the fcwh AnNfTK*.

apex. Seeds rather fleshy.—A twining, fleshy, lactescent, *».* >r«b mimnp

brous shr ttD- p. W,Ud. r.

sometimes retuse, with a brow', acute point. Corym— I*!».i IMVW oblong, acute, glabrous ; umbels few-

many-flowered, ^»<»)trt lhah Lb lra»r». •Hjefc lr.itft»>rt^l DM corollas glabrous. ♄ . ^. S. Na-

while bearing ih. fruit. Flowers. «aU. lor. "»' l s - ". \'" « r« .1

• innrni« ruwndiU>-o«atr, naked on on* »«i«\ »»"<l«. and .bmintat.

clothed wit> wlnir villion tbotbr. *»'1U almost aMtUr; MMOM gbbow.

1 [1] OMtt't'tt (Wall. l. r) ♄ . ^. S. Native aitl* mouth ^. 4acm. Mi-

••th«O«HNa, i.^r,,, --'. , . H.-ii K.rt», i....;:.:. U labrotti) tmbrW few-

Obovate-leaved Finlaysonia. Shrub twining. flowered, almost sessile ; corolla glabrous. ♄ . ^. S. Native

of South America.

[c] «-//• Kor eutiurr MM! ptap*g*tMMI *#r *I'ttgnIttrta,* p. IW. *Fine-leaved* Periploca. Shrub twining.

9 P. SI'RIVM (Bunge, in mem. acad. pet i tab. I. | 117.)

LXXXII. PERIPLOCA (from *περιπλεω, periplecs*, to wrap about ; twining stems.) H . Br. in mem. wern. »t>c. I. p. 57.— Periploca species, Lin.

Lin. syst. *Pentándria, Di* rotate. Thro *»i* plant ratttrr MMM

furnished with j awiiol M*J< iialr BTH K- law, irummitnl, glabrous ; panicles dichotomous, few-flowered ;

of the rondU. FSMMMI aniW •*B-mrnl- of corolla oblong, very villous inside at the edges ; fol-

on tb back ; |M>IW ma* t tttf m*w licles elongated, arched, cohering at top. ♄ . ^. S. Native of

lb «It|pr»1 •olitary, or composed of v coo* China, on t mountains near Pekin, in hedges.

fluent onm. Stijfm* almost nw i *Hedge* Periploca. Shrub climbing.

divan, ollicles cylindrical, much ?. *Graca* and *P. angustifólia* ITI 11[%(:-]'' IIttl hardy,

Leaves opposite, shining. I htubs w twining, glabrous shrubs, well fitted for covering bowers or trellis work, or

for training against a wall ; these grow freely in common

1 I- ((Lin. spec. p. 309.) leaves from ovate to lan- «fnl»i> aott, i Mien—ij readily by layers or cuttings.

ceolate ; corymbs on long peduncles ; flowers hairy inside, ♄ . Tb /'. lawifafci will require protection

^.11 . Native of the south of France ; of Bithynia, at bdgn, m wuiit f, fitbr bv

•bout |tin».t; and on mount Athos. 'Jacq. misc. 1. p'•ii i- I. Ming planted in a grwaaMMiw, «x aouih wall, in which

1 2. Smith, fl. grec. t. 249. Ker, bot. reg. 803. Schkuhr, latter situation '(will ftyiiro ia be protecti by mats in tt,.«'\

handh. t. 53. P. maculàta, Mœnch.—Schmidt, œst. baum. 1. weather, in winter.

t. 46. J»»-me, St. Hil. livr. 8. t. 6. Wuham, irb . 2. p. 104.

t.21. H J. t. IV *Urtnehn* brown. fv«Mfoto of corolU i XXXUI. PHYLLANTHERA (from φυλλον, *phyllon*, a

l.,K.r, U ih* aj*», ^rr« leaf . «n.t a . *anthera*, an anther ; in reference to •M >. lotbd with m|m»i» »|...ti hain. Leaves deciduous, ami toiu i.) ttWbiU

2-4 inches l aw. Corolla deeply i.'pamd, nW.y7l.

Grecian Peri *f*** >>' J uly, Aug. Clt. 1597. Shrub "• out *m* ra«M obldog.

2 P. LÆVIGA'TA (Ait. hort. kew. 1. p. 301.) RtJin) on tb bck. •>.! .lit. "to-

1 outli « R1, hflUft MkLaMM • at ||tj lifii ar ' • i « • l« *ti* cofpwacW. P

I of the island of Lampedosa, at the sea side, near Laodicea. bkulrau at tor baa* ; atapna ra, toll. K.t, .,,,.)..>rllo« tate, mutic.—A twining shrub ;

rigida, Viv. P. lævigàta, Vahl. Flowers purplish inside, «'»fW» inaikt.l <•«). will, a luU..u« *|H>l on it.r . j.j- i » tl, optnaltr. U. ar and axillary, solitary, bifid peduncles. 11,.. genus is nearly

beneath, and round th Lra** much amaUcr ilian tl>o«r < 'caadaH a!

species. i p »,,,,,, Hi,,,,,,. ^ B f ative of

Smooth Periploca. Fl.? Clt. 1779. S('r»tbi«. Java, on the top of the .*Vifc mniiimnw, where it is called *Aroy*

3 P. ANGUSTIFÒLIA (Labill. pl. syr. dec. <• p. 1 ' » m A .,.»..<«« MMJ M.//, *Aroy*.

vrinless, narrow-lanceolate, glab — «• . .vergreen ; cymes tri'<> rlaBBBWI

tomo Native of Tunis, on mount Schibel Jsekel ; Par catena and B H M— i ^ . ». n_

I

b e>o«tl., mU. a «Mu •«., fcp* tok s » d - f *

">* "(Kldlc. Leaves 1 inch long. ••aw, a aatrll . !<*>k waaa atrtMM*l.^ in_, io

Narrow-leaved Periploca. Fl.? Clt. 1800. Shrub twining. Lin. syst.

i !• Arrr'ia ; leaves r ajajM r^T!t 'aaZJ'aai'abjftSaWt 1 5 ^ * ^ •*H*F2* JC -«'«»»• >Mh ,

deep green, rather !- ats.tb bat. Jrat oa. aad tb lka* *-pan.J. ajj oa*Saa. MH -one.

rymbs axillary. ♄ . ^. S. Sierra Leone, unless the

mountains. Corollas l*»(fr. bl in the tube of the corolla, and

Afzelius's Periploca. Shrub twining. lying above the genitals, be considered as such. Anthers 5, in-

closed, inserted above the base, in the tube of the corolla, ovate,

downy on tb» back. I> • ih* «tnfma ; pollraifrttwa p*di- «•!• 10. Imrar. h >(o«t«willy, rrwt. propped by roriMurlr* al tb* b*ae. and applied to the furt t»-Ht-ti t(r;irni!jr - > '•-anutnl, a/„1 (,j\ ,,,.. •, ,Jr, y f,, \ twniac •hrub !«><«((, acuti.K, «rny, xUbrout Ir >r. biftd. Thii Bnibrrm brmg *e«ailc and MM the numbrr and unjfulai (bra of pedicel*.

1 L. JA* (Blum, bijdr. 1049.) I . ^. S. Native of Java, about Kuripan.

Jara htpammm. Kl. May, Ju. Shrub I *m.*

Cult, for culture ami propAgMiMa Nt *Ptrgwlirm,* p, | 33.

LXXXV. GYMNANTHERA (from γυμνος, naked; and «*}itp«, ••f*rra, an antlu - 1) .. being brar.llrtv i R. Br. in mem. wern. soc. 1. p. 58.

Pentándria, Digynia. Corolla sal ed, ?ia lauci* j-lcatrd. I ilaments distinct, inserted in the throat of the corolla; inthrn b. amlbn wm i Ml|L J by fours to thv dilated top,» of ,h, CWTMWCIW of lh. Sttfna apirulaUit bifid. Follicles cylindrical, smooth, divaricate. Seeds pimow —A tw ing, gUbfoi: shrub. Leaves opposite, shining. Peduncles lateral, sub-dichotomous. Flowers whitish green, beardle«.

1 G. sirina (R. Br. prod. 464.) ½ . ^. S. Native of New Holl jnd, «t(hin ihf f ropic. Scales 5, cut, inserted inside the caij* 'umw ixw. under its sinuses. All

Sh niwltnid Oywiihari. Shrub • wining.

CM. ror culture and pnuwgnkw Mt i *ergulária,* p. 133.

LXX

ccal**; awl * πτερος, *cryptos,* con- « throat w wil n the anthers.) i r. M bot. rvg. 4W. •M, aad *Kt* ott, contrib. ind. bot. p. 65.

LIN. SYST. *Pentándria, Digynia.* Calyx 5-parted; segments elongated, lanceolate, with undulated margins. Corolla campanu' t ely funnel-sh,|^-,| | tab* furnished with 5 inclosed, narrow btpanite aral. inside, which cover the anthers, being opposite them; H M M I <(*tkm* acalr* tubuU rn« tnrtootil. FAamrnt distinct, very short, inserted in the b»xtow of tK* tube; anllwr* ii^U><«r.' m.. the stigma; polles O M* by the base to the margin of rattulr* heaped toffrtWr, solitary, composed of many free

P™ * ** B 9 M R W OT racB cortMarte. M M B] aoovand * aiaal, ub*. aaaraUtr. Foil. with a b]uatly-a<t#T>uatrd utmrvn! saw* — I row, UctMetM •bmb. . «« akon r<»«n brneaih HKMM. im»M>. Flowm U r, J » . , , mldiah pMcple. Ctolli twi*' glued at first, but at length applied to the

I C. •*A*M1 .ftUVU.t N . . a . no. 1655. ght, cat. no. 1660. Nérium grandiflorum, Ro ind. 2. p. 10. mus. ind. orient. t. 1957.

Great-flowered Cryptostegia. Fl. 1 .ly, A>« Ct. 1824. . b t«.

Cult. For culture tmt proaafMioa to* / *ergulária,* p. 135.

ORDER CLIV. LOGANIA'CEÆ (this order only contains plants agreeing with the genus *Logan* ** '" imp..ri»<.t lin characters). Loganiæ, R. Br. ex Mawt aw*. f « . bf«a. 1. p. MS Gentianeæ, sect.

Ml Cap*oU bip«rtlbili». Hilt, prod, p, 43 *5*

Flowers of r.tuai pwtB. C*lvv fnw 5-parted. Limb of corolla equal or unequal, convolute in æstivation. Stamens 5 or 1, rising from the corolla; pollen vittately 2-lobed (in *Pugónea*). Stigma simple. Frail a 2-celled, bipartible capsule; havin j jOac«iU aan.tr wt both sides to the segment of the ventral suture, many-seeded; or a drupe, containing 1-2 1-2-seeded pyrenæ. Albwwt nWiy or cartilaginous. Embryo straight.— Herbs, shrubs, or trees. Lea opposite, quite entire, usually stipulate. Stipulas combined into i*ir*(*f|0»*' sheaths. Flowers racemose, cor y mbose, or solitar y, *wtmti^* white.

This order is distin rom *Gentianeæ* in the capsule being divisible into 2 1-celled parts or drupaceous, in the placentæ CtMMM> Of 1W M«<k M *%tm* æstivation of the corolla, in the stipulate leaves, and in the fleshy or cartilaginous albumen, &c.

Synopsis of the genera.

1 I LOGA'NIA. Calyx 5-cleft. Corolla subcampanulate, with a i illous throat. St 5, shorter than the limb of the coro 1—1 bipartible. Seeds peltate.

2 GENTIÉTHMA. Calyx 5-parted. Corolla subcampanulate, with a bearded throat. Stamens 5, shorter than the limb. Stigma thick, obtuse or didymous. Capsule bipartible. Seeds angular.

3 USTE'RIA. Calyx 4-cleft, of the segments large. Cowibadvii ibiaiiit Iwin 1. Capsule bipartible. Seeds with winged edges.

i r LOA'RHEA. Calyx 4-toothed. Corolla urceolate, villous inside. Anthers 4, nearly sessile, inclosed. Style bifid from the baa*. ½»«»(« 2-celled; each cell containing a 2-celled, 2-seeded pyrenæ.

5 GRETSE'RA. Calyx 5-toothed. Corolla funnel-shaped. Su*. 5, inclosed. Style exserted, bifid. Berry drupaceous, containing 2 pyrenæ.

6 LABÉNDIA. Calyx 5-cleft. Corolla fun . , ' - j — ^ Stamens 5, inclosed. Style thick. Stigma i ft, fciiioad. HtjW tawiow' conical, triangular. r*r«n csfMlbr, J fw»l.

7 CODONA'STRUS. Calyx 5-cleft, ciliated. Corolla campanulately tmoUu. luiatai A, inclosed. Style bifid. Stigmas round. Fruit unknown.

8 ANARA'TA. Calyx small, entire. Corolla campanulate. Anthers 5, sessile. Style exserted. Stigma simple. Fruit unknown.

I LOGA'NIA (« memory of James Logan, author of Ex- ptMBTiMa tU 11«iiar««i < Generationis. 8vo. London, 1747.). »(Br. prod. 1. p. ***. Ray. steudt. 1. t. 2. gen. 1. p. 151.— Eudema, Andr. bot. rep. 520.—E'xacum, Labill. nov. holl. 1. t. 51.

LIN. SYST. *Pentándria, Monógynia.* Calyx 5-parted. Corolla campanulate; with a rather villous throat; and a 5-rnlU »uU«. parted limb. Stamens 5, shorter than the limb. Style 1, permanent, stigma clavately capitate. Capsule bipartible. Placenta —ent of the ventral suture, at ate.—Shrubs or lwrb* '(••** .' Leaves sometimes exstipulate. Stipulas when present intrapetiolar or lateral, dissheath. Flowers terminal or axilIHMI. at awafcaMd (••* •

"i^-ar-^ixjss;:

lary, opposite. nrvmboa* or neMiMii .on>H.m« aol.urj. Corollas white. tocJlia** trwy. *Mb^tn* «« hy.

Sect. 1 !>-- . eooatdrfrd to *am-* tair . • t Ugtua»au f d w °f ih» <r< LBf. Prod • i>t«1«lr of tbr t*» ^''P"*** « « i W. trapctioUf »l^ailt».-^hf karw fW of ipod,,« t(ir ^uth « »u. '••nVMKa corwtvotM: 8o» i *-thyme-lt ami* l>>v'ati>a. 8hrub mull. --r«».r.»u. . ,irtn fHWI H * || L rim J*M rlli) >ou^<N>-< itipuU ri aktllaf), i».i.tar> ». Shrwb *$%*> i y L- L*- lt lit. l. c) U»»« *>.* lt*i U>it»i»a i'fanrhlrt« "mmwli : nrr Wrlwcn MM ; lrt*r* l land, on sarlr* aivd c "'"'''.'' '* l. . . .t.|Mwd m t.. ...l ,....«Jrt. r.^n- r,,lu. «l,,lr. hutumiMM, MM) •tnia. l' i>r rof..l!» ,, Jt , ..,». . .l«f n gvma tH all MI • orth cultivat- fgg, lor (j.. atiljr trie t k»a», pMt(MHI M » 4 M the l I il pl—cit in »*iul, IVKIIW a >d gla*. pUcrd o*ct ibra.

II. dlAlu>|i'M\ (from γενεσις, genesis, a beard; awl uth; mouth of corolla bearded). Forst. —n. p. 24. t. 12. Juss. gen. p. 460. Lam. ill. t. 133. f. 2. . gen. 1. p. 151. Anásser, Juss. gen. 150. Anássera, Rœm. et Schultes, syst. 4. p. xxi.

Lin. syst. *Pentándria, Monogynia.* Calyx turbinate, 5- parttnl , »ith arun" *ffi"* sents. Corolla tubularly-campanulate or urceolate, with a bearded throat; having the tube widening gradually into a 5-parted, spreading limb. Stamens 5, inserted of the corolla, with very short filaments, shorter than thr ltwb nMMI; atiou <»l, €ibt - . I.M. ... J » .;" ". ' " '" . »*'<.. ' ' " . with inflexed narrow margins, which cohere to the 2 placentas, and raaiM aiUr til of tl.r t«li«v NvtU «r»^u- ulaf •Wall >*, and axillafT at> our* W» ihtrriM'tioUl dehiscence

1 G. acer'eras (Forst. prod. p. 103.) branrM* ajwwlar . leaves oblong-lancéolate, attenuated at both ik brous; cymes axillary, pedunculate. ½. S. Native of the HIMMI af T w a j Clancai i linj. aubtiUli I Corolla reddish: with involute segments spre Stigma capitate, fur- rowed. Pedicels furnish H wml IWBL mwuiw on daaa w ibr middle. Leaves ½ an inch long.

Rock Geniostoma. Tree.

2 G. Brasilie'nse (Spreng. syst. 1. p. 588.) branches co- cymes pedunculate, terminal, bracteate. ½. S. Native of *Brazilian* Geniostoma. Tree. wnmamJy fajiml ill shaped. Style di- dymous.

3 G. seiva'ceum (Spreng. syst. 1. p. 588.) branches n>jj. 1. r, , ^tambr* *aaitmr,* iiwmnal; |aa»aa ut4oay. an. nuatnl aj both ends, rather coriaceous, of a daftfMH raUnr Wanuli, mjiU-t.. ilulk-ul.li • s S.' ,. |l, .. | *SvIU>* < ..r,.:!» ..r.. .i.n< I y funnel-shaped. Style didymous.

Spinescent Geniostoma. Tree.

4 G. rebai'ruoum (Spreng. syst. 1. p. 588.) leaves ovate- lanceolate, cuspidate, tomentose beneath; panicles lateral. ½. S. Native of Brazil. Anássera febri- llgft, Man. nov r«wt, braa. , 278. Stigma didymous.

Z.' cr. II. Evónma (from εν, well, and οικος, a house; the capsule is well lodged). Juss. gen. 1. p. 151. Anásser, Juss. gen. 150. Anássera, Rœm. et Schultes, syst. 4. p. xxi.

Lin. syst. *Pentándria, Monogynia.* Calyx turbinate, 5-cleft. Petals 5, inserted into the middle of the tube of the corolla. Stipulas setaceous, lateral, distinct, or wanting.—Shrubs.

1 E. *europæ'us* (Lin. sp. 1. p. 197.) leaves lanceolate, acuminate, serrulated, smooth; stipulas setaceous, deciduous; peduncles axillary, compound, shorter than the leaves; pedicels downy. ½. G. Native of Europe, in woods and hedges. Fl. May. Clt. 1597. Corolla white.

2 E. *atropurpu'reus* (Jacq. hort. vind. 1. p. 29. t. 49.) leaves lanceolate, acuminate, serrulated, smooth; stipulas setaceous, deciduous; peduncles axillary, compound, shorter than the leaves; pedicels downy. ½. G. Native of North America, in woods. Fl. May. Clt. 1797. Corollas white.

Smooth-flowered Loganiæ. Shrubs 3 to 3 feet.

7 L. revolu'ta (R. Br. l. c.) leaves linear, with recurved margins, smooth above; racemes 1 BKillai), *>Tii|>lr, shorter than the leaves; pedicels downy; stem erect. ½. G. Native of N«« Kooi), \\ ,.i,. t .. *mUu* l la *Revolute*-leaved Loganiæ. Fl. April, May. Clt. 1826. Sh. 2 to 3 feet.

8 L. fascicula'ta (R. Br. l. c.) leaves •jiatula«c-linrar, ob» tuse, flat, smooth; corymbs terminal, few- lUMWWJ (WanrhlcM >out». i. ½. G. Native of Ne • ll.aiawt. «n rough ish; stem diffuse. rull«a «l ite. the south coast. Cornwall.

Fascicled-flowered Loganiæ. Shrub diffuse.

9 L. angustifo'lia (Spreng. syst. 1. p. 599.) ikTi- llMM. aj«L a1 | Um linear-lanceolate, cuspidate, tomentose brtiratt) i tiiiMklM o b w lets; flowers« «».lU,,. i-ffci se. ½. G. Native of New Holland. Uh,liinii>iJ at tl

Narrow-leaved Loganiæ. Shrub.

Febr al Geniostoma. Tree.

5 3. Borbónicum (Spreng. l. c.) leaves ovate, bluntish, glabrous , eomnb. 1 steral or axillary; corolla urceolate; stigma didymous. ½ S Native of the isle of Bourbon. Anásserа Borbónica. Uiit. ill. V p. W no. 2457. Anásserа borbónicus, Gmel. syst. 1. p. 333. m fl r . Lower leaves caducous.

Bourbon Geniostoma. Tree.

6 G. acumina'tum (Wall. ex Spreng. add. p. 59.). branches tetragonal, climbing a little; leaves oblong-lanceolate, acuminated, cuspidate, coriaceous, shining above, strigose beneath; umbels axillary, shorter than the leaves. ½. S. Native of Malacca.

Acu *Geniostoma.* 8hnt el.

' «//. A rmmturr of loam, peat, and sand is a good soil for the species; and ripened cuttings strike root freely, if planted in sand, with a hand-glass placed over them, in heat.

III. USTERIA (named by Willdenow in h 7 -.T''''** « *"••• of Annalen der Botanik, 1791-1793). Afz. gen. pl. gum. up.. U04. «„h , fi-M, ^ ^ of the fr- i Room. ft Schulw .™ l^" ? "£j**l ** P" 3 64. t. 7. f. 3. dynámis, Gmel. syst. p. 10.

Lin. syst. *Monándria*, fourth or outer segment ve.. salver-shaped, 4-parted. Stamen 1. Capsule oblong, 2-celled, divisible into 2 valves, which open inside. with a fleshy place— in each division. ——— numerous, imbricate, with winged margins, fixed to the placentas. UfaM Ikia I.„„!..-. . . • roundish, foliaceous c——. guano. oppo- site purplish branches. Leaves opposite, re entire, 2 inches long. Flowers disposed in terminal corymbs. Stipular sheath an obsolete margin.

1 U. Guinee'nsis (Willd. l. c. Vahl, enum. 1. p. 5.). ½. S. Native of Guinea, where it was nlhevnl k] Isert. Monodynámis Isérti, Gmel. syst. p. 10.

Guinea Usteria. Shrub.

Cult. For culture and propagation see *Geniostoma* above.

IV. PAGA'MEA (Au Wrt doe. no, , ive the derivation of this word). AMW. puu. l. p. 112. t. 44. Juss. gen. p. 232. Lam. ill. t. 88. Spreng. gen. l. p. 114.

Lin. syst. *Tetrándria, Diggy'nia.* Calyx turbinate, 4-toothed. Corolla urceolate, 4-cleft, villous inside. Anthers 4 nearly sessile, in the tube of the corolla, inclosed. Style bifid from the base, capillary. Drupe half inferior, 2-celled; cells containing two 2-seeded, 2-celled nuts; OM of the ftdt UMMW abortive.—A glabrous shrub. Leaves opposite, attenuated at both ends, oblong, quite entire; stipulas | terpeticlar, sheathing. Flowers disposed in loose, axillary, and terminal race——, I i'. Guiane'nsis (Aubl. l. c.). ½. S. Native of Guiana, and the north of Brazil, as of Maranham and Para, &c.

Guiana Pagamea. Shrub, 7-8 feet.

Cult. For culture and propagation see *Geniostoma* above.

i Mf t U O V * . M^M.1 ,

V. GÆRTNE'RA (named in honour of the celebrated botanist Joseph Gærtner, author of *De Fructibus et Seminibus Plantarum*, Leipsic. 1788-1791.; his son, Charles Frederick Gærtner, published *Supplementum Carpologiæ*, in vol. 4to, which is generally called the third volume of his father's work). Lam. ill. t. 167. Gærtn. fruct. 1. t. 191. Spreng. gen. M . I '• k ti.. I 1. P. 131.—Andersónia, Willd. herb.

I Lin. syst. *Pentándria, Monogy'nia.* Calyx campanulate, 5-toothed, pr t|rt| *by 2* rtM *u* M at th« b*»c Corolla funnel-shaped; wit ers I, inclosed, inserted t> • JJ|»»mJ llwh StM

with very short filaments, and oblong erect anthers. Style exs> *ttni.* btlSd a* apex. Berry drupaceous, containing 2 I-•*•,)« pyrene.—\ glabrous tree. Leaves opposite, oblong, tapering to both ends, coriaceous. Stipulas sheathed, interpetiolar, truncate, ending in bristles. Panicles terminal, strict. Bracteas connate. Flowers white.?

1 G. vaginа'ta (Lam. l. c.). ½. S. Native of the island of Mascaren. Andersónia vaginàta, Willd. herb.

Sheathing-stipuled Gærtnera. Tree.

Cult. For culture and propagation see *Geniostoma* above.

VI. LABO'RDIA (named by Gaudichaud after M. Labord, one of the officers under Freycenet, who died on a voyage to the Isle of France). Gaud. in Freyc. voy. pt. bot. p. 449.

Lin. syst. *Pentándria, Monogy'nia.* Calyx campanulate, 5-cleft; segments lanceolate, nearly equal. Corolla tubularly funnel-shaped, hypogynous, 5-cleft, regular, ventricose at the base; segments lanceolate, spreading, rather villous in the throat inside. Stamens 5, inserted in the throat, alternating with the segments of the corolla; filaments short; anthers ovate-oblong, obtuse, cordate, inclosed, 2-celled, dehiscing lengthwise inside. Ovarium free, sessile, ovate, trigonal, 2-celled; with 1 placenta in each cell, which are fixed to the inner angles, oblong, fleshy, beset with ovula on all sides. Ovula minute. Style short, thick, triangular, continuous with the ovarium; stigma conical, triangular, downy. Fruit capsular?, 3-celled, many-seeded.—A glabrous shrub; with opposite, terete branches. Leaves opposite, entire. Stipulas opposite, connate by back to the base of the petioles. Flowers terminal, panniculate, umbellate, whitish-yellow. Pedicels bibracteate in the middle. Bracteas linear. Calyx greenish yellow.

1 L. vaccinio'dea (Gaud. l. c.). 500. t. 30.). ½. S. Native of the Sandwich Islands.

Fagræa-like Labordia. Shrub.

Cult. For culture and propagation see *Geniostoma* above.

VII. CODONA'NTHUS (from *κώδων, kodon*, a bell, and *ἄνθος, anthos*, a flower; flowers bell-shaped.)

Lin. syst. *Pentándria, Digy'nia.* Calyx 5-cleft; segments ovate, acute, ciliated. Corolla campanulately urceolate, oblong-ventricose; with a 5-cleft erect limb. Stamens 5, inserted in the tube of the corolla. Style bifid; stigmas 2, rounded. Ovarium ovate. Fruit unknown.—A middle-sized branched tree. Leaves opposite, oblong-lanceolate, entire, undulated, on short petioles; flowers axillary, 2-3 together, pedicellate, pendulous, white. Bracteas subsagittate.

1 C. Africа'na. ½. S. S ative of Sierra Leone, on the mountains, but rare.

African Codonanthus. Tree 20 to 30 feet.

Cult. For culture and propagation see *Geniostoma* above.

VIII. ANABATA (meaning unknown to us). Willd. rel. ex Roem. et Schultes, syst. 4. p. lx. Sulzèria, Roem. et Schultes, syst. 4. p. 707.

Lin. syst. *Pentándria, Monogy'nia.* Calyx small, campanulate, entire. Corolla campanulate; with a 5-parted limb; segments lanceolate, acuminated, spreading. Anthers sessile, inserted in the tube of the corolla. Style exserted; stigma simple. Fruit unknown.—A climbing shrub, with white flowers, smelling like jasmine.

1 A. odora'ta (Willd. l. c.). ½. S. Native on the banks of the Orinoco, near Esmeralda. Sulzèria odoràta, Roem. et Schultes, syst. 4. p. 707.

Sweet-scented-flowered Anabata. Shrub cl.

Cult. For culture and propagation see *Geniostoma* above.

Order CLV. aiBNYArfTHaVCI l. (thia order contain* plants agreeing with *Mn>ya*ti*t* in important characters). Genera Crniiaaaws afRnia, It. Br. prod. *M M btbss, Us. and others.

Calyx 5-parted. Corolla lubrolair ; with a 5-parted, aprcading limb ; asjrmrau »<>)> a flat diik. which ta bearded or *quamnmloat at (be baar, or bearded l" lengthwise ; having aacending or simple margin*, inflcxrd in n stivation. Stimrm 5, sllernating with the argmrnta of the cur. i Stj : Si ma X-Int lobe* toothed. IKpogynou* gland* *S,* alternating with the iu- Okri. Capsule 1-celled, inany-aredrd, 2-valved, but in aquatic •prrH « valvrtiti; axils of v«lrc« M'ttnritlrmut ; tliat i», the ae«dt are attached to par id* l placrnta-> on the edges of (he vah Fioatmg aquatk or manli hrrln. 1. pic or tnl nate, rarely oppoaitr, cntn dotted : having l -atliing a little at the ^—*- ' rtime* acattd on the pet i >egmcnt rfiliiii.li. having t) Thit order sgrrc* with *Gent* !,, and in their innmsj .irunurc ; and morco« . half tr. a* in afaatfMM *liUm,* and rtna , an »cal. the ihrtMt of tb* ron41a», at *Utnr.r* in tli. ., uij. ihtnsaas, and often > 'he tru< ••yw.r and *(ttr. the* lra*r» arc »ln i Ml ri nml oppoaite, a illatr> with vcrv frw tlie pro; i bin being extreme.

Synopsis generum.

1 M ENTA'NTHES. rulU bcardrtl lengthwise, with itmpl* margutt. l eaves trifoli »tr.

2 VILLA'RSIA. Segments of corolla b«rd*4 or scaly at the base ; with ascending margins.—Leaves simple.

I MI M \ \ | |i TfctMti ^jotSsa, TmiyTfaTf K, and »t"»t, «afA IIMHII that tin i; Hi staid

VII M I. rot. J u- ltr | • . i in Pl. aquatic.

•Mad

• if o r f t t • (• 4l k

1 M. TRIFOLIA'TA (Lin. spec. 208.) leaves trifoliate ; rewise. ^ II V s ative throughout Europe and Siberia, near

•• Oaea tkirsmd. akillar% 1 ^aaHMHSa of mwnllm tMtanlaal l«. nl

Salair, and Bernaoul, in pond* and pl l. 541. Smith, engl. lxtt **• «"H'»' :. Sabb hon. l.i. UN. Sort) IS. Bwb. cauc. l.p. 141 .1,1. p. l Tabcrn. iron, t, *Stn.* r • l. M,.,m paJ6atr», Haul i Dwseoridi.. .... j. p 604. sect. 15. t, ,,,_Gmel. sib. ».p.97no. 15 Roots creeping, jointed. g^,, procumbent, covered by the sheaths of the leaves. Leaflets ovate, obtuse. Peduncles a^Hlarj. tcrm.nating m a t ! yrse of white bearded flowers, which are rose-coloured outwardly. ..n:hers m rnwarrfi. ll,,, ,,u'nt was formerly called *Marsh Trefoil,* ao.| \{nt,k t L»> or Clover. It is now generally called *Buck-bean,* or s, from the German *Bocshohne,* or *Bitterklee,* and th• Duwsl, *Bukkeblade.* The whole plan '• «» pnrtiriilarK the root, has an intensely bitter taste it walrr OJHl apiht. •Given in small doses, of about 10 grains, imparts vigour to the sto nach and strengthens ,t.u estion. V** virtues were formerly l^operly cauma.. d ; and strange it is that so excellent and cheap a tonic should be so little employed. It gives out its virtues to boiling water, and a tincture may be made from it quite equal in its effects to that -l gentian. l. large doses, either in substance or decoction, produce vomiting, like many other vegetable bitters. Boerhaave was relieved from gout from drinking the juice of the plant, mixed with whey. An infusion of the leaves are extremely bitter '. and of late years haa been in wamott 11 M- a* a> alterative and aperient. A drachm of the powder is aperi 1 nl and 1 metic ; *nd it is sometimes (MBM u*ol «• an ant) A* an artii e and eccophrotic (MBM u*ol «• an ant) t ill wU|> butter, it seems to ll) it* 1 nrotraititl j«ti ted to supply the want of bile ; and may be of use in jaundice and other biliary ob*tructMJoa. CuUen mentions avversl tnauinre* of its ..... effects 111 MM l-utaneoui dinasti of thr l >mi stctti in the north of Europe, to give a kind. In a scarcity «f Wopi ik« plant ia it« lotW barr : t oon<> Mill supply the place of a pound of ho |*. The powdettd root! arr sometim xM awed, in Upland, uwtrsd of bread, but they *f* unpaUuM. Sow* say tUtsb*sp will rat it, awl that it c WM wMM Of tlNf |t>t*

muih morr robast, bail not othrrwu* iistaSgL ••f North *Ammtim.* * ! — * - . » -

'! " V • •"»<•"-'••. • ' ... pis* .»,,,. .h. l „ropean species. The nowers are pale red and very handsome.

Trifoliate Menyanthes, Buck-bean, or Bean-trefoil. Fl. May.

•• *Lmmaim§*

2 M. CALTA-GA'LLI (Mo .s. ex Hook. bot. misc. l. p. 45. t. 24.) leaves radic..., on long petioles, reniform, crenated ; umbels corolla the nor stive of at Prince William's Sound, and about Ca nd of the island of Sitcha. p. 156.

-»/ "wwiiw pajstavas* |-»>Vl....! .

Kooia or rhizoma horizontal. Scapes a foot high, reddish at top. Corollas The crests on the segments of t to those of *M. cristata,* Roxb. which has also white flowers ; but with the habit and mode of growth of *Villdrsia.*

M l,l]j M< . »». ti| tlIttlUl bot.

petiolate, cordate, unduUlrl* •JMJHIHMJ un tU *tlgv*. (»•..»[., TKamr*. {mrtirttbt > 'ilr r of Uw «
viriparous and flo* W i **lo* it r k i r n ; | i f r i l l I a r w r a l t o- Bnd> V*. HMI I
together, umbellate; MfaMWa of enroll* undalrtrty j i a j i J. MM! .|«rti«. Ar. M»TMthr>
crested lengthwise. ¥. W. S. Native of the East Indies, •• M s m«r. bo*, i. f 17
floating in pools of sweet water, in which th # rtHMs SAPB do apt <W«l. f p- ** ?**n«h. n. (twr.
reach the bottom. Cumúda, Roxb. asiat. res. 4. p. 254. 1 -taL II. | 57. t. ». It • *rt*\..\ MJM
Tejoreea Támbel, Rheed. by the Bengalese *Chooli*, and by the Telingus *Astara-Tamara*. Leaves variable in size, purplish green on the upper side. Petioles rinona w lengik, MHJ ' -ttm *mjtmfkMm.*
Mvf, thr' • •• wt-ll M OtBWf U • old U.I «M1 KNB< I«M •*<'
MJMali iMMhML |MJ •IMM* •wrii BMJBMV nr«i h. MM! H M M , t '«t «>.
in succession doing the same. Pedicels many, 1-flowered from the above-mentioned tuberosity, sufficiently long to raise the flowers above the water, afterwards they drop into the water, and there ripen their seeds. Flowers pure white, about an inch in diameter. Corona triple: the exterior one consisting of white ramose filaments, crowning the mouth of the tube, as in *Nerium*; the middle one of 5 beautiful yellow glandular bodies, which nearly fill the mouth of the tube, standing alternately with the filaments; and the interior one of 5 hairy yellow bodies, surrounding the base of the ovarium. Seeds compressed, scabrous.

Crested-flowered Buckbean. Pl. floating.

Cult. The species are all elegant aquatic plants. The first species is of the most easy culture, requiring only to be planted or thrown into a pond, where it will grow freely; the second, being only • bof pWI. Mi l require to be grown in a pot filled with peat earth, and the pot placed in a deep pan of water: it will require protection from severe frost in winter, by placing it in a g 'i'"l>"ii»r ttr ftan^ but should it become plentiful, it may be planted in a natural or artificial bog in the open air, where it will probably endure our winters. The third species, W 111)1 «w?«rf a Wftrm mMMfj a cistern or Ittb of ««ir_f ... . .tove.

II. VILLARSIA (named in honour of D. Villars, a celebrated French botanist; author of Histoire des Plantes du Dauphiné, 3 vols. 8vo. Grenoble, 1786-1788 &c.) Vent. chois. no. 9. p. 2. R. Br. prod. p. 436. R. Br. et Kunth, nov. gen. amer. 3. p. 187. Waldschmidia Wigg. Nymphoides, Tourn. hist. t. 67. Menyánthes species, Lin. and others. Lam. ill. t. 100. f. 2.

Linn. syst. ... ia, *Monogynia*. Calyx 5-parted. Corolla subrotate, with a spreading limb; segments with a flat disk, bearded or squamulose at the base, with ascending margins. Stigma 2-lobed; lobes toothed. Nectariferous glands 5. Capsule 1-celled, 2-valved, or valveless. Seeds girded by a membranous margin, or naked, fixed to the edges of the valves in a double row.—Floating aquatic plants or marsh herbs. Leaves alternate, rarely opposite, entire, ... Flowers axillary, or seated on the petioles, subumbellate, or in terminal panicles. Corolla usually yellow; margins of segments fringed or entire.

6t CT. I. AQUA'TIC« • *Capsule valveless. Floating water plants.*

§ 1. *Flowers terminal.*

I \ L- UIIOJMi (Vent. choix. no. 9. p. 2.) natant; leaves opposite, cordate-orbicular, or orbicularly reniform, repand; umbels sessile, terminal, or in the forks of the stem; segments of corolla ciliated. ¥. W. S. Native of Europe, as of Denmark, Holland, Sweden, Piedmont; and of Siberia. In streams. In England, as in the ... recesses of Uw « ... ures near Walton ... near Botley Bridge, Godstow ... Linkney Ferry; ... in the fens near Ely, &c. ... dan 337. Salib. hort. ... p. 128. t. 446. *Jaume*, St. Hil. 12. hvr. t. 6. Limnanthemum ... Gmel. act. pet. "P ... p. 567. t. 17. f. 2. Menyánthes nátans, Lam. fl. fr. 2. p. 205. Waldschmidia nymphoides, Wigg. prim. p. 20. ... Drev. et Hayn., a»ib. »vrgl. t. p. 33. t. 6. Schweyg. ... Gmel. 1. p. 447.—Dalech. hist. 1010. f. 1. Petiv. brit. t. 71. f. 4. Stem dichotomous, creeping under water. Leaves of a livid colour below; segments bearded at bottom. Seeds ciliated.

Nymphæa-like Villarsia. Fl. June, July. Britain. Pl. fl.

2 V. ovA'TA (Vent. choix. t. 9.) erect; leaves ovate, erect; flowers racemosely panicled; segm*«t« of COTMIB ciliated. ¥. B. G. Native of the Cape of Good Hope, in boggy wate 'T |4ar< -. bn*. IMH|. IMt. M««yaalbM 4 ... Lin. syst. 194. suppl. 153. Pers. euch. 1. p. 171. Menyánthes Capénsis, Thunb. prod. p. 34. Hi infill• Capénsis, Houtt. pl. syst. 4. p. 319. t. 47. f. 1.? Leaves elliptic, obtuse, from the neck of the root, full of pellucid dots, with subundulated edges, and obscure glands. Stem longer than the leaves, furnished with 2-3 leaves at base, but naked and panicled at top. Corollas of an orange yellow colour. Perhaps belonging to the section *Paludinæ*.

Ovate-leaved Villarsia. Fl. May, July. Clt. 1786. Pl. 1-2 feet.

§ 2. *Petioles bearing the flowers* wWtWUm.

3 V. PELTA'TA (Rœm. et Schultes, syst. 4. p. 178.) floating; leaves peltate; petioles bearing the flowers beneath the leaves. ¥. W. H. Native of Japan, floating in water. Menyánthes peltata, Thunb. nov. act. ups. 7. p. 142. t. 4. f. 2. Menyánthes nymphoides, Thunb. fl. jap. p. 82. Leaves nearly orbicular, thin, glabrous, broader than long.

Peltate-leaved Villarsia. Pl. floating.

4 ... si, ... (Vent. choix. p. 9. Hook. bot. misc. 3. p. 97. t. ...) ...g; leaves reniformly orbicular, coriaceous, repand, 3-nerved, or many-nerved, scabrous from scrobicles beneath; pedicels elongated, umbellate from the tops of the petioles, scabrous; segments of corolla hairy at top; capsule round, crustaceous; seeds globose, echinated, ex Hook.; roundish, compressed, size of millet, with a shining crustaceous testa, ex D. Don. ¥. W. S. Native of the East Indies, and the Cape of Good Hope, floating in sweet water lakes. Menyánthes Indica, Lin. fl. zeyl. sp. 207. Roxb. fl. ind. 2. p. 51. M. macrophýlla, Roth ... ng M spec. p. 105. Thunb. fl. cap. 167. Cumúda or Cumud, Jones, in asiat. res. 4. p. 254. no. 30. Nedel-Ambel, Rheed. mal. 10. p. 55. t. 28. Nymphæa Cerátnica, Rumph. ... p. 173. t. 72. f. 3. Corolla with a yellow tube, and white segments. Petioles floriferous and viriparous, as in *Menyánthes cristáta*. Segments of ... ufull* 1—wwUir. tW upper side clothed with long white hairs their w ... gth. Stig ... 5-lobed, curled. *Astara-T* ... iMTt M tfcr tr«u.t» M ... of B«HN. V ... ol. Bura-chooli is the Bengalee name. Leaves ... variable in size; having the hind lobes connivent.

Indian Villarsia. Fl. May, Aug. Clt. 1792. Pl. floating.

5 V. ... (D. Don, mss.) natant; leaves reniformly orbicular, smooth beneath; having the kind !>*•.• •' ... ricate; peduncles smooth, short; capsule globose, crustaceous. ¥. W. S. Native of the Himalaiah. Plant 4 times Mnd Urf Hi i very part than *V. Indica*.

Smaller Villa ... M I'l floating.

C V.Siatii; nauot; k«v«a reotfimnJy coidat*. hnxi uiidrd, divar.cal* | prdirrli clung*"!, umbrllalr, *m tkm* top* «t e a*|rmrnl« ianwo. late; segments of corolla beard.,1 thrir •rhoklMflk. «. W.S Native of N.j.aiil M Menyánthes Indica, Sims, bot. mag. t. 658. I flowers vrllo«. Walltch •tatca tn« |il»nl lobr a native of Nipaul, and iliaiihe j .'." V 11 making furn. ti luirtnjr Vt IIOM (lo«»cr», «nd • • bring a *na* native of the Cape of Good Hope; it is probably the same as the present plant, or a new s

Sims's Villarsia. Fl. May, Aug Clt. 1792. Pl. floating.

7 V. Sl * Htfti natant; leaves orbicular, deepl . cordate, aubcrmaird ; pciiolr* nWifrnmi ; tl»»« *n* • faack of corulb U-anli! k<-f>ir<!.» •• inside. *V W*. S. Native of

Swarts's Villarsia. Fl. May, Aug Clt. 1792. Pl. floating.

tin- U'nl lo<lii*, H.JNHH m >W(«t M niilitu l'ltdlta, •«, .,U. 7«. M Rotlach. ob». p. jam. 151 . i. l i l. Corolta wbti*. ptloM • * (war. AMMN r<- in. 8 V. MtMMI l • . t. »•• . p. INT.) nataiil ; WTC* tl 'datr, ipntr t nlir«- ; ninlxU •tBtcil on llir prtutln; cah*ulr »a)vili»», *l,<*trt* than the calyx ; MOtk, writ naked rdjjr* ; argn-, •fMMMj fnn^nl ntt the cd^ra. y. W. 8, ranada, iciuaa, in n< • *!uu,,r\t* ll 'pwojillf. tiMVOT rwl bmcatii and d i W i ^wlr. Cor •"•in « »l" lluw tubr, and wl »-«J hrnb. SMdalrt

littmbotdt . Wllar.ia. I'l. fliMimft- arymmc. of

l nd . bni..! l M M ! VHkfd Mting,

il>RMU. 1/. W II

i. MiMS)"lMMMM UMMl and - - floffifcrout ami 1 417 ordiu, l •IMS tra x- *H.* boi -. Ai Walt. H. or. j». IM, Ca|Mulp «CU*M». 1 prndaftr« of the tub* of the corolla M M a Tkw plant it • iwl poly)

! - ! Fl. June, Jul >'11. 1 Pl. ft 11 V. rarvifiòra (Wall. cat. no. 4351.) creeping: MM«I leaves sagittately cordate, obtu «, on third, MftMtti petioles; Hofifriout lra ttolac, vhkli beat sessile imbrU of iWmert at (t»r lnpa brkm i«J loon dim •wiili K1«»» Capauli aowll.

Smoti fU>nrtf4 \ illar.n. 1*1. rrtwpi«g.

if, *l'lJunttrt rmttmutf or prnmtttrd, <ipf*mU tkt tra-*

it V. ot»»|v ~-'l)f conlatr, *ntif* 1 rarrntr« opposite tHf lra\»-«; pcd»crU rngih tti *tW* MW« I NUll «nh naacd - r ^ ,

V . MMMMT. x IMHI W •!• *. bMMMi '<f iW aa»# colour on both •urfart. '.; V* S

•rdMe-orbimUr, rrpaml. ,! «wl« KUImm.. H. 1 Q N-. tive of New Holland, floating in water. Mwiyanthr, MruK-n.

Sarmentose Villarsia. Fl. July. Clt. 180• n.c«ci«g.

Sect.

14 V. reniformis (R. Br. form, entire ; stem elongated, ed. J. B. G. Native of New son ; and of Van Diemen's Land. • ndl. bot. reg. Flowers yellow. Nearly allied to *V. parnassifc*

Kidney-shaped-leaved Villarsia. Pl. 1 foot.

15 V. parnassifòlia cordate, reniform ; stem elongated, nearly naked; panicled ; segments of corolla with entire margins; exceedin the calyx ; valves sca- ^. H, < of New South Wales ; south coast of New Hollan and, in bogs. Swertia parnassiæfòlia, Lat p. 72. t. 97. This is a very polymorphous plant, from 1-3 feet high. Leaves toothed or entire, and sometimes angular. Flowers yellow.

Parnassia-leaved Villa — n. June, Oct. Clt. 1805. Pl. 1 to 3 feet.

16 V. exaltata ; leaves *m*mm\mUmtmA.* cordate, •ubrrr- nated ; sten nicled, almost leafless; segments of corolla ^wjo. V. 1> G. Native of New South Wales. Menyánthes exaltata. Sol. mss. Sims. bot. mag. t. 1029. Flowers yellow.

Exaltata. rvahrMv i M,r,w Clt. ? Pl. 2-3 feet.

17 V. MM ula'ta (Lam. ill. no. 1966.) leaves orbicular, crenated, peltate, tearing " O H ded, nearly sessile flowers in the centre. b. G. Native of Africa. Leaves bearing flowers in the MHUtrr . of *Claytònia perfoliata*. Oro^War-l. aved Villarsia. Pl. floating. ? lH \ ,,, U w stems filiform, creeping ; leaves cordate, quite entire ; flo- 2»J<«'1 -nirroua. 1 | ^ J ^ MM.i«i L I Z J I S L V""""ll1" '*:'|4i llUrft, l»»»f

ihe cornllmt M-.-mrtiU. Capml* o*.,,, "item wUi n bloa. »p-«a. TV wn M I I M Hoi* # f f f r M M I M H i w l * » fro» > '"it •" »»'*>> «m iMi r •wdorSihdfcL7^'

•"L™" *• »' (**mifcJW» MM »f amkora.

r,,«i,«« cyp

J*^n^f ^ " * «f «O«dU rquil, valvair m *m*<*

Style •owned in the top of ibe otahunt, artteuUt. ataapW. Capaule d*occou«, coccat S-valvcd with a free ctatral pUcrtiU, S«-di *mall: with an i»tn*di»i« placmtation ; I**U limple. I aaaa0, *wbnif/U,* in *&.*'• Shmtx <>' or •ubatipulalr. llowera diipo»ed in *>rund, bractrti. Down or baira on »h* plant* timplc ot ttvilat*. Thai order ff.r« from *(intianr.r.* in the title bring artirvlatad; and *m* the immediate, not parietal placentatmn of the aatda. TW planta contained in ihit order are lugfity oraaowni. The *Sptgilut anikHmm*, u*cd u a * i-nnifiij(c: and ihr root of *Sfi^ilia Mmnthkiitm,* in. hawd in water. t« anthtlimntir | awl tbc wiat ia febrifugal.

Sgmptu of tlu gnerm.

i-toiLM. Calyx 5-partrd. Corolla funnel-shaped, parted. Style articulated. CapauW dtcoccooa; coccw t-*alvfd ; Placenta* pedicellate.

•In -S-toMbrd. Corolla funnel-shaped, 4 parted. Style articulated, bifid at «|ex. Capsule |.io%wd. Placenta* pediccll.:[1]

•|tT**i*'mt. CaJ] 4-cleft or bifid. i Corolla w ih an angula• tube ; limb *-|>*rt.J :id at the baae. I'apavk dehiscing between i lb* diriaioM of the it style.

I. SPIGELIA (named *m* honour it and Mirgert - at Brussels, 1578, professor of anatom Padua; died 1625. Author of Isogoge, in rets heiUrtam, Padua, 1606.) Lin. gen. BO. *oa. J gen. 103. II. H et Kunth, nov. gen. amer. 3. p. 184. .ft. r*.*. gn., bra* *t.* p. *U-* —Arapabaca, Plum.

Lin. syst. *Pentandria, Monogynia.* Calyx rted. Corolla funnel-shaped ; limit :. cleft. Style articulated. Capsule didymous, dicoc<ou*, cut rouml M llw U*i coccw 2-valved, many-seeded. Seeds attached to the central [Jacwita, which is pedicellate from the base.—Sub-shrubs or herbs. Koou fibrous. Stems terete, or obscurely tetragonal. Leaves opposite, or sub-verticillate, sessile, connate from the confluent petioles, quite entire. I •••• > <li»poacd *m* wriiaial. aMHwl spikes, which are revolute at top, flowering upwards from the base. Corollas rose-coloured, or purple.—Inhabitant, , or boggy, or hard, stony situations.

§ 1. *Suffruticôsæ. Plants suffruticose.*

1 S. PULVERULA'NTA (Chart. HOV. g#n. brat. t. p. IK. l. l 92.) suffruticose; stems branched 4'». *» . i rjrii irfrtr, rM»'nrtj « \u pale, rusty, stellate tomentum; leaves opposite, scabrous from powder, but at length naked, br <ad an<l ™l> <'iti(jtr it iKr 1 » T on abort ptttolea: *|»ke* aolitary ; aiaaMajai tiwm al»ort*r tbaa the curulla. »li«h i,. . . .krl-thapctl . .* aaul eoccl VIMW proviAcoa. at th* altitude of 3800 feet, on Serra de Caraca. Sp. Olfers , Schlecht, in Linnæa, 1. p. 20 *A.* Corotlaa ruM-cuto«rrd. wttk a m t obscure stripes.

n aaVn Wi— •?—• Sank I am.

2 S. SELLOWIA'NA (Schlecht. M LaMMaa, l. p. Hi. Man, l. c. p. 129.) shrubby, cover ed all '• tomentum; leaves opposite, a* afcon pvtiolr*, ovate, rounded at the base, acutish, scabrous above; ftxLr* w=: tubular; stamens exserted. •• t« of tW interior of Brazil. Habit of *S. paleeriiiiia;* but the flowers are double the size, and more conspicuous.

Sello's Worm-grass. Shrub.

4 S. GLAZIA'NA (Mart. l. c. p. 127. t. 193.) uiffnHkaa*, glabrous • ; WHKWII early terete; leaves oblong or lanceolate, long-ac • a w a i i openaw BMB W M W I ptw»w». upper ones usually 4 in a whorl; aggregate; stamens 3 times shorter than the corolla, which is funnel-shaped; coccw glabrous. ♄. S. Native of Brazil, in the province of Bahia, in shady woods, at Almada and Ilh laurina, Schlecht. in Linnæa, l. p. Ml, flow* 8-12 on each peduncle, fewer than in the last species. Corollas flesh-coloured, with more obscure stripes, about 8 lines long.

Glabrous W •f |iaa>. Mwwb t feet.

f f. /VrrwM. *Hrti+tnm*. /trrmmmt fUntt.*

5 8. rt t• Ml i t i Mm Le. 1. f i«-ir gUbtowa, H O T ^H^^W^a^HB*^B^^^^^B»j| V"1^^4 I^avN^^Vaj n^alBJ | fVamT•^ aaaatb. aaMD, U m r, acatr spikes solitary; stamens exserted. but 1 UBMM ahorter tba* IU carolU atuncifh. V S. Native of Brazil, in high, rocky pi Villa do Rio de C niai, al UM itrvatHm of fUO f. i Corollas iW » »r«firl, *»j |MBS «»»1 mii«r U«4(.

Neat Worm-grass. I 1 to 2 feet.

t S.&. LECHTENDALIA'NA (Mart. l. c. p. 129.) stems and btaaclkfa lauaapw. • • ofooail*, « t m a whorl, sessile, narrow-lanceolate, aHHiatkd. oowirjr oat tt- •> nraia , •yaw itaanaia aacloatd. 3 i«m»a ihwrtat ilua ika ro- flU. hakft-okjfMI; corcar Mtamtti. % S. Native of : .t**il, un IU top *at mmmm* Morro da VtUa Mwa. at ilk? «4»»» vation of 4000 feet. Corolla 8 lines long, pale rose-coloured, marked with obscure lines.

Schlecht. :.«i.W. « » > » (•.« PI I u I I . . ! 7 S. HEWSONIZIA'NA (Schl ''»bt- W tinwwa, t f. fOO. Mart. o«». •••«. br. l. | rtkwcruw*. imiimh«*h; aaj and branches tetragonal; leaves petiolate, oblong-lanceolate, or otata, aruM »i ito baa« , u m i aM (uit «burl spikes solilaiy ; oorala (bawl iki) i . luaataM lacloaid i *totr* tm—nk.* Paul, and Ciaplatine; and of Mexico, i untia. Flowers white. Very *ad of M • wood*, at Pa| following.

ttmmlvUt'i ltmm giaaa 11. 1 fa*. Mart. l. c.) herbaceous; t - branch ; ovate, attenuate aaw aaU tr—raiii uinaji—J; Va»*» prt»>Ui« nerves and veins; '« baw. ardbroMa Waw« dq on ibt spikes solid •oraitaavw *immwm** -<" Native of Braid, ro mnW PLVW%•'•>r. J'J ♦^iJbiii

whorl; s.ikes solitar ; corolla funnel-shaped: stamens twice shelter than the native of New Granada, sub-tetragonal. Leaves 3-4 inches long. bulate, with hispid edges.

Ba-tide Worm-grass. Fl. April. 11. I J foot.

13 S. MAM ndica (Lin. syst. m«m. *t.* p. 330.) herbaceous; stems simple, tetragon »1, acabrotta: lc«»ra oppo> site, sessile, oval'laMMaaW, irUbr<>u*; *pikrt laliMn | corolli lpMMaVri '|-'i. •'•'!>. :• • . . •; . . >ow ' 'J M. Native of Virginia, Maryland, Carolina, • Georgia, &c. *n t b t* edges of woo, in rich moist soil; and on the banks of the Arkattwu, in ih« forr«ta nrar ilir first cliffs. Michx. fl. bor. •m»r. I. p. 14*. J'urth, I. |. ag. L tO. IHHIII. bni. rah, 930. 8t< ttrch. nwd. boL I. t. 7, I pr. < I lxmirtra Msryliadwa, I-'"- •; CWoltaa acarlrt idjt ami \rllow ma •rgmrnta anbalan. Tbf wari-jTfaw or BHuJt-rawf. or a BHwUglatt— ptaai. » Tbr wfaawn ami drcociw* of tlir *tmi* and I « v « afford a AocealtM p» Irt,. pr.

t »u ttttt ii' Indian* a* aa it '- l»f» r«, Md Cbaavarn ftrat .ntro- I oay. I f 11 | irDTN im»p»4it, \tt moat oflbctfw . 1 arkk r«ihartir*. whirli prr< vent ih* ntrr- pU]HI, (lilt t, ii l. aofrr. 1 -H.IW It. (.1. aWl

» 3 . *Aut* ^,....1/ *plants.*

I ... art. 'itMMN, brtmcWd: Uww on abort pr- core* awthraiily icabmaa 0. B. Naur* of

(tuiana, C M M Tanada, Trinidad, and Itr.iil. In New Andalmi* it *k* called *Yrtb* <U l,"mbr,* n. mag. 1359, Um. ,U, t, |ff, |.lrnwn. jam. |< 156. t. 37. f. ».— lE i. «v hr«/< rollu pair ml. amall.

Atk(tk Worm-^w. II. Jut> fit. 17i9, l'i. \ to S. FLrHwtKHA,,,, iSrhIrcHt. in Linnaa. I. p. tO3. '«> btM. f. *f,* 150.1 h ; l inatod at both r.u|. f|..r.l ..... 4 „ . whorl f apiU. aoK- ttry, dongatid, ... * uwlowdt corra* •tnooth, ⊙. S. Native o! Hraxil, wtlhtii 0* tr ,. \ , r , , , . j *.mtUimum.* MfHaaa. II. } *u.*] foot. \|(fl, , , l, l<(1 > » , !.•»«-»..>... ataaWHW • brancbaa pr MM* and .ir« a« *wM* M \h»* MM Utr*MM*lt bavvaoi .,\«tr, ; aww»i» l*-«, irrntioaL aaamiW . BMT SebavUMiopHf. Corolla* wbtM, anffbawd «*nl t*l togufcrr at the topa of th« bn

Oaft, All tti# species of ttm grmti> are very t«,wy »h blossom, and are therefore worth cultivating in every collection. The best soil for them is an equal mixture of loam and peat. Young nitin ,bbv " ' «uw kin aoror it the opaw ground, in a b«»rtl« r. Tlic annaal kin.li ahould be treated as other tender annuals.

II MlIKI •'I\ (a dim. of *furf,* ***mltrm,*** a mitre . form of capaaU lt,-!., ii, Mlchx. fl. bur. MOtr. 1, p. it-. I proa. t». iii Ga> VnonymoB, Wslt. a. oar.

|M.rtitl, | or IWaMt-*bap«] t hanag tin i«ba nraca loagrr t a ttlLmia *m<* ftaiiili. ft Stylt artintlatr*! at dat baat f: bind at aprs . MtMaM blmtt. CapVale t-tobid or of f corear : coma or lobr. *. (bUacaAg iaaafe. S«di awarmua, angular, 6i«d to I ilnnf lul placwnlaa. one 4a rat* rorcw or MIU--B»C« hnWunaa phnu, with oppoait* lame *md*

1 N| .. " l.r lir.nl- t>. 440.) uptto*. •niUtrril ft »mc W •{"*• l- p. «< l' - ' t. p,*(*H. Laav 01. t. 107. >. Watt. fl. car. p. lOft Fiowira •innaiiai fiihMiian, (>». e H» probaMt a m*r* *tarmy* of 0u* p U t

IM. t glabroua; atcai Hlfagiial, simple, or branched, ictrlr al tun . gfMLgfIIL JattaW aj-^ttg-^^gag^T. AfffIggfffV HaflrWiL^ I t. t, I *nr.* than ih» t»ly». f. •Wrtt'i MtuwU. Pl. I f.«M.

acuminated, downy, as well as the young branches; lca»r« MKJ petioles slightly ciliated; panicles axillary and terminal; dichotomous; l»fMM-be*; flowers distant, secund, spicate, on very short pedicels, with one in ... ⊙. H. ... •dilbrk. ., 1wnoiiiToi,«i Moautt TMMOJ UMMI, n«M A*a, Wtgiaw, Promt ... IM»W of I 1-celled ... MMM, *hich -re incurvrd at «*. ... nM—latulmirt. ... Wall. cat. no. 4350., a native ... ^ Sukanagur, is ... nly « wnatW wow ghbffMli Tafafty ; U^ng the ... stems more ... ular.

Panicted Mitrasacme. Pl. J to 2 feet.

ON*. SM ,Vrfr«Mcw, p- 173. foroU t„« and propagation.

III MITRASACWE (from μιτρα, mitra, a mitre, and ... form of capsule). Labill. nov. holl. 1. p. 36. t. ... R. Br. prod. p. 452. According to R. Br. l. c. a more applicable name for this genus.

... SYST. *Tetrandria, Monogynia.* Calyx angular, 4-cleft, rarely bifid. Corolla with an angular tube, and a 4-parted limb, deciduous. Stamens 4, equal, inclosed, rarely exserted; anthers behind. Style bifid at the base. Capsule ... the divisions of the style.—Glabrous or pilose ... opposite, sometimes crowded ... with-out any cauline ones; sometimes ... » nifii »•.-. PlajBajfi tcrmioait. umbellate, rarely axill... Capsule ... —Acc... timate *Gentianeæ* a little, but nevertheless it agrees more with *Exacum* than wuJi *Scrophulariæ*.

11 SMI.* WtU. U H

SECT. I. \1 ... MM uu (iK» aretKM rmiiiii Uw legitimate species of the genus). R. Br. prod. p. «-• (all* 4-cleft. Stamens inclosed, inserted in the middle of the tube of the corolla. Style at the time the flowers are open, bifid at the base; stigma 2-lobed.

... POLYMORPHA (R. Br. prod. p. 452.) umbels semi-compound; peduncles elongated, and are as well as the calyxes ... segments of calyx beardless at apex; leaves linear, ciliated a little, glabrous or pilose beneath; stem erect, hairy. ⊙. G. Native of New South Wales.

Ub

Polymorphous Mitrasacme. ..., July. Clt. 1826. Pl. ½ foot.

2 M. SQUARROSA (R. Br. ...) umbels semi-compound; pe... il«*l« xUbrow*; wsmr, ... of calyx beardless at to... leaves ... ved at tops, and ciliated a< the baa*, with frtihfaioaw —Mai—; stem multiple, pilose. ⊙. G. Native of New S... •nth Wain.

Squarrose Mitrasacme. ... «C«NK Pl.

3 M. CINURA'SCENS (R. Br. l. c.) umbels simple ... .1-f-ftHi.: peduncles ... calycine segments beardless at tfgt ... linear-lanceolate, ciliated, glabrous, terminating in a setaceous mucrone; branches ascending, pilose: the ultimate internode the longest, and smoothish. ⊙. G. Native of New South Wales.

M It Mr

Greyish Mitrasacme. Pl.

I iwr—.

4 M. CANE'SCENS (R. Br. prod. p. 453.) umbels usually 3-flowered, sessile; pedicels glabrous; calycine segments bearded ...; leaves linear, obtuse, hairy on both surfaces; stem procumbent; ... with all the internodes pilose; ... Native of New ... i.,,^ WtU.

rvot •in-ill K

Canescent Mitrasacme. Fl. June, Aug. Clt. 1824. Pl. procumbent.

5 M. MULTICAU'LIS (R. Br. l. c.) peduncles ... ft. i (Wnwl, from the ultimate ... corolla about equal to the calyx, but twice longer than the limb; capsules ovate; stem multiple; partial ones undivided, erect, hairy. ⊙. G. Native of New Holland, with... tropic.

ini!i I\,tl, *\arf\$ T '- iti It 4!rf1l, trllri-tr Ihtir •

Many-stemmed Mitrasacme. PL

6 M. RAMOSA (R. Br. l. c.) umbels ... umUI irrmmaJ. 4 6-(flowered; pedicels pilose; tubr of rorotk rquaJ w ltoa^K to the calyx, which is pilose; leaves linear, near, fnloar I att« atawk at tlw •• and a little branched ... »t ttw gyjaa, ⊙. G. Native of New Holland, within the tropic. path

Branched Mitrasacme. Pl.

7 M. LARICIFOLIA (R. Br. l. c.) ... It. ltr. I f i^oacla* * •, axillary, 1-flowered, longer ... r ihaui ihr •trni. KIIICS ... kimnlr . l«b« of corolla 3 lines longer than the limb; capsules globose; leaves linear-subulate, ... raMUIUkj >n a artj ... mucrone, glabrous, with recurved margins, which are ciliated at the base. ⊙. S. Native of New Holland, within the tropic.

Larch-leaved Mitrasacme. Pl.

* M on M •

8 M. PROLIFERA (R. Br. l. c.) umbels terminal, 2-3-flowered, many axillary pedicels; tube of corolla globose, exceeding the limb: throat bearded; capsules globose; leaves linear-lanceolate, glabrous; stem branched, humble. ⊙. S. Native of New Holland, within the tropic.

Proliferous Mitrasacme. Pl.

9 M. ALSINOIDES (R. Br. l. c.) peduncles solitary, lateral; leaves ovate-lanceolate, glabrous; stem dichotomous, erect. ⊙. G. Native of New South Wales.

Chickweed-like Mitrasacme. Pl.

10 M. PALUDOSA (R. Br. l. c.) umbels 2-3-flowered, nearly terminal; corollas subrotate; anthers exserted at the apex; leaves ... •linrsr-wncvaailr. glabi ... branches ascending. ⊙. G. Native of New South Wales.

Waif*.

Marsh Mitrasacme. Pl.

II M ii M

11 M. ... (R. Br. l. c.) scapes radical, capillary; umbels simple or ... tntaiiiMiJ: rorolU aat «*lf longer than the calycine segments, ... •h^H ar* iirwnaatji wiiiitu i capsules ovate, exserted at apex; leaves ... r« ra.li. •, oval-oblong. ⊙. S. Native of New Holland, within the tropic.

tlmitWmpk.

Pygmy Metrasacme. Pl. dwarf.

12 M. ELA'TA (R. Br. l. c.) scapes radical, elongated, furnished with remote stipula-formed leaves; umbels simple or compound; cor... tube 3 times higher than the calyx; leaves radical, stellate, oblong. ⊙. S. Native of New Holland, within the tropic.

d •iih.li ihr lf«|

Tall Mitrasacme. Pl.

13 M. STELLA'TA (R. Br. prod. p. 454.) scapes glabrous, long... stem, which is downy; umbels compound; limb ... Uf than lk» lubr •• g ... leaves lanceolate, linear, acute, glabrous, 1-nerved; upper ones approximate ... •>*lr. dpttawl in a stellate manner. ⊙. S. Native of New Holland, within the tropic.

m

Sy W**r& MItfl—rTin I'l

It M. atari ... ti.

Wild-thyme-leaved Mitrasacme. Fl. June, Aug. Clt. 18... It, creeping.

•aWklrJ

PL

15 ... • (UML «m. koO. I. p 3-... t. 49. R. Br. l. c.) plant creeping, pilose: leaves ovate, petiolate, ciliated, shorter than the axillary, solitary peduncles; calyxes hispid. ⊙. G. Native of Van Diemen's Land.

Pilose Mitrasacme. Pl. trailing.

Ii VI

16 M. PHASCOIDES (R. Br. l. c.) stemless; flowers 3-4-together, sessile; leaves linear-lanceolate, pilose. ⊙. S. Native of the Cape of Good Hope.

Phascum-like Mitrasacme. Pl. tufted.

SECT. II. DICHELOCA'LYX (from δίχηλος, *dichelos*, bifid, and καλύξ, *calyx*, a calyx; in reference to the bifid ... calyx

bifid. Stamens inclosed, inserted J in the n he (ubr of a l*-
the corolla. Style bifid at (lie baar, at tlic time ihr fl—cr. arc
Lpuuira. ougma x-iooMi.

17 M. r*»«* ttnmoaJ: lrawlinwr-
Ufteroli, (OMJ. *Q (,, \...v.
t HOIUIHI, no ihr wuth r»

PmrmAKtc+J Mitraaanaa. I'l.

«>r« (from .Ao$_t$. *„/«, rtiiirr, and yvra,
#JTV. a fcroilr j tn rrlrrrncr 10 the uu.! n»j.
we at ihe nmr the hi—W m D M.
Sugn,

l• il i aninat, tflabrout, lunger
llian tlie *trrn, which w |>il
about e^ua! M>rnu \incmu
unciroLatv] atymrnu of ralvK i>itr lull .!...ritr tl,n, (),<• tube;
learn s-nrnm: *M* m i
llcitlaml, »tt
! Mitraw P

19 M, CARU MO.
rod. ll ttcp. l tn. 1 umbrU M•
i-!
^
h, i.!i(ll».
l'rOM ttir •MBDfWMMi >l
Mlg. FUiwcra irtiail, mlutiv s with
ut (lint, il ti. i ulaic, al iKr
M lit ri l IK
. «li|(lill)

vapc llium, bijftr |>, 14*0
!>ll(J B« t)u rjlu , (adical leaves stel-
late, oval-oblong, obtuse. Y. S.
W *rtrmmtJ Hitnaaemo.* I *Kw§*

IV PLI - • :i v .from riUBMj /<*<•>. M plait, aad
tA»£, r«/j. the |Jtr»i.

*t of ttwruf' Jl lfnyiK • <t<d.
Xl M. utalai i<<* rwbflaj, rapitawy, M!W4l
oUoo||- Uru-ruUi• i
tativr.ot
l'l.
•
«m>u»l. the >cnl> be *o«n ia JMK*, lii: D . <JHJ1 l ,4, l<*m, and (*«i, and rrar«d in a Hot-brd Ml aprtout | »i •! » ltarr Krown to a MttDcttrttt • *hoMtd t tlinl. and *Mr(»*«ii pUml w th»gn

agTwmjt *»!• th« (frnot OtataWa ia aaftkalar «la*ra«tar«

rr. nvfLamrf. 3 p. lt7. M.M. rm*. rm. br«. »
marww-, or •,,«,»», wih w^aallt (^Slial,
-^r.rquiimm.mt .-wt^a,l«Ht»iaai$_y$*(toaa>.
•i' m rrtiuiwo. "iriini raJatiaViai.

• .«. of lh«a ar. ^

a l*- crllnl, n.ually t-vatved ; tian
m)lrff|n,or al»c» brnt in and brartng the MHM1» in thoar
'" "Wlt *• 1-<rlW ; *d« *rv in»*rtnl in
ir»l placentas in f 11 Uml fj|wln 8ted« •mall,
Embryo straight, inclosed in the axit of «oft S«*liy tlbumrn.
Radicle tending towards the f itmatUcM. ll erbs, rarely shrubs,
usually glabrous. Leaves opposite, tMirr,«»ii|)»lit< . Flowers
terminal or illary.

TWi order U more tradilj di.,,n$_K$ui.hr.l l»y h.btt alone, thwi
by character. l. fa MHl, ,,,,,,,, ,,, *,...IrwmUf*
Iditinar, and *Sc* it is distinguished by
the dehiscens.. the seeds;
from the second in the flowers being regular, d in h
being equal in length; and being
kneed, in the capsule being 1-celled, and in the seeds being
fixed to the edges of the valves. It also comes near to *Apocyneæ*,
bu inguished from that order in the estivation of
the co *Swirtia perennis* the embryo is in the umbilical
region of the seed, contrary to the assertion of Dr. Gaertner.

The species are chiefly natives of cool and mountainous re-
gions of Europe, Asia, and America. They are mostly dwarf,
herbaceous plants, with deep blue, yellow, or white flowers, the
former . - «<•» no most of
them colour prtvailiag. 1 hey are all pre >, MM) with few exceptions,
fclliMll in (br). * brat drfrrr. but. ent of cultivation. The medicinal properties of
tltry arr imp«< lilcu, Co
'"«• at«mamd lr.. *tia, F.rnftkrtr'a Crntaunum,*
Jrm WaUtn, Ac. arc mim-ti! l> l
aad frbrifu^al ; ti.. «. t. awond only lo$_T$>iwi.
and Pvnmaa bark. Simtlar. bat aanr* in bit vartaaa art foaad
in most of this order. A k.od of .pint <• dittilled in Switzerland
from dw rowiof "Gentiana macerated in water.

Synopsis of the genera.

TRIBE I.

GENTIANE'E. Capsule 1-2-celled; margins of valves pla-
cenlifer.mi S.. ds usually disposed in a double row.
SlWMftli t l »t In, ovate 1-celled, 2-valved,
margins of valves bearing the seeds. Anthers remaining unchanged.

1 *"i«t'»Tl4, Corolla rotate, 4-5-parted: having 2 nectariferous pores at the base of each segment, which art oli.
t ttti i ia. Corolla rotate, 4-5-parted: each segment furnished with a spur, horn or tubercle at the base. Seeds roundish, small, smooth.

J A«*«-a-»- ^"-~-
• « * Cdtafctauw, A^.M.j! having ',-r.lW.
ZZS deW '"** * ** **" * " * segment. Seeds
IOffS "** r'il
flwaiah. !^Z* ***".* **'**'** ««^rh segment
WuT ——— angular, scrobiculate, scabrous.

3 GENT Corolla 4-cleft, salver-shaped, furnished with 4 nectariferous pores at the bottom; segments fringed. Seeds small, scobiform.

6 FaAik'a*. Coroll* route, 4-parted; each argmcut furniaKed with 1 orbicular bearded gland in the middle. Seeds imbricate, nwgi&at*.

7 0 iratnpanuhteK funnel-shaped, 4-J-cleft, Stigma *-M*d, Seeds roundish or oblong,

9 CaKTAuaaU.*. Corolla urceoiately campanula l*, t-cleft. Stigma thick, glandular, t-lot*d. Seeds .mall, roundish.

9 A«Tm*BUl K spathaceous, S.4-cleft, »plu on one Corolla subrotaic, i-clefi, furni.hcd with a green gland at the base of each »egmcm. Anther* at first maibiatd, after. w.rda fr, , compre^ed, w ed.

10 Coii "£• •Pi'faw. «wi«aU7 toothed, .pl.1 on one aid it. (aMpM*lau. 5-lo^left. Sogma Infid. Aatben alined. Capaule fumtabad with *i-7* tubercles at the bate. Seeds miM|iiasa*J, winged.

11 LmtTiuuv r-ahaped: limb 4-3-cleft, with aa many Warded or fringed smaller segments inside these, and attached to them at the baar. Arvtlwra *t* 2>lobe*l. Seeds compresaed, rotmdiab.

PLioaiiois*. Carafe rotate, 4-3^0. with a fitnged throat. Anthen incambtm. fitifiaaa 1, adnate to the <• varium lengthwise on both aid** in (1st w n a fludi

13 1 rolb fuime).aha|ird or .haaad. dfft ; the alternate or atciaary •rgwrau tuually tna AMMM inmMbani, orate or oblong, warn. Satda otaic or oblong, minui..

u. "nrnlln iiwyilali in WITII all«f I if, the alternau or acre*aury tegmrtitt mually lest. Anther* caaabiaid. Saada unall. globow,

13 On i . ombett xcavatrtl dou, rfitpwawl in a ttbara iacambent. Stigaai t'iabadt aaaHy aaaaiW. I"U half abortrr than the o*arium.

lorolla funn. babeanlrd » iiKutnUtii OvartHI SajttaTal >ti,Miu M«.l!.-.'l.-t-.j

IS lym tabular. 4-cl< 'rail* it aa equal tab*, aad * 4-cWft S«ada MJaaaa. aagnUr.

19 Cituimw i.partrd HnM 41a salw afcayj. 4-d. l4aWa\ ri..f, ; \»Uf, opcnu« b, a do«bU po« at the apes, ftatda oblaag i to l vtaJtwfctt airlmti. Kjgiaa Maalt, roaad »itocri r rolUcampanal^ir. 'i-clrft.

ted. Corolla aal.rr •bafij «. .£-parted. Staawa* l; MaaMatta trry short i amber* ,rect. -igmat-t-cleft. Capsule oral-obLjof. 8c«da a ft l ,ly, risnd, 3-cleft. Corolla vwcid, wWer-shaped, swelling at the bnar, and atwtrartrtl at ikti b 3-deft. Stamen. l. Anther. iataabaM. Syle dediaai*. Stsrma capitate.

U Ca*ar*aA. Calyx olmdneaJ or fimail ifclpiil: witn a 4-cleA aarqual li longer than Uw re«t. Anther* Srvda ruaailiih, miaati

VOMIM*. CWy-* |,,,li.....S^tfti fcrnkWd w.tb to «^e, « ^ baae. Cofoili aaKrraaapMl. 4-cJeft i l»W lpaf> «.„«•. tan* at tW aaar. Amber* aim.-,

jx .malt, iparu^i. Conlto funnel-shaped, 5-cleft. Anther* aafiitair, txartv Stigma somewhat peltate, sub-bilabiate. Capsule lanceolate; edges of »ahr* villous. Seeds scobiform.

.nr.,u»llt *S* cleft. rrffi funnel-shaped, 5-cleft. Stamens 5; filaments dilated. Stigma capitate, subemarginate. Capsule oblong. Seeds scrobiculate.

| ..ih or «itbo«it awain ; aaiWra err. Hy[<ejwn disk 5-lobed. Stigma 2-lobed, recurved. Seeds with membranous edges.

8 « T « l » « 11 a//*r *mttgtmt* «/ fir aalaaj *-••** *Unt* *mmrgmt* »f WMW* *ptitMtmitftrvms* i «• lie *old ttmti.*

SO (WTOV r. ,l» raajpaaailai^ «.aaru4. CeroOa •kapnl. i-patteth tube rqaaJ. Bbwwaii rtrd (Utaarau bioVsrtate M ib« aaar. AnlWra M

| ••'•*. 'Calyx 5-parted. O -*ft«prd. A-rlrft. fttamena A. iadoapdt fiuaaawia akan. a xtand at the tnarrtHm *of* «a«h | anth*r* iaxaiaanet. IMMI «cobtfem.

MMSmi 5-parted. Caenlla fbaaarty Slimwa 3. aawwrttj antWra oblaf. Wt%wa» ftwcMMkrr* fUcxlnlar. S*«da imalt, ofM* or ofemate, ang- III aaapaou; •>•! » oraOa M •b rather oblique. l-parted : tube in lUieJ M tU middle. Stamens 5. 8t%Mn of l cylindrical divisions. Seeds small, globose, or angular.

Corolla campanulate, 5-cleft. Stamens 5, adnate to the tube of the corolla; filaments channelled inside; anthers linear, incumbent. Ovarium fusiform, 2-celled. Stigma sessile, 2-lobed. Ovula orbicular, peltate, concave on one side, with membranous edges.

Capsule 1-celle 2-valved; mar- *gins of valves inflexed, seminiferous.* *hanged when r*

Calyx 5-parted. Cor- Ha *aJter-thapr- l, 5-Stamens 5; filaments dilated; ant..ers oblong, erect, connfbd, and at taafth aairal y twisted. Style declinate. Stigma capit Calyx

56 ROMJKM. All aa ia *Ck*i*u>.* but differ* in the fruit being a •ucculrni lurry.

37 EaTTtia**. Calyx 5-. ..llafunnel-ahapcd : with a abort I I *f&n»i* limb. Anlhcn tptral in die old •lab . 117

•ma» at. rtmmliih.

38 I w ' M . Calyx 4-pa; '»Ha wiih an urw ' \ and a S.]*-paitrd Itmb. StaJMMt, »t«ral. Attlben at lengt.. evolute.

Sub-tribe IV. LtH*'»iil»*. *Capnlt t«lM. tn rtmmquence of the tmaigtm of tkt* r«/t*11* *brtng bnt into tkt etntrat column ; margins of raUn fUttetntiftnmt. Amtkeri rka^nl* <• *the old state.*

39 Lisia'sthus. Calyx ram |MUIII lair, S-clcA. Corolla funnel•ttu|>rd . tube ver ilricoi* on ow **ult;* liniti r<|iial. j-t-U-ft. AotSrr* Mfritutr, incumttrm, rrvolutr in tlic old auti. Style elongated ; stigma bilamellate. Seeds small, angular.

40 Iszra'chia. Calyx fiiKj^niiUlr. i-cltii. tVimlla funnel' shaped, equ*i*\, 3-clrft. Anlbrr* rrtoitiir wlicn old. Lobca of stigma cylindr Hal. S,nU ali^tiLir. imall.

41 Symbola'sthus. 'Ca\% '-p*i ted, pentagonal. Cotdh salver-shaped, 5- I'irtcil; Ittlw cUindrical: segments fringed. Stamens having a •mall rrrnuUicd, rm.-formed membrane at the bMtof dMAUment*. Ant)><rs sagittate, b n at length conv Lobes of stigma linear-oblong, flat.

42 Ev'stoma. Calyx 5-parted ; h <i«g t he segments more or less rlagrd on tin- back. t. roll* funnc -shaped, 5-cleft ; tube contri ioted a little at •pex. Stamens 5 ; fil*mrnl» compressed ; anthers r»ihcr sagittate. Sttgtna dwply t-tobnl. Seeds scobif>fin.

Tribe II.

Exacie'æ. C :/«»/«• *tttlUJ; mar*K,*f ,,f tolrtt t*jUz«l, ,». *ser tti n, tkr . cnlret pbtctntai, nkuk ax at l<%gtk frm «aW kar ike >eds.*

43 Sera'a. Calyx 4-5-parted ; «gmenu k«4rd or winged. Corol .i 4-5-cleft. St iinMU exaefted ; anllx-n dvtuartng lengthwise, when old recurved : and nJJoiu at tlir «[«•». Stigma* t, 1 E'xacum. C •» I camj*nul*ir. ; -cleft ; segments winged «• thr bark Corolla subrotate, 4-cleft. St.,,.,,,,. 4. declinate ; filMMBi* erete ; anthers »«onal, natnt at the base, erect, debiscing by a chir • k at aprx. aV le declinate. «

Microca'æ. Calyx deeply 4 cleft. Corolla salver- cleft limb. filiform, erect Style declinate ; ahaMN), with a twellmg mSr ami • •. 1 MtlMfl nulling KtgMM OtJNtatr, utnlmdn]. l'«| le imp 1 tWtly K-celled.

Tribe III.

Desfontai I**, *litfy \-i(tlrJ,m**f$*rJ*J;* v*fl 4-5 a»-*rietal septiform placentas, mrmt* Mr •rrrjr *mpftmn mmwj-rr led ; placentas with reflexed seminiferous sides. Seeds disposed without order, erect, obovate, anfimUr,* aid M MftflaMf «((Ae l«ar *and a dilated chalaza at top. Albumen fleshy, e —Evergreen shrubs, with spiny-toothed leaves, and solitary, terminal, pedunculate flowers. Peduncles bibracteate.*

46 Desfonta'ria. Calyx 4-5-i*rtcd; wftb w«rly equal obtuse segments. Corolla tubular, cartilatpnou*; with a 4-5-)<ibed limb; li>bra »m> dish, retu or. Stamen* 4-i. Anthem erect, innate, limited, iiuerted eat-h in a large, Amhy runmctive ; it 1U drliMomg KnK<>>-IT.

f *A gnu* kmnUf k%o*%,*

47 PAI.L*'I»*. I'orotla fuoaelthaprd ; limb of 1 segments ; tub. furnishe I wttl. 8 plirat. Cap.ulea f, club-Juipwi Stigmas 2, spre admg. 8f<edi imnll. r oundish, fl• •] tn tpongy rrceptacW*.

Tar I.

Gentiania'æ. 1 1•?•«•!W, J-vaUrd; margin*«f ralrc* placen tftfrfroaa. Seed, uMially .!i.j««cdin to rows, on each side of ihr ultr«,

Sub-*run* I. OIWTU sub-tr'ba. (This tribe is supposed to contain the legitim »lr tfir< ies of the genus.) CafaMhi 1-celled, 2-valved. Mir*Rm» of valvr* bearing the »M-,U AMIM rs reniainuift urK-Uangnl in tin old MM .

I. SWE RTIA (so niiwil by ; innæus after Iman Swwrt) a cultivato t of I.',11,, an.l flowers, ia Hullanil : amli or of Florilegium, Francof. 1612. fol.). Lin. gen. no. 321. Schreb. 449. Juss. 142. Gærtn. fruct. 2. p. 160. t. 114. Lam. ill. t. 109. Lin. syst. *Tetra-Pen , Monogynia.* Calyx deeply 4-5-parted. Corolla rotate, 4-5-parted ; segments furnished with 2 callous scrobicles at the »i» e of each, which are fringed on the edges. Stamens 4-5 ; Il ialiu If • subulate, flatten i ... brous, dilated it thr lia»r ; anilx *1* incumbent, debiscing lengthwise, I.iitmm] at ihc liaw. *S*\\\, very short. Stigmas 2, subOrttCulatr. *da'* tened, minutely papillose above, with revol edges. Capsule 1-celled, 2-valved. Seeds compressed marginair, *f*\\< \ 1.1 il.. .dges of ihr nhrM.—Uauall; »• 4l»rnu» brrl s. Leaves opposite, rare l all ternate, quite entire, ner Flowers terminal, pedunculate, almost solitary, or racemosely panicled, blue or yellowish.

§ 1. *Pentámera* (from *πεντε, pente,* • ir, arid KWTII. I part rts of the flowers). *Calyx 5-parted. Corolla 5-cleft.* A'faUMHl

1 S. verna (Lin. spec. 328.) glabrous : stems erect, . are, at Mi'll | peduncles, tetragonal ; leaves .lm.».t all radtetJ, ovate or elliptic, obsoletely nerved ; p „<•:.:. . !>*•. ;. ! rrmituil : segments of corolla acute. ¥. . ll Native of Germany, Awtha, I France, Caucasus, and Siberia ; and of North Wales. Jaca). •out 243. Smith, engl. bot. t. 1441. Pall. ros. 2. p. tt. Gentiàna paniculàta, Lam. fl. fr. 2. no. 333. Gentiàna palùstris, All. ped. no. 367.—Hall. helv. no. 656.—Barrel. Ma*. i. k .—Morr. his. sect. 12. t. 5. f. 11. Calycine segments subulate. Corolla of a greyish purple colour ; segments elliptic, acute, dotted with black, having the edges of pores brist Margins of valves bearing a double row of seeds. Plant very bitter. Cauline leaves opposite. Bracteas elliptic, oblong. *Perennial.* Felwort. Pl. July, Aug. Pl. 1 foot.

2. S. ortu'sa (Led. act. petrop. 3. p. 326. fl. alt. I p. *itO.* Rchb. pl. crit. 5. p. 11. t. 419. f. 605.) glabrous ; stems erect, and are, as well as the peduncles, tetragonal ; leaves scattered, all oblong, 3-nerved, somewhat coriaceous, obtuse ; flowe '• racemose ; segments of corolla obtuse, dotless, and erose at the apex ; cilia of nectary very long and loose ; filaments pilose at the base. Native of Siberia, in sub-alpine humid places. *%. p*f<—U I all. itin. 2. p. 568. S. perennis, β alterniflo •»». Schlecht. in Linnæa. 2. p. 189-190. Stem bluish-green, tetragonal. Lower cauline leaves petiolate, oblong. Bracteas, and pedicels bluish. Corolla violaceous.

I'ar. ,), aihtfiira (Led. fl. ah. I. p. 2»1.) flowers white. Native of Siberia.

Ot/wjc-leflved Felwort. PI. 1 foot. H. II.

3 S. DECU'MRISS (Vahl. symb. I. p. 24.) glabrous, decumbent; stems filiform, obscurely angular; **ferret** lincar-lanccv late, sessile, somewhat connate at the base ;)>ediccU twine at the tops of the branches; each furnished with a linear braetea at the baae. ty.G. '• ative of Arabia Felix. Wdlil. **spec** 1. p. 1330. Parnauia polynectaria, Forak. deter. j>. 207. icon, t. *S.* f. 6. Stigmas 2.

Decumbent Felwort. PI, decumbent.

4 S. **JAYA'SUM** i ltlum. bijdr. p. 848.) stem erect, fa»tigiately branched; leaves **linear-lai** j-nerved, **aoaile**; peduncles tetragonal, l-flowered; axillary **oaM MaaB] twin,** and the terminal ones aggregate; corollas campanulately 5-parted, about equal in length to **tbi** Native of Java, on the top of Mount Gede, in humid place*.

Jam Swertia. 11. war. PI.

5 S. cttRL'ti;* (Ro\le, **herb.)** lower leave* spatuUte, pftiolaie : superior ones as well a» calycine »cgments **UlHUlVllairj** bluntish *;* corollas 3-parted : segments ovate, mucronatt on the edges with **distant,** linear scrobiclei. ©. H. Native *of* the Uimalaiali. I lower» blui-.

fl/wflowered FcUort. PI.

J 8. *Tetramera* (from rrrpa, *tetra,* four, and f«pic(*men* part; part* of thv flowersj. *Calyx* \-*jMrted** *Corolla* 4-. *Stamens* 4.

8. Dteaoroiu Lit., spec. 329.) gUbroua ; stems branched, "Mi-hotonioii*. diffuse, articulated, thick ; radical leaves obovate, '•<'!, **peliolBta** : cautine ones elliptic, acute, 3-ncrvcd, sc-~ pedicels fr*im the forkn of the branches ntitant, shorter than the mternode*. ©. II. Native of Silwria, on the banks of the Cattiha, above Krasnojarsk, &c. Lin. anm n. :'. p. SIT. Pall, fl. *ron. t.* p. 100. t. 01.—Guii-I. »ib. 4. p. 113. t. 53. f. 2. Habit of *Autit.* Lorit-s of calyx nvale-lanceotate, acute. Segment!! of corolla **ovate,** obtuse, with the nectaries hardly cili;f CapiuU' obov Flowers green and Mime times **renntah. Btew** <*l*? *m*\.

ickot-moHt **Pelwort. P], decwabent.**

nuwie'ui i lV Don, jir.nl. tl. DM, |>. l.'S.) stems **ifted; pednoda tctragouli l>flowand;** leaves **laaoBoWt*,** obtuse, **attenuated** at tin- \n*v; **calycine** segments oval, obtn **IBM** 3 times lont^-r than thr **ealrx; witn** oval-olilong, obtuse •egments. *Till.* Native **of** Nipaul, **on tbt alpa. Root k** fusiform. Stems tetragonal, **tricbowmoaa,** 3-(lowered, *m* ***ma***\ 1-rtowered. Flowers purplish, size *at* tliose ot *S,* ***ptrinrit,***

Mantf-ttempted **Felwort.** PI. nifted.

8 S. **pAliA'ni** ; gl;il'r(um ; stem simple, filiform, ertct ; leaves **-vet!**; }< **diceb erect,** axillary, somewhat fastigiate. ⊙ fl. Native of Kamtschatka, at the mouth of the river Apalla. S. tetrapétala, Pall. n. ros». 2. p. 99. t. !30. f. 2. Kach <(tem furnished with 1-5 pairs of leaves. **Flatten** small. CalyciiK **u linear.** St-rrmentt of corollft hardly **0ober>** in? at the base, Hwp blue ; **baring** the nectariferous scrobicles combined, notched on the edgv*, and of a fulvous colour, and ^ble OH the liutk. Ovarinm **haUbnl** nt.

Piillas't l'Mvurt. p|. | foot.

v». m i l tA (Ptma,L c)**gkbrooa;ttwaainylc,** l-ll<i«ered; rolla twice as long a* calyx. 0. H. N> tive of the Whil 11 ills ; **and** of Labrador. Tin- **whole *pmx^t*** scarcely an inch high, **Mttl'** **'I'iC** flower. **Segment* of.** **of dkt <aljrx** **»l»i**

M I elwort. Fl- June, PI 1 inch.

stem branched \ leaves spatulatc-obovnte, nerved; flowers fastigtate, aggregate, axillary and terminal; pedicels **twin)** corolla campanula icly rotulc, length of calyx. *%.* IJ, Native of North America,on the Missouri flats, near the Rocky Mountain*, **Lewis.** Linvis **large.** Mowers sky blue.

liutigiaU-W- 1 iKvort. Fl. July, PI. \ foot.

II S. PKRKJLIA T A (Royle, mss.) glabrous; stem creel, terete ; leaves <lli|>ticoblong, acuminated, 7-nerved, connately **abettor*** ing ; flowers **raetmoaelj** panicled ; segments of corolla • « • , nunated; nectariferous scrobictiles combined. *11.* \\- Native of the Hinialaiah. Habit and size of *Gentiana tutea.* Root (uniform, lnn **imariiaj.** dirty yellow. Stems the thickness of a linger. **Lower leavct** petiolate'; petioles connatcly **ih—**thtiy: **upper Mtaile,** connate. Flowers very numerous, drooping, blue ? Pedicels filiform, **furnished sadi** with a **tmceoUn** bractea nt the base. NectarrforMiis **tcrobidi** * **romdisb,** fringed with long cilia,

I'cr/oltaU-U aved Felwort. PL *S* !•

12 *i.* SPECIOSA (Wall. cat. m>. 4J8+.) glabrous; stem erect, terete .'; **IWIII** petiolate, spatnlale-oblotig, obtuse, 5-nervcd; flowers racemosely panick'd ; segments of corolla obtttsi>; i tari ierou» scrobiclen distinct, ciliated with threads. *%.* H. Native of N **lipaa),** Karmtun, ami flimalaiah. Sw^rtia]>cti luris, Royle, **msi.** Pctiok-s connate at the base. Leaves 2 **incee*** long. SegmentH of calyn Innceolate, mucrtmat. I oroll i yellow, almost twice longer than the calyx.

Slunry Fel«url. PI. X to 3 fctt.

13 S. **CUXZA'TA (Wall,** at, no. 4380.) glabrous; stem erect, fililbrnT; **leaves spatulately** oblong, petiolate, obtuse, fl-nervnl; flotvers racemo.iety panicletl ; M^im-nts i>f corolla obtuse; nectariferous Mcrubtcles linear-oblong, distinct, ciliated with long hairs.]/. II. Native of the Ilimalaiah, **Etoylfl** ; Kamaon, Wall. Sweitia glycanthera, llwjle, m»«. Rout fibry, dirty yellow. Lea-. es 2-4 **ocbei tone:** superior ones linear-oblong, almost sessile. Stgmentii *(** the calyx linear, acute, 3-nervnl. Segmenti of corolla otifutr, eniar^ituttc, 5-nerved. Corolla blue.

Cunriflr-: eaved I **lwOTt.** l'l. j *to f* foot,

14 S. AUtusiiiUA (Koylt-, ma.) leave* alternate, ellijitic-oblong. acurtiinati il, 7-nerved, aheathuig at the bate; flc wers drooping, racemoM ly panicled; segments ol the caiyx 'oviiu-, acuminated : of **tba** corolla elliptic, obtuse ; **neetarifirroua** »cro- **bidei orbicular, frngad,** contiguous. *%.* II. Native of Ni- [KIIII, ltnyle.

Alternate-Icated **Fetwort.** PI.

Cull, All the species dt-li^ht in a light soil, inclining to peat; and a marshy situation. The perennial species are increased by **dcviaioD** at the root, or by seed.

11. MALK'NIA (meaning unknown to UN). liorkli. in Rnrm. archtv. I. p, *H.* S-i. **rtia** sp cies ol authors.

LIN. H K I ***Tttra-Ptntindria,*** *Digynia.* Calyx 4-parted, Co rtilla **awbcanmanulata** or **fbaael-aaaped,** l-cleft, each s. gment **fiwnlabetl** with n spur, **bom,** or tubercle at the base. Til aments filiform or mihiilnti- ; anther-H **incumbent,** dehiscing at the aide* lengthwise. StigmaacMilr, ?*h>hi-(l. **Captolt** l-fillcil, .'-\nUid at apex. Seeds roundish, •mall,smooth.- **-Uaoallygtabroui berbt,** l eaves opposite, quite ' titire, nerved: riidica'l ones **CTOwdad.** Flowe r* **imwiual** and axillary, pctliincnlate, blue, or yellow.

1 II. SHUHHA (IWkh. in Hum. arch. I. p. M.) stem erect, obsoleuly uuailranguiar, »iinplc, *>r **bnraeattd** : cauline leaves lanceulute, 3-nerved ; pedircU axillary and terminal, filiform, **(•flowered**j **lowcn** nutant ; **corolla** oiibcainpanulalc, sonn(irniv 5-cleft• ; spur* divnricato, **tweurred,** subulate. 0. or 1/. II. Native **of** Siberia, about **tbe** <Yenissee, ."id in shady place* .n tlumonth of tbe liver Tschulyichman. Sivertia cornirulata, **Lta.** spec. 328, amcen. 2. i>, SIT. **Pal!,** fl. row. 2. *y.* 99. t. *to.* f. 1. **TetrafOBfataoa ttttior, Stall,** ire. p. 122.—Gmcl. **sib.** 4, p. *m,* t, 43. f. *3.* Radical **kavei** bro.id, lanceolate. **Corollas** grectmh.

Capsulesiiliqiic-formed- Tint plant, from • *•.•» inthfi thedV»meat«reined«oftbeinh«bitantaof8iberai.

Siberian llnknia. Ft. July, Sept Ut. 1817. I'l. J t..

MM . M ; Men branched, (jiiadrangiilar ; branches Jiort ; faulin. ovule, 3MH-rt<-d ; corollas campanulas ; »pur« denVxid. & . II. Native of Canada, in twnnpa, and round the hike* <>' rn part* ol • Sweit !.ii i. Miebx. (I. anier. l>or. 1. p •' P ••», I. [>, too. Swirtta Mkhauxiana, Ru • ISO. - vuna, Spring, lyat- 1. p. 601 • Flowmgrata* iab \ellow,

/,««x'« Halenia. Fl.July. Clt. ISM. 1M J [• |. 1 *v;* i lifted ; Meim slender, tetragonal, dimple or branched, nearly naked ; Aowen terminal, umbellate i 1' tir, lanceolate-linear, aervelm • caulinc one* conniving at the base; coro:la siibt\Huji:irnil;ite ; spurs acute, divet ging, longer tlian tlic corolla. (• I '• -rti, on the A ndes. i.i unibflluin, Rutaet Par. 1 | p. II. t. *«. t. b. Dele*5-10 together, tetragonal, rather drooping. L'mbH-Military nr t«in. Calycinc legmen ta lanceolate, acutieh, with aeabroui margins. Corolla yellow (with orate, acuminated segmenia. L'ap*ule conical. Sn-d* lenticular.

I'l. 1 U *I* !•

t II. RKI;VKOHNM ; stem erCCt, branched. UHCtei !• baear-lanceolate, 8 on short petioles ; towen axillary and terminal, aoUtary, pedieellate; *<-n*\\ nienti In corolla faaod*«haped i apu i. Natu Quito, en i em aerate *y* Srnta, H. II. rt Kiinth, nov. ^en. amer. 3, p. 174. LeaVM 1j inch long: superior mu -linear, t'^rulhi p;il<- yellow: uidt arutv N-gtiu-ntc le oblonjr, compraaaed. >

SkorUkantd Halenk. I'l. May PI. J to *]* 6

. PAHVII'LOKA; »ii'tn en IranguUriy terete, simple; cauline I' ai If : flow* n paniculatrly spicatc, twin; enlv iments linear; corolla roiate!\ ilate, with .i tubercle ai the btae of each legiiwi J of ^pllrs. • . 1 . Native HI \i \ 1, new the ti* n of G Exuato, Swertia parviflom, II B. et Knmh, 1 ov. gen. amer. 3. p. 175. Coroua yellow ; witii , vate, acute segments. Capvule ol' long, compressed.

Smn-flowered Halenia. Fl.- pt. PI ¼ to ¾ foot.

8 H GRACILIS : stem erect, tetragonally terete ; leavea oblong, 3-nerve! : aoperior <»trt >euii«-, oTtfobion| flowers termin:d and axillary, twin, ; te; calycinr «ejrii. PMO-apatulate; corolla tduloui,< subcampanulate; spurs pe rect-ish, conic id. ⊙ I NaJ uong with the pn ceding. Swértia grácilis, II. II. et hnntli, nov. gen. amer. *t,* p> • 1 tvee 8-9 lii long. • corolla yellow ; with ovate, acute 1 guicm*.

11 ilenia. I'l ¼ foot.

7 II. 11ANTANINEA ; stems erect. <|ii.idnui|jiil.it, afaaaph fastigiately branched; radical leaves lanceolate, 3-nerved, on long petioles ; cauline leaves In ear, sea le ; Bowi 11.il and axillary, olitary, pfdicellali ; calycine se |menia litirar-apatulate; corollii raoip.Hiulate ; tpurt peodnkwa. 1/. 0 Native of Mexico, on ! 1 In- burning mount Joruli - rria pUntagines, II. It. <t K.untb. "ov. gen. amer. 3. p. 17A It.idiral leaves 3 incbei long. ' Ila yellow; »nli nvate obtuae segments. Seed h roittidt*li.

Pttmtmm-kh llaleua. > Sept. Pl. ¾ foot.

8 11 iLtrn'hi *etidtf* angularly terete, *ma* tca*r« il one* In' , tensile . Boweri iiibumb) ll.u• It. <• inuim, Swértia i sclevot.

piadta, II. I). et Kunth, nov, gas. amer. 3. p. ITS. Leaven 20 1l: Corolid yello« ; withoratt-obloag, obt'. menti.

Asclepias-like Ihl.nia. 1*1. July. PL I loot,

9 II. inn xn 01m >; tti 1 dlate, 3-nervvd : up[ier on Ho wen panicled, twin, pedicellate ; cal; cine segments linear-lance >tau-; enroll subcampanulate ; spurs pendulous, hooked at top. *%.G.* Nati^e of New Granada, near the mine called Zipaquira, ,i *the* altitude of 1400 beupodi Swértia hypericoides, II U. et Kunth, nor. *iim.* .nnier. 3. p. 176. LUTCI s-in i ines long ; having tli. petioles connate, and sheathing at the base. Corolla yellow ?; uitli ante, acute tegmenu. Capauk oblong, ol tuse, «'iii(ressed. Seeds ro unitisli,

St. John's-wort-!'kc Halenia. PL Sepc PL p oc.

10 11. mime* D ! m«s.) i • Don, terete, branched ; leave* elliptic-obi use, 5-nerved : lower ones petiolate ; calycine segme lll H obttue, nbori ine segments linear-lance ; spurs filiform, longer than the corolla. *y* I . Native of tb< 11 malaiah and Kamaon. Swértia cornicul na. Boyle, herb. Swértia centroatémma, Wall, eat no. 4385. St«a I-I.J foot. I eaves an inch ait,i „ half long. Flowers pale.

Pavon's Halenia. I'l. 1 U *I* !• ect.

I-.lltiitt, An, ved Hal ;i;.1. I'j 1 to 2 feet.

1111 II • • A l(Doe, mss.) leaves linear-l.incrolate, acute, S-nerved, attenoatad al the *\m?;* cah cine segments •patidate; Bnvra abort, atra ght, shorter iljau tin corolla. ⊙. H. Nati\ of Mexico.

Elongated Halenia. I'l. I bot,

II. ramrouA (D. IX ,} tnAed ; atema erect,ai Hate; cnl juirs str.ujjlit. twice oborter than the corolla. *%.* 1 f' Peru, on ibe < Cordilleras of the Arnlti. .t, Kuix ct Pav. in herli. I amb. I .ry Bammi with .lge«. Plowcra foUei yellow.

f»». Halrnii PL \ to \ t

1, ri'ijinrinjj; almost the wine • nnd toil 1 require 1 will drained with ibcrde, nnil filled with a mix! und, placed fa *f$m* of wai. BMuld eonslant;.

III At.Mil'OTES (from *ywaBoTyc, agathotes*, goodness ; in reference to the quality of the species). D. Don, mss. Swértia species, Wall.—Gentiana species, Roxb.

LIN. SYST. *Tetrándria, Monogynia.* Corolla rotate, 4-parted ; segments ovate, acuminated, furntalu with t oblong, parallel, fringed scrobicles il tlic 1... se. Stamens 4 ; filmnents subulate, glabrous, compressed. Anthers oblong, incun ibeiH, with t parallel etll Ovanuro < -I'MMII 1 . stigma 2-lobed : lobes ro Indian, thick, pruinose. Capsule 1-celled, dehiscing by 2 valves : Seeds globose, n 11 it nit h.—A11 mud, erect, brand tnionte, I 1 opposite, aaaaile, ovate-lam M <ni>fi'i!i .11 1:IIII 1lll inbrai *}^% loot!*

. 'H • •wpenor One* «lrtn-il; I ith porple ba*t'. All i>vute , ll h downy • croh .t.-a, with iihoaaav I' \ NERVÒSA ; stem and branches tetragonally winged ; leaves 3-nerved : lower ones ovate, obtuse, petiolate, becoming more lan and sm itlrr ai ll ey ascend the stem ; scrobicles combined, ciliated on the edges. ⊙. |. Native of Nipaul, and i Kamaon. Swértia nervòsa, Wall. cat. no. 4353. |

i.l.d; pedicels solitary, axillary, and terminal; ialycme segments lanceolate, acuminated, longer than the corolla. Corolline segments acuminated, broad at the base.

DIM. PI. ⊱ to 3 feet.

" 3 A. CUIBAV'ITA (I). Don, mss.) stern terete; leaves ovate-lanccolate: scrobicles of corolla oblong, distinct; having the s fringed will) hairs. ©. H. Native of Nipaul, K unison, and 1 |.ilaiaii. Gcntokn Chirata, Wall. pi. asiat. rar, 3. p. 33. t. -'52. Gcntiana cherayta, Fleming, asiat. res. 2. p. 16. Roxb. fl. iiid. 2. p. 71. Swfcrtta pttrpflrea, Royle, herb. Swcrtia chirata, Hnmilt. TOSS. Flowers greenisii yellow. Segments of calyx about equal in length to the corolla. The whole of the dried herb of this plant is in general use among the natives of Hindustan, nml the mountainous countries bordering upon it to the north. It is called in the Sanscrit *Chiruta, Chtratatiktu. Cheraiaim,* &c, and in the Bengalee *Chireta* mid *Chirayta.* Dr. Wailich thinks thst it contains a larger proportion and greater intensity of bitter principle than any other ftpede* of *Gentiana,* and that the introduction of it into our pharmaropceta would be attended with much public benefit. A weak ir.tii-iion or it, made with cold spring or rain inter, .should be used in small r|tiantuics, repeated several times daily, for gome weeks, when it may advantageously lie left off for a short time, and then resumed again. A decoction or infusion, made with .lit r, Dr. i'l i'in in cays is object to liable, on account of the head-ache it generally produces. The dried herb of the *Chirata* H met With in every bazaar in IImdosian, being a medicine in the highest repute with both the Hindu and Euro pan practitioners. It contains all (he stomachic, tonic, febrifugal and .intarihritic virtues which ar. tl to *Aslhriua lutea,* but in a ureater degree. The efficacy of *Ckirita,* when combined with Caranga nut, the *(iuUami'ma Itomlucel/a,* in curinjf intermittent*, hat alnadv been mentioned under that name, ill vol. 11. It equally power I'ul in exciting and strengthen lug the action of I n*cb, and obviating flatulency, acidity, and redundancy of phlegm, in dyspepsia and gout. For restoring the tone and activity of the moving fibre in general debility, and in that kind o icy which is i terminate in dropsy. lii *i.'/iiriiytii* will be found one of the most ustt\il and efficaCHMM remedies which eta be cmplojul. Infusions of the plant are the best way of administering it. Spirituous tinctures tt re also prepared with the addition of cardamom seeds or orange pee). The most useful purpose to which the tincture can be applied, H that of being added to the infusion to render it mcM agreeable-

Chiratfht. PL 8-4 i

CW' i pJture and propagation, tee *Ophelia,* p. 179.

IV, (H'lll. 1.1 A (from *ttf*Xiia,* apJktiesa, service ; plants serviceable in KM D. Dun, I ->«ertia species of anther*.

LIM. SVST. *Tetra-J'ntdndna, Monogynia.* (.ply irivil, -^reading. Corolla rotate, deeply t-j-puted; nectanferoits glands or pores at the base of each Moment *t,* diitinct or combined, n:,; enti (tubulate, glabrous; anthers conl jun fu»i! it; dtigma S-lobed : lobee obutae, rcrolute, proino«. Ceatnlf o\ obraaoae, 1-eeUed, S-v»lved, many-•eedt< »K at t0P- *««! niinutf, angular, Krobiculale, dark brown, scabrous.—Annual branched herbs, natives of Nipal. .1; with iju.i'- rangular stems ; opposite sessile leaves ; and pamckd, white, or purple flowers.

•imilA 1 cim/i mtn'matrdglondi • *.>J* rdiA.

I (t ANGUSTIFOLIA (D. I>on, m*s.) rluwer* -1-cleft; leaves petiokte, linear-lanceolate, acute; cal\ nMBtt linear, mucroiiiate; Begments of corolla OTSte, nciiminaiei!. hardly shoncr than the calyx. 0. H. \ Native of Nipaul. *i* hetty, and of Kamaon and Sirmor. ptiichella, and S. dichiitorna, Mam. herb. S. angiwtifolia, D. Don, prod. B. aep. p. *127.* Wall. pi. rar. atiat. 3. p. 2. t. 304. Branches trichotomous. Leaves *2* inches long. Flowen pule pnrpbi dotted with paler purple. Hoot fusiform, Hi glands or pores on the segments of the corolla arc Uarded above, con-e(|iit ntly it may be a species of *Agothbtcs.*

Narrvie-traced Ophelia. PL 1 to 2 *in*

• S O. CIUA'TA (D. Don, irm.) flowers 5-cleft ; leaves i scabrous, with re volute margins, petiolate, ciliated ; tulycine segments fauaoeofatte, Diucroiwte; segments of corolla < . acuminated, tulieri-ulolc at the ktw, hardly longer than the calyx; stem nearly terete. ©. H. Nativ Himalaini Swertia cdiuta, Koyle, herb. Stein scabrous at the joints.

Citiottd-levrti Ophelia. PI. I foot.

• *3* O. WALLII mi ; flowers 5-clert ; leave* lanceolate, acmnmated, 3-oerved) ciliated at the base ; segments of corolla ovate, shorter llian the calyx, Illanients dilated at the base. ⊙. II Native throughout Ntpnul and Kamaon. Swertia pnniculnta, Wall. pi. rar. attiat. 3. p. *3.* t. 205. Flowers whimh-purplc. Perhaps ihe aaatc as *Oph. ciliata,*

it'aMch't Ophelia. PI. I u>£ feet.

[1] 4 O. TI.'RU (D. Don, mss i flowen 5-cleft ; haves luiceokue, acuminated, S-nerwd, scabroas, petiolaie, ciliated ; ealjcioe eopnenta muerona enti *of* corolla ovate-hwci ohue, acummaieil, longer than tl; tilanieni.s moaadelphi j.aul, at Qottiugathaa. Swfrtia raceu .. U : , t ; . ' : . Flowers white, m dark purple at the base.

7VrWtf-*t«nmcd Ophelia. PL *H* to 3 feet.

5 O. FLORIDA; flowers 4-clefif haves - 3-nervetl, acuminated, becoming gradually narrower and smaller •eh the bop; calyeitiL- segments linear-setaceous, r than the enrol!- , but are afterward* about equal in lenu to it ; segments of corolla oblong. mucronate; flowers corymbose and racemose. O- S. Native of the Burtnete empire, at Prome, and on mount Taong Dong. 8 ti:i tlurido, Wall. cat. no. 4382. I)> flowers of the phutt from Prome are paniculately corymbose ; and those of the pUoi from Taong Dong, arc panicnlaiely racemose. Lower learn pel

• *try* Ophelia. PI. 2 i

K CitiRAVTA (D. Don, m»s.) flowers 5-dcft; lea\> ovate, aLUte, *5*-nerved; caly< ent« ovate-htnceolnte, acuminated; segments of coroll than the calyx. ; . II. Native of Nipaul. Swerlia latil'ulia, 1; herb. Plowcn very pale blue.

Ch'trayln Ophelia. 1*1. I U

7 *i'* ' left; leave* linear, acute, glahroujt: n iih revolute edges ; calycinc segment- lanceolate, icuminaud; segments of corolla ovate, mucron date, longe i than the calyx; •tea tetragonal. ⊙.11. Native of Nipaul. Sw . rtia polchell IL cat. no. ; Swertia elegans, Wall, cat, no. 4376 .ii only a slight variety of thin i species.

Stretching Oph i lia. PI. I fo ot.

. 8 <' v r i ; !)• flowers 5-cleft? leaves ovate, cordate at the bait*. 5-nerved; panicles axillary and terminal, racemose; calycine segments ovat • -, acuminated, o! ,-th to the i egments .f die corolla, which 'fly Mail shape. 0. H f Katuaiv - nia eordata. Wall. cat. no. 4378. Stem branch) ;onal; angUs »!•. Mtnged ; wings rather b

It

Cordate-leaved Ophelia. Pl. It)

* * *Segments of corolla furm shed cach wit* **I** *2 oblong, diitind glands.*

9 O. LU'CIN\ **(I).** Don. **naa.) l o m n** +-cleft; (iiperior leave* cordate, acute, •tem-cla»piiiii; **calycioe** wgmcni* **linear-law** eolate, mucronulatc : *cgnn>ni- **of eorolbi** nvate, acuminated, longer than **the** calyx. 0. H. Native • Nipaul. **SwaVtia** lucitla, Royle, herb. Flowers **purple.**

*Shi**ting*** Onbelio. Pi. I to ,1 I feet.

Cult. Pltc wed* of the •] ***Opkeiia*** should IK* retired on a hot-bed in spring, m other tender niinti:iU j antl the plant* after wards pl mted out in lite open ground, about the end of May. in a warm situation.

V. GENTIANEXLA (a din. o! *Gentiana*). Borkh. in

arch. 1. p. 29. **Gentiana ipccka of author*.** Ilippioii species, Schmidt, in Raem. arch. I. j>. **II.** Ccniiina, **tret.** Cron sopétalae I • 1. gent. I 09.

fan, M»T. ***Tttrindria,*** *Diggnia.* **Calyx 4-cleJL** Corolla ttlvcr-fctiuncri, 4-cleft, **without** any **accessory** *< ments; **lurnithed** wil 4 nectariferous scr 'licle* at tmtloni. as in *Sne**rtis.** Stam' nit 4 ; .inihrri incumbent. Ovariuin **wbpi** dicellate, obsoletely **ictragooal.** Siyle hardly n>y. Stig ma* **broadub,** w- vnlni. • Capsule rtuiform, l-cefled, 2-valve !, with **obum** gles. Se I ds small, **•cobiRwm.— l'< i** ennial, herbaceous, glabrous **phnta ; itemi** tetragon• l. **I** leaves opposite, lanceolate, with scabr **lit*** C<l([f», »CI sile. Flowers terminal, pedicellate. Segments of corolla serrated, deeply ciliated in tJif noidd

1 (. CILIA'TA» (Horkh. in Hirm. nroii. **1. p. rhoC i. t.** 1B9.) **item iexuou ineemata** and linen: segm i ma of cnrolln **terrati ly ciliated at** thu base. ϗ. I!. Native fro ii the llaliic to ; he Mediterranean, **on billa. Oentiana cUilta,** Lin. MM >. am. dict. 2. p. •HI. v\<\ usive of the synonymes of Oeder and Gunner. Jacq. fl.miMr. t. **118. Pall.** t). ro>*. 1. t. 92. f. 2. b. Hippion ciliatum, Schmidt, in R i. arcli. I. p. II. Lowci leaves spatulatc. *orolla deep or ,,al< htitc-, **baring** tin- in ctariferou **u** (•land* yello »". **Filament*** citi ated with white hairs. Anthers purj>le. Segments of corolla lanceolate, acuminate: **altrrnatc ooej lam** r.

Var. β . •ti-ra **dwarf**, few-flowered ; leaves for the most p:irt I ceolate. 1/. U. Froel. gent. p. 109.—Barrel, icon. 121. **mch** sive of ''7, f. j .

Vm *γ;* stem many-flowered, branched. U. H. Froel. gent. p. 109.

Var. ε ; stem Ittimbli', l-floweritl ; leaven all ovatc-l»i. ceolate. **1 II** Froel. l. c.

Var. ε ; segments of corolla toothed, not cilutnl. *M* 11 Hi])|»ion den)sum, Schmidt, *', boh. 24. exclusive of the synoiiyr '.

' *Ciliated-* • tiaiwlla. Pi *A*>g. Sept. Clt. 1759. Pl. ½ foot.

2 G. FIMBRIA'TA ; stem si m])U-, I- indei il» flower ; leaves . lanceolm **ratt** of comlU •erraied si **top,** and cdiat. le ginge d in (lie middle, 1/.11. Native of Caucasus, in **raiieji.** I Gentiàna fimbriàta, Willd. mss. ex Ro :it_ ,1(Sdniltm, syst. 6. p. \i:,. I Gentia la ciliata, llicb. 11. tattc. I. p. 99. exclusive „t ill. definition and synonymes.—Co iuron. ecph r. p. **J22,** 82). f. 1. Flowers blue. Segments of corolla **otrtoag.** 'I'hii nlant t» said to occur i Germany with larger flowe re. and **with** I **lit-** Hi <« **tb*C«!** leaf even /> ,ged-flowered Gentian ,]k II Aug. Sept. It 1818. **Pl** ½ foot.

S G. WACRANTHA (D. Don, mi».) stern **erect,** branched j branches tetragonal; l ower leaves **patalata** : upper ones linear; peduncles tetrage •tial, **[•flowered;** corolla turbinalely t ampanutate; n gments fringed; **calycine legmentt unequal.** *11-* **H.** Nati»' of Me) ico. Gentiàna ciliàta, \\t>*c.* et **Seaaa, BJM<** in herb. Lamb. **Radical** leav« **petiolate : eauttne one*** « ssile. I orc'lias lar^', showy. pale blue: vegniem^ ublong, mucronulatc, erosely »errated at top, and fringed at the base. Filaments dilatfd, kt-i'lrfl. Anthers **oblong.** Ovanimi fusiform. **atiph** ate. Stigmas large, cucullate, **witb** plirate fringed edge*.

Large-flowered Gentian» I! i l'l. I foot.

4 G. CRISTA ; stem teres !•; branches elongated, **l-fl** owered ; leav s lanceolate, neut« ; teginent* of corolla obotai>, deeply cili.v ed. *TI.* **II.** Nat; ve from New York to Carfdina, in ary pasi' ares antl WIMHII, Gentiuiu crnnt.i, 1 m1. *ftut,* **p.** 112. Pursh 1. p. 185. Cur . bot. mag. *i.* «031 Sweet . rt. g«rd 139. Ge muma **Ambriau,** Andr. bot. rq>. 509. Gentiàna rihata /I, Ainerie:'m:t, Lin. iy»t. 1. JI. • 1. 5. Flowers ,zure blue, t'leannily fnn^retl on liiiir edgvi. [11] **irgmrnti of <** or inner plicæ simpie, i v I'ursh. Seeds cylindrical, hisp

*Le**."-hitirut*** Gentianella. *V\.* Ang. Sept. Clt. **IW4.** l'l. ½ foot.

5 G. BARBA'TA ; **Itetnacuti** ly tetragon 1 ; bmnehrt ehm^.i' ed ; leaves lanceolate, acuminated ; segments of corolla oblong, rounded at the apex, serrulated, deeply ciliated in the middle. **U.* M Native of Siberia and Caucas ine mea Gentiàna MX, **bgraaay,** anltiah olj low*. l)>rbita, I **nt. p. 114. Willd. «p*c 1. p. I** < **Gentians ciliata,** Pall. ti. **roaa.** *2.* **p.** *U* ', '. *ib, 4. p. 105. no. 1 wern let than thoae Corolla t^nnnl **tube** ; **Uld** green nrrtnrifcrout gland* ; •egment* **pale I H.** iih **I. JI ?8t.) •tctM cjniwatmp]**

*Bearded-*f\v\\t r. <! **Gentianelli** l'l. Aug. Repl **Clt.** I 764. Pl. **j** foot.

6 G. DETÓNSA ; stem tetragonal, erect ; leaves linear, acute ; segments of corolla crenulated at top. bitlentai e on both margins, acute **or** obi II-<•./ *U-* H. Native of Norland, Iceland, Norway, Ac. Gi , tiàna detónsa, **Rottl. in** art. **hafa,** 10 p. 435. **t. 1. f. 3,** Retz, obs. 1. no. 25. Frœl. ge **i. (i.] 16, W** illd. spec. 1. p. 1352. Gentiàna ciliàta β, Gmel. syst. p. 46 I. no, 43. Hciis, **scan.** •d. 2. p. 64. no. 220. G. ciliata, <Gunn. norv. 2. p. 88. t. 2. f. 3-5. Gentiàna serràta β, Wall|. b|p. p. 71. Very like *G. barbàta,* nit] probably only a < ariety of it. Corolla **blue.**

Shaven-flowered Gen Manilla, l'l.) A) ot.

7 G. ttkiViA **(Borkb. in** Hum **arch. 1. p.** *t9.)* •>• m tetragonal ; branches 1-flowere ! ; **leave*** lmrar-lanc< olate ; e .roll* 5-cleft ; segments oblong, obtuse, serrated, or ciliate I OH ihr edges. ' I ' . N ative of Norland and eland, • p:t-<un • near the sea. Gentiàna serràta, G .tin. BOOT. *L-i.* ii, l 01. no. 819. Frœl. gent, p. 117. **Oanriina** ci i, H. dan t. 317. Genti.in.-i Itovarica, ZtK^a island, p. 235. 1', duncles 2-leaved. Co- **ti>!la bin** e. Stigmas capitate.

Serrated-flowered Gentianella. **Pl. 1 l** oot.

Cult. The species of *Gentianélla* are extremely **l'le in Uoaaom,** and ate ihet- fore well fitted f ,,r decorating peat bonier*, in which **toil** they always succeed best. As most of **the apeciei are difficult tu preai** . lie **on** the ground during mn> winter, reserve plants of each should be kept in pots that they be easily sheltered by a frame in winter. The species are best increased by seed, which sh **Maid** '"• sown as soon as ripe, **I'l>r ii kejit till iprin** they seldom lorn **vegetate.**

VI. ntA-1. **U** (name **| afttf John Fraw, a** collector of North American plants). **Walt.** (1. r«r. **p. II Mi** chx. fl. bor.

amer. l. **p.** :>>'•. **Pttrtb,** rt. artitr. **iep(.** 1. **p, M. Bpreng. m** P. 85.

SYST. *Tetrandt* jy'nia. I Calyx 4 **pmcd** or **4-**cleft. Corolla 4-parted, **ipreadiog** ; Moments oval, each furnished with an orbicular bearded gland in the middle. Stamens 4, included ; filaments filiform. Anther* ovate. **•omewbat** hifid at the baie, at length reflexed. Stigmas 2, thick, glandular. Capsule compressed, subnwginaied, 1-celled. Svedi few, imbricated, **winged,** fixed **to** the margin* of the valves.—A tall herb, having the stem and brand >nal. Leaves opposite and subverticillate, oblong. Flowers verticillate, on short, l-floi- Corolla* greenish yellow, sometimes mixed with purple.

1 F. **WALTI'BI** (Michx. t. c. t. J.F. Native in swamp* of Lower Carolina; and on the borders of lakes in **renaaylra** York ; and at the source* of the Arkansas. F. Carolinieniis, Walt. fl. ear, p. 83, **Flower**i in B| gregate clusters. The whole of the plant has a very stau 1 •p^ce' ric character approaches *n near to *Swtrtia* that without seeing the fruit it might be considered a species of that **genea.**

*tor'** Frasera. Fl. July. Aug. ("lt. K'.r,, PL »**to** l

Cult. **This plant require* to be grown in a peat soil, in a ituation ; it will uUo require protection the winter after n*ing i ,r that preceding its flower.**

VII. GEN] I \\ \ **,o named from Gentiiis, king of 111]** *ho i it,e virtues of noi! ies or otl in l l. p. *tt* 11 llr. prod. p. 150.—Gen-ana specie* of auil ppion apei Schmidt.

Lt!«. »T»T. ***Pcmli*** \ **l-5-cleft, l ilia f\ tped, rarely sslver-»hapod, with a naked throat ; ft, without any accessory wgi • mens 5 ; , incumbent ; filaments flutter bed, rmmdwh or nhlong — Glabrous lv , avea opposite, decneaati ale. Pk riTiinal. This grniis is easilv d from Olbefa tir<>k<-n off lVCKU hy the roroll.i being free, in the limb of the corolla being without any accessory segments, &c.**

SKCT. I. ***Pertnual*** Acr/«c<ou.i *jilants. Corolla* more or Its* campanululely funnel-$hajml. 5-ckft. A'.thers incumbent.*

g

l U. **UMOnuolsa** II- H. et Kunth, nov. gen. amer. 3. p. 130. t. **MO. f. l.) procimbaot]** leaves snatulate, *o\n* rathi r veiny; **flowen tcnnlml,** solitary, ON *Vn\\z* peduncles; corolla **rtmntwi i-*bapcd, 5-deftj** tliroat nnked. :ica, on the htirntni; mount .\n- ***am,*** n» ltiimiil flatt. Stem branched, **quadrangular.** l **08** lOM^ petioles. Calycine e. ncuie. (' ' l Segments **lla** obovai

wmUa-ltke Gentian. P). \ to ' foot.

fl. B. M Kuntil,' **l.** i *f.* 2.) **lofted, procenbeat, braodM** >r linear-olilong, vti.it 1-ncrved, den»e; flower* terminal, pt-, i : corolla camp;. **funnd-toancd,** -[j-|)aited; t), led, l. **mount Antinna, near tbc** . «hieh are covered by **perpetual and of Peru.** *P* Gent, **anapaaulolkks Willd.** f IS-l. Br.iiu. !• l. B ; of tdri*f i rt* ' le of l>lti<-, «iiii **obovatc** obtuse **Mgmenta.** iceolaie, utilinh. Ovarium linear. **PL pneuabaot,** tufV

S <• **GRACILIS H. B. ft Ktintli, l, c. p.** 168. t. 221.) stems ascending, al<>« simple, 1-flowered ; leaves oblong-spatulate, obtuse, nerveles- : lower one* approximai- **litely fmintl-KliaiKii, 5-cleft: throat bemrdk**. *If* l *on* tin **the An<i •.'•itoj in Parat g between Kio Bamha and l<osa. at top. Leave* neai** S r.ri- ***fraga grttnuiiita ;*** **with lanceolate, acute segments.** Cal\> **lanceolate, acute. Ovarium linear, com|»re**cd.

Slmtitr **Grntian. Pl. 1 fool.**

4 (J. tAXIN ACOLIPES **ll. B. et Kunth. l. C. p. IBS) procumbent; sterile branches short, daoaelj leafy : fl< —eendtag, l-t-flowired ;** leave* **lanceolate-linear, cibtimc, IO. BOfoDa campanulately fannel-thapcd, 3-tleltj tliroat boanHaaa. %• F. N»- in . America, on the Pull* mountains. b< <na- j«ca ami Loxa, m the tliitn *G»* bexapoda; aad neat ii braacbed, eraeprog. Leave* »e*»ile. Flo went size of tlifwc of *liiil'itta tttrdptern,* orange-coloured or sellow M1 >Taie-oblong, obu** late,acute. Ovarium **linear,ooa>presaad<** tves ftheaihiug in n \ery remc.rk- **able manner -c.**

Saxifrage-tike **Gentian, G JtaiD, in" etlinl). phil. jotirn. may. 1830.) plant creeping, tufu-d, ascending, branched; (lowers corymbose, urnnn.il | rowded, dflCtl L*p— tic," r.ithfr tli•«. 11v, concave..1-nerv. N 5-cleft, acute, reflexed ; corollas erect, campanulate, 5-toothed, obtuse; with a** nak ed throat. **:.'.ll. N.an •** **l rica, on the arede** couts; **and reared** from **teed ddaring Capt** l rartklin'* **'tloin- l** leaves like thos **l of** *Arenaria peploides,* **but much darker grcrn. Flu >ie,** rnr. **ry and axillary, usually 3-4 r, tcrminaJ, Corolla gri'eniftlt blue, yellowish green (it tin; baji ted M>itit-wliat towards the mottth, J-wruil: tbiw -ing into each of the blunt teeth of the Katb ; stamens reaching the bane of the teeth. Anther* Mgiuate, dehiscing along 11 it- sides. Stigmas ses>: lot*. Ovarium attenuated at** lldtll (ink.

Tufted ***cd*** **Gentian. Pl. Jane, July. Clt. ISiO. PL 1 to Sin.**

(l. UHAMIN; l ll B. el Kuntil. 1. c. p. 149.) procumt branches ascending, Huhtastigiate, l tir 3-Hotven-fl ; leavet linear, acute, netM'li->s, remote ; corolla catii]i;mulately funnel-Hliiipnl, 5-clcfi ; throat almost beardless. 1/. 1 . N *xm* of Peru, neur Micsipaaipa, in cold rocky **places** at **the altttoda** i>t"].>.'u **beu-**pods. Stems branched, **cotnpreaaedly** ijit.idruiigtilar. Leaves small at the base. Corolla white and violaceous, *ex* lion pi. ; with obOMte-oblong obtuse segment*. I*«>bes *of* stigma ob- **toatf** spreading. Otartnin lnear, compressed. l **ituleoblooa*-** liiuar.

Mil. PI 1 lcn>t.

7 G. **cuuanolnsi** (H. H. **M** Kunth, l.e. t. ***tit,")*** **proctim-beat; hianrhni aarsimlinj. fnw flmrarnd] Itttret** linear, **obtta** obnok'tely *5-* *)>•** **approximate; eorotta camp** mdately luntul-shajHi!. .'i-parted; throat bearded. ^. F. **Native** of the Audit, in Uw l'ovince of Pasto, between 'ii«l.in- **gsjet** and Ciuachuc.il, at the altitude of lCOO **bexapoda, Habjl** :t sjM-ci' **ilighily tetragonal.** Branches Leaves sessile, subconnate. Caiyciuc wgntents **lanccoUte»luiear,** acute. < orolla white ? c.r \iu|j ceous; **ith obgvate- sa segm« i** l l ovarium linear.

Ciiekmctd'likt Gentian. PL 1 *Ut* \ fool,

8 G. CB*NI» ill l', 'i Kutiih, 1. c. p. l TO) stem erect, nearly simple, l **t lo»** ered ; leaves oblong, or 'vatr-lan eolate,

actttiab, obeoletel) 8-nerodi lower OOM approximate; "owers drooping; corolUeaaapMiakte; iliroai a bttte bearded. *U- I-Nxtii «!li America, on the decliviuea of momii Chhnborneo. G.ciwifloraWilld. rel. .\ H em. et Schultes, syst. 6. p.184. Stems a little compreaeed. l,cnvc sessile, subconnate. Flowers *tite af thaw ot PnemoHiinthc migdru,* dark purple, painted with yellow veine. Ovarium linear. I apsule oblong-linear.

DrMwayflowered Gentian. Pl. j to i few

9 0. DlAKTHoiow (1. H. «! Kumli, 1. c. t. 283.) stems ri•itnple, +-(H1owered ; ie;u<% linear, acute, l-aerrtd: lowei ones approximate i *i* opposite; corolla campanula tcly l-sbaped, 5-deft; throat baardkee. *%.*1* Satire of the Ande« of Peru, between die mine of Micuiparnpa anil city of Caxamarca, at the altitude of 1800 hfttapow. Stem a liult coi pressed, purplish Leov es sessile, connate at the bate. Flowers nlmui the *iw of dtOM of Cuw/tfiwu/a *jxitulti,* drooping, ex Bun pi.; luee coloured t'.il>i-it»e eegmenM bw eeolatc, acute \ Kgraente of eorolla roundi*h, obovate, obtn e. Ovarium Mf' ar.

Pimk-tU *VI* I foot.

10 'G. ROLIOSA (II. U. ct Kuntil, 1. c. p. 17 0-1 Menis ttiinple, leafy; leaves lanceolate, ac•\u; S-serredi flowen tennioal, oorjnnboH ; corolla campanulately flmocl-»li»p< i , 5-cleft; throat beardless. -_ I. Native of iVru, MI t'i inid plai es. G. coarctata WilM.reLoxRvm.et Shall tetragonal L« at tin- lia*t>. Flowara white, liBeoftli *nf l'ii' umonánthe eulgàris.* i Calycine segments ovate-lanc olate, acute. Segments of corolla obovate-oblong, obtuse. Ovarittm linear, compressed. I obes of stigma obtuse, spreadin *'i.*

Leafy Gentiait. ITI ½ to ¾ foot.

11 O. OOkVMBOBA (II. B ft Kumli, I.e.]>. 171. I. I Men ereet, ahnple; leave* 1 tulaie, obtuwi almost •• ein-less ; oorj rnbi terminal, a littli- branched; corolla catnpanulately funnel-*hti|H'il, 5>p*rttd ; throai beardlww. *"Z* I . N ative near Santa IV de Bogota, on ihc mountains, *llnui* •, ular, branched. Stems •linliily tetragonal. I eaves subconnate at tlic bate, Flowers size of those of C i/ximild *JMUUID,* I iola-nous. (Calycine segments lanceolate, acute; seg IHTII* nf corolla ol> long, obtuse, narrowed at the Itaw. Ovarian <> vate-conicnt, conijti essed, stipitate.

Corymbose-flowe red Gentian. PI ½ foot.

12 I LISIO n'. II It. . i kuntil, I. e. p. 171i MH erect, hranclx-il, leaves lanceolate-lin car, aruli , 3-nerved, remote; flowe ra itiutiiml, corymbose, <>r wnbelL te ; corollas rot tit'ly funnel-shaped, 5-cleft ; filaments bearded at the btet> 1/' !•• Nativf of Peru, on the m untains near Ayavaca, at the alti-imle of I too besapod s. Root perpendicular. Stems sli jlitly tetragonal. Flowers size of those of *Eurythàlia campéstris,* of a violet col iur. Calyrinc •egmenti \.> ceolate, acute. Segments of corolla ol>l. f i n Hum linear, enmpraaaad. Cap* *ule linear-colons*

FttuH/hn ered Gentian. i Pl. ½ to ¾ fiwt.

13 0. pirrr'»* (H. B.et Kumli.l nearly simple; laavOl l.nu t-olato, oblu lv funnel-tlaped, 5-cleft ; throa• bearded. *11.* P. N ative of Quito, in the fis-HUM of rot-ki, sear thi town of Antiaana. Siem§ n umerous, erect, or proc imbent. 1 eaves sessi '< membraw us. Flo nrera blur. size of those of *Ruriflhitlut* i *campéstris.* Calycine seg-mend lm ceolate, tcuie. Seji ments of corolla ovate-oblong, acute. : lobes of s tuse. Ovarium linear, compressed. 'LJML.I ol species. •oii»ili'. aa in VAMI of the *i»

DiJ i Gentian. Pl. ½ i o 1 loot

H .J. HYSSOPIFOLIA (i! B. et Konth, I. c) Ken ei erect, Uranrticil at top ; k eaves linear, acute, 5-nerved, remote; flowers **paakUdi roroUa rotately runael-tbapad, 6-defl | thtoai bi** le»i. **Tt(. F. Native of the /kadea** of Quito, in **cold** p laces between Nab **on** ami **the** valley **of** Sara^uru, at the altitn e of lifOO **hcxapod*.** S tem terete. Branches pa u'culately disposed. Leaves subconnate at the base . Corolla **riolaeeotH ; wuh ob-**long obtuse segments. Calycine •egments lanceolate, acute. **Lohrs ofntii»nia roumlisli, iprndinf** >mt **lineal** . Ovar Capsule linear-oblong, compresc

Wj *sop-leaved* Gentian. Pl. 1½ f **ot.**

15 'G.? MAGELLA'SICA (QMML in Preyc roy« pt. boL p-449.) *tcin« t-rcct, branched ; brancben **tetragonal** angles mem-bran• HIS; leavi spatulate-lanceolate, acutish, 3-nerved ; flowers **irrniinal, solitary, or liy thrct-s ; calyx i-cleft, equal in length to the corolla : with lnnt-i olau; scfrnHM*.** K . F. Nat ve of the **Falkland Ul.iniK.**

MtigtHun Gentian. **PI. tufi,** d.

16 U. UIHA b I •on, mss.) stems numerous, ascending, leafy: leaves lanceol **ite, obtuti** , 5-nerved ; radical ones crowded, petio-**late; calyctne •egmenta li^ulair, oblong,** obtuse ; co **rollu «u)>-rotai** e, twice longer than the calyx : segments obtuse. ¾. F. **Nadi ni, where it it calk-d** *Rima-Rima.* Root b **-own. •mi, IVd'cuk tei -rolla yil tigMHeeM** fusiform, fibrous. Stems numerous, ascending, leafy, 5-cornered, smooth. Leaves lanceolate, acute, 3-nerved, remote, sessile. Corolla yellow. Stigma sessile.

i? (i. IIIIIIMIH'u i> Don, n]s») stems **tract, filtl** form, few-leaved **i; radical lea** ves lanceolate-acute, petiolate, 3-nerved ; **flowvn umbelkte ; calj** cine segments lanceolate, acute ; corolla rotate, twice longer **neota Ian r lliati tl** the calyx : segments obtuse. ¾. F. **Nati»** e of Peru. [Gentiana lutea, Ruiz et Pav. in herb. ! amli. Root fusiform, **brown. Pediocb** bract 1. - < orolla yellow. Stigma sessile.

Pe luuctilar i Gentian. **I'i. J foot.**

18 **O.** MOM SA (Forsk. proI. fl, **tuatr. no.** 13.1.) **eaulinc** leaves remote, sessile, elliptic or ovate, about 2 pairs : **lowet onc»** approximate, **attrniturd at** the base ; **lli>«ir» j«a** uncu-late, •ubcorymbose, or solitary ; corolla 5-cleft, cam **panttlately foanel-ahaped.** *1}. V.* Native of Vai ! Diemen's I and, and New **/i-alaint. The** ** ew Zealand plant hardly differs from that of Va n Diemen's i ntd, unlmK in the cauline leaves Uin^ In oader and ovati . The stems are probably tetr igoual.

Mountain Gcnlian **I'l.** ½ to 1 foot.

\9 0 SAXOSA (Forst- in act. Itolin. 17T7, p. UI. t. 'i, prod. tl BMcr.Mt.13t. Lia. aoppL 1. p 17fi stems terete, simple ; leaves fleshy, spatulate, coriaceous, nerveless . radical ones crowded ; flowers ter linal, lubuntl ellate, pedicellate ; pedun-cles **rinjiulnr, I-flowered, axillary,** and terminal ; calycine seg-ments linear-spatulate ; co i'ilia CM panulate, 5-cleft ; w .tli *a* naked throat : and oval, obtuse, concave segments. ¾. F. Native of New Zealand, on rocks by the sea shore. Frœl. gent. p. 2 **9. Willd. «j>ec. :** p. 1237. !Root fibrous. Calyx **angular. Corolla win'** e. Stigma sessil **r, t-lobed; I'** obes orbi-cular, reflexe I. (',imtilc <if>lti|i)t, kllli(-\llInlti(-.il.

Rocky Gentian. **PI. J to** ½ foot.

20 G. MACROPHYLLA **v (Pall. fl. ro*. I, j>. |i»s** t. 96.) stems **nearly cen Ivpil itt tlic middle;** radiral leaves, lanceo-Ute, 5-nerved **'. Icit^tli** of stems ; flowers terminal, verti llaiely aggregate, involucrated by usually 4 floral leaves ; calyx 4-5-toothed ; cor **Ha mbui** arly campanulate, 4-5-cleft ; with short, acutish segments ; lobes of stigma fla **•. at teagi** h revolute. '. M. Native of Siberia, in elevated meadows frequent. Frœl. gent. !»• »'' W ' I U *|K"" I f . ! 335. 5i ' mi, IK.I, mag. 141 4. Hip-pion m:uTi>p!iYllum, Stliu. idt.— Gmel. sib. 4. ;,. **104.** I 52. Calyx •• utuallj cleft on one side. This plant has a itirh tin habit of *Ericàla cruciàta,* from which it differs in the flowers being •mnl! pale blue, and without any accessory segments to the coro1!a.

Long-leaved I Mian. I'l. Jiily. Aug. Cli. 1796. Pl. ½ **in I** foot.

Sec ;. **II.** *Aitutmi jiiniiti. Coiolta tamfxiHulutc ; throat naked. \gma 'i-i*

I. au nea (Lin. spec. .31.) stemi-rect, branched ; branches tetra...iiiil; **lower leave*** »patulaUw>lilonc: upper ones ovaw, acuti-li, alt obsoletcly S nerved ; **Bowen** axillary and terminal, IMI Init^j **angular pedicel*.** ; **COroQaa** Ciimpamt lately funnel - shaped, 5-cleft : segments acuminate **! : throw** naked. ⊙. **H,** Native of the alps of Lapland, Norway, on islands nea i the sen. Fœl. gent. p. 54. no. 20. Lin. ll. bjip. ed. *-i.* p. <i5. Gmel. syst. 1. p, 4CL no. 13, (i-iitiann imolucrilta, **Rotlb.** in act. hafn. 10. p. 434. t. 1. f. 2. \. i; **WaH.** I•• p *p.* <•:. Gcn- tiana iiuinquefi olia, Oed. f.. cinn. I. 344. Ellppion auniim, Schmidt, in Rn-ni. arc!). 1. **p. 10. BO.** 10.—**Barrel, icon.** 3. **1** 104. • t K.i•!.• al leavi **denae.** Calycim segments o vat*, mucronate, ** .ilil.; **annotate, Lin.** How.rs collected i ito heads of few flowers, involucrated **!. Corolla white,** *x Wahl. ; **j*Uow** in th< driii! mate, ex Lin.; purple **m** Old.; tube length of calyx. Capsule longer th in the en! yx.

Golden-flowered Gentian. I'l. Aug. i It, 1823- I'l. ½ to ½ ft.

'. QUINQUEFIDA (Lin. spec. 333. exclusive of **IJM** synonymes. I• n. dict. 2. p. 6••.) *tcm tetr agonal, branched; leaves stem- • !:t«.j>iivfj, oval, acute, S-nervvd; ll«»i-rs **ICIMMMJ** vmil **lateral,** 3-*5* together, on short (itdieiU ; corolla iiibulnrly cum- panulate, 5-cle **ft: throat** naked : segments lanceola u', acuminated, wtth simple plicjc ; calycine segments very ii"", narrow. *&* . **H.** N.i itive from New York to Keniutky, on hills in *hady **dry {daces.** Willd. tptc. 1. p. 133!' **gent.** p. **ffl.** Gfti- tiana **amarclU)**)»x. (1. bor. aii.ir. I. |. I'timh, rl. amer. sept. 1. p. Ipfi. **Qrntiana** nniiu' lloides Ki-imtck- **itiaiia** quini] tie folia, Lin. *prc. I. |>. in (jitiiKjiit li'huni, Schmidt, in K.im. arch. 1. p. II. Flowers iniall, pale blue, not jr••UOVT, as **nprcaaated** In **Michanx.** Ati^li-s *cf* **attn** num- branous.

Five-flowered Ger ,;.!,. **FJ,** *ham.* Clt. *Ida. V* J tt> ! ft. 23 G. ALEUTICA (Cham. et Schlecht. Jii, in LiniiJi'.i. t, p. 172.) «*in **tetragonal,** ol oletely winged, **tiinpie or branched** at i!n- base . leaves obacurclj J otic* few, luticcolati- spatu inte : cnuliiu- and floral ones **ovate,** stem-clasping ; flowers on short pedic "I*, tntl **i** liorol leaves ; corolla salver-shaped, 4-clef - i »iih a naked **tfaroai** lanceolate se **rtacnta, vrhkh** arc **dootiralawd** nt the **edgi** divided . even ro ilic middle, **Dearly equal**: with ovate-litnce< acute segments. • 11 Native of the island of **L'nalaachka,** in grassy places. ' 'fiitiaiia **L'nalaRchvnsif,** I^'tlel*. tn--^, SJ.I syst.1. p. 856 . Plant **quite gUbrou. Plowcn rather** ^mull. - violet. Calycine segm nis cartilii^iijonttlj serrulated. *Aleutian Gen* **ttiao.** I'l. | in{ ; oot.

24 *(• UinikiA si **(Cham, et Schiedtt, i» Ltnaa*.** I. p. 170.) stem tetragonal, obs letely winged, branched froai the baie; radical and **\owvt** cauline leaves lanceolate, icutisli, **obaa** rely i-in-rvLii, s.iLiit'tii. es spatulate ; flowers on loii^ **pwlooclea;** corolla salver-shaped, I-tic ft, **with** a **Mil** d throat, more than twice longer ilian tlif en);. x : having lanceolate, setaceo»»ly acuminated segments ; calyx divided even to **the** liaic ; >rg> ments unequal : 2 of which are very lar. .11. **hfatire of Behl** ing's Str itoji **M** the shore. Gent. Kracilis, Cham, in lilt. Cauline leaves linear-lanceo **latt.** Uranchc% or **padnnrWi** many- tiiwif d. ***Very*** like *(tint, mirea.*

***ftia* ' I'!. J t<> *I* f'^t.**

i G. UMBELLATA **Bieb. H M L** (•. **18S.)** N'.HI tetragonal, branched ; leaves ovate-oblong, bluntish, 3-5-nerved; radical ones spatulate ; peduncles te ,'iiutinl, iiiiilitllnti-, **ioi** olucrated by the 4 superior leaves ; flowers pedicellate ; calycine segm linear-lanceolate, unequ .|; liirni la subcam |M>iinlai<, 5-cleft : *whU* ovate-lanceolate, mucronate segments. ⊙. **I) N** ative bf Cau- casus and Siberia, in humid places, near river,. 11 ,nn a u rtflli Steven, **n** mem. »oc. mosc. 3. p. 857. **Flowers** small, pale blue.

Um **WAStfe-flowered Gentian. Fl.** Aug. Clt. 1823. Pl.^ii. 26 **6. PBOfixooa** (Richards in Frank). Journ. e<l. *ti.* An pen. p. 9,) r;niii:il Ifdvi-slinear,obovatc.caulineone*Utnceolate,corollas 5-cl . It, tubularly cmnpamdate : segments suhserrau-d at **top** • throat n ked. 0. H. Nutive of North **America.** Haliit of **Burythalia** praiensis.

Allied Ctmilan. I'l. *i foot.*

§ 5. *Corollat tabular, 4'5-cU/t, with a naked (final. Stigma* sessile *k . Annual p/itntt, nalirvt of Sipaul.*

27 • CANALICULATA **U (Bajlci HUM.)** stem erect, **branched,** Iticarudicid.ite ; leaves seasilo, ovnif-lain-uolatf, obtuse, »omcwhnt **S-nerred**; calyx **i-5-parted**: **with** obovate, acuniinatetl, n membra nous segments : corolla tubular, 4 -5 -cleft ; throat **naked** - IUWA ovate, ncutUh. ©. H. Native of Nijimd. Hoot sub- fusiform, fibroin. **Leave* durtincti** not connate at the base. Flo won **raettBoadj poiefedi** t'lui- ; pedicels bisulcate. Cnlyx **aoaple.** ^ftmtf* **4-5.** inatitod **in the tinuaat** oi' the enrol la ; liinin'iits very short, subulate. Aniliers oblonjr. **CapMtli** long, **coinpraiiedi bipartite** at i pex. Seeds **tpadiceout, o** on oiiv side and engraven on the <>\\ •r.

Vkmnnfllrd rfrmmrri **Gentian. I'l. .1** to **1** t'^rt.

28 G. i \r\ **(K«>le,** ni*5.) **Item** erect, biranalir ulate, branched fimn **the b*M** i *V* aves sessile. .Ilijitic-ohlon};, **obtOCC, BMsbranoMt peduodea elongated, BliJbrm, I-flowered; caly-** cinc M^mnitJ) lanceolatr, acute, nriLqiial ; corolla tubul:»r : throat naked: loben ovnl, <ihtUM>. ⊙ .11, Native of Ni)it»ul. Root fibrous. I . , •.. **i diatiocl** at the base, not connate. <Calyx 5-parted ; segments foliar. . . . .*, **unequal.** Throat of **corolla** ciltaii ly bea'ded inside. : tamiiu insert d in the tube. Fda- **menta** rl.annelled. Anthers and ovariuin oblnn^. Stiirmun sh.iri, **obttnev** ininiiitly papi!lo»t- Capsule **ubrylmdi** . iiiu at O|M.X. **Seed* tmafl, rotmdiabi iriih ex<** avated **dott.**

Pe !>tttcle<l-i\own d 0 entian. I'l. J to ! foot.

2B (.'. MOOHCMOFTIA'SA (Wall. cat. no. 431)0.) annual, n> **uch** branched I ; li'avra Innceolatv, **obtOM** ; (lowers large, |>anii:li d , calyx camp.itiulate *:* with a short **tube and long,** It: ear segments ; corolla l.irge, funiu-t-shaped, **trilh elliptic,** obtuse segments, and i inked throat. *Q,* II. \.nive from Sirinagur t o Luddak. Pedicels long, 1-flowere• I. **Flowera largi** . showy. *Moorcroft's Gen* 'i.in. I'l. ', tV>ot.

§ 4, *Atwntaln. An nnotiiiiln.;*

30 **G. nan B** • **r. in herb. Lamb.)** suu> soli: ary, simple, erect, **densely leaf)** : leave* very **narrow-linear, mucro-** nulati', **mocb Crowded)** raceme tcrmtiul, erect, **thyraoid; co- rolla tabnlar, longer than the calyx,** with a **bbroua throat,** am] ovate, acute segments. *11.* F. •tilit- k-ra* *>| the Andes. Root thick, funiform. **Leave*** an inch long. I!scemes 2-3 **tnchea** lon^, many-fl' owered. Flowers fascicled, verticillate. Bracteas lanceola te, **roembranoua.** Calyx citriip.tinil.itr ; with **law** eolate, acute segments. **Ovarian)** fusi- form, **nipitate.** 3) ratlur I-ng ; lobes o I »<inin.i **rottndish**; rime: onate revolute. Seeds globose, smooth. Habit of a || species of *Eulo* i HI.

Pi>e-leaved Genti an. PI. ½ foot.

† *Species hardly knoH-u,* ***ma*y*** *uj tthith are prubttbltf syno- n> wlh lhi»r itetfriUd at»••*

31 G. coNoi i ^ (Willd. herb, ex ***Rama. M*** **Schtdtes,** syst. 6. p. **184.) leaves linear-spatnlate; Bowers umbellate, ero« 1/• P. Native of Sooth America. Humb. at Bonpl.**

r **attan, l'l. ?**

32 **G** i.tsii..].iA i Willd. I. c.) corollas campanul.it*v,* 5-parted uy, **terminal ; leaves aarrow-lhieaj, acute j itema** bran **at the base,** ascending. *11.* P, Native of South **America.** Humb. el **BoapL**

rt<tjc-i,iutd **Gentiani PL ?**

S3 G. CONN!*tA* (Willd. 1. c.) corollaJi campanulate, 5-clefl; **ealyciM teeth ovate-filiform** j leaves oblong, connate; stem • **little branched,** erect. 1/. **P. Native of Sooth America,** Humb. et **Bonpli**

Connate-leave • 1 Gentian. PI. f

34 G. • in.LoNoioKs (Willd. I. c.) corollas campanulait-, **5-**cleft; **leaves Iirwr-lanfri4itft|** spreading; item **tiraple,** erect. ;. I'. Native I' South America, Humb. **at BonpL**

Chelone-like Gentian **m.** PI.?

35 G. STKI'CTA (Willd. 1. c.) corollas campanulate, 5-ck-l'i ; aves oblong ; (K'thmcli-s **opposite, I-flowered)** stems **simple.** erect. ;. F. Native of Sonnil America, Humb. M lionpi.

Straigh.' Gentian, l'l. '

36 G. RAFUNC > LOIDSS (**Willd.** 1. i'.) i orollas <-.impa!iulaiii. •'- cleft ; **teavee oblong-lam flowers oppoi** D **simple,** ascen• lin^. 1/, **P.** Native of South America, Huinti. it **Bonpl.** Peduncles **an** inch long, umbellate.

Rampion-like Gen 1 iKm. PL \ foot.

37 C' IUIKIBU'MIA {**Willd.** 1. c.) corollas campamil.te, *5-*cleft . **leaves oblong-lanceolate,** bluini-li; **pednnrlea I-flowered:** lower ones opposite : superior ones subverticillate . **item simple.** ***II.*** **P.** N ative of **South America, Eioasb.** et tfonjil.

Bupleurum-like Gentian. *tiulfc-jltm i* **itian. PL**

38 G. PEDUNCULA'RIS (Will,!. **I, e**) **ooroUas eampanalate,** 5-cleft; radical leaves spatulate : **cauline ones lanceolate j** pe**dnndes elongated, l-flowend,** solitary, terminal; **stem aw** ending at the base. **U. H.** Nativ e of South**li America, Humb. ct Bonpl.**

Pedunculated-flowered G</(ir-llow itian. **I'l. ?**

3!> '. . . . **.iv I'aaU** [Willd. 1. c.) corollas funncl-sli.. 10-d eft ; leav **-s linaar-lanceolate, spreading; Bowers ten** solitary, sessile **; stem erect, branched a** little. %. **P.** N ative of South **America, on mooal** Uiiuiboraxo, Humli et Bonpl. A **•pecii** *.tin.*

CUatbon *C* **tian. PI. dwarf.**

† † The ft/Honing planti ***Marc been*** *described* ***at sped**** *of rn l'ij turu'ut nuth»rs,* ***but nont*** *of* ***them are*** *legitimate nf ttwi* ***genvt.***

40 G. ? DU RIA **(Tboab.** pr.nl.). **p.** 48. fl. cap. **•2. ii. II** 4.) **fructiieroua Mem** I ille««, or tlic leave* full off **early, I unknown; |** panicles te **rminal,** tricboi omous, **supra-**deco **mpound;** corolla **4-clefl.^Nativs of the** Cap. of Good Hope. Sten **i simpie, erect. Calyx 4*parted; with amalL** acute ments. l rolla **(-parted, purple; Mgmanta aeoat. Cap-**

f **s oblong, ending in** l (Miints. **8tj** I. - **•I t' nl, I »5.)..m.llplan,.«1,h and** sleuth'r ! **terminal rolla lunoel shaped. I cleft**; hml» rather tlowi li<\. lii^t. S. n|>|Kinl i ujT Mack **on drying.** Stem dtcliotomoiiftly branched at (op. **Leaves** capillary: lower one* nearly an m< li **Flowers noall,** purplish **or blot,** numerous. I'erba|H **a 1'' *Hamtti* tian.** I'l.) foot.

42 G. ? CALYCINA i(L$_a$m.dict.«.p.BW.).tem.rtin,! **:!;;:;;:** ti rinnial, <m **long peduncle*** \ corolla cli-t-j>U \, which in **large and 5-6-parted.—** Louis **berb.** JIINN. yellowish. C-d. **ments** linear, acute, rather in. **ncata** linear, **acute,** rat **obtuae ceppnenu.** S tamens free. Stigm M oblong, \ur short. **Capm**

Ltirirc-cahjj-ttl **Gentian. PI.**

43 G. ' ' NIH/SOKA'NA (I; ilte«, syM. (j, p. | **item 7-nerved:** floral ones **the** narrowest; i i **calyeinasegments acute, length** of the tube of the —Native of **Japan,** in boggy **places. Planta** Jap nofana, *i.* ami. *H.* p. **189. f.** '-1 , i **altogether different** froi i lil(ry. v tube, blue linih, and obtu«e ^e^ments.

1 '.an. PL *j fa*

44 G. ? sciLLoiuEs (Lin. **mppL 1. p.** ate; **leaves obovatei obta** slia]). .f (he A/ Hippion Mill' bmidt. **Leaves** on thori **uppei Me. Peduncles long, ns** 1. t. **. subulate, erect, Ii m Calyc cms linear.** i than **the calyx** ; limb 5-rlefi, tint, **beardle»»,** yell **plea) does not** probabl; **notliin Linrueus. Perhapi** •< genus of *Campanulaceæ.* **i M-nti.ui. P|. I bot,]-t** *Scilla-like* ostrate.

t + t *What are the jhi'lowing* ***tj****

1 Gentiàna màjor Mari .'ma, **anguatiori** folio I Gentianélla vernæ, floribus cæruleis plurimis in summitate congéstis. Pluk. mant. 89. Perhaps *Gentiàna cruciàta.*

t (• entiàna angustifòlia Ame ricana, fl ore ex ochro cyaneo mixto in fastigio ea ulii unico. **Plukn.** niant. 89. Ray. suppl. p. **91** 0. no. 4.

3 <'entiàna orientàlis. xmpli- simo et acutissimo asclepiadis **(olio.** Tourn. eor. •,'. Said h> Cbam. in **LaaBjaa, 1.** p i ientulis, I liis ve /»>i*. tlor. Toiirn. cor. f. **var.** (lore **exalt*** ,rn. |, (-. n. in Liniura. I. p. 174. to **be the urn**

5 Gcntiina < **minor ;** 173. • **•*I.* S** Ma. **h»m. in l.inna,, ,**

6 Gentiana rivulàris and Genti as, Chunb. mus. nat. a •;.<!. up.. II. p. 180.., e probably a species of *Sebæa.*

(tilt. **I** he South America and New Zealand species of *Gentian* should be grown in |H.«"«,1| dv ained with sherds, in a and sand, and placed among other alpine require protection in winter. The seeds of annual kinds n even in the open bo rder r *Gentiàna macrophylla,* the only hardy perennial, is well fitted for a border flower, but grows best in a pea: e perennial species are either to be •erajat il h\ dividmg **at** the root, or by *m* ed.

VIII. CENTAURE

jS^xie,^, •«y be «,wn m pou, in tl». J,,

" ' \ I d, m o f f , •

Pursh, II. nmer. sept. 1. p. JH. Null. sen. nnwr, 1. i. **17t Imlifwais. Sprang** ^eii. **t. p. 8J.—Bartoaiaspei Siahl.**

I'cntandria, D'gynin. Cnlyx 4 • parted, **adpre<Sad<** Corolla iirfroljitely cntiijt. **1 - cleft** j HgOMUl **OVSte** <»r oblong, erect or *]» eading. 9 **wens** 4, inclosed ; m*<-rti'd beneath **the recem** i "f **the** corulla. Anthers ercci, subcordate, bluntish; filaments, robuhtte, flattened. Stigma thick, glan littrtr, bluntly hilicl. **Capsule** I-celled, 3-valvr<), io volocrated liy the **penOMMM talj** \ ft mi corolla. 8 eeds minute, glot'ulnr. attached to tin- l dges of the valves.—Annual, glabrous, simple, or branched small plant- l eaves opposite, decussate.

I C. VEMKA'LIS (Michx. H. OlIHT. bor. I. p, M. *U* 12. f. 2.) stem **Mlliplr .** peduncles scattered, corymbosely elongated; segments of corolla oblong, acute, twice longer than the cal \ x ; style longer than the ovarium. ⊙. (1 Native from , Virginia to Georgia, in mossy swamps. Andrewsia vérna, Spreng. syst. 1. p. 428. Flowers 1 while, larger tli.in the oilier sp> cies.

Var. ih unifibm t l'ursli, l. c. p. 100.) small; stem 1-flowered. This may prove to be a distinct species.

Spring Centa **nrdta. Fl.** May, July. PL | foot.

2 C. ESTIVA'LIS (Pr,*iA*\, **fl.** M|it. **amer.**). p. loo) »tem simple ; peduncle «• opposite, simple; segments of corolla «patulatc, Abruptly acute, *1* limn longer than the calyx : -tyle leng tli of ovarium. • Il **Native fi** im Carolina to l Georgia, in imMiv} Mvnmpx. **Plowen** ii mailer tlian ttir prct'etlmjt ; t lit" calyx sho rt.

• iri-lla. PI. *June,* Aug. PL | M **i** fool.

1 .' **n** i'liixli, l. i **branched;** pcduncles oppo~itt': lo«-r ones ttranchrd ; segnienm of coroll.i oval, acute, lisrclly lon^t-r **than tbc *etijn :* itvli *my* abott.** II- S.i'ive from • **N** l.n^bnil M (*:ir(ilina, in *u* mossy swamps, in innnil.'i-ed, grassy places. C. panictita- inner, l.j 1. BanonU tcnolb, Mulil. in tin. p 7)9, **Andrewatsaattrn iniiiilt, (trrrnis)i w l**

Autumnal Centau • < U.i. Fl. Ji ly, Sept. Pl } io 1 l-ot.

Cult. I or cu luire and pro] agation see *Eurytkaiki,* p. 188.

' ^. ASTE'RIAS (fr m n<rrf||', nt/rr, n .nar; klwpc of flow. it. **Boat.** urch. l. p. 14. **Gcstdma** lutea, Lin.

Lin. syst. Pen'limlriu. Digynia. Cal **thaeaoua,** ICI- •' • S-4-rleft; Moments clifirt, **buwvolate,** nnequal. l,'nrol);i ivitli *n* -luirt mix', **and** a 5-cl will **{land at tbe base of** i «'•!)" **ibortcr** clran ilic **calyx. 8uuBera 5-6;** am **i at llr^t,** \>*n* **;tt ltiiyili ilistiiu't. Sliifinan obtoog,** flat, rt'Vtiluri'. **Captttk** ovate ; 4 sidrd, **acanin** ti.cotnpri membranooi ••""iiff tl»i **tin1 lisbit of *reritnm.*** **Leave* broad, 5-ner»ed** \ ***grrtn,*** **boi gUucoita beorath. Il,. pedkrllal** **rticilfatc, noa thick pedaocl* ! tcteaa t-4, •eh** wliori of *Rw* **equal ID U**

I V >rkh. Hl Ran. arcli. **l. p. SJ. eoraOaa rofiowen** wrtii dlatf, **tab** V Il Native of the alps of middle Europe, from the Pyrenees to Savoy. Gentiana lutea, Lin. spec. 367. Vill. delph. 2. p. 521. ill. icon. t. 139. Plenck. off t. 156. Woo \\. bot. **ro*d.** I >rcli. *I,* «ii!i :i figure. Swertia lutea, 'V it. in Tratt. tab. t. 518. Radical leaves ovate-oblong: cauline ones sessile, ovate, acute. Corolla yellow, veiny, and spotted. The roots of *Gentian* **are** long, thick, externally uf a hrown cohmr. **and** wrinkled ; internally spungy, and of **a** yellow colour, H|||||. out uny remarkable smell, but surpassing in bitterness» a|| **Other** F.ttrnpean vegetable!!. Alcohol dUsolvpa only the l bitter extractive, **water** built tl.e extractive mid mucilage. It* **bitter*** **penda Upon** a new principle discovered by **Henri and Caventou,** called **gmtiaota,** nnd **is easily obtaitwd m a crystalline** liirm by **means** of ether, in which it is very soluble. It **likewu** HI idcohol, ami mure sparingly in **M It appran to ber alkaline nor acid.** I **the general i** F bitters in an **eminent** degree, and it **b totally d** void of astringency. *On* dead animal niaticr it nets an ai antiseptic. Taken into 1)0 stomach it proves a po*<erful tonic, .IT il in i arge doses it evacuate- **the** intestines. It is useful in **neakness** of the **stomach,** and in general debility, Kxlemally il* **powder** i* applied to puirid ulcers. **Narcotic** effects **have eoaoetimes** been **ascribed to it,** but **these** are **owing to Uw** • oots of *Jcumt,* or /:, *Uatl<* unn gathered along with it.

far. ji, major; **flow** ers **ller,** paler : corolla 5-9-paned almost to the b.<*, spoilew. *"U-* 11 Native of subalpine pl:tc s.

I ,,t. y, unijtbra (D. C. Il. fr. no. 2761.) Stem I **Sowar.** •r Gentian-root. F). June, July. I lt. 1596. to 6 feet.

PI. *I*

% A, iiv'iiaiDA ; leaves **ovale-lanceohrte**; • orollas 5-8-cleft, rotn: dowers ncsnile; talyx metnbjranoiw, unilateral. **unequal)]** It. **H.** Vniu **of the** alp* oi Vallais. Gentiana hybrida, D. C. syn fl, **pall** p. *44. no. 2702. fl. fr. 2. p. 651. no. 2762. G. Thomä-li, Yill. nitin. pj. hyhr. in** ROPII roll. p. 189. (* camp.inulata, Keyn. **men. 118.** I **reddian** \<llow. **Supposed to be** n **hybrid** between ***A.*** *lutea* and *Coitäntha purpürea.*

Hybrid Asterias. Pl. 3 to 4 feet.

Cult. Tin- genus is c **imposed of robosi** j.lniii-. **with** the habit of *Veratrum*. proper for ll.i«< r **bfl** rich M>il **Hiita** them **beat,** UK il itllow* the root* loa*centl. ! hey nr« inci eased either by fterd, *nr* by dividinjj Ilir root.

X. t'OILA'N'ItI I (from κοίλος, *koihu.* **eenc** ave, and ἄνθος, *ttnthot,* **a** flower j **hi reference to** ilur **shape of** coroHas.) **Reoaah** spec. 65, Borkh. in lltt'in. **arch. 1. p. 84. Oendana species** Lin. **ntd** "tb. i s. Dasystephiana, **Borkh.**

Ln. *¥ST. *f'enttindi* linnoun, clflt inside, with 6-7 iuu'i]ii:d **bbes** or teeth at apex, ('orolh large, **CoriaceooS,** camjianulate, .1-7 -t li-(i i segments bro • ! at tbc basr.obtiwe, remote. Stait. an. **combined,** Ovarium obl.m^, pedicellatf nit, with *'>~7* tubercleii at the **base,** I-celled. Seeds many, orbicular, with winged edges. —Showy plant*, with ohsoleuiy **tetragonal item*; oppo** ovate, 3-nerve • i, **apiculated** leave*, which *xri:* **iheatltitM** ;it **tbc** b Flowers large. on short j» dicels : terminal ones dispose l in a **wlmrl, and theaxtHarj** ones soli **ary. Bnctauopj** osite, **shorter**ili.iii ilif **flowers.**

1 ('. Il kl l B **in. arch.** 1. |. 25.) **rMIH** leaves ovate, 5-nerved : i-.inline lles ovate-Innccolule; **upperOl** broad-lanceolate, combined and she i'lung at tin- **base;** corolla 5-6-cleft ; stamens 5-6 ; calyx membranous, spathaceous. **.V H** Name of the alp* i of Norway, Switzerland, Savoy, Pyrenees, &c. Gentiana pu 'l ,, l,in. ipec. j **Willd. spec. 1351,** exclu»i^ e of the jivme **of ViUara. Woodv. med, bot. i. p.** 1 **synduyl** (Ned. ft. dan. l. *50.* Pit nek. off. t. !*3D.* Andr. hot. rep. **r. 117. Fra>l.MM.p> 18.** P ihepurpi' MM. l. Urntiiiiu |'anicea, Gesner. Inindi 1. <|>. u 1. n. l. tl .f. 92. A. a. Root yellow outside **and** white inxidc, scaly at top, very bitter. Stem purplish • t , i ' i , 11 racteas ovate

lanceolate. Flowers from 3-8 together, terminal; and the **axillary** ones usually solitary. *Calyx spr..thaccous, with 2-3 unequal teeth at the ai ex. Corolla coriaceous, **purplish,** • »1tM m-i<le ; **tube** striated, with greenish yel i'1(; 1'inb 6-cleft; segments «ub-ovate, obtuse. Caj»>ale fusifo **nn.**

yar.fi; corollas rose-coloured,
Var. y ; corollaH without dots.
I'ar. I ; corollas white.

*I'ur*VU t..ihntha. PI. **JuM,** July. Clt. 17G8. Pi. 1 to I ft.

i t. PassonOAj radical leaves ovate, apiculated; having the petioles sheathing **at. the** base: cautine ones ovate, lanceolate: floral ones acuminated: all £-nerved ; calyx C-7-clelt; -orolla **6-7-deft;** stamens 6-7. %. H. Native **of** the **alps** of middle Europe, ami Savoy, but not of the **P m O M** <Sentiima Pannonica, Scop. cam. 2. no. 20. Lin. spec. I. p. 63. exclusive of the synomtm*. Lin. syat. ed. Mur. p. 265. Jacq. fl. austr. 2. 1.136.' Tratt. fl. aust. fuse. 1. t. 0. Schrank, bav, 1. no. 424. exclusive of the syn. of Lin. Frcel, gen. no. 21. Gentiina punctuta, Jacq. obit. 2. p. 17. t. 39. Pneumonunthe I'annotiica, Schmidt, boh. 2. no. 112.—**Barrel,** icon. t. 64. Stems **purplish.** Flowers verticiltatc, axillary, and termin.il. Corolla rather membranous, purple, In-set with dots; with a yeUowkh tube; »cginenu ovate, obtuse. Capsule fusiform. Hracteas ovate, acuminated.

Var. fi ; stem humble; whorls solitary, few-flowered.
Var, y; **corolla** white.
*Va*i. I ,• **stems** tall ; leave* long, acuminated.

***Pirmmuin* Cothtmha.** Fl. June, July. Clt.' PI. 1 to 2 ft.

3 C. IIILOUA ; flower* verticJltatv; corollas usually 6-cleft ; calyx membranous, 3-tobt-d : **lobee obtW** < ijunl, *It.*. 11. Native, of France, on mountains, in the province of Clarion. **Uta** I'll..ha, 1), C. syn. fl. gall. p. 244. no. 260. fl. fir. 2. p. 653. no. 270(5. Soon. **B. nil.** t. II **Qentiana punctata,** Wahl. car;). 1. p. 72. Nearly allied to *C. punctilio* in the colour and sixe of the corolla, but differing in the floral leaves being twice longer than the flowers, Perhaps only a variety of *C. purpurca,*

Two-Uihrii-euUxvd Cmlatitlia. Fl. June, July. ('It. 1820. PI. 1 to •>. feet.

4 C. PVNCTA'TA (Horkh. in **Romk** arch. 1. p. 27.) leaves ovate, acutifth, j-mrvid ; lower one* pctiolate : superior ones acuminated, all coadunnte at the base ; flower* vcrticillate; calyx rather truncate, with 0-7 unequal lobes; corolla can usually (i-tj-clrft, dotted, 1i. **H. Natived** '!"' 'ddlc Europ<-, a* on the al|w *oi* **lam)** and **San**v. I Ger.liana punctuta. Lin. spec. 037. Willd. s|*»r. I. p. I «3*1. Trail. It. austr, fasc. 3. t. 9. Jacq. austr. 5. t. 28. I Gent. purpùrea, Vill. dnuplt. 2. p. **fiSt.** Hall, hikt, 638. Pneumo.....the , **punctata,** Schmidt, Rtsni. arch. 1. no. 4.—Grui. in Srluuulrl, **a** p. *&9.* no. 92. b. I. 28. *f. 9i.* b.—Mur. hitt. I. 4. f. *2.* Barrel, icon. 60. will) • pah r (lower. Hoot brownish outmde, white insult. Stem n **tetragonal, green or pofptisb.** Lenves pale green. Mractra* *h«>rter than the flowers. Trrminal II-J in a head : axillary ones Military. Calyx with blmish angles, and ! or aulphui insion, dotted with numerou* it regular purple sjxits : limb 6-7-cleft. Si.niun* ti-7. Is imbricate, wingi'd.

*D<*lr<i* flowered Coilantha. Fl. June. July. Clt. 1773. PI. **1 ti.**

6 C. CAMFAKVLA'TA ; leaves ovate, acutish, **5-nerred** : I one* ii.nally 7-IMTHMI : **tuperiof oajaa MMssti** sin utliing, aruminnied ; **lewi** Miiinat, and axillurj ; **oajyi** cleft, wild **blueisli** «ii(;l<» ami **unequal** triangular **aagm** corolla rampanulaic, 7-cleft; with **obi use, iriangalar,** equal lobes, without dot* %, II N Carintliia, Switzerland, *&c,* on the alps; and *of* the Pyrenet*». GcntiJna campanulas, Jacq. in Murr. **sysi.** p. 267. **austr.** app. p. 43. I. *2'J.* Ti aitktr. **fasc.** 4. p. 1. Gentiuna eampunuiata immnculata, Per*. **aoek 1. p.** 284. **QML Bwatri,** var. a. I). C fl. fraJl- no. 2763. a. I[1]neumonánthe c**npavakta,** Schmidt, I. c. Hoot **(nsHbm,** divided • **little.** Leaves pale green. **BracttU aboal** iht length **Of *dm*** flowers. Corolla large, sutphui- coloured. Stamens 7. Stigmu flnl, obtuse. Seeds orbicular.

***Cmmftmmlmt* l o u d** Coilantha. Fl. July, Aug. Clt. 1819. IM. I • oot.

6 C. SBSS^I (D. Don, mtw.) stem erect, simple, terete, papillose; leaves **IMafla,** ovaie-l.»nceo!ftte, **8 *wvrta* I iowttl** axillary, soliury, bract less ; calyx spathareoua, 5- toothed ; corolla campamilate, 10-cleft; the alternate segment* bieimpidate. %. F. Native of Mexico. Gcntikna ca«riiliji, **Moc,** el S$_t$*»e(in herb. I,;imb. Leaves scabrous, 3-5-ncrved : **lotMf** tint'* ovate. (JIJIUM.-: nu|>crior ones acuminated, deep gr.en above. i alyx cleft tW the inner Hide. Corolla blue ; T i l **Ttrmdiah.** mucro- **nate.** Filamvnts flattened ; **•Bthcn** oblong. Styles distinct. Stigmas rcvolutc, papillo»e. Caj»»ulc ptar-slio|>e(l. Seeds winged.

Sttte't Coilantha. PI. J to 1 •oot.

' & ^1 **nil** ;1). 1).>n, **inss.)** stem •rect, simple, te ri'te; leave* **sessile,** ovat<-I. nceolate, 5-nerved ; flowe.., $_n$>ilbi y, on short |Kit»c<U, usually solitary; cal\x spatltaceous, ,5-to thed, bibracteate at the base ; corolla campanulau>, **10-deft;** the alternate segments biciiRmdattr.)/• ''• Native *of* Mexico. Conliitftl wiih *G, cærulea* in M oc. et Sesse. **i berb.** l,.inib. Lfttves smooth, 2 inches long. Calyx cleft on **the inoef** side. liracten* linear-huii'tolatc, aetite, much **longer** ili:iu the i calyx, connate at tiie base. Corolla campamilaidy funnel -si. i ped. Filaments dilated at the I HIM-. Ovarium tome what fusiform ; animus linear, obtuse, mimitfly {>apilto«e.

,1/rx **iaae'j** Coilanthn. PI. 1 foot.

8 C Hi usr.'Ht; corollas usually 5-clcft, campanulate, tim ted ; segments lanceolate, with **a** small accessory tooth **bet*** een each ; **calyx** membranous, spatliact out, 1/.11, N.it.v, of the eastern and central l'ynin es, often with vars. (5 and *y.* **Oeouana** Itur- sèri, Lapey. I, jiyr. p. ISO. abr. p. \3*t.* 1). i . fl. fr. >>i]>pl. no. 2703. Saul to be very nearly allied kg *C. jutnttiiltt,* but the corolla is always pole yellow, never purple. It has the leave of *Cm iittta,* and tlie flower* *of C. jtumi ata* or *C. purpurea, r* i is pr•bably a hybrid. **Villars** ways, tlaupli. 2. p 522. that se flow< rs are campanulate, rerticillate, (i-tlcft, acut **•d,** dotted ; ami the **calyx** spathaceous.

Var. a ; co**M>|las** dolled, bluntiah. 1/. II. Native of (lie Pyrenees. [1] M-ntians Iturtch ;), Lapeyr. l.c.

Var. β ; corolla* **dotted,** acutish. %. II. Native of Dauphiny, I'yrrmii, &c. Getktiatia BitTM'ri y, I). ('. 1 ,. I Gent. piinctuta, Vill. **dswpti** p. 520. G nt. hybrida, Vill. mi m. pl. lisltr. It.i in **oalL** I. **p.** IHIt, Gent. punctata, var. lutea. Trait. 11. austr. fa*c. 3. I. 10. I

tar. y, giganfta (Lagteyr. »l>r. **p. H.**)>yr. **suppl. p, ;** 1.). *It.* M. Native of the I'yrenees.

liurter' Coilantlia. I l. July, Aug. Clt. 1820. **I'!.** 2 feet.

9 C. oi \\ . * I Borkh. in H i m. arch. **1. p.** 26.) stems terete ; leaves ovate-roundish, hardly i erved : rather fleshy : cauline ones .1-4 pairn, «es«ile; flower* 1-3, terminal, •ewtilf; en ycine **•egOMata** unequal, blueUh, subulate; corolla cam|wnula(e, 5- tkft, with sh ort, obtuse **segment*.** 3 **times** longer than the calyx. *li.* II. **Nal** ive of Kamtschatka, on the tops of the alps, in humid place* faring the north. •Gentiana glauca, Pall. fl. ross. 2. p. 101. t. 3.1. t, 2. I ,vel. gent. p. 56. *Willd. spec. 1. p. 1340. **PlssiuiiMMiiiiilm** glauca, Schmidt, **m Rom.** arth. 1. p. 1[(. (ici. 14. Stems simplr. Itadit-al leaven rosulate. Calyx cam I iitulaU'. Ccinilln subventricose, bl neisli.but tin **tube** pale.

Anthers white. Capsule fusiform- Perhaps a species of *Pnvumonanlhe.*

Glaucous Coilantha. PI- } lo $ foot.

10 C. ASCLEWA*DEA ; leaves ovate-lanceolate, a-5-nti stem-clasping, with repand edges ; terminal flowers crowded, axillary ones solitary, all m-.irh MMQB] corolla campanulas, 5-i. left ; segments ovate, acute; calyx tubular, 5-toothed : teeth unequal, distant; anthers connivenC If. II. N of Switaerland, Hungary, Syria, Austria, Carninli. - Piedmont, Barbary, Mount Caucasus, *&c,* in shady **ajpinfl** pUce». Gentiana **aaclepiadea,** Lin. spec. 329. Hall. lj.lv. no. 640. **Jscq.** austr. t. 328. Sims, boL mag. 1078. Froelgent. p. 48. DasjStephana Renealm spectm, 67. t, 68. Dasystéj.hana asclepiadea, **Borkb.** in Rcem. arch. 1. p. 26. Mayerhoff. fl. monac. t. 00. **Gentiana** Ascltpiadi* folio, Bauh. pin. 187. Ger. emac. 433. f. 3. Corollas large, blue, 3 times longer than the calyx. Seeds winged with broad white edtjes.

Var. fit leaves distinct. *y..* H. Native of (larniola and Bohemia, Frtrl. gent. p. i9. Scop. earn. 1. p. 298. Pneumonanthe asclepiadea, Schmidt, boh. no. 113. **DO. 8. Sduaidd,** op. gesn. I. t. 9. f. 80. *t.* p. 40. t. 26. f. 82. Flowers sessile, solitary, secund. Leaves bifarious.

Var. y; leaves 3 in a whorl. V H. Fral. gent. 49. Pont. **comp. p. 76.**

Var. c; leaves lanceolate, long-acuminated, 3 inches long, a little smaller. ~*U.* H. Frocl. I. c. p. 49. Calyx subspathaceous, ex Fr-l.

Far. 1I stem elongated, nutant; peduncles elongated, a little branched. Ti. fl. Fru-l. I.e. Clus. hist. 1. p. 312. middle **figure.**

far. it; corolla while. 1/. II. **PraL** I.e. Wnhl. heir. I- c. Pomtd. comp. p. 76.

Far. *; stem **1-Bowercd.** .: 11 I'ueumondnihc plicau, Schmidt, in Room. arch. 1. p. 10. no. 613. t. 1. f. I. Calyx ventricose, with 3 of the segments broader than the otl

Atcltpiat-likc Coilantha. Fl. July, Aug. Cll. 1629. PI. 1 to 1*1* foot.

(utt. For culture and propagation **sec** *Attit'tat,* p. 184.

XI. EURYTHA'U A '.meaning unknown tons). Reneatm. spec. Borkh. in Rtrm, arch. 1. p. 28, Mayerhoff, fl. mon. t. 278.—Gcnliana species of authors.—Hijipion species, Schmidt, in Rtrm. arch. 1. p. 32. t. 4. f. 13. fl. **bobem.** no. 128. Genliina, sect. Endotriche, Frocl. gent. p. 87. **OpatAdM, Bi—hn** spec. 71.

LIN.STST. *Tctra-Pcnlandria, Monoggu'ta.* Calyx 4-5-clcft. Corolla salver-shaped; with a 4-5-clcft limb, having as many bearded or fringed segments in>i*le and attached to them at the **bate.** Stamens 4-5 ; filaments filiform ; anthers cihlouc incumbent. Stigma 2-lobed or **btfoV** Ovarium pedicelUte. Capsule ovate or oblong, erect, I-celled, 2-vol *&§* smooth, roundish, compressed.—Annual, branched or simple herbs. Leaves opposite, sessile, decussate. Flowers terminal, blue, white, or purple. This genu* is readily di*iingui> a the rt- the beard inside the segments of th» corolla at the thr iat.

1 B. i sir LOB A ; stem simple, **slightly tetragonal,** usually 1-flowere<I; leaves ovate; corolla 5-cleft: with ovate, acute **segments**, and b*anl<-<l j>lrr» inside, equal in length to th segnH-nU- G- H Native if Savoy, Bavaria, and th» I nathisn mountains. Gemiiuia unifiora, Wdld. **spec.** 1. p. 1 G. amarella, var. (. **Froel.** v""- ♭• **87. Hlppk** I i ilia, It, in Rccm. arch. I. p. 23. t. ?. f. 4, Stem hardly hi than the corolla. **PlowOTf** larger than those of /. *ttrit,* ol a violet colour.

*f>M,-*ow*Tfd* I .lia. PI. 1 inch.

off, fl. mon. t. 278.) stem obsoletely 6-angled, branched ; branches longer than the inter node-, 1 or many-(lowered ; leave-, ovatt -hnceolate, 3-nerved ; corolla 5-clcft; segments of corolla ovato, nciile: a e d plica- inside at the bast-, about equal in length ui the cal segments. 0. H. Native of middle Europe, as of Germany, in mountain incudows. Gentiilna Gcnndnica, Willd. spec. I. p. 134G. Schultes, fl. bav. no. 48. G, astunML-i, Kni-I. gen, p. 86. Sclniltti, fl. austr, ed. 2. no. 10t6. flail, helv. C51. and of all other botanists who have written on the German flora. **G. MttriUs** *y,* Wahl. carp. p. 76. exclusive of the syn. of Besser. G. amart'lla, var. a, Lam. fl. fr. 2. p. *92,* I a mart 1l*i ,i,* Hieb. fl. tanr. I. p. 23. t. 3. f. 4. G. cam) All. pedvtn. no. **354.** D. C. fl. fr. no. 2776.—Barrel, icon. t. **1U'2.** Root yellow. Stem purplish. Radical lettves obovate, obtuse : caulinc ones sessile, a little connate at the base, as in the rest of the species: uppermost **and** br.-mch ones subcordate. Corolla purplish blue ; and the beard white.

Far, ,•}; **stem** branched; leaves subcordate, **acuminated.** 0. H. Barrel, icon. t. 510. f. *2. G.* amarella, var. *c,* Froc). gent. p. 8(5.

Var.y; stem usually I-flowered, short; flowers white; coroll.is and calyxes with scabrous edges. 0. H. I.Gentiana anwella *fl,* Wahl. H. carp. **p.** 70.

Far.i; stem branched; flower* white

German Kurytlialia. Fl. Aug. Cll. 1818. PI. H 10 | foot.

3 E. AMAkxLLA (Borkh. 1. c.) stem tetragonal, paniculately branched at top; branches shorter than **the inmaodw** , leaves ovate-lanceolate, 3-nerved; corolla 5-cleft: segments ovate, acute, with be.trded plica' inside at the base. 0. H. Native of Sweden. Bohemia, Hungary, Galicia, &c. in dry **pastures,** as well as of the islands of **Unauuchka,** and Sitcha ; in England in dry pasture, on calcareous **soil*.** Gi-miana :nti.irt'lla, Lin. **•pee.** 334. **Smith, HML** but. **t.** ***US.*** **OedL** fl. dan. . (jen. p. 141. Iti l>. tl. t:iuc. t. p. 148. Curt. f). lond. **fa»c.** Wahl. carp. p. 76. exclusive of **the** syn. G. pratensu, Bcs*< I **itiana** loncifolia, Kafin. dansk. hoist, **fl. Behum.** fl. sect. p. 80. Pers. ench. I. n. **C86.** Schulies, fl. austr. i no. 1<I17. Ihjipion axillare, Schmidt, boh. **M** Kueui. arch. I. p. 32. t. 4. f. 13. Gentiana • tragona, M ihvst mils. p. I ntiana campestr^. I i. elcnclt. no. 234. ma amnreils)>, Frwl. gent. p. 87.—Plenck. icon. t. Opaajitha, Iti-ncilm, spec. p. 71. Gentiana **pymntdalis,** Willd. herb. no. 5540. Hippion axillure, Schmidt, in Rum. arch. 1. t. 5. f. **19.** Genliana axilluris, Rchb. icon. t. 130. Swcrtm corniculata, herb. WilM. no. 5178—Barrel, icon, t, 510. f. g. [1] **tiana obluaifolia,** Willd. ex **Rehb.** icon. t. **189.** no. 248. Pttiunrles axillary and terminal, 1-2-flowered. Corolla twice longer than the calyx, with a white tube and a purple limb, MM ln'arci. » Moments 5, uniloriit. **Corolla** t j-cl **o** **e** **plant** is very 1 I he [»lnm from the i*land of [v] **diflert** frum **that of Onilnrtifci fa the gsjyda> atguieim** ***bmq man*** unequal.

far. 0i a larger plant, with longer branches, larger flo which are constantly j-c1tfl; segments of corollu broader. **Bitb.** 1. **e.**

I'ar. y, *figax virna* or *pro-•* I I difTers only in the early **time of** flow it

/ar.V. **Tkla,** the taller autumnal f/m/ioN, with Cent,, like **leaves,** is said by Ray t nt it dors not ing eaariiti.il from the **species.**

AmarcUa ot **irytheJb,** I \ug. Brii. Pi. | to *i* ft.

4 E. ILKHMOSA; **stem** tetragonal, bi Mngcd at ihr **base** ; leaves lanceolate ; corolla 5-cleft, a little longer than the •I; **HpMMsj** «f corolla a bearded on tie imid„

0. H. Nniiw of Oiimnny, in boggy paMtire*. Geniiana Amarill:., WiOd. prod. tool. no. 29»- hot. mag. 11. p. 37. Gent. uli$_H$ iWilld. Hncc. 1. p. 1317. Rdib. fc t. fiS. Gent, campesire, Ley**, bal. Steal 1-8 inchea high. Peduncle* Inn-!, 1-flowered. Perliap* hardly a variety of *Amanlia.* Corolla bhtei«h.

Boe Euryihtilia. Fl. Aug. PI. 1 t« 2 inche*.

H £$_t$ „ tregonel; leave* lanceolate, obtuse ; corolla 4-5-clcfl: luW cental in laagtfa »> ihe calyx ; aegmeauol eorolh having IIH inner plictu bearded. 0. 11 Native of Havana, Savoy, and lead, on the mountain*. Genliuna obttwifWia, WiUd. t.pcc. I. p. 13*7. Wahl. helv. p. 49. G. am.v >ue). gent. p. 87. Hippion obluaifolium, aidt, fl. boh. no. 2*(3. Ran. arch. I. p. 2f. t, «. f. S. limu tpntulata, Kchb, icon. t. *21.* Gent, meniann, Neva. Lower leave* narrow, and alniovt petiol.-ite : radical onti almoat orbicular. Corolla purplish or hluei^i yellow iti tindried itate. Branches few. 1 il,.u,red. Two of the calycine segment! are broader than the others. This plant is considered the tame n» £. *firmuiniiii* In (ham. tt Nchleclit. in Limura. 1. p. 17V-18O.

Bhnt-Uarcd Eiirylhnlia. PI. July, Au^. Clt. 1826. PI. J to 4 foot.

. I'BATK'KSLS ; Ktrm tetragonal, branched; leave* lanceolate, with acabrouN edge*, obtmletvly ;t-nerved ; corolla deft: with nvatc-lunwolate, ohtu*e segment*: having the plicæ bearded ; ealycio "t« nearly ii|ti»l, shorter than the tulie, (•:, II. Native of Kti<m)a and Siberia ai the Ilaikal; and of Golicta. in humid and dry place*, (ientiima p Fro < hwive of the *yn. «t PI. dan. G. cam* I'all. fl. row*. X. p. 103. Taller mid more bran, than *E, Qerm6*ica ;* with the lower braoebc* shorter than the iioth'*. Corolla unt twice ihortet tlian the largest *enly* segment*, of a livid blue colour. Leave* iDTMlhnffl violaceous bencalb. Flower* terminal, ng^rejjaic ; pedicels shorter than the flowers. Said by Cham, in fininaa 1. p. 181. to be the same with *.tmaritla.*

Meadow Kurythalia, I'l. Aug. Sept. Clt. 1S17. PI. 1 ft.

7 E. I'm Vmc/ii item toiragonnl, brantlitil Iron the b branches equal ; leaves ovate-lanceolate, Hwrved ; corolla 'ft, with ovate, obtuse segmen is, and a beardvtl throat; teeth of calyx aubulato, nearly c<pial. 0. II. Nnuve of the alp* of Caucasus, ot the fountain* railed Jurlmriba*i'li. Gcntiana Caucásica, Bieb. fl. laur. 1. p. 196. Sims, bot. mag. t. 103H. Gem. tmian'-lla, Pall. raee. *t.* p. 104. evdu*ive of the «yn. ofFl. dan. i. 81 'at. colllna, Adunu, in Willd. herb. Roots yellowiati. Calyx vhorter than the tube lie corolla. Peduncle* 1-flowcred, length of leave* at the topi of the branche*. COTOHM l.ir^er th.in thnvr of *B. cam' piitrU,* of i M beard while.

Cfiuca>itin Eurylhalia. Fl. July, Aug. (.'It. 1801. I' foot.

8 E. UHTl'ena (Borkh. in ltd m. arch. 1. p. -'(*.) Mea tragohiil, pyramidally branched : leave* lanceolate, 3-m••• • ci»rolla 4-i left; the »egment* obtuw and the throat branlei! ; y large. ©. H. Native of Europe, from Sweden to Sic iy, in dr\ i iwisiurei. In Britain, particularly in the north of WnU* and Scotland, r.to) ; but • 'ally in marly district*. Oeatiaju cam, I I. Kf^{nt}- P- '''• S||1)t11 bOUt. 1*7. Ocd. fl. dan. t. 3(i7- u». t. 181. « amaretla ft Unt. fl. Ir. *t.* p BOt. Oent. atnart'lla, Allg. I. tia obtu«f61ia, til. 1. p. 11. This i* very nearly iltied l» *E- amareiL , hw.* branched, and the calyx is aJwaya 4-pnrted and irri'^ular. rolla piirplith blue, and tomctitnes pure wliite. According to Linnæus poor people MM* thii plant instead of hop* to fa •>nling to Pallas a* a medicine, in common with man) other upci ies.

I'nr, fi, (JcrmAnkft (Frari. £«t<. p. *91.)* stoni acutely tcti ponal, *grtvn* (>r blmnah porptc at the bate, S-C UKIH[1]* hi((li oimptcor branclwd) *$* of the calyeuic ae^nivnti are very larg and Kiibcordate, or ovate, acute 3-ncrvcd, UM 2 umalU-r one laoeeoUte, acuminated ; corolla blucuh violet, with a whitis tube, a hitlc shorter than the calyx. Gent. catnpe*tri«, Rotli. fl. germ. 2. p. 290.

politd$ta (Frcpl. 1. c.) lower branch** of atern the longest, therefore corj mbotw ; caiyx 4 - parted ; •rginenta acuminated, S of which are hromUr m lanceolate ; the other *t* linear; corolla twice lunger than the calyx: limb 4-4 aciitith, reddtafa purple, but the beard i* whin'. ©.11 N.v of Italy.

t'ttr. (', *ijuim/urjhta ;* flower* 5-cleft. 0. fl Native of Switserland. < Gentiana Iermanuca, Schleich. cent. pi. p. no.91.exD.*'.)!. fir. J:*7.

I .jr.,. i, i.wiiKi; pleat email j oorolbipanam. 0. H. Native of the »omh of Burope. Hippion aitrniil.tium, Schmidt, fl. boh. no, *12S.*—Barn I. icmt. 97. f. X.—Column, cephr. 1 r. a.

Fieltl Fury thai ia. Fl. Aug. Britain. PI. *[* to J foot.

utiBVKn* ; item tint, branched; leave* lanccol connate, acute, downy, with pilose marjii (lowered, adhuy, or n(tmcroii<i, di*pn*ed on the brancltv* aa if they were in r«i lanceolate, *m* downy a* well a* i ft, and)•• in the throat. 0. II. ' ' panl. Gentt4na Sori- MbldSi D. Doa, prod. B. m j>. p. 127. Stem terete, glabr roui. Flower* jMile blue. Iyobe* of corolla ovate, mutic.

Bundle JloKrrtd F.urythalia. PL ? PI. 1 to 2 feet.

10 E. tMittiLATA (D, Doa, m**.) item erect, brand I lanceolate, acute, 3-nerved, or somewhat 5- r one* iH'tiolatc; calycine MgCMMa lanceolate, acutninnted ; throat nf corolla fur^iKhed with a jaggvd frti of corolla elliptic, oblong. 0, II iona ami I'av. in herb, Lamb. Leavee with *cabr<»ui adgi long. 1-iowcr* terminal, 3-5 in an uml edged, bracti rollas yellow. PQonenta diluted; nnthrr» oblong. Onriaoj ck, 2-lobed.

I irythalia. PL 1| foot.

11 *].*. .MKKIIVTA ; «tcm •ubtetragona), almoct timple; radical leave* ovate : caulme one» oblong-ovate, *u-m-< l»| obtti tem terminal from |be exill of the aupc- eordlla . rilloui -tlli-rnalr, ca- ll i tin- »egmenu cord. II, Native of canU-rn Siberia, about tie sra of Ot'houk, and of Kamiachatka, in gr*n\ niaml.y place*, Gentiiin* iiiiruulau, Pull, fl, ro«», 2, p, 102. I. Froel. gint. p. 90. no. 35. Hfppioi DaiyMfphana anriculata, Borkh. in Ron CoroDe twice longer than the calyx: whl l«, pale blue aegment*. which arc riUoui ineide. Ovarium fuiifoim. There it a much'branched variety ol thin, with more vmlci-eiiliinred corrdlu, found in unit marilte* to« ««•• *A* irithalta. PI

•• OI-A | Mm HtHfU—al, brancneil from the b«»«-. leafy; leave* nearly all radical, and nmularr. tdunti»h . tlmini ; y ragonal, nak< H i and the Car- alps of

MI

Europe, as of Valau, even to Siberia. Gentiana jjlacialw, Vill. dauph. 2. p, 532. **Frwl** gent. p. 98. Wahl. lapp. p. 69. carp. p. 75. Geni. niwilis, Lam. diet. **mppL** 2. p. 733. no. 68. Hall. IRIV. **651.** Hippion longepeduncuUitum, Schmidt, in It com. arch. 1. p, 21. t. 2. *(. 5.* Gtnt. nans, All. pedi-m. 1. p. 1>9. no. 360. Nearly allied to *E.nmarcHa.* Corolla deep blue, having 2 small fringed segments to each segment of the corolla. **Capsule flungnicd.**

•la i corolla 4-cleft, bearded; stem subdichotomous ; peduncles very long; leaves ttibovate, bluntiah. f. . II N e of the north of Europe. Gent, tcnella, i nt. p. 90. WiHd, spec. 1349. Pen. syn. 1. p. 286. Rottb. act. hafn. 10. p. 436. L *2.* f. 6. Towjwon, trav. hung. t. 14. Vahl, act. we. hafn. 2. p. 2. t. 21. Fl.dan. I. ,118. Gent, tctragona, Lam. ill. no. 2233. Gmel. **syst.** p. 4CS. Roth. germ. 2. p. 290. 1 on tcnullum, Schmidt, in R<rm. arch. 1. p. 19. Gem. Konigii, Gunn. 8. norv. no. 288. Gent. ***tMUUtmm** fl,* Lin. syit. p. S69, no. 34. Gmel. syst. p. 460. no. 7. Corollas deep blue.

'ar. y, wtijlura; stem simple, 1-flowered. ©. H. Gent. gtacialisp, Fnrl. gent, p. 98.

Ictf Eurythalia. Fl. Aug. Clt. 1819. PI. \ to ± foot.

13 E. DICUUTOMA; stem tetragonal, dichotomously branched; leaves suborate, acute ; peduncles very long ; corolla 3-cleft, with a beanUil **throat,** am) **oblong** obtuse, hardly iprculing »egments. ©. II. Native of Siberia, from the Lens to the ¥..•. Ocean. Gent. dichotomy, Pall. fl. ross. *t.* p. 110. Froil, gent. p. 100. Htppion dicltotomum, Schmidt. Gent, borealts, Lvdeb. act. at. «oc. mosc. 3. p. 357. Gent, gl«cialis, Led. fl. alt. I. p. *88.—Gmel. sib. *i.* p. 106. t. 51. f. B. Th.i «peril* differs from *E. glaaalit* in the »tctn being fim-ly forked, **filiform,** and rather flexuous. Leave* at all the forks, and on the pedu; cles. Calyx divided almost to the base; segments lanceolate, acute. Corolla purplish; tube longer than the calyx. The corollas vary to 4-cluft, and to a white colour. Said by Cham, in Linnaa, 1. li. 1 82. to V the same «s £. *glaa* dialis.

•totu Eurythalm. PI. J foot.

14 E. HA'NA (Borkh. in **Rom.** arch. I. p. «8.) item tetragonal, dvcumhi i.i, lil.t'i.nn, **tKebotonoaa,** leafy at bottom, with dmjr, tui'tttl bram-hes ; r.nl Y.il leaven obovate : caulineones **ovate,** obtuse; peduncles hardly ilie length of the flowers ; corolla 5-cleft, rarely 4-cIcft, campanula!*, with a bearded throat, and ovate, acuti«.U **fgintiWt.** O. H. Native of the alps of Cnrintliia and **SsJlbnw,** near the limits of perpetual snow. Gent, naua, Wulf. in Jnctj. misc. I, p. 161. t, 18. f. 3. Frocl. gent. p. 102. Mippinn nsnuni, **Scfamiat,** in Koem. arch, p. *HO. u S.* f. 10, Root yellowish. Radical leaves usually 4, rarely more, rosulate. Calycine segments ovate, lanceolate, acut**bh,** nearly equal. Corolla with a whitish tube, nearly the length of the calyx, and a deep violaceous limb, and a white bipartite beard. Stigmai oi ate.

/'or. ji; stem simple, shorter than the flower. 0. H. Frocl. gent. 1. c.

DM white. ©. H. **Prod.** gent. I.

fhrarf Kuryihalia. Fl. July, Aug. PI. 1 to *2* inches.

Cult. For culture and propagation sec *Plcurdgyna,* below.

XII. I'll I **RCGYNA** (from xX*vp«, *pUvr,,* n .ido. and *y, gt/ru* a **IMMSVI** '• in reference to the * »t^nias tM-iiig adnate longitudinal) tt» '«>(!> •'<!" of the ovarium). I **•X ScMtchC ta** Linn— 1-p- 187.—Gentiana species of authors. *utu **ipecies** uf ***limmm.***

\jf uindna, ***Digjm*.*** Calyx 5-cleft. Corolla rotate, .preading. 5-deft | with a fringed or uraly throat. Stamen* 5; filaments filiform; anthers free, incumbent, Stigmas 2, ailnaic longitudinally to the sutures on both sides of the ovariuin. Capsule elongated, l-cclltd, 2-valved. Seeds minute, globose, scobiform.—Annual plants. Leaves opposite, decussate: radical ones rosulate. **Flower*Mae.**

1 P. CAaiNTiu' ACA ; stem short, tetragonal, dichotomou*, leaves ovate-Unceolate, **obtOM** ; [x-dunclcs very long, naked ;^ corolla rotate, 5-cleft; with brimle* in die throat. ©. II. Na< Carinthia, and SaUburg, on the **ten** *of* the alps- Carimhiaca, Frocl. gent. p. 103. Willd. spec. I. p. 1350. Swertia Carinthiaca, Wulf. in Jac<i. misc. 2. p. 53. t. 8, **bin. anted.** 14. Murr. p. 266. Root yellowish. Stem •)• Branches and peduncles errct or ascending. Radical leaves 4, rotate, oblong-ovate : cauUne onet twin above the base. Calycine segment* cut almost to the base, ovate-lanceolate, obtuse. nearly equal, shorter than the corolla. Segments of **eorolb** ovate, acute, sky blue above, and white and violaceous beneaih. Brittle* in the throat short and whiu . **Gapeale** elongated, angular. Stigma* obtuse.

I'lctirogyna. Fl. July. Aug. Clu 1817. PI. J ft.

2 P. SILIA'TA ; item tetragonal, dichotomous ; leaves linear ; segments of corolla oblong, acute ; corolla rotate, 5-cleft : with scales in the throat; catycine segments lanceolate-linear. ©. H. Native of Iceland and Norway. Gent, tut]cum, **Willd.** •pec. I. p. 1.131. Swertia sulcata, Hottb. act. hafn. 10. p. 438. t. 1. f. 4. Rets. scan. ed. 2. no. S< norw. no, 1077. fl. dan. t. 34.1. Gent, rotata />, **Fred.** gent, p. 106. Corolla length of calyx. Stem spicatcly branched, many-**Dowered,** leafy, ex Fl. dan. 1. C. Ovarium com pressed, furrowed.

*F*urrewrerf-capsuled Pleurogyna. PI, } to \ foot.

3 P. KOTA'TA ; Mem simple or branched from the middle, obsoletcly tetragonal; leaves ovate-lanceolate, **BCtttkh,** strict J segment* of calyx ovate-lanceolate, one half shorter than *tin-* corolla. <• . II **Native** t • in humid places. Gcniianaroiata, Fr **Led.**fl.**alt.** 1.p. US 8 rotita, Lin. «p»-c. I, p. **1851.** Pall. fl. f. t. 89. f. I. and .'.— Gmel. sib. 4. t. 53. f. 1. Root yellow, fascicled. Branches •ub-futigiaic. Radical leaves **4, roralate, obovate,** obtute: cauUne onet lanceolate, acutish, sub-trinerved, **iboner** than the internotlcs. Segments of calyx linear-acute, 3-nerved, a little shorter than the corolla. Corolla blue, 5-parted. **Scale*** 10 in the throat, variously cut. Ovarium cylindrical, compressed, furrowed in the middle.

/iutate-AovcTvi] I'ltiirogyna. PI. \ to I fool.

4 P. STKI.LKKIA'KA (Cham, el Schlccht, in Linna-a. 1. p, 188.) leaves ovate, acute ; calycinv segments ovate, lanceolate, one **half** shorter than tlie ftftmfW. 0, II. Native **of** emtern Siberia, KamUchatka, and Caucasus. **Swertia** r ,11, ft ross. t. 89. f. 3. Bieb. catic. I. p. 199.—Gincl. sin. 4. p. 11?. t. *5t.* f. 2. Stem many-nWcn-d, **branched** from the base; branches fa.ttigiate. Corolla **5-eJeft.**

StelUr't Pleurogyna. PI. \ to \ foot.

Cult. The species of this genus are almost uncultivatahli- ; aUliimu'ti several of them art- rj| common in chalky parti of Britain. We would recommend the sevd to be sown in chalky soil, or soil well mixed with chalk or marl, in which tlit-y will **probably** grow in a cultivated state.

XIII. ERK \ I \ {meaning unknown to us). Renealm. p. 75. t. 68. Ericula, Borkh. in **RoNa. arch. 1. p**. jy. « species of authors. Hppion ip p S Hnnth.

Lni anr: *Pentindr* h d, l i i h **t-5-dft.** Toroll funnel-shapetl or salver-shaped, 8-10-cleft; the alternate **teg**ments usually smaller, entire, bifid or fringed, hut never Warded. Stamens *i-5 ;* fiUnients filiform. Anthers incumbent, **linear**

or oblong-linear. Stigma 2-lobed or bifid, *mami* '1°«. Capsule pedicellate. Seeds .mall, oblong or r....Khali, nmootli. —Dwarf [>crcnniftl or annual herb*. Leaves conduplicate. Kadical Uavea roiulate, imbricate: caulineones opposite, decussate, sessile. Flowers terminal, usually solitary.

§ 1. *Perennial phntt,*

1 E. AIPIMA; corolla campanulate, about equal in length to the item ; leaves ovate, rathe* Bethy. obtuse, DU*e\«M V - 11. Native of Dtaphiny, in the Pjrrapeea, very plentiful Gentiuna alpina, Vill. dauph. 2. p. <S*fi. no. 8. t. 10. D. C. fl. fr. mppt no. 2770. a. Lodd. boi. cab. 476. Gent, acatilw/3, Frcrl. rar. y, D. C. fl. fr. 8770. Per*, syn. 1. p. 2R5. Hfppion alpimim, Schmidt, in Rccm. arch. 'Z. p. 20.—Barrel. iron. t. 105. Leaves hardly twice ai long an broad, almost round. Flowers solitary, erect, always longer tlmii the stem, 12-14 lines long.

Alpine **Brieda. FL** May, July. Clt. 1817. PI. i foot.

2 E. ALTA'ICA (Bnrkli. in Itocm. arch. 1. p. 27-) stem short, r than the (lower; radical leuvc-s imbricated, compact; corolla faanel-tbaped, 10-cleft ; IfgiitflHt roundish: accetaory onrs roundish, jagged. If. H. Native of Altoia, near tin mils of jxr|Htnal snow. Gentiana Altaica, fall. H. rn«. 2, p. 109. i. <*M,* f. 1. l-'m-l. gent. p. 62. Gent. grandiflora, Laxtn. comm. nov. petrop. IK. p. 526. t. 6. f. I. Ilippion Aliairuin, Sclimitlt.in Hunk anil. 1. p. 10. no. 2. Gent. If Lam. ill. p. 48A. no. 2115. Hoot simple, fihry. Leave* lanceolate, acutuh. Flowers solitary. & . innti of calyx lanceolate-actiimii.-ihd, with a membranous white keel ami margin. Corolla large, deep Una. Anthers yellow. Very nearly nil nil to *E. Pyrenaica.* **Capsule obevata, perticaflata.**

I'm. p, <,ll;ji;u> (Led. II, alt. 1. p. *-IHS.)* flowers while, with 5 yellow atripes. V . H. Nat ve of Siberia, in alpine placet.

Attain Kricala. Fl. April, May. Clt. 1 Nil. PI. £ foot

3 *V.*. I'viii \A'ICA (Borkh. 1. c.) sum brnnched at bottom ; leaves tancoolate-linear ; flowers term hinting the branches, (tolitaty ; corolla funnel-nlmptil, 10-cli-ft : accessory segments oblong, nhtuu; and crcnulated ai the ajn-x. *Tt.* II. Native of the Pyrenees, and Caucasus. Gentiana Pyrenaica, Lin. syst. E68. maat. 55. Wtlld. »JKC. I. j>. 1341. PnaJ. gent. p. i;a. Gouan. ill. 7. t. 2. f. 2, WaUati el Kit. bung. t. 207. lli|ipi<m Pyreniicom, Sthmiili, in Kuem. arch. I. p. II. mi.]. Very nearly allied to *S.* rcriwi. but differs in the accessory segmenti being nearly cijual in *>/ Dtbert. Stem procumbent, Khmer* length of branches. Sterile brattchea den«cl> leafy. Radical leavct crowded, imbricated : caulme *one** connately sh< acute, *witk* white tagiooue edge*. Bi paeon of calyx lmiceolau>, acute, with pale edges. Corolla .i pair gTcen outside, with the limb deep blae above. I In re ii a variety of (hii *pcrii-» with a 6-eleft rorolla, with .» many acceswry *egmr»ti>. see *DA* . fr. no. ^775.

/yriwon Ericala. Vl. April, Jt.ly. Ch. 1HS5. PL J foot.

4 H. 1-u'nitA fBoridh in Itaem, arch.]. p. 41.) ttems 1-flowerrd ; leaves linoar-l:meeol r, crow'.< d, imbricate ; corolla salver-shaped, 10-clcft; segment* ovate, acute : (he 5 aecrtaory •.mall, semi-bifid. 1/. 11. Wathf of Cerinthta, Awatria, ibeTjTol, FT—e mi land. &c, on the alp*. Gctuiina piimila, Lin. >|H*c, p. 331, Jacfj MI»I. 115. obi. 2, p. 29. I. 49. ausir. 4. t. 502. Freel. etrii. j>. BI. W01d.epee. 1. p. l»i'». G vérna β, Lam. dict. 8. p. 659.*y*. D.C. il. *u*. Da 771. Hippion pùnilum, Sch :iijilt, in Idem. arch. 1. p. 10. Habit . of *E. Pyrenàica*, *nd *E. vérna*, bui differs from both in the corolla. Lower leave* with MbraCtWTed cartilaginou* margiui. Calyx pviuajt'innlly keeled, bluewh. Corolla pale blue; accetsory segment l v»liile.

JDa *arf* Ericala.

5 E. scmroLiA ; plant tufted, procumbent! branches 1-flowered : (lower* sessile ; leaves lanceolate, acute, loosely imbricate ; oaroDa limn. I-shaped, 10-cleft; the accessory segments are almost equal to the others in Rise, all roundish ovate; ealycinc segment* equal, linear-lanceolate, acute, with membranous, white edges ; stigmas sessile, rcvolute at apex. ^/. F. Name on the Andes, about Quito Popayaik Gentiiaa «etiifolia, II. It. it Kuntil, nov. gen. amer. 3.]>. 134. t. 225. Sen.'. cacspitoso, U'dld. herb. ex *Bam.* at Schultcs, ijrat *r>*. p. 185. Leaves sessile, <tomewli.ti connate, ncrvelcM, with diaplianoiis white edges. Calyx 3 times shorter than the corolla. Corolla size of *E. vtrna,* blue. Capsule oblong, acute, compressed.

FIG. 21.



Stontcrop-Uatcd Ericala. 1*l. procumbent.

G E. TiiumikA; almost stcmlesa, tufted; leaves crowded, mnoily radical, rotulate, roundish-spatulate, sessile, small; flower» Military, sessile, upon the top* of very short Mi ms ; calyx tubular : with triangular, ac>te. enrol In long, tubular, 10-cleft: the 5 regular segments ovate, rounded, micronate ; and the 5 accessory one* small, and also rounded. 1/, *V.* Native of Nijiaul, at Gosain*than. Gentians tubirlora. Wall. cat. no. 4388. Flowers long, narrow, blue, large for the size of the plant. Margins of leaves cartilaginous. This is a pretty little plant.

Tuhe~jUnecTtd Ericala. P), small, ml ted, 1 boh.

7 E. DEfkt/ssA (I). Don, m»s.) Mems I-flow. red ; flowers sessile, radical; leaves lanceolate, ituicron.iti-(roanlatt' of flit surculi ovate; corolla campanulately funnel-shaped, 10-cleft ; the ,5 accessory segments ovate, erosely crcnulated ; tin- -other *5* roundish, and nujrronately owned, 1/, H. Natt ve of Nipaid. Geiitiimn ii pressa, I*. Don, prod, 1l. nep. p. 1 (6. Wall. cat. no. 4.1H7. Hoot Bbroaa. Plant depressed, MMBV ss, sometime* HIIII ninny di-cumlit'iii Mirculi. Leaves glaucoui-green, 3-tterved, with cartilaginous edges, scabrous from papillae. Calyx tubular, *5*-cleft ; with lanceolate, mucronulate keeled segments, 'ila an inch long, blue, with violaoaew hue*. I flat, channelled. Ovuium fusiform, p dicellate. Style • longated. Siigmas lanceolate, nwifIQlllilal e, approximate, paj,illo*e, a* several other part* of the pleat. Varj nearly allied to *E. All I)c»rti,te>t* KnenU. I aaa.

8 E. CAKIKA'TA (D. Don, mss.) stem tin , terete, simple ; leaves sessile, kreli.i at the baae, linear-Unecolate, ineni ved ; flowers aggrtgaie, terminal ; calycine orgim-iits lineal , mucronate, with scabrous edges ; corolla fu H>d, tubular, with a Ud throat, and a 10 Inbed luuh : the 5 acceai sharply *it* 1, mueh shorter than the oth. h arr lanceolate, acute. *If* , F. Native of Nipair . Stem purplish. Leave* green, having the margins and k. el cartilaginous. Filamem* capillary. Stigma* re volute. I apsule c >.mate-oblong, winged at aj ex.

Keeled-leaved Erical i. **PI.** *H* **bei**

!» I', VIMJMI; stems procumbent or •loloniforou*; I-dJah-tpatulate, obttiae, with ciirtilagiuou* edge-aessile, (rrinitial, 2-3 logcihrr. rarely solitary ; calycine segt UaaaHaooaolataj corolla 10-cUft; the 5 regular segments roundi«h arnl crenatetl ; and the 5 ac. ssory ones *m«H m<f l>itid. V. F. Native of Kamaon. Geniiana venusta, 'Wall. cat. I o. 4389. Flowers blue.

ileautiful Encals. PI. procumbent-

[0 |. rete, sample, l-flowercd; leaves narrov-linear, spreading! OOtotts campanula^, with *b* ovate acute •a many at - %• H. Native from New Jersey to Carolina, in n and near in sandy soil. < folia, Miclix- l). aincr. hor. 1. p- 177" Pur»h, 8. amer. stpt. 1. p. liJC Gcntiuna nurpurea, Walt. fl. car. p. 109. Gentians porjihyrio, Gmel. »y»i. i '. 57. Hippion Porphyrio, Si'limidl. Calyx 5-eltirt. Flower!, targe, azure blu«, often *t* iadsM (oog. Capsule elavate, stipitaie. Stiyn !i bifid. Stum mostly simple, but «ometimes f aVftflSWag.

Narrote-Uarnl Erieala. PI. \ to I foou

11 E. QI ADKIFA'ETA ; stem a little branched; flowers terminal, solitary, alnio-.i sessile ; leaves imbricating in 4 rows, ovate. with car s edges, terminated each by n bri stle; corolla funnel-shaped, 10-cleft. 1/.? G. Native of Java, on the hi«lier declivities of Mount Gede. Gcntuina (pinilritaria, Blum, liijilr. p. 847. Nearly allied to /;. *aquatun* and /,'. *hmtuilc.*

<}iw/ri/rtriou»-leaved Ertcaln. PL J foot. ?

It E. LLSLVMS; stem rough ishj k-ave* iineur-lnnei-olati-, undulated, nerveless, ciliated, as well at the calyxes ; (lowers u-i iinual, sessile, crowded; corolla campanutate, 5-cieft, with as many denticulated, accessory segment a. 1/. H. Native of • lyhrataa and Virginia, on the mountain* : and ot tbt Arkansas. Genti&na 1 incur is. Free), gent. p. 87- no. 11. Pursh, tl. amer. sept. 1 p. ISli. Gentitina puberi -.. (I. bor. amer. I. p. 176. Flowers large, blue. Segments ot" corolln blue.

Lini arAi, avid Erica] i Vug. Ch. 1818. PI. | foot.

\S 1 .iiiuil. branched ; leaves w-• stem-i'las; -ovate, very acir.e; tiower* disposed in terminal and lateral fascicles : corolla .10-cleft : tin- $ regular nul ihe 5 S.ITI—iiij) ones MII;II] and i-iliuud. 0 . ! H. N.m\i' at* Carolina Bad (.';inad:i. OB hiph >na scuta, Miclix. tl. Imr. inner. 1. p. Purtb 1. p. 1 SO. Fertile branches much shorter than the sterile one*. y Miiall, greenish y. i«, <n *tWKJ* >ihort branches. " Howers nuwtly solitary, axillnry, and terminal, upon . calyx nearly divided to ilie base, 2 of mailer than the oilier* ; corolla cainpnnttlnte, 4-5- • purple ; sicjrntents setni-ovate, acme ; orifice ciliattd:" rx Nutt. pen. I. j>. 17^. Perhaps a specie* of *Burythai* haux' plniit and Nutt all's be the same.

Acut <1 Ertcala. PI. \ foot.

14 E. VL'RKA (Berkh. in Hum. arch. I.]J. 41.) stem bram-lied nt bottom ; hrwirnw t-flomrad ; tdtoal ones spreading. Cfewdodj corolla tnlver-ithaned, 5-dcft, with a» many small bifid, accewory segments. It. H. Native throughout Europe, on the alps and mountains, nnd in humid meadows, a» -ivoy, Piedmont, Austria, Carniola, Arc. In England, in Teasdale Forest, (hutiam ; and bei Gort and Galloway, m Ireland. \ WQU. »i>ec. l.p. lava, exclu- irkra, Pall. Smith, engl. boi- 403. Curt. hot. mag. 491. Lodd. Imt. cab. iiii. fl. UMtr. 1.1. £. UocdantD tiuna uroatf»ta,Schlekh. Mall, helv.no. Ci <.,,. tl. fr. 1. p. '.J94. Nip|> nn, Bebmidt, fl . I. 5. f. 9.—MotT. hi C., r. emac. itianOlla diilcis, Oaaa. in SchcnidsjL op. (jetm. 2. hisive of Lm. name.—Ban el. icon. ;. 1 Stigma finely strrated, saucer-shap,in l. Angles ol calyx undulated. Segments of corolla nmi CoroiJas a«ure blu »ory seg- i ide fusiform, miretrng when ronefc. Mem hardly excredinc lite corolla ; segmen•« of corolla acutely serrated. *11,* H. Natite of the Nfiric alps, Carpathian mountains, as well a* of Siberia, at the Baikal 1W1. gent. p. *65.* Gentiana Bavariva, Jacq. obs. 3. p. 19. t. 71. ;. verna y, Lam. diet. 2. p. f>39. Gmcl. syst. 461. Bcop, earn. l.p. 178.—Barrel, icon. 109. f. -'. sVicsIa* Renaalm. spt-c. p- 75. t. 68.

Var. y, eUmgata (Frotl. gent. I. c.) stem elongated, lilt form, nearly naked, 1-flowered; calyx oblong, i-ijiial; radical leaves rosulate. %. H. Native of Austria, Oast, rlongiia, llifiike, in Jacq. coll. p. 68. t. 17. f. 3.

Vmr. c, Uaclii/fifiifllltt (FreeI. 1. c.) leaves laoceolate-rouadiaa, very short. If. II. Native of Dauphiny ami Cariotbta. Gentiana brachyphylla, ViU. daupb. *t.* p. «58. no. 12. Barrel. icon. t. 103. l. 2.

lar. t, acuiifiora < I), C. fl. fr. suppl. p. 427.) segments of corolla acute, 1/.11. Native of France.

i'nr. i.. *trrnifoim ;* cnuljiic 1«T1 *:'* in a whorl. -. i), *(Uka ;* corolla wliiic.

lar. 0, tultataiiltt; plant almo-i without a stem. **O. H.** Native of Switzerland. Gent, verna *fi,* Wahl. helv. p. Gent, pumila, Sut.

Vmr. i, *M-rJiiluj ;* corolla G-cteft ; calyx ventricose, tridenlate. %. 11. Mtppinn nexndum, Schmidt, in Kurm. arch.], p. I

•>*g* Ericnta. Fl. April, May. Englnnd. PL \ *foot.*

15 E, JESTIYA; stems ahort, 1-flowered; leaves oval, all equal,crowded| calyx rantricasc] corolla funneltihaped, 10-cleft : having the oecessory segments small, bifid, and acute ; stigmn evp-shapod,deeply crenated. "U- II. Native of Bohemia, Aiixiria. :Mid Bajvafja, on the mountainit, in meadows, Gen-tttaa atstlva, Bona. at Sdrakaa, tyattf. p, 154. II tivtim, Schmidt, A. bob. no. 119. Ito'in. arcli. 1, p. 1(1. t. ft. £ *b.* Calyx more angular, and the stigma men deeply crenatcd tli.ni in A', *rrrna.*

Vm 1 »M (Haoq. pi. alp. no. 4. 1. *%A, S.)* stemless; calyx short, pentagonal; accessory segment* of corolla pernibifid ; stigma fiinncl->hsped, ciliated. %. II. Ntv love, nasvr tin

:nmer Encnla. Fl. June, July. C!t. 1818. PI. i foot.

B. I'JIVA Tint A; laavaa obovate, all sessile: caul in, reriote; (lowers »« rolla 10-deft, funnel-shaped; accessory wgmentu unknown. If. II. Native of the Carpathian mountain Carpaihiru, Kit. in Scbultes, fl, austr. . no. 1008. Said to be nearly allied to *E. virna.*

(arjwtJuan Eriesla. PI. \ foot,

17 B. iMnmcA'T*; stems tufted, shorter than the flowers; flowers solitary ; haves ovate, acute, imbricated, with scabrous edges; corolla funnel-slitt) having the segment* bifid. %. H, Nath 'xerbnd and Carinthia' on lbs tops of the alps. Gentinna imhrtcuta, Frii-1. pni, p. 74. Willd. spec. I.]' 1844, I 1, Lam. diet. —Cam. hort. t. 15. f. 2— ttarn-l. icon. t. 101. f. 2. ex Cam. Scbmidel, op. 1. 44, i. *tt.f,* *+. This tfrrirs apptm to be intermediate Ijchvm *j.. Bmii'ie** and *S-prottritm,* bw is very tiiiiunci from both. The lufl* are more dt-i leaves roumlixh. Limb of corolla brotuh r than in /.. bliu-; with iiv.itc-l.ini'eolatf acute segments : the accessory one (tale blue and rattier Itirge.

/wAricnfrrf-leaved Ericala. Fl. July. Aug. Clt. 18)9. PL } foot.

18 E. raosTBA'TA (Rorkh. m RoHO. arch. 1. p. |].) (l c m prostratr. filiform, leafy, about equl in Ufth so the fl haves ol. use, crowded ; carolla fu nnel-shaped, 10-cleft ; ,j ^ 5 accewory segments small and bifid. %, |). Native of Satiburgfi, on the tops of tin- alp*, Carniola, UuabMchka, Bc-h- iiu, Bay of *Su* Laurci I tian lalaada, frr.

it, lltcnke, in Jacq. coll. *2,* p. M« <• "• *i ²-. Tratt. fl. austr. fasc. 9. t. 8. FnaL gent. p. 75. Willd. spec. I. p. 1344- Hiupion prostrittum, Schmidt, I. c. Yity nearly allied to */£. lltutirna,* but all parts of the plant arc more slender and the flowers much smaller ; calyx less angular; segments of corolla lanceolate, acute, of a watery blue colour.

Pnuirale Ericala. PI. 1 to *I* inches.

19 E. AHOCLUSA ; stem shorter than the flower ; leaves ovntc, obtuse, 3-nerved : radical ones crowded, imbricate; calyxes keeled I; corolla salver-shaped, 10-clcft; segments ovate, obi the 5 accessory sogmrms small and bluntly bititl. *%.VL.* Native of Caucasus an |>ntliian mountain;*, in ratlirr humid alpine pfarsji (i,!iti."iua;i»gulo»a, Bwh. fl. taur. I.p. 197. suppl. p. 190. cent. pl. r• r. ros«, 1. t. 47. Gent, vtrna *y^* angulota, V alii. carp, no. 210. Gent- uiriculosa, Wahl. helv. no. 278. Gem. Bavurica, Pall. ross. *i.* p. 110. exclusive of the syn. of LsB« Gent, umflora, Georni. "in. I* p> 20,1. t. 1. f. 2. Habit and Mature of *B. tun:tt,* but tha Bowan ;ire larger, and the calyxes bladdery.

Angular-caiyxed Kricala. Fl. April, June. Clt. 1824. Pi. \ foot.

20 E. BAVAWA (Borkh. in Itcem. arch. 1. p. 41. Schmidt I, op. gesn. 2. p. 43. t. 27. f. 85.) Menu 1-flowered ; leaves ovate, obtuse : radical onus crowded, imbricated, litr^er than tha cauline •ne»; corolla fumu-l-shaped, 10-clefk ; MgaMOla entire, or slightly serrated: the accessory ones small, bom-formed. If. - 11 - Native of middle Europe, on the alps. (J.nti.uin Bavurica, Lin. spec. 331. Vi)l. datiph. 2. p. £27. t. 10. exclusive of the m. of J:ic<{. Hirnke, in Jacq. coll. *ft.* p. 75, no. 32. Gentiana strpyllifolia, Lam. dici. *t.* p. 640. Pen. ench. 1. p, 285. Hall, helv. no. 645. Ilippion Bavuricinti, Bchmidt, bo no. 120. and in Ram, arch. 1. p. 17. t> 4. f. 1 .'. < prostraia, Funk.—Barrel, icon. 101. f. I.—Cam. hort. p. 65. t. 15. Difiifera from *E.* trrna, in the leaves being obtuse, not acute. Corolla deep blue. Ovarium pedicellate. Stigmas 2, downy.

far. j}, itnhrieiita; flower exceeding the stem j radical leaves crowded, roundish. %. 11. Native of the alps of Salxburgh and Cnrinthia. Frrrl. gen. p. 71. Gvntii'tna bnbricata, a I>. C. fl. fr. MtppL p. 427. no. 277X.

VttT. y, elongate; item elongated, 3-4 inches long. %. II. Froel. gint. I.

Var. i, albifUira ; corollas white. Fra-1. I. c.

B.; iiicala. Fl. July. Clt. 1775. PL } f>>

21 F.. cauctA'TA (Borkh. in Rcem. arch. 1. p. 27.) stemo ascending, terete, I at the base; leave* broad-laneeolati-, 3-nerved; flowers terminal, and axillary, cnmdrtl, nearly aeaaila; calyx 4-tooihcd, mu-tjual; corolla tubularly campanula!*-, H-clefl I having tin- 4 n^-ilar stgraenta I and the 4 accessory one* small, acutely bifid or jagged. %. II. Satire of middle Europe, in dry, exposed, n ountainous places ; as well as of Caucasus and Siberia. Gentiaaa cruciato, Bauh. pin. lt)H, Lin. »nec. 334. Jacq. aumr. 4. t. 372. Pall, roaa, lOtt. Hfppkm crucia 3 mi.li, in Rosm. arch, I. p. II. Maycrhoff, fl. itton. t. 153. TretrorrhUa Renealm, Bpaea *t$>* Ntrba iiiUoiiuin, Brunf. 2. p, 52.—Gcr. emac. 433. f. 4.—Mor. hist. t. 5. f. 16. Leaves connate at tbe base. Bractcas lengtli of flowers. Calyx cleft on Corolla with a pale tube, widened upwards, and a pale MM limb, dotted with green in tl»-throat. Capsule oblong. This apecics differs much in habit from the rest: and hai much the ,ranee ot - *mmrophjlln.* Seeds oblong, smooth.

Var. p, minor (Cam. apfe. 4) 7.)

Var. y; stem humblr | flowers smaller ; segments of corolla aewte. %. II Pnel grot. p. 2ft.

-war/Ericala. Fl. June, July, Clt. 1596. PI. J t oot.

22 E. irATiiA'ctA ; sum erect, simple, nearly terete; leaves lanceolate or oblong-la unnate, acute, approximate : is termin. :ily^ 5-toothed, cleft on one side ; corolla fum.- ; limb 10-cleA : the larger *ep roundish, ohtnaa, and Mory oh i undivided, at length 2-lobed. IX- H. Native of Mexico, on the i astern declivities af mountaint, near Xalapa. Gcntiana »|mihacea, H. B. et Kunth, nov. gen. ainer. 3. p. 135. no. 15. (inn. J»IIHH.T. Wflld. iclia, mw. Leaves 3-t" mvmbranout. Mowers erect, sJxcof those of *Gmtiitna crucuttn.* blue. Ovarium sub-clavate, compressed. Style short.

5/MtfAaremu-calyxed Ericala, PI. 1 foot.

^ 2. *Annual plantt,*

23 K. UTKicvL«sA (Borkh. in Itntn. arch. I. p. 27. brancliL'd j branches alternate, I lowi tlyx carinattl "niLTtd : radical leaves nuulatr, OV« -patulatL* ; Ik talvcMhaped, 10-ctefi acuie, and entire : ^*ory on< crenati.l. »«^rly an in *S. vtrna,* ⊙. 11 Native from the Baltic to lha M, ditirrancan, in mounuin pastures and subalpine places. ua Dtriculosa, Lin. spec. 332. I p. *66.* Willd. sjKfc. I. p. 1343. Hall, hclv VaJdst. el Kit. hiinj(. I Hfppioa utriculosum, Schmidt, in Rom. arch. t.p. I] It.irr. I. i. on. IK. t. 48. f. 2. not J.—Column, eciihr ,nd bram*ht>« ob». iragonal. Corollas beautiful blue; tube whitish, striped wil lliii apecics is i asily recognized by the 5 , rominent wings of the calyx, and the HUver-shaped corolla. *Ro<*

I ar. /J, ratnuia ; stem hranctx-d nt ilu; baw ; bran< gated,)>flowvred. O> H. Native on mount Baldo. Freel gent. 1. c.

fur. y, unifiora: Stem simple, dwarf, 1-flowered. 0. H. Fra-1. I. c.

Var. 2, albiflora ; corolla wl.:te.

Bladdery-calyxed 1 BricaJa. 11. April. Clt. I8M. PI

24 i i.i* (Borkh. in Ita'iu. arch. 1. p. *£7.)* stem simpU fir liranclicd; branch* ate, l-flowered; rndual I leaves crowded, ovate, < ulisli! OMSBM ones lancoolat' tubular, S-todthid, srkh acute, hardly ki-clt-d jin«l<« ; oorolla I »hai)ed, 10-cleft ; the accetaory aegmen ⊙ II live of Europe, from Laplaixi i iicc», and Italy, <m the alps. ID Scotland, as M • uitana nival is,Lin. spec. M6. I t. I. p. 8a. Willd, epte. I, p. U44. ;l. Lot. 8if(i. Wnhl. lapp. *y,* St. lit Iv. p, (x. *Ot*\ fl. dan. 17. Hall, lu.lv. no. ti47. t. 17. < : «. t. 7, (. r. t. 5. f. *S,* Sirm and branche* tetragoiuil. ical onenacuti I toOai salver-shaped, blue, greenith i • Calycinc segments acuminated.

tar.)i, minima ; stem DIW ?» »ery short. ©. H. Nat I >,iu|)hiny. Gcntiana n , Vill. danpli 2. p. Itf. t, 11. f. I,—Barrel, km r. 7, Aiimi/i.-,- strm humble, u»ually 1-Ho Yrry N • • I uropt I>abrador, I ^t-nt. I. c. cxclutiw of the aja. Hippion n.v.ilt. Bchmidt, in Kum. arch. p. IS. t II

Var. 2, albiflora ; corolta* while.

A»(wry Ericala. H. Aug. Scotland. PI (foot.

23 E. aauAaaosA ; si divaricate, gluudular hain • rcniolc, alicnuiiUd at b • tig, mucronatc ; vorulla funnvl-nhaped, 10-' or MBaaaory M «mall and bklealali Babcria, ondrj SM mouuuins, at the rivers K.rlyk and Kan. *MM* stjuarrwsa, *IA-A.* rncm. acad. sc. patsri

.'7. no. 13. ill. ft. roas. t. U. Gent, aquatics, Bieb. suppl. p. 92. Gent, aquatica, var. y, Fro»l. gent. p. 77.—Corolla blue, hardly exceeding the calyi 'uas sessile, rcvolute.

Hijuarrott Ericala. 1*1. \ foot.

20 E. AQUA'TICA (Borkh. in Hcem. arch- I. p. 27.) stem coaTCtate, erect, branched; flowers terminal, sessile; leaves libtHMe. imbricated, keeled, mucronate, canilaginously margined ; teeth of calyx ad pressed, acute ; corolla funnel-ah aped, i the accessory segments small, bifid?. ©, II. Native i ia, in sandy, alpine meadows. Gentiana aquatics, Lin, :nnoen. 2. p. 343. spec. 33i. moac. 3. p. 258.—Gnwl. sib. 4. p. Ill), no. 76.—Hipnion aquaticum, Schmidt, in Rirm. arch, R. p. 10. no. 1%. Stem beset with glandular hairs. Calyx ith 5 winged angles. Corolla pale azure hlue. Capsule rI,'iv.itc, elongated. Stigmas obtuse. Thecapodium equal in jili to the calyx.

. I-.untie Ericala. PI. \ foot.

27 E. LOUR li ai; stems tufted, simple, 1-flowered; leaves lanceolate ; calyx acutely 5-clcft ; corolla funnel-shaped, 5-cleft : the accessory segments smaller and plieat*; stigmas sessile, rev "lute. ': . H. Native of China, in humid places about Canton. Gentiana aquatics, Lour, coclt. 172. but not of Lin. Corollas blue, terminal, solitary.

Loureiro's Ericala. 1*1. } foot,

28 B. I'm SBE'RGII ; stem simple, 1-flowered; leaves with membranous edges: radical ones, ovate, acute, crowded : ct.uiiue ones ovate, minute, connate, ovate-oblong; calyx with 5 membranous angles; corolla funnel-shaped, lo-clelt, sessile: tin- accessory segments smaller and plicate. 0. II. Native of Japan. i aquiiticji. Tliunb. jap. p. 115. Corolla blue.

Tkunberg's Ericala. PI. \ foot.

89 E. si; i tves spa tu late, mucronatc, connately sheathing, remote; (loners numerous, pedunculate, nutant; corolla 10-deft, twice as long as the calyx; calycine teeth adprcssud ; ip- ilrical, sub-truncate ; having thceapoitiutn exceeding the corolla. 0. II. Native ia, on the tops of the Alps, against the river Tschuga, in humid places, Gemiananu- Uunge, in Ledeb. fl.ah. I.p. 284.

r *I trooping* -flowered Ericala. PI. { foot.

30 E. HOTLIIA NA ; mem much branched, filiform, slender, tltrxuous; Howers numerous,solitary, pedicellate ; radical lea ves large, ovate, mucronately awned, tprcading, Hat, 3-t erved, glaucous beneath : cauliue ones linear-lane col ate, niucronatc : having the top of the keel and edges cart i lag i nous) y and minutfly dttt* ticulated; corolla tuhular, 10-cleft; the accessory segments obtuttc, bidentatc, much smaller than the other 5, which are lanceolate, acun inated. ⊙• II. Native of Nipaiil ; and the iluualayah, at a place called KhofW Pass, Koyle. Gentiana decemfida, I). l)on, prod. p. 127. Gentiana k<> Wall. cat. no. 4393. ' <i'ntiuna r paria, Nam. herb. Itout simple, fibroimly branched. Calyx tubular, with long, subulate, sctaceously inu- Ite, equal segments. Corolla twice loin;, r than the calyx. Anthers incumbent. < karium stipitalc, ied, cunentd. Stigmas *n*\volute, nearly ter.u-, minutely papil Ktse-

Royle's Ericala. PL 1 to | Toot.

31 IS, HaMMa'l (D. Don, mas.) stem erect, branched; leaves sessile-lanceolate, mucron ulate; with cartilaginous •dgrs; (low ers sessile, fascicled ; coroll i tubular, 10-cleft: the 5 ah accessory se incitts a little smaller, • ntire, acute: the otli> r 5 obtuse. ⊙. i Native of Nipaul, Kamaon, Stlhet, \c. Gentiana pedicel *MM,* Wall. cat. no. 439t. *i* confuted with 6V*- *tiana coron i,* Koot simple, braodied at the base, i leaves coriaceous, nerveless. Bracu-a* similar to the leave*. Teeth of calyx ovate-lanceolate, mucron nntc, *kb scirioui adf ● .« azure blue, rifaments flattened. Ovai membranous. Style elevated ; stigma 2-lobcd ; lobes flat, obtuse, minutely papillous. Habit of *Gentiana Hoytt-i,* if Wallich and Uoyle's plant be the same.

Igmatt hlffi Ericala. PI. 1 to 2 inches.

32 E. N ' m n ; stein much branched at the base ; branc simple, I-Ho*ered; leaves oblong-lanceolate, imbricated; IVIth white cartiUginous edges; calyx 5-angled, with erect, acute teeth ; corolla fiinntlsh.ijHtl, 10-elcft: «ith lanceolate acute segmenln, the 5 accessory ones rather the smallest. ©. H. Native of eastern Caucasus, and Siberia, on the mountains, in humid, grassy places. Gentiiina humtlis, Stev. mem. soc. inosc. 4. p. 258. I), suppl. |. 191. C.aquatica, Pall. fl. ross. *ft.* Bie *U* 97. f. 2. I iquiitica Caucasica I, Cav. hort. gorenk. 1812. p. S8. Gent, aquatica *i, Yt-* gent. p. 77. Gentiina liAmilis at|n tica ma, A mm. ruth. t. 1. f. I. Ktxit llender, \\hite. Leaves glaucous, green: lower ones largest anil rounder, becoming narrower and neuter as they ascend: cauline ones sheathing. Corolla blue, twice as Ions as the calyx. 'JVeth of calyx equal in length 10 the tube of the corolla. Capsule obovate. nearly allied to *£. aqutituti.*

HumbL Kricnla. Fl. April. Clt. 1824. PI. { foot.

S3 K. rt.AVA; stems numerous, 1-flowcred; leaves lanceolate, imbricated : radical ones elliptic, rosulate ; corolla funnel-shaped, 10-deft; having the 5 accessory segments small and emaruinate. 0. II. Native of BohfiniLi, ftlx»nt lion- «:crn. in dry places. Gentiana fluva, Mayer, abh, boa em. gcsselsch. 1785. p. *id.* t. 1. f. 1. Schultes, OMir. tl. Id. ed. no. 1012, Ilfppion imbricatum, Schmidt, bohc.ni. 2. p. 117. It win. arch. I. p. 15. Calyx ventricose, yellowish. Corolla deep yellow, uith short, subulate, Kpreadin^' segments. Stigmas yellow. Said to be intermediate between *E. virna* and *Pyrastrata.*

\'t'{(on--dowered Ericala. PI. 1 inch.

34- E. Dtuoi.AM*SA*\ stem branched,angular ; cauline leaves sessile, broad-ovate, somewhat cordate: radical ones ra.-ulau- tlijwers white, [K'dicelbif. by threes Irom thf tn}>* of the brand and stem ; corolla cam pan ulate, 10-cl< I accessory segmints small and bifid, tin- <n hers lanceolate, bluntish. ©, I Native of the island of Sitcha, and in Bortll-WMt America. Gentiana Douglasiana, Bongard, in mem. acad. pete rub. *H.* p. 15<>. Koot per|>endicular, tihry. Calyx campantilatv, with lanceolate, acute segmt-ntt. Corolla white, twice as long as the calyx. Anthers oblong. Stigma sessile, 2-lobcd. Ovartum <>bli(iii.r. roinpressed.

Douglan'u Ericala. PI. \ to ^ foot.

$5 E. ARGs'tiTK\ i. HISS.) plant of a cinereous grey colour,fascicled or iui nTe»; leaves and calyxes lai- l.itr, setaceuuily mucronate, keeled, ritnrved, with scariously membranous edges; Howers Mgsile, (emmal, aggi >rnc- teate ; coratta Iriigih of calyx, 10-litbcd: the *5* accessory seff- MW ovatf, obtuse, train, membranoas, smaller than the <>' *5,* which are ovale, acumiuate<l, having their mat gins inv fat* nbov< .11. N iti\< MI ili. Ilimalaiah. Gentianaar^;. Roylc •Mi li.i..[nliform, desoending, Bbrously branched at the base. Plant CI>III]K>MI| i iiort, crowdeil, leafy braoches. Leaves crowded, recurved I y spreadillf, itlvery, with white, finely *crrulated edges. Calyx tubular; MgmeMf; aod bracteM IMKM mucronate, ivctllffVtL FibuMOti ml ulate. \nther« incuint>ent Ovartum cuneate, oblong, sessile. Style clung, 'igma» obtu |

.Vi/rtry Erieala. PI. I inch.

36 E. fH(xL-'xnr.xs (D.Don, HIM.) plant green, annual, of many procumWnt stems ; leaves lan< mcronate, < marginate' flat: radical ones lar^ HMOM ; Hokt lubaggregate, terminal ; calycine segments lanceolate, mucronate, recurved ; corolla tubular, 10-deft, longer that the calyx •

5 of ihc lobes ovale, scute, and tlie *5* accessory ones roundish mnd very short ; capsule euiwaie-comprewscd, winged at top. ©. H. Native of Nipaul. Gentians procumbent, and G. radicata, Royle, mm, Plant tufted ; sienta tilifwrtn. loafy, procumbent, 1-2 incha* long. Flower* on short pedicel*, filaments xulmlato. Style short : stigmas eemicylindrical, rcvolutc. Capsule pedicellate: wings crested.

umixnt Brycala. PI. procumbent.

37 E. CANTA'TA (D. Don, m»s.) stems simple, annular ; .ingles winged; ! !.ne, mucrnnulate, nervelcus; fh in dense ttnabd fascicles, sessile; calycine segments oi d, nacronate, recunri *A,* with (carious edges; corolla lunnrl-shaped, 10 lilbcd : the *5* accet»ory lobcn very short, and i ic-d : i he other ~> OVttC, nimic , i :t]>sule ctiiu-nltrd, created at top, 0. M- I Nipaul, Gentiniiacapitata, I* prod. fl. in jt. p. 1 .'»;. Gaat tXMffeta ntidG. capituta, Ktiyle, msa. Root* fi'iry. Itrncicat ovale, fbKacexma, uivolucr.it ing, K< mucroiinU-. Flowm sue. of those of *Eurtjfhaha camj>cttris*; pale blue. liljnitjits capillary. Stigmas st'iuicyliudncd, revolute.

tafr-flowand Brycalt. 1*1. J foot.

38 E. COBONA'TA (D Don, mss.) plant depn atad, tufted, ah stemless: li ,< ulnte, acute, obaol Kpn'iidnifi, nith cartilaginous edges; (lowers aggregate, sessile, invttliuTjtet! I>y lanceolate bracteas ; calyt-tue teeth ovate, mui Mih ftcarkms edge* ; corolla tubular, 10-cleft, crowned by a fringed ring ; u-^ments t ml, ovale, UHLcronulate. &. U. Native of the Uimalai.i)], (Itntiiina coronam, Royle, PAM> limits filiform, hranchid. Itroctcait connate at the ba«e. membranDua. Corolla longer than the calyx. Filaments tubulate. Ant her • oblong. Ovariuin *e«ile, Btjla elongatiil. Siigmas setnicvlnulrkal, rrvolute,

Crvmtud Bowered Biycala. 1*1. 1 inch, tut'tol.

39. E. onnt(i t.\'T\ . irn^onal, |wniriil»tely hrnnched at top; leaves roundish, piinnenily mucrmiaie, *n* runnl, «ith thick catlilagmoni edge* ; flowen pnnicled, solitary, aCMtle, at the tups of MIUIII brancbet; calyctM segments lanceolate, pmi- (jentiy nmcrotiate, ;i> llM *t\,v* Kginciit* i.t the corolla; acceMtary •egment* of corolla mwlL ,11. Native of BMM linltc*. i i>rUi fu] ita, I Icy ne, htrh. ex Wall. cat. no. +3U5, FloHera small, blue, ll.ihit of n ipcd *ptiiim.*

Orft/fu/flf-lcaveiJ Erycala, PI. J to J I

Cu/f. The *pefiet arc umall alpine plants, tx-.iring blue fliimcr-, which are large in comparison to the size of the plants. They fthmild be grown in »mall poU, «t II drained with sherd*, in riili Ughi mould, or a mixture >• loam, and • *1.....>u^ other alpine plant* I either incrtBtrd by dividing at the root, or hy seed, which ahotild W «own a» soon as ripe. The annual kind* require the same trralinent as llirsiev. i-MSDM UM; and •<> 5<t. *aiithat,* a flower: UM-d in diiurder* of lung'!.. CordahtMi 1.]'• '''•' '- -'• i*Ofci icon. *AiVi.* CUT. emac, <yana i 09. t. 63.—(iriiti.itia f)|Mcics of Lin. and others. I'lieuinonanthe species, ^cliinidl. Das'. species, lluikh, in lltrni, at ' mnalis •jxcien. tinrklt. 1. c.

I.is. *tntt* MMHHU*AH *I'cntandna,* Calyx 5-cleft. Cor.ill.t compsuiuUtc, or (unnel-«ltsped; IO-deft,Uw 5 ultrrnatc segments ustmlly umall, hilid, ur frit ,i tulM*. i>r free; filaments flat Capsule t-celled, *2* valved : seeds anj^rular, oblong. —Glabrous herb*. L M * M oji|iotitr, decussate. Flowers terminal, solitary or crowded.

| I. *Anther* combined. 7'hii t.rtion contain* tAr trut wpecie* of tkt ficnu*.*

I. 1' ACAI'LIS (Schmidt, in K«?m. arch. L c.) stems ietrago>

nal, 1-flowered ; radical leaves crowded, imbricated; corolla OMBfKkBtdatC, ''i-cltft ; M'gmeni* obtuse, rflucronate, having as many small accessory segments. *Tt.* H. Native of the A)p« of middle Europe, as of Austria, Hungary, and France, AS well as of Siberia. Gcntiana acaulig, Lin. spec. p. 330, Fnrl. gent, p. -57. WUld. spec. 1. p, 1340. Jacq, Bustr. 2. t 135, and 125. Smiili, titgl. hot. i. U!t4. Curt. bnl. mag. i. *bi.* 0 ttau grandiftora, I «h. I. p. i'S5. < acaulis, var. a, grand .in. did. 2. p. 637, no. 9. Ciniinalis ill is, Itorkh. in Ku'in. arch. 1. p. Jt6. Ciminalii longiflora, i. p. 514. Ctmbalia grai I. ft. mon. l. 37.—Schmidel, op. gctn. 2. p. +4. t. *27.* f. 8fi.—Barn), icon. t. 37. Flowers very large, blue, ? inches long, with 5 yellow mark- i ~tiKma orbicular, fl mkttd. Capsule ataubiSd. There .ire 5 nii-Hiterou* tubercles *a* the bine of the ovarntm. t uh cartilaginous margins.

frrnatMsV«(Lan diet. 1. r.; plant \<ry dwarf; leaves) l-nerv. *i 'j.* 11 ntiina acaulit /), Fru-1. gent. I. C 1 hylactites, Rcncalm, •peein. p. 70, t, tlB, f, 3,

far. y, cautctcent (Lam. p, CS8. no. 10.) corolla mpaaalaK r than the stem ; caalioa)< »*«t< %. II. Pratt m u L *C* exclusive of the lynanyo ia acauhsc. D. C. fl. fr. 770,—Ii n. t 106.—Bocc. i

Car. 2, angtultj' ,yH|, fl, p. | •• oblong-1 ll,i campanu' th« stern. It- H •* angttatifdlia, \ill. il.mjili 526, no. 7. Gent, acnuli*, I,in. and Willd. . il. t>, no, 2770, Pnetnnonamhc angusttfulia, Schmidt, in K<em. *;»* p. 14. no. 10.—Lob, icon. 310.—Barrel, icon. i. 1 10. I'. *. '«•• '; »tem 8-flowercd. 1/.II, Bnuli. him. d. p. 523.

Car. C. *aibijfura*; corollas white, or nearl) so. ^. H, pi. nr, S. JI

I nr.j), rahrguta; leaves variegated*

I nr, .?, fiore-ptrno; corollas double.

<i/e*»(' .il I \| ... h,May. Britain. PI. 1 foot.

* I'. VULGARIS (Schmidt, i'i Ku'in. ari-h. 1. p, 10, m> tamgooalt leaves linenr-spmulnte, ol • . terminal ami axillary, pedunetl rolla funnel-1 with acuminated segments. %. II. Naii\ Norway to Sicily, Caucasus and Siberia, ii ntid meadows. In BrittsB, ihiiiitlant in Lincolnshire and ^orkshire, in boggy parts of heath*. Found i.y Mr. Newtown between Clapham ami namr 1> by Ifi I'ofield; imoreland, and m Lancaahirt, >nminoii; M*I • i a tn, near Gravetend ; m un, &t ! it; aa well as at Lelii and near Dart ford, » Pneutnonii> »pec. 3**. Smith, engl. Iwt. u 2<). Mall. helv. 6+1. Fl. dan. t. «G9, Pall. 105, Hub. fl. c»uc, l.pbtM. k»a. t. <» and 1 I (. 7. Jaumr, St. Mil. t tiuna In.- Urn. fl. fr. X. p. *29* • • |', ,imo_ nlLt,,] m_ •«"• I. p. *6.- SchmidrLop. gesn, 2. p. 40. t. 28. f. ,ire), icon. t. 51. f. 1 t. 52. f. 1-8. and t. lit.f. 1. GemianaCslalhiaiui, Bauh. I Bool fihrous. Stems simple, tetragonn'. I having tne aeeeasory acgin. II and green. At Barnaoul * •*"• " id-leaved var^ rs.

dwarf; leaves broader. *X.H'.* Lam. dici. *. p. fl«« Schmtdel. in op. ge«n. *t.* p, 50. t. *6. r. BO.—Barrel, icon. I. right-hand fig-

vale, obtuse ; •tema 1} foot high. %. \\ I'ml. K<nt. 44.

I ustiallj l-fluwernl. *If.* H. Schmidel, op, gesn. l. c. t. a s. r.

Car. I, corollas white. It. II Froel gent p. 41.

Var. C, gvlKite (Si™, bot. mag. 1101. Pall, ross. 2. p. 211.) stems decumbent; leaves ovate-lanceolate, obtuse ; segments of corolla dotted inside.

Far, ,,; corolla* 4-cleft, with bluntiah segments; accessory ones .ubdcnticulated; leave* linear. *X-* H.

Var 5, *aKittdem* (Schmidt, fl. boh. no. 115. exclusive of the aynonymes), corollas [5]-cleft, 5-toothed, sessile; leaves connate; liWar-lanccoJatc ; radical ones fasciculate. lf.H. Native of Bohemia.

Common Calathian violet. Fl. Aug. Sept. Clt. Britain. PI. \ to 1 foot.

§ 2, *Anthertfree, incumbent or erect. The greater number of the specie* contained in this section trill be found probably to agree better nith the genut Ertcdla than nith Pncutnonantfte,*

3 P. BICVSFISA'TA ; stems numerous, procumbent, terete, leafy, 1-flowered; leaves sessile, linear, obtuse; calycine »egments linear, lanceolate, tmicronulate ; corolla turbinalely catnpanulaic, 10-cleft; the 5 accessory tegmesfts small, bicuspidate, and the other 5 roundish, mucronsie. %. (I. Native of Mexico. Gentiana assurgens. Sesse, and Mocino. Habit of P. *culgitris.* Stem purplish, 1-3 flowered. Lower leave* tiarrovr-spatulate. Corolla blue. Filantents dilated. Anthers oblong, incumbent ; cells loose at the base. Ovarium fusiform Sty io very short; stigmas •cmi-cylin<]rii:;il, ininutily j>aj>i!lose.

Bicuspidate-Sowered Calathian violet. PI. procumbent,

t I*. MicHAu'xti; stems terete, leaveslinear-lanceolate, blunish ; terminal flowers in fascicles, axillary ones solitary, pedunculate ; corolla campanula if, with roundish segments, the accessory ones small, and acutely unidentate. 1/. II. Native from Canada (o Pemnylvania, on high mountain*, near the borders of lakes and rivulets. Gentiana I'rwimionumlir. Miehx. A. bor. amer. 1. p. 176. Pursh. fl. anier. sept. 1, p. 185. Gent, pscudo-pneumonantbe, Hum. et Schulws, sysi. 6. p. 140. Flowers Urge, dark blue.

*Mickaut** Culaihian violet. F). Aug. Sept. CU. 1600. PI. | foot.

5 P. OKXAVA ; root composed of thick fleshy branches; [4] stems terete, simple, numerous, ascending, 1-flowered; leaves lanceolate, obtuse, short, crowded, coriaceous; flowers solitary, sessile; calyx tubular, 5-clt-ft : segments obtute, much like tlie leaves, with wide recesses ; corolla funnel-shaped, with ithort, triangular, acute segments, having as many small ones between thj forger ones. %. H. Native il, at Gosaintthan. Gentiana ornata, Wall. cat. no. 4386. Corollas blue. Plant with the habit of *1'iu-umonanthe tmlgahs.*

lucked Calaihian violet. IM. \ foot.

fi P. TtirioKA (Schmidt, in Kirm, arch. L p. 10, no. 15.) stem terete; leaves linear, obtuse : floral one* alternate, drawn out: flowers terminal, sessile, usually by threes; corolla campanula^, 10-cleft; the real segmenu sub-cordate, ouiuur, slightly •errubifd : the accessary ones small. %. II. Nairn- of eastern •eria, in alpine meadows beyond the Uaical, Geiuiina triflora, Pall. fl. row. 1. p. 105. t. 93. f. 1. I'm;I. gent, p. 38. n Dasysttphana triflora, Borkh. in Burn, an h. I. p. 20. Sujxrior leaves nearly *3* inches long. Calyx •ubcpathaceou*, unequally 5-cU-ft; Moments linear, acutr la* [tale blue.

Thrtt-fionrred Calathian violet. Fl. June, July. Clt. 1807.

7 P AOstj'NDiw* (Schmidi, in Hu-m. arch. I. e.) stemi proewmbent, tetragonal; leaves linear, radical o,,,, dongatcd, 3-nerved j terminal flowers usually by threes, sessile; ixitlan solitary, lower of these pedicellate ; calyx cleft on one ..de, and 3-5-tooilwd on the other ; corolla campanula te, 10-ck-ft, with broad acute segments: the 5 accessory ones very small and obtuse; stigmas acute. T|. H. Native *nf* Siberia, in dry, grauy, mountainous places. Gentiana decumbent, Lin- in Pall. ross. *i.* p. 106. t. 94. Sims, bot. mag. t. 705. Frcel. gent. p. 43. no. 14. Gent. Pneumonanihe,Groel. sib. 4. p. t. 51. f. A. exclusive of the synonymes. Dasystvphana U dens. k rkli. in Kn'in. arch. 1. p. *26.* Radical leaves I'' nger than the plant; ex Lin. Corollas large, blue. According to the figure in Bot. mas;, the flowers are all pedunculate.

•-. a, Pallasii (Led. il. alt. 1. p. 281.) radical leaves narroucr, shorter; stems ascending; calyx 5-toothed, foliaceous, *X.* II

f ttr. fi, Ocb'iri (Ledeb. 1. c.) radical leaves broader, longer ; stem erect; calyx spathaceous, nearly entire. %. II. Gentiiina Gtblori, Led. act. soc. nat. muse. 7. consp. gen. gent. noi. aio.

far, y, adstimdtnt; stem* simple, decumbent. It. il. Native *ot* Siberia. Gentiana adscendens, Sims, bot. mag. t. 723. Flowers blue.

Aicaiditig-stvmmcd Calathian-violet. Fl. July. Clt. 1799. PI. decumbent.

8 P. rm'uiDA (Schmidt, in Roetn. arch. 1, p. 10. no. 11. t. 2. f. *2.* Towns, trav. L 13.) stems limplc, tetragonal; leaves linear-oblong, obtuse, nerveless; flowers terminal, twin or tern, sessile ; calyx tubular, 5-cU-ft, with liiifjir-lnneeolon*, acutish segments; corolla cnnipanulaic, 10-clofi; with lanceolate-ovate, acute segments, which are nuirnlcd on one side; the accessory fnts small and cmuibtt*d I Mi^ma orbicularly-cnpitate. *IL.* H. Native of Siyriu, on tin- Alp-, and tin- Carpathian mountains. Gentiana frittuln, Ilirnkf in Jnctj. coll. 2. p. 13. Wulf. in Kt.m. arth. *S.* p. 341. Willd. MC] p, 1337. Froel. gat. p. *3D.* no. 13. «iih a ftgurc. Wahl. carp. p. 72. Trait, fl. austr. lasc. 7. t. 1. Radical leaves crowded. Corolla white, marked with fuscrscent dots aud stripes, or bluish. Stamens blue.

/'rigid Calathian violet. Fl- June, July. PI. \ foot.

9 P. A'wiiDA ((Schmidt, in Bl—I •idl 1. p. 10.) stem* obsoletely tetragonal, or nearly terete ; Ic-ivt-n lim-ar-lanceoUw, 3-ni'rvcil ; Huwtiv tirtninal and latt-ml, JH iii< illati- ; calyx tubular, with linear segments; corolla campanula to, 10-cleft, with trigonal aegment*; the accessory ones small and serrated. If. II Native of eastern BJbcrtBt at the Jenessee, and tbfl ltnical, *&c.* AS well as of the islands of Kamtschatkn, and Si, Lawrence, in humid place* on the top* of mountain*. Giiminnu algida, Pall. II. ross. 2. p. 107. t. 95, Gent, frigida *fi,* Frwl. gi'iu. p. 39. no. I J. Doxy Stephana ulgida, Borkh. in Ru-m, arch, p, 26. Gent, punctau var. Pall. itin. 9. append, p. 724. no. 82. f, 2. which is Gent, punctiita ,>, Gmel. syst. 5. p. 460. Gent. li.im.mzovii I.fd. in act. sol. mote. 7 consp. gent. 181.',—fiim-l. sib. 4. p. IOC. no. 75. Calyx purplish, membranous, rhtft on one side, tetragonal, with uiie<|ual si'gn I orolla large, milk coloured, marked with bluish dots and atripes, and the limb of a livid blue colour. Thu is *aid to be the same as Gentiana ila, liv Cham, in Linntca, 1. p. 174.

far. ,i. d war fir; corolla yellow, marked with blue spot*. #.H. I i, p. 39.

/tlx'td t'rtljitlnaii violet. Fl. June, July. Clt. 1S08. *\, 1 to ½ bot.

10 P. <n LIPA : •iem» ascending, tetragonal: leave* lanreolate, 3-nerved ; low— axillary ami terminal, aggregate : rondla cam puiulate, wiili))tuntl«h «cgmrnu; the *5* •eotaen ones thort, an.ljac^td %. II. Naliv. .trly o$_n$ mountains above G• ndcha. (Jrntiiinn gelid*. I ••''. I, p, IPQ, suppl. p. \HH ilpina, Adatim, Hi.tlm, h-r t»7. Hal *frigtda,* or *P. trptimjida.* of (hose of *U./rigida;* cream-colour, or bluish.

OtU Cab t hi an-violet. Fl, June, July. Clt. 1807. PI. J foot.

11 P. BEiTK'jiriDA (Schmidt. I. c. no. 5.) stems tetragonal, erect, simple ; leave* ovate-lanceolate, obtuse, approximate, 3-nerve<l ; (lowers terminal, 1-7, in a cluster; corolla funnel-shaped, 10 cleft, having the 5 regular segments roundish, mucronate; and the 5 acce«ory one* jagged; calyx tubular, 5 cleft. 1/. H. Native of the mountains of Persia, near the Caspian Set ; and on the Cherson Alp*, in Tnuria, and throughout .Siberia, in alpine places, Calvx angled, angles ending in *hrrt^mlm* foliaccous tegmcnuK Corolla having the tube almost cylindrical, widening upwards, of n greenish brown colour outside, but dolled inside. Limb HRI blue. Filaments di lilted in the middle.

Var. a, :i»}iuHrtti!a; limb of corolla without any dots. I/. H. Gentiana s. pU ulida, Pall. fl. ross. 2. p. 101. t, 9*. I'. 13. .Sims, bot. mag. 1229, Fra-1. gent, p, 47. no. 16. Wjllil. spec. 1. p. 133'. 1. cauc. 1. p. 195.

Var. (\, *fnimliita;* limh of corolla dotted. %, H. Sims, bol. mag. 1410. Pneumonanthe septemfida, Schmidt,). c. Banrtbaua iteptcmfula, Borkh.

S«r»-eA*/>-flowered Calnthian-violet. Fl. June, July. Clt. 1804. PI. $ to I* foot.

12 P. B*roKA\>iA (Schmidt, in Ha?m. arch. 1. p. 10, no. 12.) atem terete; leaves oblong -lanceolate, 8 ejajaeJ : Mowers in axillary and terminal fascicles, sessile ; corolla camnanulatcly rentricotc, with 5 obtuse, entire segments, and 5 smaller accessory fringed ones. *11,* H. Native from Canada to Carolina, in low meadows and woods. Gentiana Mponaria, Lin. spec. 330. Frcel. gent. p. 32. no. 8. Sim*, bot. mag. 103!>. W,lh|, spec. 1. p. IS.iK. Michx. 8. bor. amer. 1. p. 17«. Pursb. fl. aepi. amer. I. p. 185. Gent, fiwliriata, Vahl. symb. 3. p. 47.—Mor. hist. 8. a. 434. sect. 12. i. 5. f. +.—Pinkn. aim. Irtfi, f. I. Flowers Crowded, line bine. Segments of corolla broader than long. Capsule fusiform. There is said by Fru-lieh to be a variety of this secies collected in Carolina, with a slew! •tern, and lanceolate, membranous, obtuse, .''J-ncrved leaves, with only one tcruiin:tl (lower to eadi stem, and having the accessory segmci: Ha ICHS toothed.

Sviifmnrt-ttfu Tahiti nun violet. Fl. Aug. Sept. Clt. 1770. PI. ! •.' *i* *

IS P. CATCSB.*.!!; stem terete, minute!) downy, and somewhat scabrous; leaves short, elliptic-ovate, acute, with scabrous edges ; (lowers terminal, fasciculate: ^corolla 10-rk'fi, campanuatle, eemewhat vem • berreUanapod] the 5 regular segment* awitiab, and the 5 accessory one* jagged. 11. 11. Native of Nortli iili Carolina, in open grniay places. OenttaM Cateiha'j, Walt. fl. car. 109. Null. *gUU* amer. fl. p. 172. Ait. hori. Kew, ed. 2. vol. 2. p. 112. Gent, sapontiria Andr. bot. MB. I. 418.—Catesb. ear. t. 70. Nearly allied I lowers palabh rvaa sessile(rounded at the base,

vi6y'« Calathian violet. Fl. Aug. Sept. Clt. 1*03. PI, f to I f.

14 P. ociiROLEi'cA ; stem terete, smooth ; leave* ovate-lanceolate, smooth, »-nerved; flowers di»fm*cd in sessile, termIIUI iVieiclei ; corolla campamtlaiely-vc»tnco«ie1 wiih 5 acute keg menu, and HI many small, simple, acute, occeaiwry ones ; calycitie sapaeeMi IBMM IIL-III the tntu' nl DM <''rn!la. V.M. Nainelr.mil'. tia to Florida, in dry, sai or gravelly hill*. Gentiana ochrolenca. 1'rtrl. gent. |>. .15, no. 9. I. «|>ec. 1. p. 1958. Sana, boi. mag. 1551. Purab, fl. sept. amer. 1. p. 1HS. (Imi. rQloe*i 1-m. •JP^PC- 330. rurl. gent. p. 30.«. Willd. siiec. 1. p. 1338. Gentiina*4 Wait. fl. car. p. I0U. Mu-Lx. tl. bor. amer. 1. p. Wfl. I'lK-umonanthc HetiHjtdt, in Hcum. arch. 1. p. 10. no. 13.—Plukn, aim. t. 186. f. 1.— Grov. vir. B. 145. Flower* yd low ith-green outside, but blue and striped with purple inside. Capsule ovate. • *fnatii*-coloured flowered Euryihalia. 11. ;>t. Clt. !803. PL 1 foot.

15 P. INTERMEDIA; stems erect; leave* obovatt-oblong, 3-nerved; (lower* terminal, aggregate; calyxe* foliacoous, unequal; corolla vent ricose, barrcl-sh:i|Mil, 11 (-cleft; the 5 acceisory segments small am) simple, as in *P. oehruUuat.* It- H. Native of Virginia. Gent. im< <iins, bot. mag. S30S. Corolla barrel-shaped,as in *P.ochroUuca, P.* aaanwli *it.* /',^r/«fct, *P.frigula,* &c. Acceaiory Mogmenu KIIU,IJU- nnd bilitl. Anthers distinct. Csjjni am) corolla now a«tl then 6-cleft. Corolla more or less whitish greca OUtrida, < hanging more or less lo violet, internally Htreaked with violet.

Intermediate Calathian violet. Fl. Oct. Clt. 1820. PL 4 foot.

10 P. INCARNA'TA ; flower* aggregate, terminal, bwnl atlfr ti. with an unetiuttlly jaggrd Ixinler ; leaves oval; petioles di rent. It. II. Native of North America. (ientiana inearnAla, Sim*, hot. mag. 1«5G. Corolla pale beat nt tl.e haw, limb white, tinged with green. Nearly allied to *P. tapvnana* and *P. ochroUuca,* especially with the 1B;

*Fk**A-coloured flowered Calathian violet. Fl. Oct. Clt. 1818. PI. 1 foot.

Cult, The apecies of this genus are all handsome border flowers; and *P. a<a\'tl't** is well fitted for adginga la b»rders. The| all grow best in a peat border ; and are increased by division of the rivot, and by SMLL 9etM of the rarer species may be grown in pots, and placed among other alpine plants.

W. **GLYPHOSPE'RICUll** (from *y\^^, gfypho,* to engrave, and *irrt;ifia, tprrmn,* • seed; seeds beset with excu\ dots), D. Don, mm,—Cientiittia specie*, Kuix el I'av. in herb. Lainh.

LIN. IYBT. *Puiygamia, Ditxcia,* Flo WITH polygarnou*. Calyx ft. Corolla tubular, with a 5-cleft limb and a naked throat. Stamen* inserted in the throat of tbc corolla; filaments alto* getttcr adnale DO tht- tube; anthers incutnbent; celts loose at the base, and diverging. Ovarium fuaifonn, e«mpre*si'<l 2-valved ; etjk hardly any ; stigma capitate, 2-lobed ; lobes very short, rcvolute, pruinosc. Capsule membranous, 1-celled, dehiscing at apex, many seeded ; placentas X, very narrow ; seeds round, runt coloured, full of excavated dots, di*po**d in aMin)>lr onlir.'—.Small, much bi mib*. Brant! scabrous, from papillae. Leav. .»l«ie, lanceolate, coriaceous, with wrruUied margins. Flowers copious, racemosely panicled at the tops of the branches ; eomllas small, violaceous. Flowers sometimes smaller and female with the rudinwnt* of siamma; soiiictime* larger and hermaphrodite, on diHtinct plant*. This genus has the lial j *tr<a*6cmt,* with scabrous branches.

I <;. vioLA'crr* (I). Don. mss.) branches scabrous from papilla- ; leaves lanccoUir, mucrynate. *h. S.* Natr I'er... (ientiana violicea, Rui« el Pa*, mas. *m* herb. Lamb. Calycine segment* Unceolaie. mucronaie, 3-nerx rolla twice longer than the calyx ; lobe* i crenulated.

1 ru/dccMM-flowered G1y}ilntspermuii

2 G. OKKA'TVM (I). l),ii, sjkn.) liraticlim glabrawat leave* ovate-oblong, obtuse, tj . S. Nan •! Guayai|iiil, 1'afalla. Brandies subtetragonal. Flower* larger than those of the firu species, violsceous ? Calycine segments oratelaneetilate. Corolla (win- IHBJM than tlic calyx: with flat, •he*, inn. Shrub 1} f<ot.

Cult. For culture and propagation see *Tachia,* p. 197.

XVI **SELATIUM** (from «X«c, *telas,* glittering: deep colour of the flowers). D. Don, in»s.— Gent,ana, Ruiz et Pav. in In rb. Lamb.

LIK. SVST. *Pent&ndria, Dtgynm.* Calyx wmi-S-partcd.room-branous, with linear, acute, flat, erect segments. Corolla **tubular 5-Wbed.** Stamens 5, adnate to the base of the corolla; filaments dilated, **flat, attenuated at ape*** \ anthers incumbent. Ovarium fusiform, stipitate. Style very short; stigma 2-lobeil I **lobes flat,** cunente, dilated. Placentas 2 ; one-half shorter than theovaria.—Perennial plants. Leaves opposite, sessile, veinlcs*, with scabrous edges. Flowers terminal, subracetno«e, drooping.

I >. **coecfKStrai** (D. Don, **mss.)** stems terete, ascending, branched, leafy : leaves linear-lanceolate, acute, veinless ; fl subracemose, drooping; corolla twice longer than the calyx. *%. V.* Native of Peru. Gentiana coivima, Hui/ **at** Pav. Leaves hardly an inch long, with roughisii edges. Calycine segments ovate-lanceolate, acute. Corollas scarlet. Filaments channelled ; anthers oblong. Ovarium oblong. **Style** hardly any,

Scarfa-flowred Selatium. PI, \ to 1 foot.

£ S. TOLIOSUM (D. Don, **mas.)** stem terete, simple, erect, leafy; leaves linear, acute; calycine segments linear, acute, erect, length of corolla; flowers terminal, fascicled, erect; filaments flat, dilated. %. F. Native of Peru, on the Cordilleras. Stem the thickness of a writing-quill. Leaves cm in an **interrupted** manner, glabrous, *1* **indies** long, with scabrous - : radical ones aggregate. Lobes of corolla ovate, acute. Pulicels bractless. Ovarium fusiform.

***•ft)* Sdatiam PI. \ foot.**

S S. **asao'aaui I'.** Don, m-s.i **Steal asmigent,** tt-r leaves lanceolate, hluniisli, 3-ncrvcii, **irith** scabrous ed flowers terminal, in heaps ; peduncles bibracteatc ; corolla I the length *>f **toe** calyx, with ovate-lanceolate segments, ^ I . Naliv, -'.in **thickness** of a nri'm$_L$- quill. Leaves 11 to 2 inchi els filiform. *ovt.*

Atturgcnt Selatium. PL \ foot.

S, **fa)iaaoU>EA**; stem simple, strong; leaves long, linear, acute: aggregate, axillary, form ether i d i raceme; corolla **cam**]....ulate, hardly exceeding tl<e e.ilyx. %. II, F. Notivi **of Pem,** at liu.iy-1 lu.iv, neor ! (lentiitna **tdca,** Il-Kik, hot. misc. *i.* p. 227. Root fusiform, naked at top. Leaves 3-4 inc! I **lowers** numerous. Anllier» oblong, it little longer than the filaments. The plant innx black on drying.

•/rtoid-flowered Selatium. PL 1 foot.

I ^ ; stem naked at bottom and leafy at **tea** j leaves elliptic, acme, 3-nervrd ; flowers axillary, ns;gre^ate at the •Ha obovattf, twice a* long ai tl with obtuw incurved legmerits. *If* V.* **Native** of Peru, alung with the preceding. Gentiana incur bot, mj»c. *2.* p. *9tt.*

iw.

***Imemrttd* flowered Selatiura.** PI. J *f«*

VTVMID. **DO sten erect, terete; ▷** linear-lanccohite, acuminated, mnnv-ncr\i<]; ; angular, elougated, umbellate, bractless; caly* enu ovai iiliular: lobes roundish ; seeds roundi>) N,iti»i **of** 1'iru. Lenvts /\ t.. with scabrous : ,*4* to '; *u* i an **umbel.** I lied, (hariumi)l' **igma capi**

JtUnuaUd Selstuim **Pi I foot**

7 **B.** turn "i« (" I)t>n, m**°"> *' em filiform, branched lif-fuse, terete ; eaves lanceolate, acute, 3-nerved, attenuate the base, «-t.ol««e; ne """•|v ^ threes, angular, ter-minal ; calycine segments o.j.te-Unceolate. acute; **corolla** rotate : with oblong, obv ,vate, imicrnnale »gmcnt». 1/ *I.* **Native** of Peru, . . 1 «I«KU«BO Uoot fustl orm. **I**

with scabrous edges. Filaments subulate. Anthers and ovarium oblong. Stigma sessile, 2-lobcd, pruinose.

Dijfust SeVanum. PL ^ foot.

8 S. MLLTICAU'I-IS f I). Don, **mas.)** stems numerous, ascending, ttitle*), tiliform : radical leaves pettoiate, ipatulate : cauline ones linear-lanceolate, aeutish ; **paduncUl** n>n.illy solitary, terminal; calyx turbinate: with lain- icronate segments; corolla **Rnoe)*afaaaad,** deeply 5-cleft: lobes elliptic, obtuse, connivent. *11.* F. Native of Peru, Kuiz et Pav. ELMM long. Plant tufted. Hatlical leaves crowded, all scabrous on the edges. Corolla **pale** lilac, twice longer than the calyx. Filaments dilated at bottom. Ovarium fusiform ; stigma sessile, 2*lobcd.

tlfiinif ttemmed Sdatiisin. PI. mfted.

Cull. For culture ami propagation see *ICudoxta,* p. SOS,

W11 *[* I.O'STOMA (meaning unknown to ui) D. Don. -Gentiiuia species, Unix **et Par.** in **berb.** Lamb.

LIN. SVST. *I'entdndria, IHgf/nia.* Calyx 5-partcd: with nvate-lanccolate, acute segments. Corolla funnel-»hn]u-ti, **twiea** longer thati [ho **carjpt** ; limb 5-parted ; tube bearded with long hairs **inside.** Stamens 5; filaments **dilated, attenuated** at the apex ; anthers incumbent, Ovarium **fusiform.** Stigma sessile, 2-lnbed.—A jK-ri'iinin), herbaceous, tufied **plant. Stems terete,** erect. Leaves **oppoaite, decuaaate,** (tcssile, linear-lanceolate, acute, obscurely **S-nerred, trftb** scabrous margin*; radical ones aggregate. Flowers umbellate, white. ?

1 17. m AM I !'. l» ••. •• - . *]* . Native of Peru.

Thread **Uloatoma,** PI. tufu-d, j i foot.

Cult, **For culture** and propagation sec *Kudoj'ta,* p. I02.

XVHI. SCHULTE'SIA named mi -.....rof Joseph Augustus Uca, hf.D. Professor of tt<nany at Lantlshut ; author of Systems Vegembilium.) Mart. inn. gen 2 p. 103.

LIN. SVST. *Tetrandn a, Monogynist.* t'olyx tubular, 4-**cleft,** 4-uinged; wings running out into erect **subulate** segmenu. Corc.lla salvcr-shajwd ; with an equal mix , a (juadnftd limb, and naked throat. Stamei is 4 ; filaments filiform *m* : anthers erect, unchangeable in ih<- **dried State** > bjlamellate. Capsule 1-celled, X-valved, many •seeded ; Meds small, angular.— Slender, gtabroim **btite.** Stems tetragonal, simple or forked. Leaves sessile, opposite,**decimal** e, lanceolate or linear. **PI** terminal, or in the forks, Pedicels continuous with the calyx, jlla* fine rose-colon red or yellow.

1 S. « R I M i.triokA (Mart. I. c. p, 104. t. 180.) item erect, branched ; leave* ovate-lanceolate, acute ; flowers nearly sessile ; **wtafs** of cttlyx broad, half-ovate; scpiniili of romtlu nearly orbicular, finely cri-mdated. '• .8 N .• •• • •' I- **tsQ,** in the provi ince of B itna, in atpine, schistous places, near Villa do **Rio** de CoHtas. Corolla fine yellow, an inch long. Draucltcs !-!• flow<•.

Note 'i-Jimcrtd Scluilii'«i.i. PL 1} foot,

2 S. UHAVII.IS (Mart, **I. c. p. 105.** t. 181.) stem straight, simple, or simply branched ; leaves thin, rmii*li. acute: lower ones ovate-lanceolate: upper ones narrow-lanceolate; ll owers solitary, on long pedvr cles, erect or droopin /\ **wings** of calyx narrow; **aagnrni*** of corolla almost MJH re, spreading ,'. 0.S, Nati\ of Brazil, in the mine provinces, in mountain fields. Corolla nw -coloure l ; tube yellowi*h at the **haat.**

Slender Sch **mltesia. PI- } m t (bot**

3 S. AUBLE'rn ; »n-m straiglil, simple, or **a** IK lie branched ; leaves lanceolate, attenuate I, i)n' !(>•• er ones shorter and acute ; flowers solitary, termi id or axillary, on short j>e<: uncles ; win gs of co lyx broad ; segments of corolla obtuse, undulated, crenulated. 0. - I Native of Guiana, Cayenne, Msranhai»,Tnnidari,&c. Exacum Gutancnw, **Vahl.** symb. 3. p. 16. Aubl. guian. |, »

68. i. 26. f. 1. SebaVa Guianenais, Spreng. nyst, 1. p. +23- Flowers pale red. Capsule « **celled, t-vahwd.** Seedi minute.

Aubht't **Schoheafc.** I'l. \ to \ foot.

4 8. STimor-iiVLLA (Mart. I. c. p. 106. t. 184.) atem straight, simple* or **law** hntnmom i **amvM laneeoiata** or linear, **apread flowen** erect, bilidiatc at the base; wings of calyx narrow; segments of corolla, short, broad-ovate. ⊙. 8. Native of Urazil, in the province of Pianhia, in in lows; and in like places, in tin- **bland ofCobai** and of Mexico, on the burning mount Jortdto. **Brythra*a Jornlllnah,** H. B. et Kunth, **nov.** gen. amcr. 3, p. 177. E'xacnm **CoMaae,** l'ocpp. emim. pi cub. • ltas'a Jorullcnsis, Sjirrng. **ayat** 1. p. 42C. Stem I- **S-flowered, whan S the middle ft** <essile. Corolla rose-coloured ; or of n row-purple colour.

fiorrmr-leated Schultesia. Pl. \ to 1 J foot.

Cuff. The seed* of thin Hperic* **tbonid** be sown in pots in a mixture *ot* gravel mid pe.it, placing the |MllS in pirns of waier, and the plants afterwards thinned if too numerous.

XIX. CALLOPI'SMA (from wi\A$_{of}$, *knifos,* beauty ; in referencc t'» **the** beauty of the •species.) Mart, nov. gen. bras. 2. n. 107.—Deianir.'i **ScMccst,** in **LiBfHea,** l.p. 19i5.

i.i\. **tVST.** *Tetrtindrin, Manogifnia.* Calyx campatio[1] 4-jwirt<rd ; segmenta keeled. Corolla salver-**shaped** : **with** »n **equal** cylindrical **tubai a 4*toa*tod** limb; and ;i **naked** throat. **StanWM** I ; lil.titu-nts subulate ; antln rs tttrnight, birinn opening by a double pore at the apex. Stigma exscried, £-l«hed. CopKule **l-cetted,** 2-valved, **many-Beaded** ; need* •mall, oblong, or **angular**—Glabrou *MM,* **almoat aknpie** herbs. Stems straight, tercti l Jo or per foliate, **opposite,** decussate, pelin nt margins : **lower and upper one*** tin[1] sni:dlrst. **thoae** under **the** iofli •• very abort; inflorescence paniculately **oorvmboao. Peduncle*,** funiisticd **with,** opposite brocteas. Corollas **roae colowd** or white.

1 **C. n kVOUA'TVM** (Mart. 1. c. p. 1<)8. t. **Itf.)** stems sitnpK ; leaves ovate, or **ovate-oblong,** per foliate and connate. *V.* S. Native of Ilrnzil, in **the proi la,** at the altitude of from 1 *HM* to Corollas soi- •ise-culoumt, and **aomMtakM white.** Ratlicol **leavea S«Mn**

***I fir. a. tinguttifiittii* (Mart. l.** t **iiii;il1rr, slenderer ;** leave* lanceolate, acuter. If. 8. I << mnira enibticiti>, Srhleciil. in Lintui'tt, 1. p *106.*

far. ,), *{,t(tJ7iiui* **(Marl.** 1. t.) larger, more **rsbmt]** leaves ovate, **often obtuae. 11-S,** Dcianira **pi lopuna.** I'l. S to I \ **loot**

8 C. **AJuriBxtrouuM** (Mart. I. c. p. i09.) ste • **limpli** branched ; leaves **oblnnj lanconlatf. oi** n **irrow^oblonf, Mama** or half sieni-ciakping at the base. *If . S.* Native of Bnurii, »i the provinces of Minas Geraes and - . **l'au), along with** the preceding species. Deianira nervòsa, Schlecht, in *L* **innaea,** 1. p. 1!*7. Co- ri>ll,i» rose-col **oared,** Urger **than** those of tltc preceding. Leaves ?J inches 1ong.

ffiiiiniaa *tmwtd* raHnpi— Pl. \ **to** 1 f><

***Cult,* lor culture and propagation sec *Tiiekin* IK-low.**

\ \ . I \ *i* I 11 \ *(Tttchi* l« Ilie (luiatia nntne of the first species, wliich name i« iaid t» nirnu an nnt*' neat ; tlie trunk **and brancbea** are usually full **of anta. | Aabl. 1.** p.75. Ju%s. gen. 142. **Mart n«v. K<n.** bra*. **3. p. 11 * M . Sdtftb.** gen. no. 177. LUiinthus, Sal. pur. under no. 34.

Lix. syst. *Pentandria, Monogynia.* C -T. *Pent* ilyx tubular, **i-angiad, i-toothed** ped : with a ,l-cl»ft limb, and a wide **naked** diroai. S nut her* **og-aagUute,** unchanged by **drying.** "stigma exserted, mall, rouiKlult, **bilaaoellaie.** t'apiulr l-celled, i-valvid. tumid | margin* of valves bent **into** the central placenta, many-seeded ; **•mall, moid.**—Shrubs or tree*. **MMM** opposite; **petiole*** combined at the ba*e into a sheath. Flowers lateral, axillary and l erminal, yellowish, large.

I l'. **GoiAMt'nu** (Aubl, uuian. I. p. ***7t.* t** 29. Mart. nov. **MO. btaa. *i.* p. Hi).) ahmbbyi glabrotti** branches tetragonal; leaves oblong, acuminated, attenuated at the bate ; flowers axillary, solitary, **sessile;** segments of corolla acute, rcvolute. f}. S. Native of Guiana; and of Braid, in **the** province of Rio Negro, in moist wood*, at the river Japura. Mynnccia Tachia, Gtnel. **syst.** 247. *\Uvm.* **ot** Schultei, syit. 3. p. 163. **LwtM** S incited long, and *,!-3* broad. Corolla* yellow. The n:itnes use the root, **which** i* bitter, nil a febrifuge. There are drop* of a yellow jtelltticid gum from the **axils** ives, beneatb the flow.

huh Shrub *5-6*]• '

ahrubby, downy; branch fastigiate, tetragonal; leaves lanceolate or "li! lowny; il . termii

Nattra of Jamaica, fa woods. **Listaotliua** longifol **lift,** ham. ill. t, 1<l7. f. 1.—Browne, jnm. p. 137-1. 9. f. 1.—Sloar,.j,i;.i, p. .'.s.l.i.i. l.p. 157. t, 101. f. 1. I^avw l a p.[1] riii'.' into **short**

/'"'• FL June, July. Qt. **1798.** Shrub 1* *i* l et.

Mart, t, c.) **letvaa oonJaati l** rori- ntil, solitary or twin ; segin- Lisiintliut cordifòlius, l.in. *y*t. 193. mant. 43.—Browne, ja n. **p, 147.** 2. t. 9. f. 2. I towers yellow. 1'. **B) narks thai this** plant may b deeme i a variation of *T. It* heing no much .-dike in habit, 'the form of the leaves is almost the only difference ; that **they are** al ways cordate, the ii|"|>er ones only being ovate ami «es*ile: lle corollas are aUo **rather lan**

// *cart-leaved* Tachia. L Pl.! CII. **1816.** Shrub *i-S* feet.

4 l **SwVcTtni** shnibtiy, **B^tttkTOn** { branches terete ; **leavea** on long **petiolea, lan** .it tln= luse, and ;i cuminated at 'In- npcx ; l' **otoaaOOfJy** corymbose. axill- l;iry; **legmen** of corolla ovate, acute, erect ; stamens much exserted. ♄. S. Native (if Jamaica, on tlie hluc mountain!. Lisiiinthus exsértus, Swartz, prod. p. 40. fl. prod. occ. 1. B 346. Cor •Has yellow.

Starts' */\k* Chia. I l. June, July. l Clt. 1793. Shrub 10 feet. *Cult.* These are cle |MM **ibrabl** when in blossom. 1 hey will grow frt c-lv in a nnv! ure of peat and >nd, ttn\i.| wltli n **liilleloam**; nnd euttnigs strike root re.idiU m >niitl m, der a **band** glass, in heat. ! he species .ire ditllrtdl to keep through tin- ninti'7 in ttii* CO ry, being very apt to **• HBp ofl** U tins, an tnii.li as]H>»*iblf, they **should** be kept **rather** dry in damj> weather.

Perfoliate Cal **lopuna.** I'l. S to I \ **loot**

\ \ 1 .PREI 'U'SA (from *πρυτανεια, prytaneia, ipntMa,* eonspicu> beauty of plant.) M,it.i>.,\ jen. bra*. !. p, l 20.

Lix. syst. *Hexándria, Monogynia.* Calyx large, c impanulaic, 8-winged, - -cleft, coloured. Corolla campanulate, 6-cleft, **with** a IKOIII **tube, and** a naked lii [ing from a **dupliettun** [11 ey were emer led,*-vali • 'vc- ioflexed, pUi **milt, »u** bilamellate. Capsule 1-cel ed, many-seeded ; margins of v entiferous ; seeds nearly globose, many sided—An erect sh fastigiate branches. leaves opposite, decussate, crowded at the tops of the branches. Racemes trr i **bad,** leafy. Flowers showy.

I l[1], **MOWTA'MA** (Mart. nov. gen. bras. 2. **p. III.** t, i leaves ol> iiargtnat< ; >r* ob«>letily **MTCMJ**

orolla 4 times higher than ihe calyx. I;. S. Native of Brazil, t'aly* of a yellow straw colour.

Afomfm PramtN. Shrub 8-10 feet.

Cult. See Te<*hia,* p. 1»7, for culture and propagation.

XXII. OKTHOSTE'MON (fiomof>.Joc, or/Aw, straight; and στημων 'F »rcwM»it, a stamen; stamens equal.) K, Br. prod. p. 151.

Liw. tvsT. *Tilraudria, Digynia.* Calyx tubular, 4-tootliud. Corolla with a short, 4-p.trted limb, and a naked throat, marcescent. Stamens tijii.il, i-xsertetl; anthers dehiscing lengthwise, mutic at top, straight in the aged Mate. Stigmas *t,* roundish.—A flaccid herb ; with hroadish leaves, and terminal flowers. This is an intermediate genus between *Ckaudrta,* Lam. ihe *CtBlairium,* Horkli, anil *Erythnta,* but differs from ttiem, in tlif limb of lbs corolla, and equal sutnens, and in the anthers being straight, and the Bowtrs being tetramerous.

1 (>. LIU'ITCH (R. Br. 1. c) stem straight; leaves broad-ovate, 3-nervttl ; lower ones petiolalc; peiluncles sub-corymbose ; teeth of calyx hardly exceeding the tube of the corolla. 0.? S. Native of New Holland, witliin tlie tropic. E'xncutn erectum, Roth, ex Spreng. *ay* si. 1. p. 425. Habit of *IHddcra virgata.*

Erect Orthostemon. PI.

Cult. For culture and propagation see *Cunteora,* p.]99.

Will. ('NLO'RA (from x^w('<»v> *chloros,* pale ; because the flowers are of a pale yellow colour.) lieneaim, specim. p. 80, t. 76. Sclireb. gen. p. *bjii.* Juss. gen. 142. Adann. fam. p. 503. Lmi. ill. t. f96. Kchb. icon. 8. t. 206-209. and *5.* p. 413.—Bbckstuma, HmU. angl. ed. 1st. p. 146.

Ltx. OTST. *Ot'tandriti, Mviwgtjnia,* Calyx of 8 narrow, spreading wgmuits, rarely of o\ Corolla salver -ilia jx-il : tube shorter than the calyx, inclosing iU- ovarium ; limb of *8,* rarely of C deep equal segment*. Stamens 8, rarely 0, shorter from the mouth of tM tube ; anthem linear, erect. reel, filiform ; stigmas 2, cloven, ovate-oblong. Capsule ovate, with a furrow along each side, invested with tl ranous tube of the corolla, 1-celled. S-vaU ed ; with inflexed edges. Seeils numerous, angular, minutely gramilaie<!, in n many rows along the hflcxi d margiru of tin valves.— HerbacaoaBi annual, smooth, gtftUi ' plant*. Leavcsoppostu*,sessile, or per foliate, riiiiire. Flown* terminal, stalked, aggregate or solitary, yellow.

1 C. rxaruLtA'TA (Liu. ty*t. Sfil.J glaucous; leave* per foliate ; stem dichotomoun, cylindrical; flowers corymbose, with a flower in each fork, 0. H. Native of Kuropc, in many places; in Britain, in chalky pastures or bank*, and limestone and clay soils. S -iitli, eiigl. bor. t. fio. |]<>ok. ll. lund. *t, 2.* Citntiana pcrfoliiita, Lin. spec. 335, Sabbat, horl. t. 100,— Mor. hist. '». p. *U5.* W0 . f. 1-2.—Unuii. hist. 3. p. 353, with I figure.—Park, theuir. 873. T_T f fTf T — flltlMHI Mjllll p. 78. *Cun* epit. p. (,T. Kyui leaves oval, sessilr, rosu the lower siem one* oval-lanccolntr, ; rlitliatt. in a corymb of 2 forks, with a pedicillate flower in each fork. Calycine Mi;»Mni» 8-lo. Corolla golilen yellow; segments sonit • *ly imarginate. Stamens 6-9-10. Stigmas •*, sliajH')! like a horv-shoe. Haller alTirms that this plant is more hitter ili-m the *Erytkra'a Cmtaunum,* and that it seems to m r n (he same WHsKtiw

Perfoliate-leaved, or Common Yelknr> Wort. I I.July, Aug. Britain. I'l- J lo 5 ft,

i i>irja»OLiA*TA (Lin. sy*t. 36i. suppl. U18.) liraplr, tetragonal ; leaves ,e«dc, so.m-what stem ermi]nal; calyx bihjjd beyond tin- middle, uii .i].n,.l Lnctb of the tube of the corolla ; limb of eWfl O. H the extreme part, of July. Chi. dubia, Lam. ill. t. 296. f. 2, ru^^l[di^!l beyond the tube. Segment* of corolla oval. Anthei. Stigmas 2, obtuse. Corolla deep yellow.

/iapfr/bfiate-ltaved Yellow-wort. Fl. June, July. Clt. 1S23. PI. I foot.

3 C. <jL-Ai>Hiroi.u I,Lin. ML 302.) stem simple, sli. letrngon:d, jointed ; leaves linear, 4 in a whorl, a liulv broader towards lite ends, blunt isli. Length of internodes ; Ho wen S-clett. 0. 11. Native of the Mouth of Earope, wber« it was found by AUtrccmer. Padondn terminal, *I* tofthfi each hariog *2* small,opposite, brack-as in the mithllv, ;m<l at tlie top 3 {K-diCellaie flowers. Corolla yellow. Segme tits of corolla n»t- r than in *(htm it ju-r/otii'la.* S:ml to be a hybrid bet wee *ChlitrapCTJuiiuta* and *lAuum qwdrifbtium.*

I'ow -l< nt i *il* Yellow-worL I'l. I f ot.

Cult. All the species are beautiful, and may be easily propagated from seed*, and require only common care in the cultivation. They do not seem to thrive in the open border, although they succeed Tcry well in pots.

XXIV, HI'PPION (hmfc *hipjtot,* a horse; and i*r, *ion,* a violet ; horse violet.) Sjirt-ujr. s\-t. t. p. 505. gen. I. p. 143 (1824.) E'xacuro species, Smiiii, OemilM species, I'lum. icon. t. 24.

LIN. STST. *Pentundria, Motwgunia.* Calyx campanulote, 1,5-cleft; segment* blunt, with membranous edges. Corolla Mlvtr-sbajMa; tube twice *as* long *a** (he calyx, swelling at tha Iwsc, and befouling ovate, where it is fillril »itli the increasing IM arium, t-ontracted at the orifice ; limb J-ctefi, spreading, Ingtfi of tube; segments obovate. Stamens 5, exscrted, half as long as • rder; BluMltti inserted in the orifice of the lube, leaning to the Upper iiide of the flower, incurved at the mi ; anthers I at the lute, remaining unchanged. Si a capitate, slightly cloven.—An erect, *'«- brou-, I plant. Stem tmte; branches slightly <|iioil- rnnguUr. Leaves op)>o*ite, decussate, 5-uervi-d, reticulated, with veins, trcn, ies*de, dilated iiim a cordate base. I'anicles terminal, erect. trichotoinously ilivulnl, many-flowered; pedicels terete, 1-flowered. Bi , at each division of the panicle, its well a* MCB flower, fUlNiad !>!<' IIH- leaves, but smaller, nerved. Flower* of nn elegant K"lden colour, slightly drooping, of the si*e of those of *Chtura perfotiaia.* Calyx and con my.

I 11. VtMOSQH i Sj.n'llg. SVSt. 1. p. 5S9.) &.<• v^of the Canary Islands. E'xacum viscotum, Smith, icon. rat. t. IS. Gcntiima viscusa, Ait. hort. kew, t. p. 321. Sims. hot. mag. 2135.

CUmMgHippioo. FL June. July. Clt. 1781. I'l. 1-i feet.

Cull. This pLint grows well m a mixture of peat and sand, ami a very little loam. It h unly to be inereawd by seetti, which ripen plentifully in our gardens.

\ \ \ '. (.\NSCO'RV (Kansjan-cora is the Malabar nan of *C. perfoliata.*) Lam. diet. I. p. 601. Pladi 'der, m*s. Koxb. 11. tad. 1. p. 116. Hook. b>>t. misc. 3. p. 89. -Ct-nuurum, Horkh. in R«rm. atcb. I. p. *2$.*— Homes, Willi]. Hayite, term. I. So. f. 3.

Lin. syst. *Teträndria, Mo tcgwttitL* Calyx tubular, cylindrical or quadra igulftr, 4 toothed, with a eoptracted mouih. Corolla t j|H'd. with a (-•KO. MsNp*ll limb; • the 2 upper »ev ments e<,<ial, 2 lower one* combined a greater distance. Stamens I ; tl ntl' of lit. tube, the fuurtli jimt brlow ihe NHM which separates ihe S lower segments. I il.itiH-nit capillary. Al thers remaining unchanged, oblong, linear, erect. Btjle filiform; stigma *t~k* lobes obov.. te, revol ,,te, minutely papillose abo. Cap ,,le cylmdri-

p«l, 1-celled, 2-valved. Seeds numcroui, small, angular, inserud ! tlu: mli< M.-Il **margin!** of tin- valve*.—Small, erect, simple or branched, annual plant*, stem* and branches tetragonal. Leaves oppo«ite, decussate, sessile. Flowers terminal or axillary, the terminal ones trielioiomous, ami the axillary ones **nUtai**

1 C. sFsMiirLORA (Schultes, **aytt.** *3. p.* 301. Wall. cat. no. 4367.) erect; stem and branches 4-sided; angles winged ; leave* ovate, sessile, 3-iurvd ; flowers solitary, sessile, in **the** forks of the branches ; capsule sub-cylindrical, nearly as lot the cnlyx. 0. S. Native of Coromandel and Bengal; appearing in moinl pasture*, during the rains, and first **part** of the cool **season.** I'l.idera sessiliftura, Roxb. fl. ind. I. p. **416.** E'xacnm heter<K'l1ttim, **WflU.** *JK.C. I. p. 039. Gentiana heteroclita, Lin. syst. p. 270. mant, 560. Ccntaurium luttTnclttum, Borkh. HI Room, arch. L p. 38. Clnronia brachi.it.i, Willd. herb. **Largest leaves an inch long. Flowers small, pale red I eth of calyx acute. The 2 upper segments of die corolla oblong. Lobes of stigma obovati[1], thin.**

Sesiilc-JivK'crvtt **Can»cnra. PI. \ loot.**

2 C. ScaviaoVlHI (Wall. cat. no. 1368.) stem branched from the ba«c, and are, aa well as the branches, tctragonally win. radical leaves obtu&e, few, rosulate ; cauline leaven small, subub c, opposite, scale-fornird ; bracteas large, imbricate, ovate, nding in a hair-like point; calyx large ; (lowers tie- in axi.n of the bractcas, spicatc. 0, S. Native of the Burmese Empire, at Prom*. Pludera pulcl '11 a, Wall. mu. Flower* beautiful red. This is a very renur table npeciei, with the habit of a species of *FJytritrut.*

hultei'i **Canscora. PI. 1 foot.**

3 **C. imn[1]»A (It. Br. prod. p. 451.) erect; stem and branches tetragonal, filiform; lower branches opposite; upper win-* nilernaii-; leaves ovate-lanceolate, sessile, 3 nerved, acute ; lower ones peitolate ; flowers terminal, somewhat panit-ted, pedicell.iu-; calyx tubular, wingless. 0« S. Native of the Bast Indies, growing on ihc bonks of water courses, and on low fallow lands. I'ludera vinjfcta, Roxb. fl. ind. 1. p. 471. Cham. et S• hlccht, in Linnti\i, I. p, 198. (look. bo(. misc. 3. p. 89. t. *U.* F/xacum diflusum, Willd. spec. I. p. M7. Gentians cliflii->;i, \alil. symh. 3. p, 47. FU'iningia vir.uu, Roxb. herb. Pladera murAlis, herb. Ilauiili. (:inac6ra tenelta, Wall. cat. no. •361. Kxartini titicllttrn, herb. Mad. Centhera of the TamuU. Flowers small, PM6 eoloawd. I'iic ^ unper segments of the linibol'tin- corolla equal, orbicular ; segments of stigma recurvi .1.**

BtffaM[1] H- July. Aug. Ctt. U^o. PI. i to *2*

4 C ruLinv\ 11. 1 too. ML) Kern tetragonal, but not winged ; leaves lanceolate, sessile; calyx tubular : with elongated, setaceous lecth. 0. H. Native of Nipatil, Roy If. Si nches litgh. Radical leaves large, *[>rca(tinj;.

>tj **Canscora. I'!**

6 **I ^A'TA (Wall. cat. no. 4304.) erect; stem and braiichfK 4-wingcd, tin- UtMT WOM lllimi | lravei ovate-lauceolate, acit' rat^MMJla ; ttTiniiLiI peduncles, tricboloti flowers pedicellate; axillary onw solitary. O- S. Native along with *(', dijfu.ui,* whieh it very much reoemble* ; but is a tittle more robust, ai « so high. I'ladern dccusslta, Roxb. fl. ind. 1. p. 418. Flcmtngia decuuttU, Uo\h. In rli. E'xnenm alaiuui, Koth. nor. *pec. It is called in Benjralne, *I)unk,mi.* Flow em larger iltan tlm**[1] of *C. drffum,* white. l*e- dtiti' led, like the stem am) branches. Calyx 4-sided, nnd 4-uJt^Ml, inflated. Corolla and »umrnt cxarily aa in *C. diffusa.***

In-matt **Canscora. Fl. July, Aug. Ck. 1810. PI. 1 foot,**

fl I s (Um. diet. I. p. COI. Wall. cat. no. 4305.) trad| stem and branches i-winged; cauline tcatct lanceolate, *3*-nerved : Aoral one*, or bractca*, jK-rfoliale ; flower* terminal, pedicellate ; calyx striated; capsule oblong. 0 . S . Native of India, wl]ij>lit«> in l»w **maial toBa.** Plddera perfoliata, Roxb. fl. ind I. p. **41**8. Kansjan-CorB, Hheed, —L 10. p. 103. t. *52.* Flowers rather large, pale rose-coloured. Corolla subbilabiate ; limb of upper lip largest, and deeply *i*-parted ; the lower one also consisting of *t* lotas, but smaller.

I'rrfitlintc Canscora, PI. I } foot.

7 C. ALATA [Roth, ex Wall. cat. no. 4363.) glabrous, erect; stem and branches tctragonally winged; leaves sessile, 3-5-nerved, ovate-lanceolate, acute; wings *of* calyx very broad; bracteas roundioh, peltate, JHT foliate under the **peduncles** and Tediecls. O. H, Native of the Bast Indies. E'xacum alatum, leyne, herb. Flowers «olitary, or by tin ees.

Win£«/-calyxed Canscora. l'l.] •.' I.

8 C. rusi'LLA (Schnltes, syst. 3. p. **901.** Wall. cat. no. 4368.) erect; stem and branches tetragonal, the latter cross-armed; leaves sessile, sub-cordate; Rowers u **rmmal,** »tn>ilr, **fan** threes, monnndrous ; corolla hid in the rulyx ; **Bapmi*** globular. 0. S, Native of the. coant of Coromandel. **PUdan puaJBa,** Roxb. fl. ind. 1. p. 41D. Hopea dtebfitonta, **VahL tnoaa,** I. p. 3. E'xacum sessile, Witld. spec. 1. p. 635. Leaves minute. **Planers mail, jreMow. Calyx** sub-cylindrical. I **widi** the tube a little gibbon*, **tad** the **bordat 1-tOOtbad,** >iamcns 4, 3 of which bear **muwtt,** abortive anthers, the fourth a large, fertile one.

Lratt Canscora. l*l. 1 to 2 inches.

Cult. For culture and propagation see *E'xacum,* p. 213.

\ W I . \ U| | I'M A (Voyrin is the Gui**ma name of one** .of the speci•a.) **Juix. gen. 141. hum. ill. '** ' **Vojril isbL gWD, 1. p.. 20£>. t. H3.** —Lita, Schreb. **gen. 1734>.**

IAS. **SVST.** *Pentdndria, Afonogynia.* **Calyx short, turbinatt, 5-cleft, lurnished with 2-3 scales at the base. COTOBB salvtr-shaped, with a long, cylindrical tube, which is tumid at the base and apex, and a 5-cleft limb. Anthers :>, almoM seasile, in the throat of the tube of the corolla. Stigma capitate, aunplt. i ile obioog, 2-v:ilv«d, l-celled; a a r g n a o f valvei Bemimfc- rous. Seeds aerobiciLlnte.—(>rcgariou* plant-', ** Capu **A on the decayed rooM of trees. Roott rompoaed <•! ihiclusb, white,** flesh **v fihrfK. Stems erect, flex units, almost <•, ar- tieubtrd or nixhwe; scaly at the base ; with *2* imali, opposite scales at each joint of the stem.**

I V. Knot* (Aub). ituinn. l.p. 209. t. S3. f. I.) flower* t> segment* of corolla ovate, acute ; tube ventricose at lop. Canscor **ina, in woods, at the roots of trees. Lam. ill. t. 109.1 ita rosea, N illil. *|MT. 1. p. 1017. Roottubi 4-5-tliit. MIIII *2* i>p|N>wite, (loliy, elh|i' le* at each joint. Curnlla rose-coloured. Stem tw <** Native of Gui **ir-colourrd-How(rcd Vohiria. Fl. Julv, Aug. C'lt. I PI. | foot.**

*** V. COZMJ'LXA fAubl. guian. I. p. >ll. t. U. f. I.) flowers twin; aegmeir Us mtindish ; tab* dilated at toj** Stem **Naiii • ' • itana, in woods, ai tbi roou Lam, ill. p. +»1. I** Blue-flowered Vohiria. **Willd- *pec. I. i>. 1071. Scales at the joints of the stem more leaf-like, and more ovate, than in tin prec• ding, and nearly imbricated; and the •.egmenls of iht condla narrower. Flowers purplish, blw 1*l. \ i** multifl**A**

3 \'. SPATHA'CEA I ID. ill. *m>. tH9.* diet* 8. p. 771.) stem tiiany-tlo'A. ml ; bracteas sitb-tp is i thruat of tnli< aal-abapadi segraenu obi **Onlawa.** Uta spathicea, Spieng. sy«. 1. p. 5S1. Nearly allied to *P.* earn, lea. Stems ascending, simple, * little fm rowed ; **farmabed with ,' appaain** , ovate. acute, **an>la** ftiniwid leaves at each joint. I lowers ter **mhtal.** approximate, probably bi ue.

Spathacews-brzclead Vohiria. PI. J foot-

4 V. B*EVirLo*A (Lam. ill. no. S550. diet. 8..p. 771.) item usually ***-floweied** ; tube of corolla 3 times longer than tlie calyx: segments linear, acute, short. *ty,* S, Native *of* Guiana. Lita urevitlora, Spreng, syst. I. p. 581. Stem simple. Scales or L[e]» acute, remote. Corolla yellow,

***Skort-JUmmi* Vohiria.** PI. $ foot.

i V. tKirLORA (Lam. ill. no. **££51,** IVrs.syn.]. p. 284.) stem 1-flowered ; corolla with a very long tube, ami ovutoacut- **segmenu.** Native of **Mattuuque,** ami Si. **Vincent,** «i moss, at the roots of **decayed tree*. V. ipWIla, Hook.** hot. misc. 1. p. 40. t. 25. *Mmn* ajihy'lta, Jacij. OIIHT. p. 87. l. 60. f. 3. Pera. ench. I. p. 284. Lam. **diet** £ p. «*•». ! cum aphy'llum, Willd. spec. 1. p. *6.i$.* **Uta aphylla, Dietr. gat.** lex, 5. p. 53J. **Spreng.** syst. I. p. **581.- Plan.** SJHC 9- Kool wliite, fascicled. Sum straw-coloured. **Leaves** or scales small, remote. **Flowers large,** for the siw; of ihe **pleat, ydknr.**

Ohe~jl<mcrtd Vobirin. PI. \ toot.

6 V. TEKK'LLA **(Gnilding,** *wm.* in **Hook.** bot. misc. I. p. 47. I. *%b.* f. B.) »tcm 1-ii owered ; corolla with **a** short tube, and linear-lanceolate segments. *1}.* S. Nn tive of **St. Vincent, on** mount St. Andre, in humid places, at the roots of decayed **trees, Beada** furnished with long aril, a* in the seeds of Orchideous plants. **Lttra** or scales small, remote.

«fer Vohiria. **Pi** { foot.

Cult. LriL-ultivatable, **epiphytical** plants.

KXVII. LEIPHAI MOS (from **base,** ***km.*** smooth; and *jii* **urn;** this plant in smooth and of **a** brown colour.) ScMecht, tt (hum. in Linntra. G. p. 367.

LIN. «T»T. ***Ptmtiniirin, timmgjma.*** **Calyx** small, 5-part id to the nmid If ; wgmems Inceolate, acute. Corolla tubularly- funnel- li 1l» <l. **marenetat,** 5-deft ; Momenta of the limb **abort,** oiale-triangular, very acute. Anthers j, Mgittate, on u r y •hort tiUitit tits, (>vanIIin **lanceolate,** tapi-ring into the »tylc. .a BUInew hat j«ltatt-. **tub-bilabiate.** (**ilatc- elltptic, ahortcT** than th< tube of the curolla, 1-cellt-d, **S~vahr*d ; valvca VQJOCM ieaida** at the margin*, dchikcing in **the middle.** Seeds scobiform, very slender, minute, numerous, »(rai' colour*e i,* ap{>carint; like congem-a of bairn, when the caj >uto is open.—A par **tMttcal,** I- rb, of the colour of *Hipe pity** (tn j lace of leaves (here art triangulnr, ncuie, erect, adprt-HMcd, mem •ratioii^ vcales), with the babtt and inflorescence of *Erythrtr a,*

I L. i-AKAsi. ('ham. I.e.) 1/, .live ^l[L]\ico, **glowing** on rutten **trew,** in woods, at Papontla. lMunt about 3 inchi* high when in (lower, and whon in fruit about 6 inches high. Stem sir **aple,** terminated by **ejaoai** in- Hod florescence.

f'nraitt Leiphaimos. PI. i to } fool.

Cull, Plain not cultivat ible.

WVIM. KM* OSTE'MA (from *evvov, ntih»*[1] tingular j .ind *try?*[1]"* ***** <>*, a •tamen; in rclerencc to the arched fila- **OMBtS.)** Hinm.bijdr. p. 848.

»riT, *1'enldnrlria. Monofi>,* > ***UJX*** tubular, im- [m] ioiwd' filameni» **dflatcry-fornicaied.** Style >horu-r than M cap. .ub-emb r g inale. C.p*uh 1- celltt f-v«Jred ; **moexad** on both mar[K] * W l l h " , ***mi,*** *lem-cla«pin« **I N M ,** and axillary heads of

tl (Ult.m. bijJr. p- »*»•) «• **I** [N] »[Li] » [f] Java, on the shore, near Pamanukan, in tic province of **Krawaac.**

Sea-tftart Emcostema. Fl. Aug. **Sept.** PI.

Cult, I'or culture and propagation see *Hippion,* p. 198.

XXIX. **CRAWFVRDL4** (named by Dr. Watlkb, it. honour **of John** Crawfurd, formerly governor of the island of Singapore ; author of a **history of** the Indian Archipelago.) Wall, u nep. p. f>3.—**TrmtcraaptfntaBi Blum,** bijdr, p. ?*

Lin. T. */< iitdmiria, Mtmofiy'uiu.* (:ih\ tubular, 5- toothed. Corolla tubular or campanula^, 5-cleH, with or with- out accessory lobes **or wgmenta. StanensJi** filaments dilated, **from <** lit **the corolla;** anthers erect. **Hypogynoaa ditk** 5-lobi d. Style erect ; stigma it, recurvi d. Capsule clavate, compressed. pedunculate, **covered** hy **the decayed** calyx **and** corolla, 1-celled, 2-valved, even to the base ; valves seminiferous near the edges. Seeds vertical, imbricate, **with** membranous edges, 2-l'ihed at one etui.—Glabrous, twining herbs; with elon- gated, **slender** branches. Leaven opposite, 3-nerved, acumi- nated. Flowers axillary, solitary, or in fascicles, large, showy, pale blur. Tl is genus tppearn IO be **the connecting** link b. i ween the present order and *Afn<ctfncu* through tribe *(jt(tetnic\r,* **which** again connects that order with *HigHtinitictte.*

1 ('. i AM n L^LA'TA (Wall. tent. p. *63.* t. 47.) **laavas** lanceolate, acuminated, 3-ncrved; peduncle* short, fascicled, bihruiteatc; teeth of calyx elongated, subulate ; corolla tubular; limb fur- nished with **accessory segaeota** ; capsule obovate, *:i* times longer than its **Mtpt< • . *\ i«- Native of** Nipaul, on Sheo- pore, **and <f Silhet.** 'Gentiana volubilis, *D.* Don, proil. fl. nep. p. 126. Crawf. a **llnia,** \\;dl. cat. *no.* 4370, **Plantgn** t7ci/-tlo»irtd **Crawfttrdk.** PI. twining.

Fasc

3 (. SPECIOSA (**WaE** tint. p. G4. t. 48.) leaves o»ate. acutiti- nated, 5-nerved ; **Sowers** on long, nearly naked pedicels, soli* tarv ; teeth of calyx **abort]** cornllas campaniilate, without nccct- sory lobes of I **tegnMUat** capsule elliptic, shorter than its stipe. ¥.? ⊙.? C. G. N **rttve** of Nipaul, on **Sbaopora.** Plant **glaaeoseeM.**

Shony Crawfurdia. PI. twining.

3 (. Blumii; leaves ova ie, acute. 8-nervrd ; pedicel* axil- lary, **I-flowered, bibracteaifl** in the **middle** ; calyx **i-deft.** %. ? ⊙.? *\ & Native of **Java,** in the higher woods, on mounts I ede and alak, where it i> called *Tjoppi ttthur by* the rtatt es. TriplctOHju'rimiin **trinerve,** Blum, btjdr. p. 841). Corolla tu- bular. Anlhei s sagittate. Seeds O sted, **b e d** to the t] ree siitea uf tin ' berry, ex Blume. I

Itlumr'i CrawtunlLi. PI (nitting.

4 C. ? LOVKL'IKI | leaves ovate-lanceola w>i 3-iicrved J; **flowers** lateral, disposed in **elongated,** droopii g panicle «; corolla **canipa-** nulate ; *cd* **5-toothed.** t*, « (»- Native of China, and **Cochhchinn.** (Jrittu'uia scan<lens. Lour. **eoch.** p. 171. S tem large, woody; bra **nchcs long, »•**andent. 'w • r 1 • a) arge tube, which ia grey outside, with distinct white 'lot*, ami fur- nisi., il **witbdenae** purple In irs insitlcj hn>b short, spreading, white, bluntly 5-cleft ; tegmenti for the most part laciuiatcly plicate. { J|»II[I' roundish.

LutnroM **Crawfordia.** Shrub **rttmbirj**

Cult. C'attjurtlm is a g—• of very **showy,** twining plants. They will grow viry wt-11 in a mixture of **loM** , sand, and peat ; and iiay either be **increased** by cutting! or **seeds.** Should the seeds **of** any **Of** the ***tatck*** **I • » «** be introtltrctd tu our gardens, •inIliend i heir IK ing reared on a hot bed in **spt** and in the middle of May the plants *o reared to **bs** Irani* plante•! nut in the 'pen border, against a sout h wall, and or- wise treated as • he hardy species of Con • ***ilculus.***

• * I H W U. COOTWTSBJ >LU .ub-lribe .„,,«. «„„,

R 1151

ms Coutnubea ; in dM capsule being 2-c.-11.-d.) Cm .nsi-ouence of the edges of the »alves being benl into the central placenta; margins of rakes pUvi.tik-rous. Anthers remaining unchanged even in the old •)

\ \ \ COUTOU'BEA (the Caribbean name of one of the opeciw.) Aubl. g"i:«n. I. 1> 7*.—Coiiibes, Man. nov. gen. braa. S- p. 110.—frxacum species, Yahl.

Lm. nff. 7*«Wb*»B, *Monogyua.* Calyx campanulas, .j.i^.n,.]. Corolla nlver-shaped, with m equal cylindrical tulw, it, and a 4-prt.il limb. Stamens 4, cxserMd ; the base i antlwrs sagittate, tm< in UH dried siato. Stigma bilammcllote. Capsule 2-celUil, t.ralved, many-seeded; seeds MTJ minute.—Glabrous herbs or •ulwhrubs. ereci, rarely twining. Stems obscurely tetragonal, naily branched; branches opposite, anil thickened at the nodi. * Leaves oppwiie. decussate, srwile, l-nemd, thmnmh, veined. Flowers disposed in terminal and lateral spikes or r«tt -e or loose, tribrneicate, «lu:

• *Flotttrt tctramtrtm*.*

I C. Dimtntli (Mart. nov. gen. bras, *i.* p. 111. t. 185.) tt»m simple ai bottom ; lavrea scsiile, rounded ai the base, BM In[1]!' stcm-dagping, lanceolate, long-acuminated ; spike* t<-r- .iiny! and lateral, cylindrical, deaM-aovend: throat of corolla irroraie. Q. S. Nai i ::ml, in tlie prorv •>hia, in dry fields, ai Villa tin Ca I iki tlntude of from 200 • Ha with a green tube ; throat bedewed with Mm k ; liinti whit*.

Den i-fi,iKcrcti CoatsubM, PI. 3-3 feet.

< \ ,1.1. ntn. I. p. 72- t. 27.i *ttma* erects branched ; lenvet l.inceolale, acuminated at both mdl; spikes icrminai. I. toow; flowers decuwatc, ratlicr clow togedicr. S. Native of Cayenne, Guiana; in the northern part of ISi .t/il. U ol Maranbaai Hid I'ura, &c. Meyer, ess. p. 67. ibea tpiciu, Mart. nov. *gea.* brt*. I. p. 112, CouiotiU-a nlka, Lam. ill. *i.* p. S19. i. 79. E'xacum »picatum, Vahi. lymb. S. i 1 ' lorollu white, reddish in the tliroau

Spicate-flowered outoubea. Fl. July, August. Clt. 1883. PI. *i-.', '.*

S C. HAMOU (Anbl. guian. 1. p. 7*. t. 28.) item divaricately brand ml ; Utvea <>Klong-lanceolate, acutninattd m both n •>]>tkej u rmin.il and axillary, the lower jwirt liaty ; Bowui dectttMte, mnoic. 0. S. Native of Guiaxu and Brazil, in dry fields. Cot&bea raniosa. Mart, nov, gen. bra*. 2. p. 112.— CUR) r;niii>»um, \ uhl. aymb. ^. j'. "rotlttS while.

lira Coutoubea. Fl. June, July. CU. 1844. I'l. 1-2 feet.

M)KO« (11. 11. ei Kunth, nuv. Ken. timer, 3. |i. 181.) Mem dii hea tetragonal; le.iv,. ..lilmig, acute ; •pike* termnal. (towi *te. O S. Kstin Gn homid n ihe bank* of il> Orinoco, mar the falls of Ature. Corolla white.

SmaiUr Couioubea. PL \ foot.

• • *Ftmmt ptntamcrmu.*

5 C. nuiciiuM (G. Dun, in Loud. bort. brit. p. *8.) stem timple; blrTM lancpolatf, acuminated at both ends, nerved ; Bowen rertietllate, axillary : calycinc Wfrnnw longer tlim the capsule. ⊙. S. Native of the West Indies. Gen'»<»• verti *I. tytc SS3.* Kxaciim verticillatum, Willd. •(>«. t.p.640. Plum. icon. tl. C i ..rolls* while.

Whorled-flowered Coutouhea. Fl. June, July. Ck. 1811. I'l. I I i

C C. VOLU'BIUS (Mart. nov. grn. bras. *t.* p. It*.) •tern twit- iiitlrnt, Kti'inlt-r \ leate» lanceolate, l mimtetl, *cut« at the base; spikes terminal, ftw flowers pentandrous, pentamerous, remote. *"U.^.S.* Native of St. Dommgo. LUianthoa scandens, Sprcng. «yst. I. p. 587. Cor.lias ereatn-colou red.

Twining Coutoubea. Shrub twining.

(utt. The »iwcie»i of (*'outtnibca* arc of easy culture, requiring the same treatment as other tender annual*.

XXXI. ADENFMA (from •£*», *ndtn,* a gland j and >ij^n, *fitma,* a tilament ; filaments funmln-d with I tjland at the Jii-<Ttion of each). Gcntiana and E'xacum species of authori.

l.i\. SYST. *Pcntandria, Munagyma.* Calyx 5-parted. Corolla rannel-ahaoedi i-elilt. Stamens 5; filauicntn short, each fiirnishi-d with a gland ai its imeiliuii; enthers incumbent, ioclnM-d. Style single, length of tilamenttt; itigma large, f4obed. CapBitle l-cflhil, .'-valved; seeds scobiform, fixed to peril linear placentas, which adhere to (he margins of the va! An erect, perennial plant, will, creeping roots; sessile, lanceolate, opposite, decusute, 8-ft tragonal. simple stems ; and axillary, sessile, small while flower*, generally 3 in the sxils of each leaf, and therefore appearing as if they were verticil late.

1 A. in IOM ; 1/. S. Native of ibe East liulic*, m uncultivated grountl«. during the wet season, .ma vorurilUu, Linn, supjil. 174. E'xacum hyssopit'blmm, Will.I. ipi.. I. p. 040.—Burm. afr. t. 7+. f. S.

Hyssop-leaved Adene ma. PI. | tn 1 foot.

Cull. This is a plant of easy culture. Any light rich soil will suit it ; and it will be readily increased by «iivi<!u,_' ihe jiliiru nt ihe rout. It should have plenty of water given i when in a growing state.

ZXX.IL KCIUT.U/lilA (named after Guitavus BdnM prol< btagen). Mart. nov. gen. l»rn- p. 113.- Curtia, Schl • III, in ConSM) I. p. 209.—TliurnhaiiM-ra, spec. Pohl. in litt.

LIN. SYST. *Prnlandria, Mottogynitt.* Calyx 5-paricd. < orolla tubtilarly-iubcaiiiiimnulate, equal, with a 5-clcft limb, and a nakiit throat. Stamens 5, minute ; mben obloag. Stigma simple, p»'tiii*ill«tely glandular. C«jw»ile 2-vs!ved, many-winldl. BeMI OTSU «r oboirnlt, mittute, angular.— Aununi, erect, glabrous, slender herb-.. Sums tetragonal, »nti« *)iW-,* or branched; lirniK-hes t)p]>o«ite, dicholomoun. Leave* •esaile, nppo* ' , or ver ticillatc, narrow. Infi- led, looiu-, or crowded, terminal and lateral; {Mtiuncles bracieolatc. Flower* small, ro«e-ct»lourcd, or yellow.

1. B Hart. l. c p. 114. i. l8('>. f. 1.) «trm slead •ditt({ly]iantili-d; leave* subpetiolate, .1-4 in a whntl, ovate, BCOte : corolla* hardly twice longer than the calyx ; «egtncnl« ovatc-rodntlish. >fl *Hwth* •(Itraxil, on ihe ;t- of high moii in am*, in marahy, grainy place*, at the aJtilnd 4000 fci t. B'xacutn brad M.irt, n-is. 1. p. SD7. • ; throat constricted, downy .modi-, leria. PI. J to J foot.

t t». coNfiHT*(Miin. I. c. p. 115. t. 186. f. 2.) si terminated by a snort, crowded, panicle ; leave* se- in s whorl, broad, ovate, arntr ; corolla hardly l« *»f(*• the calycine segments, which are teUccou* ; segnr • rolla ovate, obtuse. G-S. Nai iraxtL in the mine provfa HI i >i.

fl B. «tmciA (Mart. 1, c. p. 11U. t. 1 87) stem straight, simple at hottoin ; leaves 4-fi in a whorl, ovau- acuminated, 3-nerved ; panides eorjmbose, coarctat* ; corolla more than l«i as llw calyx : wttk r«uiKl«l segmeni*. ⊙. S. Native of llraiil, in h'umiil placi s, near Tejuco, and elsewhere in the diamoi district ; also on Serra «le St. Antoni.

I) d

cillàris, Spf«ag. »yst. l.p. 580. Cilrtia gentianoides, Scblecht. in Liiin.r.i. I p. 210. Corollarose-coloi.

Straight Sch ableria. Fl. May, June. PI. 1-2 lect.

3, PA'TULA (Mart. 1. c. p. 117-1. 188.) stem dichotomon-, spreading ; branches slender; leaves opposite, linear: panicle spreading; corolla 3 times higher than the calyxes, with acuti«h segments. 0. S. Native of llrazil, in t)ie mine provinces, especially in marshy, grassy places, at the altitude of 2900 feet, on Serra do Itambe, and in the province of ©ojraz, between Carretao and Crixa*. Corolla having the tube white at the base, and a rose-coloured limb.

Spreading Schublt-ria. Fl. May, PI. I to 1 J feel.

5 S. TENE'LLA (\Urt. 1. c. p. 117.) stem filiform, nearly siin-ple; leaves opposite. narrow-linear, or -ubulnte; pj^ corymbose ; corolla hardly twio bl of the calyx. 0.S. Native of Brazil, in the prov ince of *oyaz. Corollas yellow.

Weak Sc haWeria. I'l. J tw \ foot.

6 S. TENUIFOLIA ; stem sim jilc ; leaves ltnear-lanceolate, opposite; pank-Ws die :io Mjpnrni.i 1 lanceolate-subulate ; flowers -mall. ©. S Native of Guiana. Exacum tennifolium, A. ibl. guian. l.p. 68. t. *tQ.f.t,* Flowers small, red.

Fine-leaved Sch itbleria. PI. (foot.

Cult. For culture and propagation tee *Schutthuti,* p. 196.

XXXIII. HE LI A (from *l\oU helot,* a marsh ; habitation of species). Mart, nor. gen. bras. 2. p. 122.

Lw. SYST. *Ptntdtulriu, Affm''ggnia.* Calyx campaniil.it>', .5-parted ; segments erect, with membranous margins. Corolla salver-shaped, with a sub-oblique, ,'>-]>arted, mnrccscent limb; a cylindrical tube, which is inflated in the middle, or unequal; throat naked. Anthers oblong, emarginate at both ends. Stigma of £ cylindrical legs, not bilamcllatc. Capsule 2-valvcd, 2-celled, many-seeded. Seeds small, nearly globose, or angular.—Glabrous herbs, with perpendicular roots. Steins terete. Bats* lar, simple. Leaves opposite, decussate, sessile, confluent at the base, marginated, quite entire, having the middle nerve running out, it: lateral ones vanished. Flowers cream -col •> or green, disposed in coarctate, bracteate, few-flowered panicles.

1 II. oBLoNKirouA (Mart. DOV. gen. bras. %, p. 183. t. liU.) leaves oblong or oblong-*U* nceolate, obtuse; tul>e of corolla -.lender, 3 times longer than the limb, which is finel• denticulated. 0. 8, Native of Brazil, in the \rovince ofSL Paul, in marshes. Panicle dichotomous. Corollas pale cream-coloured. Stem quite simple.

Oblong-leaved Helia. PI *i* feet.

2 II. MVMU.\'T* 'Mart. I. c. p. 124.) leaves oblong-spamlate; tube of corolla twice as long as the limb, which is quite entire. ©. S. Native of the south of Urazil; and of the island of Pararuma, in the Orinoco, in hot humid placet. Lisianthu* xpatulatus, H. It. et Kunlit, nov. gen. 3. p. 181. Corollas green. Stem quite simple.

Spa *tttlate*-leaved Delia. PI, £-3 feet.

Cult. For culture and propagation see *Schultitie,* p. 196.

\\\IV. I I hit XIA (from •*, n, well, and Ma, *dota,* glory, in refer .ce to the beauty of the species). D. Don, mas. Gentiana species, Ruii et Par, in herb. Lamb.

Lin. syst r. *Pcntandria, Ihgywa,* Calyx campanula!?, mnnhranott*. semiquinquifid ; segmenu lanceolate, acnir, ,1-n, i Corolla camt*nulaie, 5-parted ; segmenta elliptic, obtuse, nerved eonvotuu-l) imbricated in -estivation. Stamens 3, adnate to the lube of llM corolla, at the base, inclosed : filament, channelled insid*; antlwr* linear, incumbent. Owiii i-edled. *-valvcd, *t* inches kwff. Stigma *-lobed, sessile: lobe* dilated, ronndiah, re volute. Ovula disposed in one scries in eac cell, orbicular, peltate, concave on one side, with membrane edges.—Perennial, erect herbs. Leaves opposite or verticillat rod. Flowers large, drooping, showy, disposed in terming thyr>oid panicle*.

I K. FORMo^isaiM* (D. Don, ims.) stems erect, annular, solid ; lower leaves opposite; upper ones as if they were 5 in a srhot sessile at intervals of 2 inches, all *5* nerved ; flowers mu> disposed in terminal, oblong, thyrsoid panicles, *y.* F. Nativ of Peru, Ruiz et Par. Stem an inch thick. Leaves 2 inch folate, acute, distant, glabrous, greyish green. Pedicels I, I t to 2 inches long. Corollas large, scarlet. Ovarium fusiform.

Mo tf *tkoirt/* Eudoxia. P). erect.

2 E. PB'KOCLA (I). Don. mss.) stem* erect, terete; leav opposite, ovate-lanceolate, acuminated, many -nerved ; flowt numerous, disposed in thyrsoid, oblong puicus. %, P. Nati ry nearly allied to the preceding, but difloriog in the leaves and calycine segmenta being broader, long>acuminated, ami many-in rved, anil in the stamens and |>«'diincles bei terete. Corolla violaceous, barely longer than the calyx, purplish, thickness of a writing quil.

rmsJtt&Mu-flowered Endoxia. PI. erect.

Cult. Bhouk) either of the species of *Eudoxia* ever be introduced to our gardens, we would recommend their being grow in pot*, in a mixture of peat and saiu), • ith the addition of a little loam; and in winter to be placed on a shelf in 3 green house or frame until their hardiness be ascertained.

Sub-tribe III.

CHIHO'NLt! (this ttibt agrees with the genus *Chironiu1* i the anthers being changed in the old state.) Capsule I-etUod, S-valved; martini >>f vsltei inflexed, seminiferous. Anther* changed in tl the old state.

\\\Y. CH1RCTNIA (from the centaur Chiron), I.n>. gen.no. 25J. Schreb. St9. Jus. gen. p. lit. GftTtn. (run. I, t. 114. I.atn. ill. t. 109. Chironia. sect, vi i. in Linna-a, *9.* p. M9.

LIN. SYST. *Pctttdndria, Afonogynia.* Calyx 5-parted. Corol salvrr-shaped, with a narrow tube and a spreading Hob, »hich i I'lii^cr than the tube. Stamen-* *5* ; filaments broad, abort, risii: from the top of the tube ; anthers oblong, erect, conmv. ti spindly twisted. Style tleclmflte, s little luiitjfr ilun th. stnni. Stigma capitate, (insurgent. CtptoJe OTate, l-ctlled. S-val*ed. Seed* numerous.—Small shrubs- Stems simple, or branched. Leaves sessile, opposite, decussate. Plowtn terminal, red, or white.

I C. JASMIXOIUE* (Lin. tpec. *Z72.* amrcn. 4. p. 84. Cham. in I.innn-a, 6. p. 344.) glabrous; stem tetragonal ; ! lanceolate, linear; panicles dtchotomous, or flowers femim.il, solitary on the tops of the branches ; calycine segments acuu, ketlcd, much shorter than the capsule, which in cylindrical))-oblong, (j . G. Native of the Cape of Good II •• I hunt*. !. 1. p. 55, and in Lin. trans. 7. p. 551. Ker. bot. reg. t. 107. Lodd. hot. cab. 27. Ch. uniHora, Link. Lam. diet. 1. p. 737. ill. t. I <>8 f. .1. Segments of calyx lanceolate, acuminated, length of the tube of the corolla. Corolla red or purplish ; ovate, acuminatei: if tube.

Jaimmt-tii, ' Chironia *u* Fl. April, Jui-. I-* feet.

4 C. LvcimoiDU (Lin. sysi. p. *t29.* mant. 207.) glabr simple, terete; leaves linear, lanceolate; peduncle* terminal, tloiijfat.il, usually by threes. ^ . < t tr> Cape of *GiKx*\ llo|>e, on the summits of ntottBtaJBa. Dmnb. prod. p. 35. and in Lin. trans. 7. p. Ut. Berg. cap. p, 4,5 Lateral bracteaa subulate. Calycine segments twcralaic-tubu-

kau keeled. Corallo purple ; tube length of culyx ; segment! of the limb ovate, acute, longer ih:m tba tube.

Lychnis-like Chironia. Fl. May, July. Clt. 181G. Shrub 1-2 i eet.

3 C. UKUMFVUFOLIA (Lam. ill. p. t?:». no. 2175.) *ttau* nearly rii leaves lanceolate, with decurrent side*, ai in the preceding ; (lower* pedtwllau-. axillary, disposed in a terminal panicle, *h* • <* native of the Cape of Good Mope. Caiv. straight, acute, shorter than the tube of M corolla. SrgiiH*n* of corolla longer ilinn the tube. IVrhap* oniy a variety of C. *hfchuidn.*

McUtrnpyrum-Uaved Chironia. Shrub 1-2 feel.

4 C. KUDICAV'LIS (Lin. syst- p. 229. auppl. 151. Chain, in Linneea, •• {'• 544.) herbaceous ; glnbrou* ; loaves of di fie rent forms, ovnie-oblong, bluntish : radical one* often roxulate; item* many, simple, Mibutragonfll, bearing each 2 opposite lanceolate leaves, mid 1 flower: Htperior internode* elongated; leg- DMQU of calyx subul;iU', tqusj in ktactb to the capsule, which uidnv.illy oblong. %. G, Native of the Cip» of Good II ope, on the IOJI of dM Ttbfa Mountain. Thonb. prod. 1- p. 35. and in Lin. trans. 7. p. 249. t. 12. f. 3. C. j asm foot r!e«, Lam.dici. I. p. 736. ill. t. 108. f. 2. Corolla purple. Calycine •cgnh'iils length of tlie tube of the corolla.

far. a, *taiinliirit* (Cham, in Limuca, 6. p. 314.) lower leave* btuntiah.

/ or, ,i. *eto»gata(^Bk\on, mm.* Cham. I. c.) lower leave* lincnr-lanceolate.

M-itemmed Chironia. Fl. July, Aug. Clt. I SI6. PI. 1 foot.

j C. LIHOIDE* (l,in. hort. cliff. 5+. spec, *72.)glabrou*; stem branched ; branches terete, fn«iginte; leave* linear, erect, fleshy, acute ; pedunclcM terminal, elongated ; calycine segments , l-iiirvcii; rnjisiili- elliptic. '" • < '• Native of the Cape led Hope, Throb, prod. \> W. aid in Lin. trans. 7. p. 252. Curt. boi. mng. I. 511. Ch. vuly-irH, Cham, in Linniea, t, p, 343.—Itreyn. cent. p. 175. slycatt segment* lanceolate, HIUIIUI thn the tube of the corolla. CoroUa ret!, with ovate-nblottj!, obtuse segmeni«. Anther* not spiral, but incurved. Stem nodulow.

Far. a, itn. 1. e.) thrub tnller, looser; leaves broader, flat; cnlycinc Moments narrow,]-nri

. intermedia (Cham. I. c.) dwarfer; leave* narrower ; ralycinc segment* triangular, 1-9 nerved, sometime* abort, and sotnetinu'D drawn out,

' *<ir. y. tyvhiuHthi* (Cham. 1. c.) calycine »egm •ubauricuhle, abort. Ch. lychnoiiiea, Cliai t, in Liuh.-ivi, I. \i. P'O. Var. *,1,* UIKL *y, a,* probably of Lin. and Thunh. Ch. emarginata, J:irui!/, pi. nnv, cap. tail. p. 11-

,-,. PLJa CU. 1787. Bk I to 2 feet.

i.tA (Lchm. sen*. I H nib. 1828. p. 10. Litii, lk(lctr.-ifttm.il, glabrous j li orate, nearly nrocile, thick, dotb • **• N"'''*i- of the C*|>e of Good Hope. Stcmimany from the same root; corym-bose at top. Corolla row-coloured, about the sise of tliuse of *Ch. baccifera*. I< rhap* a i^tecies of *iii-tlinia.*

HU Thymc-Uavtil Chir-wn. Ft July, Sept. Clt. 18*9. Shrub 1 Toot.

7 C. rrruooM* (Lin. *y*t. 229. »ujip. 151.) glabrous; branches tetrtgonall leave* ovate, S-OCTVOd, blunti*h ; flower* terminal, notitary ; calycine wpnents blunti*b, keeled, cln., rolla. b - ° - Nili*e of (W Cape of (Jowl Horn*, Tbsmb. b Us. tram. 7. p. 249. U 1«. f. *. Co-roOsji purple. M of *HatVtma.*

rrtj-niioZ-lirai -onia. Fl. -'"ly, Aug. CU. I«**. Shrub I -2 feet.

Cult. Peat with a little loam is the best soil for tlie tp. of thin jri-iiu*; and voung cutting* planted in the sam< soil, with ;i hand-gfamt placed over the) itn. in Linnrea, 0, p. 544. *My.* Although said to be ihraba, DOM of tbt specien are kwg Ih and (hen I [iicntly requirt to bi nMcd Brotai seeds or i They are all pretty plants when in blossom.

XXXVI. ROSLI'MA (meaning unknown to us). Momclt, metli. siipp. p. 111.- Chironia ^jx'cies, Lin. and other*.—Chironia, *HV>* ' Lnr. STST. *Pent&nil •g^nia.* Calyx 5-parte<l, * abort, subulate segments. CoroOa ialv<-r-shanvil, with ovate, acute, short segments. Stamen* ,1 ; lilarrnnts short; ami oblong, spiral. Style declinate; stigma peltate. Berry flmhy, 1-eelled, iDHiiv-M-edcd. SeeOs rather compre«ed, marly glo-bose, dark, wrinkl. !ots. Small shrub decussate leaves, anil terminal, solitary, sjpte-c floweri.

1 It. BACC(FE*A (Mcrnoh, 1. c.) branches *< *ml',* leaves opposite, decussate, glabrous, mmr-lanctolafcr, ••« lUvnrrent, with reHrxed edges, longer than th< n ii-rmina), solitary ; calycine segments 1-nrrvcii, MMd]irti|i|ijn^ tin- nmch larger glubo«e bsVf] of Good Hope. Chironia baectfera, Lin. spec. 273. 1 Itunli. |>rod. p, 33. and in Lin. trarih, 7. p. 255. Curt, bot. mag. 233.—Commel. rar. t. 9. Flowurt red.

ry.bearing Ruslinia. Fl. June, July. Clt. 1739. Shrub 1-2 feet.

2 H. AKOUITtrouA ; glabrous ; branches terete ? ; leaven lincar, spreading ; calyx ovate; corollas clammy : cuncated, acuminated ; calycine cegments acute, conniving at the points; flowers solitary, terminal. h, U. Native ot the Cape of Good Hope. Chironia angusti^ilia, Hort. Kcw. ex. Sims, bot. tn:if(. t. 818. Flowers red, lnr

Xarr<nv-lcaccd Hoslinia. Fl. June, July. CU. 1801), Shrub 1 KM

3 K. FKUTE'SCXKS ; downy ; stem and branches terete; leaves lanceolate, obtuse, rather tomentose, as well as the liratichct and calyxes; flowers terminal, corymbose; catycitif Momenta obtuse, almost nerveless, nicKwun; a Inticeolate, cllij.- *}j , Q,* Native <>f tlie Cape of Good Hope, Chin'mia frutiscens, Lin. spec. 270. ima<n. 4. p. 308. Mill. fig. i. 97. L«m. ill t. 108. f. 1. Curt, boi. mag. I. 37.—Commel. rax. t. 8. Co: targe, of an elegant n

far. (i; leaves narrow • linear; (lowers large, red. 1; Chironia frutvsccn*, *fi,* I>am. diet. I. p. 737.—Burin, afr. **CI.**

I ar.y,<UeiUKit,i, j.bnt more tomentoac; leaves marc crow brat». tbort] (lowers rather larger. ^.(!. Clitronia dcoMttet Vent. *wU.* i. 31. Curt, bet mag, t. 707, Chironia IratiaoMM *>l,* latifblia, Weodl. coll. t. *4,*

•*ra* (Cham, in Linmra, 8. p. 314.) plant glabrous.

'. i. *tttbtffiiTQ* . flower* pure wUb

FndcKent Hotlinia. Fl. July, Sept. Clt.)75G. Shrub, 1-2 feet.

It. Sec *Chirimui* above for culture and (rropagauon.

WWII. I:UVIHK1;A (from ipWlpoc. *f^ihrot,* red flowers). Ktucilm, njiec 77. t. 70. Uorkti. in K«rii). ari'li. 1 p. 28. Richard tn I\< s, ench. 1. \> *lit,* B Br. prod. p. 45. Nchkuhr, liiMilb. t. 59. CbirOnia amlG«i)tiana species ofauthora. Lns. SYST. *1'rnlanti >H<>»"'•* Ciilyx »ub|M-ntagon«], S-rlcfl. i corolla funnel-shaped, rceaccnt, with a si ort limb. Ami ers spiral, in the old state; style erect. Stigmas 2, roundish. Capsule : inear, 2-v .ilttfl.—Small annual (tlabroiu plnnt*. Leave* m i l

seasile, opposite, decussate; radical one* roauUte, 3-5 nerved, Flowers terminal. sessile, or pedieillatc, red or yellow.

k I *FUmers senile, or* on rery *ihort, hardly ecident pedicel*.*

1 E. Ci:nTATi'ait;K (Pers. ench. 1. p, 883.) stem tetragonal. BicboiotiKHislv pankkd, corymbose; leaves ovate-lanceolate, 3-nrrved: calyx shorter than the tube of the corolla. 0.(1. Native throughout Europe, in dry gravelly pastures; in several parts «f Britain, comni''ii. W3kL enum. 1. p. 247. Chironia Ccnuuntiin, With. p. 337. Curt. fl. lond. I. 247. Smith, fl. brit. p. 257. BgL bot. t. 417- Heyne, getr. darst. t. St. Jatime 9t. Mil. fuse. ti. t. I. Wood. mod. hot. 485. *U* 137. MnyerhoflTer, fl. monac. t. 5. Gentians Centaiirium, Lin. spec. 332. Ued. fl. dan. 017, Bull. herb. t. S43- Plenck. otr. t. 175. Centauriuoa vuJgare, Rafin sæl. p. 68. Hippocentaurium Ccntaurium, Schtilt. Ht &c. Calycine segments subulate. Corollas rose-cnlmired ; segrn ents elliptic. This is a |>un bitter, and agrees, in this respect, with other Gentianeous plants.

Var. β, minus (Schmidt, fl. boh. Z. p. 31.) radical leaves spatu* late ; stem 2 feet high, branched; branches all ftxilUiry. i« triehotomous at the apex; branch lets mchoCOTBOua, 3-flowered ; calyx 3 times shorter than the tube of corolla. ©. 11. Bohemia.

tar. y, nuttium (Schmidt, 1. c.) radical leaves broader, obovatc-roumlish, 5-neTved : caultne ones half stem-clasping, it'.aie-obtusL'; stem a foot high, branched at the base; branches erect, simple, trichotomous at the apex; branchlcts trifid, 3-flowered; bracteas setaceous ; calyx length of the tube of the corolla- (• • H. Bohemia.

r«r. t', *mtntu* (Schmidt, I. c.) radical leaves obovate; lower can I me ones oblong: superior ones linear, all obtuse; stem simple, erect, a finger in height, bi-rricbotomous, 2-3-rlowcrcd, one of the flowor* sessile, and the other pedicellate. (•. II Bohemia.

Var. ε, palüstre (Schmitlt, I. c.) radical leaves as in var. > ; stem i ham! high, »nil the branches dichotomous; cauline leaves oblong, acutish. 0. H, Bohemia.

Var. T, *eolttnum* (Schmidt, I.e.) radical leaves rather scabrous. ⊙. I. Bohemia.

Vmr. 'i, llnit'fTii; leaver 3-nerved : lower ones oblong : upper ones I.-irtccolate-linear ; calyx much shorter than the tube ol the corolla, which is filiform ; segments of corolla bltinmh. 0. H Native B of Portugal. Gentiana Centauriutn, Brot. ft. lus. 1. p. 276. This difli'fs from the species, in the superior leaves being narrower, and in the filiform tube of the corolla,

Var. δ, grandiflo-a; larger than tl species•; limb of corolla concave ; segme

larger :il« broad. • . H, Native of E<iro|ie, in moist places. I rium *)i,* Peru, encfa. 1, p. 283. Cetiuuriun Rafin ami S »e. ;)ower» white.

\ ,illr, aim. hot, p, .IV. anil B be. bot. p. 10.

in which ChirdoJa Ccniaunum, Ch. pulr). I iu;t|>frta, found un». name.

Ctittaunj Gentmn, or LruvrCt-maury. Fl. July, Aug. Britain.

PI \ W Itosm. et Schultet, syst. 4. p. 167.) *I;* leaves ovate-lanceolat< <; calyx ,iiifid. length of the tube of the corolln ; ca!;

Totla tuberose at the apex, !ianluhuan, Moltn. chil. ed. *d. \U* SMC. 1. p. 1607. Gentiana *M.* Cahan Login it, Fcuil). per, 3. *ammo,* «»d corymbose at the top. this is Lawuen oof Chili, notathin's thanathe!€\ *Gentiana* if

s|H'cilically »li»linct from the present, although the flowers are said to follow the quaternary division. Though it is medicinally used in Peru, Humboldt never sow it while there; but it wu cultivated in the plains of Chiloe, the inhabitants of which mny have originally brought it with them from Chili, whan it is a native.

(achanlahuam Lesser Cenuury. Fl. July, Aug. Clt. 1825. PI. i to 1 foot.

3 E. QtiTE'xsts(H. B. et Kunth, nov. gen. omcr. 3. p. 178.; much branched ; branches dichotomous ; leaves 3-nerved, lower ones oblong, upper ones lanceolate; flowers terminal, lateral, and axillary, on long pedic-ls; caly\ equal in length to the tube of th« corolla ; parts of flower quaternary. 0. H. Native of Quito, in temperate places, srhcra it i» called Cachanbgua; and of Cliiloe. E'xacum ljuitense, Bpceag. ayst. 1. p. 435. Sti-m and branches tetragonal. Cal> cine segmenu linear, acute, furnished with a narrow membram ous line on the hack, and diaphanous margins. Corolla rose-coluun.<], with a cylindrical tube, and oblong, obtuse, equal segment*. Capsule oblong, 2-celled, S-vakeu. ThisdtSera from the preceding in the tetramerous flowers.

Qutto Lesser Centaury. PI. 1 to I foot.

4 [1]. I.YDIOM v (Smith, engl. fl. 1. p. 3£l.)ttem 3-cleft at top; leaves roumlisli-i IlioiLi-, 5-7-nervi-i!; Sowen terminal, fiuiculate ; tube of corolla equal in length to the calyx ; segments of tlie Iiinh lanceolate. ©. II. Native of England, on the sea-shore of Lancashire, and to the north of Liverpool; and of the county of Down, Inland. Chnronia Centiturium, var. I. Smith. B. brit. p. 1393. Corolla* pink.

Broad-Uattd Lesser Centaury, Fl. July, Aug. Britain. PI. £ foot.

5 E. CAHTA'TA (Willd. ex Ro?m. et Schultes, sysl. 4. p. 168.) leaves elliptic-lanceolate or obovate, 3-5-iterved ; flowers capitate, bracteate. 0. H. Native, country unknown. This i* said to be a very showy species.

Cnr,f<«fr-flowered Lesser Ccnt.tury. PL | to i foot.

$ I. conre IITA (Pcrs. ench. I. p. *83.) plant erect, *tU* bran<hed ; leavr» ovate, obtuse, 3-ncrvcd; flower" semiile, fascicled, crowc: <l ; calyx almm aaml in length to the niid<i the tube of the corolla. 1/. li. N.itivt- of Spain. Corollas red. Very nearly allied to *E. spectata.*

CrotrdM-flowered LesserCeniaury. Fl. July, Aug. Clt.ld.il. PI. J to J foot.

7 K. AI.OEIOA'TA (Sweet, fl, gard. t. 137.) stems tetragonal, much branched, decumbent ; branches dichotomous, aggregate, few>6owend ; flowers nessitc ; leaves spatnlate, obtuse, 1-nerved, tapering into tin- petioles at the bast ; bracteas. linear, obtuse, rather longer than the calyx ; calyx twice shorter than thi- tube of the corolla, *g*. S. Native of the south of Europe. Flowers beautiful, rose-coloured. Segment* of corolla oval, obtuse. Stem and branches tetragonal.

Asgrtgatc Lesser Cenuury. Fl. Marcli, June. Ctt. 13X4. PI. 1 • oot.

8 E. UfTOaU'Ui (Fries, nov. fl. suec. p. *SO.)* stem itmple or branched,dwarf, tetragonal; leavesovatt- oblong, obtuae; tl crowi! ed, sessile, fasciculate; calyx at<otn equal in• length to the lube of the rorotU. ©.II . \ ative : Bl tain. M the sea coast; and of Sweden, near I ottenburirir, and ol Moll and. Chirònia littoràlis, I urn. ami Dillw. guide, p. 469. Smith, engl. bot. 2305. Chirònia pulchélla, I on, fl. brit. nc. 1. no. 7. Corollas junk. Tint ipaciai differ* from /.'. *ffiftrta* in the shape of the leaves and length of the tube of the corolU,

Sm-thorc Lesser Cmtaury. Fl. June, July En 1 mil. p] ot.

0 E. srtCA (Per.. ench. I. p. IM. Boakk, rl. gr*tc. t. 238.) branches dichotomous, tetragonal; lea lance

oblong, obtuse, 3-nerved ; flowers siibsecund ; calyxes and bracteax about equal in length 10 **tin** tube **of** the enrolls, Q, 1|. Native of Italy, Greece, and France, in humid place*. Gentiana <> pica in, Lin. spec, p. 359. Cliirimia **iptcAtS, WlDd.** •pec. **1.** p. IOCS,—Barrel, icon. t. 1242. ***Fkmtm*** idtcn. spicate} segments of corolla ovate-lanecolale. Corollas red or pink.

Var. >>, *Jiore-Albti;* flower* while. Maul), comin. p. 488. f. 2. C. Bauh. mod. 130.

Spike-AoweteA Lesser Ccntaury. Fl. July, Aug. Clt. 1820. PI. \ lo 1 foot.

10 E. ALOI'ICWROIDES ; Moms somewhat tetragonal, **dicao**torooii-ly brnnrhed ; leaves oblong-lanceolate, 1-nerved; lower ones spatulaic: upper **QBea** narrower, acute; flowers sessile, •ecund, minded, subspicate; corolla funnel-shaped, with mi acute, spreading-limb. ©• II. Native country unknown. **Ana abpecuroldetj** Ltim. diet. 2. p. 643. Calyx angular ai the 1J4M-. »itli **iiiifai •obnlata. erect** segments, length of tube of the corolla. Very like *S. tjucata.*

Ptnt-lttil' ***likt*** Lesser CVmaury. 1*1. i foot.

11 E. ALSTHA'LII (K. ltr. **prod, p.** 451.) **learei** oval-lanceolate, ohiusc, **8-utlwd ; BMNKI** subsecund, almost sessile ; "<uperior **braetm** shorter limn **the** calyx. 0. II. Native of Van **Diaoen'i** Land. Very nearly allied lo *E. tpicata.*

Southern Lester Centiiury. I'l. *{ I*

12 E. ULIUINOSA (Waldltt. et Kit. pi. rar. hung. 3. I. 258.) stem simptf, tetragonal, compressed, dichotomoutly corymbose at top, »cabroii!i from **puboKtnce,** as well as the leaves and calyxes ; leaves **8-ncmd** ; radical ones obovatc-tpaiuUte : caul me ones linear, acute ; culyx length of tlie tube of the corolla. ;> . II Native of **Panoooia,** and aercral other **putt** of the south of Ruiiiiiii in humid meadows. E. paludosu, Schrad. E. compressa, **Hajiw.** *I'.*, angustifolia> Wall. Hipp" iii **uliginoaa,** Schultcs, obsir. fl, l. 389. Stem simple and branched. Calyx M iian he lube of the enrolls. i iln- plunt from itiurt hairs is perfectly tnanifi'Mt under a microscope.

Bog Leaser C'eninury. II. Ju. July. PI. J to I foot.

$ 2. *i'loncTt jKtticeltatt,*

13 B. I;M\HOIKA'TA (Waidst. **et** Kit. pi. rar. hung. 3. U 275.) stem tetrngonal, dirhoi I ton : angles diaphanous; leaves ohlon^-ov.-iie, obsolcit'ly .i-iitTvi-d ; tlo tie j segment* of corolla oblong, emnrginale *ht* the »|n\. 0, II. Na* tive of Pannonia, **about** Pentn. **Hippocentauria** emarginata, Sclm H. ad. l». »ol. I. p. 3!H). Lravewshorter than **T!k« hmrDodta,** »iih diujihnniiti* edges. Calycine lcgmt-nts subulate. Corolla with a white or pair purple limb.

petal led 1 I i ntaury. Fl. I'L j fool.

14 \ i'i it in i) i I • • -, **DOT.** *fl.* »u*-c. it. 3D.) dwarf, much ranched; liram-I- iii.il; haves **snort,** ovate or oval, 3-ncrred: cauline onai **eqnaj** in I.n^tli to the internodes; flowers iu loose panicles, destitute of scales at the base ; calyx nearly as long as the tube of the corolla; style simj.lv. 0. H. Native tfcrougl u1 I **ttfope,** in the sand by the sea-side, and in **onobt** meadows ; a« well as **of** Caucasu*. In I: •. , ..ii the sandy ava-cout of England **and Beotlaod.** E. ramostwttna, Pers. eiwb. 1. p. <83. E. paluitris, Sthr»d. new journ. 4. p. 78. B. pnh'hfUa *a* ami »J iniiM-ria, Link et Hoffmans. fl. port. I. p. 2J3- Chirouta pidchclla, Smith, fl. briu 258. enal. hot. t. 458. CbtroQM pukbella ft D. C. fl. fr. no. 87»1 uia ramnsissima, Vitl. detph. 2. p. 6 rouia Oerjrdi, Schmidt, fl. liohero. 2- no. 131. Chironium centauriuin **of** many authors. Gentiiina Ceniaurium *fl,* Lin. spec. p. 333. (hinmia Centauriiim /), Wi! 1. p. 1068. Chironia iim; nany authors. Hippoceataurta pulchtll.i. **s, osstr.** fl. ed. *id,* **1.** p. 389.—Vaill. but, par, 32. t. 6. f. 1. Corollas slender, rose-coloured. From **toe** Olivers **dosing** at 11 o'elock in the evening, it has been confused with *C/im'mta* ***maptrta,*** or *E'sacum puiillum.*

t<ir.t>; stem **Maple, few-flowerad.** -.11. Native along with the species, Chirutiia pulcliella, Witld. &pfi\ !. p. 1067. **Gentttai pokbfila,** SwartK, act. holm. 1783. p. 84. t. 3. f. 8-9. **Willd. apec.** 1. **p.** 1007. Eryilirns'a pumil.i, Dietr. gart, lex. suppl, 2. p. 8*9.! Gentiina **palustns,** I.:un. ill. no. «2*1 Chironin pulchella *y, IX C.* 1. c. I

Neat **Leaser** Cetitaury. Fl. Aug. Sept. Britain. Fl. ½ to ½ foot.

15 E. TtKiiirLORA (Link et Hoffmans. fl. port. 1. p. stem erect, dichotomoutdy branched at top, tetragonal; leaves oblong and lanceolate, 3-ncrved, ncule; lube of corolla much longer than lite calyx ; MeirncMs «f corolla very nai acute. 0.11, Nati* I, na the **IIM** dBrfft), **MM** AC.IHIB. Gentiana ramosis- fl. hi*. |, p. ^79, 1 | in the forks hardly ; ,,t'ar, uneiiual. **CoroOa wfth a** n d limb, ind **whitish,** t.

SUmier-Jlawcrtti U'MUT Ccntnury. PI. \ fo

16 E. I'YKINA'ICA (l'ers. ench. 1. p. 285.) lea\< | segments of cttrolta lanceolate. ⊙. II N ative of the Pyrein .1 by D. C. fl. fr. suppl. no. 2781, **to** ***tiirien <<i I . juihhtUu.***

Pt/renean Leaser **CentSttTf,** PI, | to J I foot.

17 E. LiXAkLcroLtA (Pert, «nch. 1, p. **28.1.)** stem • mple or branched; leaves linear, obtuse, usually • ub-one-nerved ; corolla funnel-shapfd ; calyx shorter than the **tab*** ; style very lou, **inopltl** flowers sub-corymbose. &. H. Native of Ore sou of Europe, on (he banks of the Durance, mar A- gnon. I*, C. fl. fr. supjil. no. 2781, a. Lois, > I gart. lex. suppl. 2. p. 2<48. Geiuuma litiariii'fidia, **Laa** p. **0+1.** — Bocc. mut. 8. t. 43.—Barrel, icon. 423. Nearly allied to *E.* **pwfatfffn.** Corolla purplish or rose-coloured, Calycinc segments linear.

Toad-Jiajc-Uapcd Lesser Centaury. PI. \ foot.

18 I ! *e :* branches short; leaves ovate or oblong; tlmurs longer thnn the branches; segments of ca I y x acute. 0. 11, Nairn on the sea-shor., about i layonne. Chironia occidcnul-, 1» (' fl. fr. suppl, no. 2782. < marfiima. **Tbt** hind. p. l»4. Mubitof *E. puUf,e(^t* b dwarfer. I Corollas yellow.

fi-m Le* aury. PI. \ t<i \ fool.

19 E. MA&ITIUA (P< U.) stem branched at top, dieh 'iibosr, tetragonal; It-aves oblong-b late, 3-ncrved; flowers jml ncnts of corolla oval bluntish ; calyx length of the tubu of the c< htpartite. 0. H. Native of h in, by ihe sea-side- Chironia maritima, Willd. spec. p. 10R9, exclusive of the syn. Barrel, icon, t, 40K Smith, fl. gra.'C. t. 237. Chironia maritima anguttifulta, D. I fr. no. *HS1.* stippl. p. 428. Gentiana mariiima, Lin. mani. p. 55. Lam. diet. 2. p. 042. Cav. icon. 3. p. 4 t. 296. t 1.—Bocc. **ma,** 4. p, 83. t. 76.—Birr. —Column, rcphr. 78, t. 77. C»ly> like *I'.* **CwMiri«w,** but difl'ers in t >ellow. It ditler* from *E. lul, ,,,* **ifl** ie, in ilte wgments hung lanceolate-linear, aru

far. ,i; Tin- utn * Im' pressed; leaves | -nerved. ⊙. 11. s ative .if Tai.gi. I sea-side.

Sra-t.de Lesser (Vntaury, Fl. July, Aug. Cll. 1777. I't J to J fool.

20 E. MiYt'ai (Bttn- I L fl. alt. ill. t. 1». fl. alt. I. 220.) stems erect, 2-edged, diehotomous at top; 1 otihmg, somewhai 3-nerved; flowers bractlets; iH'duticles abi

rqual in length to the flower*; tube of corolla exceeding the calyx, which is ^-parted: **with lubalal** nt^fni*ntN olitust.-, crenulated at the apex. ©. H, Nat: . in humid meadow*, at the river Irtysch, near Abluikit, and eliew -torn **obs*** tragonal, £-10 inches high. r leaves obovate-obtuse. Flowers solitary, pedicellate, in the fork*. Peduncles tetragonal. Tube of corolla slender. Anther* hardly twisted.

Meyer's Lesser Centaury- PI. } to J f«ot.

I'. ROXBU'ROHII; stem* dichotomoutly branched, terete; iwer leaves ro&ulatc, *patttl ie, **S-nerred**: cauline leave* lanceolate, ob'use, 3-nerved : calycine segments linear, much shorter than the tube, which is U segtnenu of **mceokie.acuie.?** Q.H . Native of the East Indies. Chirònia centaurioides, Roxb. Chirònia jasmino **'lea, and E'xa-** cum diffusum, I! ;.!:•. **herb.** Plant much branched from the base. Mower* rose-coloured, pedicellate,

Roxburgh's Lesser Centaury. *V* . ½ foot.

E. LU'TEA (Rœm. et S **jmllea, syst.** 4. p. 171.) **stem** tetra- gonal, dichoto iioualy-pantded ; leave* many -nerved; lower ones ovate, superior r ones oblong-lanceolate ; segments of corolla elliptic; ilyx length of the **tab* of tha corolla** | style bifid. 0. H. Native of Italy and Francr. on **the** mountains. Chir6nia lùtea, Ber iol. ror. pi", dec. •>. p. 32. ChironU maritima, var. a, D. C. fl. fr. M **mppL** p. 3i. Gentiana mart'tima, S avi, pis. I. p. 27 k—Barrel, icon. t. 46*. Gcntiana pumila, Gouan, H. mon»p. p. *33.* **Leaves acute,**'. shining. Pedicel* thick, angular, -» Jim times **the length** of calyx. Calyx tubular ; with acutely keeled linear-subulate segments. Corolla aalver-ihaped ; Mil bluntish segme nta. Capsule cylindrical.

Yellow-flowered Lesser Centaury, Fl. July, Aug. Clt. 18*4. PI. \ to I foot.

23 E. tui&t.s (K -hultcs, syst. 4. p. I7i) item nearly simple, tetr igonal: angles winged, pel lucid; leaves roundish, 5- ncrvetl, downy, stem-claaping; calycine segment* obtuse, ad- ut **eased,** glandular; limb of **corolla** connivent. 0, It Vative of the lo er Pyrenees, in the valley **d'Osaau,** in boggy meadow*. Chirò • uligino«a, Lapeyr. abr. suppl. j). 39. Very nearly allied to *E. maritima.* It out of **many** capillnry tilires. ' Pcdun- cles axill iry, subdivided, **ft-IO-Bowered,** Tube of corolla in- closed in • the calyx. Limb of corolla tpoWvn yellow,

Morih LtAvr C'vntaury. PI. 1 to 1 foot.

I'ORTK'KIIS (Link. Ct Iloflmant. ft. port. I. p. 351, t. 66. a.) stems prostrate, tetr igonal; branches asaurgeut; Ii aves ovate-roundish, obtuse, generally 3-nerved ; tube of corolla longe r than the calyx; segment* of corolla aeutiah. *G* . 11. Native o • **Poctagal,** in humiil place*, about Oporto. and el*e> where, ticntutaa Portioais, BroC tl. **las,** 1.p. **-ilx.** H;ibtt of / *cónica serpyllifolia.* i lowers termin si, usually S, rarely 7, those in t! **sessile.** I alycine segments scario **H** on **the** forks **sessile.** Corolla yellow ^redili»h or whitish, ex Link. fl. port. I. c.), vith long, **narrow** segu ents. **Style** liit'nl. **BtaBM** lilifoim, creeping, ex tlrOL

Oporto ; esser > ntaury. PI. prostrate.

Link, i (Iloflitiuns. fl. port. **I.** p. *352.* t. 66. b.) **•ten** branched, tutted, j Tost rale ; leaves t-nerved, lan- ceolate-spatulate, fle »hy \ flowers termitul, *3* **toj;.** sessile, capitate ; tube of corolla hardly exceeding **the eat]** segments of c **oroUa** »i ' I' ^ ative of Portugal, in mar shrs OIHJ I •. (t_ Tops •: .n 1 . «t-r» colour I **nlimrm** **'rom** the other sp ,,cir* m theft*

Tufted Erythræa. Pl. prostrate.

E. ERYTHRÒEA (Bivon. s a-, cent. 3.) Mem tall, •iraight, rather l flower, co. rymbos r, bVoctcate; oalyx much il.urter than the tube of the corolla, with subulate segment*; **aegmenu** of corolla bluntil Q. II. Nat; Hy, **on the mountaina.**

(htat-jiowtrtd leaser CVntaiKv- PL 1 I oot.

27 K. ? CocHl»cuiNtN*i- (Spreng. syst. I. p. 5S0.)»tem q uite •tmple; K-avea ovate-oblong; flowers axillary, aolitnry, pedicel- late; calyx tubular, slt^i'th 'f-clefi; migma turbinatu-roundUh. ⊙. I. Native of Cochincliina. liottonia littoralin, Lour. coch. p. 105. **Antben twisted**

Cockmckim I • .•ntaury. PI. \ foot.

28 E. tom-AR (R. lir. in. append, to Salt, abyss, p. 476.) thi» spec ts ha* not yet been descrilied. 0 . ! EL Native of Abyss mra

Equ ser Centaury. **Pi**

(utt. A lii* genus **arc** elegant, delicate little **pfauua. The teed* ihmM** e town in nnall potit, **well** drained with **•herds,** in a mixture *of* gravel and peat, or tand, loam, and **peat;** and those apecict, native* of the sea--hore, m>y be wa- tered occanionally with salted water.

\ \ \ \ lll. SABBATIA (in **boMU** *of* L. Sabbaii, a cele- brated Italian Imtutmi.) **Adan*.** ram. p. **505. BaL par. load.I.** *32.* Pursh, :'.. amcr. **HSL** I. p. 1M. Hclib. hort. bot. 2, t. 118. C'hiionia »|ietie», Lin. Michx. and other*. Swertia ape* cir». Mill. diet, no 2.

Lis. s ***tt,*** *P*ntAndria, Mottogyma.* Calyx 5-jmrted. Co- roll.i with an urceolate tul»c ; and a 5-lg-partid limb* Stigma 2-parted; segments apirul. Stamen* 5] anthers at lengi h re- volute. Capsule l-celli^iJ, 2-valvni; tiLir^int of inives Kcmini- feroiu.—Iliennial herbs, with angular **Wn\%* and brnncltes. I>cavcs opfMisttc, **uuilfij** decuaute. Flowers terminal, solitary or **eoryaraoaa.** ('orollat rose-coloured or white.

I S. <,K\\ ii,ia (Sal. **par.** lond. t. St.) malt ; br.inrhes ICKW, **eJoogated, 1-flowered**; leaves linear- elliptic, -r lanceolate ; caly- cine teifirtenu linear, equal in length to the tube of the **corolla;** •cgmenis of corolla obovar ; sten, angular. &. F. Native from I'i M ii iv Ivan in to Carolina, and of **Canada,** in wei pasture*, on the hank* < rivers. Chirònia gracilis, **hfidub** fl. bor. **atner-** 1. p. It*). Chtronia camp. ulata, Lin. [ice. p. **£72.** Fl> rose-coloured.

Slender Sabbatia. PL July, Aug. Clt. ! PI. 1 foot.

i S. **STKLLA'SIS** (Pursh, (1. amcr. sept. 1. p. 137.) erect; branches dii-'luitoinoua, elontiutitl, 1-flowered; **leaves** lanceolate, acute ; segments of calyx **tubulate, shorter** than the **tube** of the foroUn ; ne^mcius of corolla **a** bovate ; stem terete. ,*.!{. Native of New York, New Jersey, &c. >u **Bah** mnnhes. Bur- tram, icon, incd. t. l.>, in the Bankaian Library. The ||< are lar^c, and of a beautiful ro*t?-colour, wjih an elegant yellow star in **th** centre, which i • surrounded by a deep red border. Thu plant ii **extreme)]** shy of cultivation, though very desirable Tor that purpose, It variekuitli w white flowers.

Starry-flowered **Sabbatia.** Fl. Aug. PI. I t oot.

3 S. ANGULA i«l» (Pursh, I c.) erect; le **aves** otate, atem-cla^i. iug; petluDclet elongated, i-oryinlmse; calyx half shorter than the corolla: with lanceoUn segments; stem marginately quad- rangular. ^ . 1 1. Native from Canada to Carolina, in shady woods, on **grasay** hilla; and of the Arkansav 'Chirònia, ,angu- l&ria, Michx.fi. **bor.** atuer. I. p. 146. f,in. spec. 272. \\,||,|. **apte.** 1. p. IOti7. MaLit of *Ertflhrtea Ctntaunttm,* i crowned at in *HyjJncum ;* purplish red. It vane* with longer and shorti-r, broader and narrower leaves. It is use<l by the **inhabitanw** of North **America,** for the same **purposes,** and in the **same way, as** *Kriftkra-'a Ventoirium* i> m this count

*A*gu{,u-*um\rw&* Sabbatia. Fl. July, Aug. Clt, l 826. !Pl. 1 foot.

4 S. ca *rV»Tmi» (Suit, in ai ner. phil. **trans.** vo>. 5. n. a. p. 197.) erect; branches dichotom **>u. | IBMH ovate.** »tem-cl*M..

ing; peduncle* **riorigatod,** sub-fa*ligtate : calyxe* winged, with linear segments, which **exceed tba** 5-pnrted corolla. 11 Nittive of North **America,** in the **open** prairies of the Arknnsas, and red river. Plant **bitter.** Sum **and** lirmches angular. IV-duntli s I. rruing a 1«JOM corymb. Leave* acute, 3-5-nerved. Corollas rose-coloured, siw of those of *S. mgnUtrit;* the segment* ohovatc, and the base marked by a 5-rayed, greenish star.

FWMSabbetia, PI **Jtm*,Joly.** PI. 1 foot.

5 S. CALTCOXA (**Puna,** 1. c. p. 13*.) leafy; leaves oblong-oboval; flowers solitary, with usually a 5-7-parted limb ; calyx foliaceous, exceeding the corolla : with broad ohJanceolntc segment*. &• '' x _l:V|, tril,,, ^i-w York to Carolina, in wet meadow*, Sims, bot. mag. I000. **Cbirdoia** dichotoma, **Walt** fl. **car.** M.I Uarlrnm, icon. ined. t. 10. in **the** Banksian Library. Chironia ca!_veo»a, Michx. fl. bor. timer 1. p. 147. Corolla large, rose -colon r«l, with obovate segments. Calyx involucr«-form ed.

Calijcosc Sabbat ia. 11. .hi. Aug. Clt. 1812. PI. I foot.

6 S. uiLOito'iDK* (Pursh, I. c.) weak; leaves lanceolate, erect; **bnscbea few,** l-flowered ; corollas 7-13-pnrted, Urge; calycine segment * linear, -shorter tliau the corolla. J . II. Native from New York to Carolina, in **boga,** Cliirdnia chloroiilct, Michx. fl. bor. amer. I. p. 147. Chironia dodecdndra, Walt, fl, car. p. 95. Cltlurn dodecumlra, Lin. «y*t. p. 299. Wilhl. apec. S. p. 341. Strut ilniiiiiilnut or weak. Corolla* Urge, rote-coloured, with oblong **MlimOHU.**

Cktora-hkc Sabbaiia. Fl. Aug. Sept. Clt. 1817. I'l. decumbent.

7 S. PANICULA'TA (Pursh. 1. e.) erect ; leave* lanceolate-linear ; panicle many-6owcred, brnctcate, *ub*faatigt*tc; calycine segments Bubuhkte, thrice shorter than **die corolla** ; sttm tetragonal. Ti. I . Native of N••• Jersey and Carolina, in bog* and cedar swamps, (l.ironia pnniculina, Michx. It. bor. amer. 1. p. 140 Suenia ditiortnif, Lin. spec, p, 3^8, Mill, diet. no. 2, Willd, spec. 1. p. 1330. **Ptowera** white, **with** obloitg segment*. Lower leave* nomeiimet ovate-lanceolate: superior ones **mbalatelj tetaeeoa*.**

Var, n, *iatifiilia* (Pur«h, 1. c.) **leaves** short-ovate ; panicles few-flowered. 11. II. Ciiirunia lanccohUa, Wait. fl. car. p, 05.

t tir. fi, angvitijvlta (Pur»h, 1. c.) leave* linear ; panicle corymbose, ninny-flowered. l£. M.

K/'«»ii/(((/-(lowered Sabbat in. l*l. July, Aug. **Clt** 1817. PI. foot.

8 S. AUITRVLI* (Cham, it Scblcchl. in Liuniea, 1. p. 194.) tct; stem quadrangular; angle* win^-ed; leaves linear-lan-**cefil.i** aegu '' ***A,*** **aeota,** the inn Idle nerve **keeled, equal** in :h to tlielube of the corolla ; n» of corolla lanceolate, **acuminated, & . !''. Native of Uraxil, in the provim-c of Ci*-** I'l.itine. Plant {(bbrou*. Lower leave* obovatr, ubiuci', the rest linear-lanceolate, with revolutc i d^t-n. Plant often 1 or 2 lowered ; or terminated by a few-flowered panicle. Corolla **while,** luilur-shapcd, with a 5-cleft limb. Anther* **twitted.** Stigmas bipartite, flat, at length **afcmntedi** and more or lets twisted. Capsule half 2-celled. See<U wrinkled.

Southern Sabhatia. PI J to 2 r eet.

t *SjxcUi not tujftcitHtltf* ***known.***

9 S. Akur.'xA; erect; lcavet linear-lanceolate, acute ; flower* terminal; calyx length of corolla, which ia route; stem ti erete, dichotomous. *4* . II. Native of Maryland, **Delaware,** New Jerny. Chironia ania/nn, **Rafn.** in l)e«v, journ. bot. t. p. « • . Perh itj>» **d** e same as *S. erf uitit.*

Plea,»,t **Sabbatia.** ft. I. foot.

10 S. **evato** I ; leaves lanceolate, obtu*e; c> mes terininal; **eorotti loagei** than the calyx ; *tcm tetragonal: *m* membranous; calycine aegmcot* linear^obtute. *S • I-* Native of Carolina. Chiron ia cym6»a, Lam. ill. 1. p. +79. no. 2178. Potr. stippl. *t.* p. 234. Leave* as if they **were** truncate at the **base;** upper one* atmoct linear; radical ones ovatc-roundt*,]M-titilate; and the bractea* linear, ex Poir. IVrhap* the same (u *S. itHgufarii,* or A*, *paniruliita,* var. *a, ltttif"»iia.*

Cymott-flowered Stbbatia. PL I fooi.t

Cmit, **The tpedea of *SabbAtim* are** very elegant planti, wlw in blossom, and are therefore worth cultivating in every'collection. Tlie »eeds should be sown thinly in pots, m the sanw way a* recommended for the species of *Erythr&a* j hut the pots require to be placed in siiallow **pam** of **water,** the species !• natives of ntar*lies and boga.

Sub-tribe IV.

LISIA N Till 1 (this Mib-tritte agrees wirhthe genus *Linanthux,* in **the eapmle** tK-ing **8««elled,** ami in \W anther* •••tl in the old itat<.) **ted,** in **conaequem** the margin* of the valve* being bent into (In central column; margins of valves placenlifcrous. Anthera changed in the old **itate.**

\\\1\. LISIA'NTHUS (from *hm* lym.* dia... and «^i^, *anthtu,* a flower ; **a** name given to tl e plant, on account of nivJical virtue* |io*iic**ed by it, of dissol **hummours,** b«it>t{ a powrrfiil catHar'i) llr<iwne, jam p. 157. t. 9. (. 1. Schreb. gen. no. XT l ! in. *tippL **133.** ni.iiii, p. 6. **Juss.** gen. U:;. *A»\>* guiati. 1. p. x*0«. < fruct, suppl. 1. p. *US.* l. 183. H, *V-* et Kunth, nov. gi*n. i mer. 3. p. 180. Mart. B. l>r,i*. ia. et Pav. fl. per. 2. p. 114. I'I I. par. lond. under no. 3t.

LIM. **aTST.** I ' *!oMonyma.* Calyx cam pan-late, 5-cleft; segment* erect, **with ntMBbranous,** iliaphtinotix, and ineumbeni ed^es. **CoroUk** funnel-»h:i|><-.!, **mat** mvfj on one *ide, or ventrkoM? above; limb c«|ual, 5-cleft ; thr oat beardless or naked. Stamens 5, rather unequal, ascend ing; ant hers sagittate, Rxt'd by the base, for iltc mo*t part rcvuluu . i s[>eciaily in the dried state. **Style elongati** na bilanwllale. C apsule 2-celh'd, 2-valved, many-seede ! ; margin* of valves inflexe •l, ptaceutiftTous. Si.-c-d* angular,—11 ir (citron t or *uRV utitone, erect, glabrou* plants, Routs perp **ndicular.** Stems subtetragonal, simple or divided at top. leaves di*cut*ab solely opposite, *e»ile, or on short petioles ; petioles usually more or less combineil inlo a ahorl sheath, quite entire, usual \ marginatetl. 3-5.nerved. Flowers Axillary, among tlie superior leave*, or terminal, racemose; raceme* bifid, with a flower in the fork, or dithotnmou* or panicle*!. Corollas of various beautiful «>!• **on.** r< **dieoai eontinuoaa** wnh the calyx, **bracteotaie,** sub-opposite.— Inhabitant* of tropical America, in fieldi and alf ine pastures.

4 1, *Flower* blme or purple.*

1 L. 41 ri **m i s** (Mart, *nov,* gen. bra*. *2,* p. 93, t. 171.) »t linely 4-wing(.tl ; leave* ova(. -orbicul ir, obluae, margn **n solitary, laShtrj,** itroopiug; calycine **segmeni impanulati lar,** \Mtlt **ovate,** orbicular, acutish; corolla cr ly tubular, acutish segments. ⊙. S. Native of **Brasfl,** m the mine | provinces, in pastures, on the mountain*, particuUrly betv een Villa tia Camitauha ami Villa Hi< :la **pale** vmlet, **above** an inch long. Leaves 1 or 11 **iach** in diamt ter.

Alp LUiamhu*. H. Jan. Feb. PI. 1 to JJ foot.

t L. *v** • Mart. I. c. 2. p. yt. i. iru.) leave* oblong, acute, te**ilc at the bottom of the Mem, and **rtaWUBf down** it; »lrm tetragtmal, submarginate ; racenu* **termioa duncteti oljcine eegmenu** acuminat.<l; **corolla** fti[itirl-sh>|M>d : with tlrep, oblong, acute, crectt«h it-gn re of tiraxil, c n mountains, t-ar Villa Kica, am Jnao iU-l Key. **I^eaTes** 1 ID 1 \ inch long. Corolla* 1 • inch of a beautiful, pale »iotei I the roots are very bitter, **and** used in rirci> iu- **nativi** I

*t't*iUI<mt* Lisiantlnti. PI. 1--*U* et.

acme, peiiolott, with t oblique nerves; peduncle* solitary or twin, long, brecteolate under the flo,wcr; calyx turbinale; corolla with a short tube, a vi-ntrico**.[1] suh-campanuljite, indexed limb; and ovate, obtuse, rather irregular segments. 0, S. of Si.mli America. Leave* I2-20 lines long, and .5-6 broad. Bracteas minute. Corolla yellow. *

Tnula U-ftovtvrvil Liaianihtu. Ft. 1 to 11 foot.

KiOHGxceM (Clinm. [‹ Schlecht, in **LintucA,** 6. p. 388.) and branches terete; leaves of the sterile branches half item-duping, ovate, with rounded, stem-cla*ping ftitri which are lanceolate at die bate, acuminated, pale green above, but pnlor beneath; panicle Urge, loose-flowered; calycine scgmenU narrow-lanceolate, acuminated; corolla almost funnel* shaped; with elliptic-acuminated segments. ©. G. I extra* in woods, at Papanila. Leave* 6 inches long, and 2 inches broad. Corolla blacki-.li in tlie dried state, but probably greenish ji-llow in the recent state- Capsule elliptic.

BtacktMh-ftowered Listanthut. PI. I to *2 t-*

Hi L. SAPONAH mints (Cham, et SchLcht. L e. p. 389.) item branched, nearly terete at bottom, but obsolete!)- tetragonal at top; leaves nearly «es»ilc, ovate-lanceolate, acuminated, with rather scabrous edges; inflorescence a compound cyme. *% G,* Native of Mexico, at Papamia, on the edges of wood*. Leaves 5 inches long. Calycine segment! lanceolate, acuminated. Corolla white, salver*shaped; with ovate, ociiiniiuu-d segments. Capsule elliptic or ovate.

'uiria-like Lisianthue, PI. I to % feet. ?

t *Species not tuffictcntiy known; and probably not belonging to the gemu.*

33 L. C.%«ISA TU» (Dear, in Lam. diet. 3. p. 650. ill. t. 107. f. i> br.irji.hcd; lirandii> ti-tr:i^ >n.il; leave* roundi*h-uvaie, Mrsoik*. J-IKTVI-II; calyx prismatic, hai in. segments keeled upwards; corolla with a slender tube, and ovate. spnail.ng segments. %> - \ alive uf Madagascar. Leaves sul>-connate. I erect, podicdl.iu-, tormina! and axillary. roSa 3 times lunger than the calyx. Capsule ovate - oblong.

• ly.\cd Li*iair rub.

54 L. TKisKkvn (Dear, in Lam. diet. 3. p. 659. ill. p. *76.) <v; item tub-tetragonal, K-nvos ovate, nmcrortatf, 00 abort petioles; flowers in loose terminal, trkhoKimutu panicles, pedicellate; calyx docplj divided, with keel ins; lim corolla parted nearly to the bate into narrow segments. 1 Native of Madagascar. Leaves beset with sliort hairs oa both surfaces; bracteos short, lanceolate, acute. Capsule o>

Tkrte-nc i itanthtis. PI. ll foot.

34 L. *maiZmvM* (Pet. Th. in Willd. nws. ex Ream. et Schultes, svit. +. p. 788.) glabrous; Men Icrttt; leavei ovate, acuminau red; u mbeIs terminal, few.flowerud; calyx ventrictwc, coutracteU at top; tul* nf corolla 6 ii, la: witli ovate, acuminated »egmenU. I; . lagascar or leaves lanceolate, 4 i> long, longer titan the inu?modes.

fulx-/o> inthua. SliruliJ

Cult. M'>si of the species of *Liti&tUktu* arc very handsome fixture of loam, aand, aod peat is a good *aul* CMttDga. of the shrubby and perennial •{> readily in sand, under a hand-glau. Tlie annual kind* require *the* same aa that recommended for *E'tmum,* p. SIS.

x I 11; I |; \ (111 \ named by Martiim, in honour ol *G*b,* Br«y, of the dvowty of Irlb«h, ambuawlor from the Kwf of Bavaria to the Court of Spain.) Mart. nov. gen. bra..

*r<*ti*iir«.* C«Jy* campmuUte, 3* cleft; segment* erect, with membranous a funnel-»h;tjH-il. equal, deciduous; limb 5-cleft; throat na Anther* re volute when dr n bifid; segment* cjli cat, not bi-lamell&te. Capsule I margins of Vfdvaa |>t;icernifvrou§. bent inward*.— I gUbrou> herb. Stems tetragonal, fiitular. Leaves opposite cusute. petiolate, triple or quintuple-nerved. Flow alternatc, duposetl in dirhotomous panicles. This genus <! In.in *LuuiHthut* in the regular curolh, and str> F tinstigma.

I I, E'LEGANS (Mart. 1. c. p. Uli. t. 179.) le*vc* lanceolate, acuminated; racliii of panicle genicubtelv bent. 0. S. Native of Brazil, in the province of Rio Negro, near Gga, in moist, sy Ivan me.i 'Coro'a blue, n natt in length. Racemes long, twin, with I flower in the fork between tl> *Elegant* Irlbachia. PI. 1) to 2 ft

Cult. Tor t'uli.ire and propagation see *E'jcacum,* p. 213.

ILL BY M BO LA NTHUS from »V^DX»K(*$ymbolon,* a r in reference to the rins at the ban- of the lilaments.) Litianihu» species, Ruiz, et P.n. and II. II. ct Ktmtii.

I.iN, sirsT. *Ptmttmtrm, Monogynia.* Calyx 5-parted, pentagonal; MMIJMUU with membranous mnrgin*. Corolla shitjH'J, witti a cylindrical tube, 3 I _'er than llie calyx; ami n 5-pmrtcd liuili; segmentx with cr. fringed Stan rted in the tul»f, li;irdh : anthen -iji^nt.itc, at 1. il. crenulated, [1] in ovate, com-, l-ceUed, S-vaW«l; placcnuu *ft,* parietal, bibimcllate, MtiN on tin- bark. Stigma £-lobed; lobes linear-oblong, lljt, blunt. Capsule ovate.—Ol&broui, branched shrubs; lirai> 4 iii.il. Lstii *atr, on »ltor it middl< - round at the base. Flowers axillary, aolitar. ter f-coloured.

K -HI; l.avc* oblong, a axillary *out* solitary, ami tt-riuinal ones S-.". rolU salvor-stuped, witli fringed segments. i Granada, on mountains betw , • : 1 thu* anomaln . I' Kumli, nov. gen. atner. *3. y.* firanches sub-dichotonious. Leaves 2} inches long- »iie of the following species. Brae teas oblong, tub-spathaceous.

induta, Shrub .* to C :

it; leave* ov ! >wcrt pediceliute, rj, solitary; calyx IK-HU.. rolla sud jj. Native of tVru, on the fnbuntain«, J.i-tiiui! Ruiz, et Pav. S. [>cr. *t,* t. \ *Hi.* Leaves S-3 inches IDI eels curved, furnished witlt 3 ovate, < lea* each. T ^menu of the ca and '.' itunr, nib-i ill HIIII metnbrnn [1] lla rub-ri loured, large, with a> its.

^lirub 3 to 8 1

Cult. For culture and propagation sec *TAchia,* p. 197.

Mil i CUSTOMU : .*T©/K>c, • beautiful montri; ,,, •• fair corolla*). Sal. par. lond. t. 34.—Li«i&nU)ua species of aut)

Lin. STST, *f'rnttiii'trut, Monof(ifnUx.* C«lyx deeply 5-. having the backs of the segments more or let* winged. C ru i]^ with i funnel-shaped tube, which is contracted a little H th* • p n; and a i clefi limb, wh n is longer than the lube and is var egated below the middle above. Stamens 5, inserted near the n ddle of da> tube, and a little lotigtr ttinn it; 6tan> erect, linear-lanceolate; anthen rather Mgiltate. <H.v

obkmg, 1-celled, rx Sal. and 2-celled, e* Nutt. icculcnt; with short, stiphate placentas. Style abort, erect; stigma l. obed. Se«ls stTubicnlitu-.—Annual herU, with the habit of *Paeu morttinlhc.* l eaves glaucous, oblong, .i|i|>osite, decussate, perfoliate. Corymi few-flowered, diebotonous, trrmioal. Flowers bin e. | he planta have glaucous, ; perfoliate leaves, r...[unlike those of Lo«'l's Catchfly, ihe *Stfenc Arc.*

1 l. SILENIFOLIA (~.il, pnr. t. 34.) stems terete: leaves obovate-lanceo •late; M lyx ringed on the back- ll n-iilence, and <(N'orili America, on the sandy banks nf the grc-at salt liter of die Ark.-msna; ami nt sources ! the Canadian river. Ltsjanthus glaucifolius, Lam, diet. 660. Iscq. cd. 1. p. 64. icon. rar. l. t. 33. Nutt. in amer. phiL tram, vol. 5. n. s. p. 177, Corolla purple: anthers yet low.

f-.it. 1,(1 f-Uaotd Eustoma. Fl. July. Clt. 180*. Pl. 1-8 foot.

S E. EXALTA'TA (Sal. l. c.) item slightly tetragonal; haves ilaic or oblong-lanceolate ; catoctne w'gnienlic winged on the back. 0 itive »f Si. ll ainl Vcra Crui, Lisiaitthus exalt&tui, Lam. 3. p. CG2. ill. p. 478. < <x;ili i l. Lam. diet *2.* p. *W>-* Krvtltras'a l'liinui i , II. B. el Kimtli. i *water. 3.* p, 17C—Plum. spec. 5. Iturin. unet. (COB. t. 81, f. l. Leaves 3-nerved. Segments of corolla ctenated. l'™ it lull of clammy seed*. Th» species differ* from the preceding, in having a more angular Item, and a gre iiiT number of flowers ; in the wings oi the calyx In inn broader, and in the filnnwnia heiitg inserted a link' l igher up.

' l) more glaucous titan the specie* : and and more expanded. ©• F- Native of the bank* of rivulets,, Cham, cl ii Linnau, <i. p. S87.

Tali Bintonu ;<> a feet.

'. The seeds <i!' the *<.]»* • *Eittom** require t< bi reared on *a* hot-bed, and otherwise treated like *<n\>* annualc.

friU II.

I <• plants corttatneil in this M'Ciion a^r. •• *with* i 2-celled cap . lkil ; marj; t into ihe centra) |)lacenia, «hiil, is at length free, and be irs the scctU.

Mill •-I.K.E'A (n&tmd in *m* ktnaterdaaii aulhov ••! Loeupfetissimi rerum naturalium thesauri descriptio, 4 vol. fol Amsterl lam, !7M—1765.) Solander '"*•• R. Br. prod. p. t tcttta »|ircie* of l'in. am) uilicri.

Lm. SIST. *Tttra-l'c>i<un<!* £)">*<>• (•rgmentrt keeled or miwed on tin' badi. Corol!a t »lia|to(1, mareeacenti v .cinji lengthwise : when old, recurved, with a callous apex. Stigmas 2. Capsule 2-celled, 2-valved . valvoa with in(l.i\«J etlgea inserted. into tlif central plact>nu, wtiirb i* at length free.— Erect animal gitbrova berba, with tetragooal stems and branches; opposite, decussate, sessile leave <; and usually tirniin:il, eotjaabose panicle i of flo«>rs.

1 6. IONDA'TA (U. llr. pr»d. p. 452.) stem dkhtuomous, tetrapmal; liaves sessile, cordate; flow R in the <• licil eadi »ith *n* keel <» lot back. G.G. Native of the Cape of Go«1 Hope. E'xaci cordátum, Lin. syst. 155. ippl, Wi. Cbata a«a, 194. Gentiana exacoide-, l.in. spec. p. l B.t. ll */* — llnrin. aft t. 74. f. 5. Corolla yellow, with a cylindrical tulw and ob >\atc segments, Hal *three'n Crntaurium.* In all ihe varieties the stamens are said to be inclosed in the thro*! of !)»• oorolla.

Var. a, macrántha (Cham. et Schlecht in Linnaea, 1. p. 191.) keel* of the i alyx, w ich i« largt, broadly winged, smooth, or Kcabroitt; corollas l irj, j^ ; more tliaa twice longer than tin* calyx.

'".• ('tiarn. ttScUtcht, l.e.) keels of calyx with narrow, m0otb,a] most evanescent \vings; corolla smaller, half an inch l •• m long as the <:.

Jar. y, mcrtmtka (Cham, ei Schlecht. l. <\ p. 1'J^,) keel* of c«lyx wingad, nerved, haviug the oervee ending in t. corolla minute, 4 lints long, not quire twice the length of thr calyx.—l»lukn. aim. p. 94. t. *£75. t.* 4.

Co. ted Setwa. Fl. July, Aug. Clt. 1815. l(). i to ij foot

% S. suLFiiu'atA (Cltam. pt Schleclu. in lJnnfrn. |. p. 192.) stem dicbotoraotuly and corymbonely branebed, b l broad, ovate, acute, l-nerved ; calyx nearly gio- bose, with acute segment*, which are ». on t! flowers 5-cleft j stamens ex Native of il f Good Hope, on the top of the 1 : I ckton, mss, Leaves *S* lines long and twe hroad. !la sulphur colottreil, with elliptic, acute- segmetlU. < mil- ttlba of thr t-omlh.

Sulphur-coloure l ilowtn Pl, | foot.

s S.«l (.IA (Cham, et i obosely 'branches : angles winged ; brsDehes straight; cordate, ronndi t sntsile, 3-S-tterved ; fl' quinquefid ; calyx ovoid, with acute, tharply keeled -. stamens exuerted. ©. G. Native of the Cape of Good 11 lwrg»bay PiHirt. Stem naked al the bw (ITDUS at top. Leaves 4-5-lines broad, and tf lines long, with the margins and apexes infiYxed. Flowers crov yellmv.

Mulu'htiml Scba^. Pl, 1 to 1J fool.

4 S, CMITA'TA (Cham. KSchlccht, 1. e.) sam crowded with leaves at bottom, the rest naked and Btiujik, termio coarctate panicle : leaves sessile, ovate, 1 m the lwwe, 3-mrvct); flowers quadrifid; calyx •vate, with keeled segments ; »tftmctis exaartssl • .<>. Nal <• Cape of Good Hope, on the top of the Table Mountain. Leave* with revol uie eilges. TIte superior part of t he stem often furnished w'*h WO nairs of n.'nute, stem-clasping leaves. Corolln yellow, much longer than the calyx, with obMM *a* gments.

Vajiilat U< (R. Mr. prtid, p. 45*.) Men dichotomous,. sir^litK tetr igonal; leavers ae*>.ile, cordate, ovate, 3>rterveil ; paiiiclr corymbose, term nal; flowers iguadnfid : calvcinr «egn winged keels; stamens inc o«'d. 0. *H.* N*tii -itina nilfcji, 1'huub. 1 Lin. »>st. l i i . aoppL l t t. [.am. d1 l.m. — l'lukn. pliyi. t. 875. f. 3. Corolla «<ild, n yellow, with lanceola. segments. Habit of *Erytha-u* '*,,m-*

. *)i;* flowers]tale yellow. Cham.";

/<k«-rSo«ercd in-baa. Ft. Ju. Aue. Cli. 1824. Pl. ' foot.

6 s A'LBEN (R- Br, 1. r.) »nin iciragonal, dichotomoualy branched, fa»iigiaie; leaves cordate, decurrent, 3-nerved; flowers 5-cleft, terminal ; calycine se jments *V* eeled on the bswfc : su> mens exserted. ©. G. Native of the Cape o i Goo.1 l Hope. E'xacum álbens, l in. syst. 155. suppl. 123. E^ iL-um pedmctt. látum, Lin. Gentiana álbens, Thunb. Corolla whitish; tube longer than the calyx ; and the limb th of the tube.—Burm. afr. p. 207. t. 74. f. 4.

White-flowered Sebaea. Fl. A ug. Clt. 1U20. l'' . ½ foot.

7 S. ov (It. Br. ptwl. p. 452.) stem branchi<!

Inn

3 L. ALVTUS (Mart. 1. c. p. 95. t. 174.) stem tetragonal; with the angles a little winged; leaves sessile, ovate, obtuse, marinate ; flowers racemose ; calycine segments ovate-roundish ; corolla from a slender tube to ventricose : with ovate segments. 1/. S. Native of Brazil, in alpine pastures, near Villa Rica, Sahara, and on the range of mountains called Serra de St. Antonio, in the mine provinces. L. specibsus, Schlecht, in Linnaea, 1. p. 198. Racemes sometimes simple, and sometimes crowded, coarctate. Flowers drooping. Corolla 1| to 2 inches long, pale violet.

Winged-stemmed Lisianthus. PI. 1J to 2 feet.

4 L. AMPLISSIMUS (Mart. 1. c. p. 96. t. 175.) stem tetragonal; having the angles a little winged ; leaves sessile, ovate, acute, a little margined; flowers racemose; calycine segments ovate; corollas very large, campanulate, with ovate-orbicular segments. If.. S. Native of Brazil, in alpine pastures, near Villa Rica, Villa do Principe, and elsewhere, in the mine provinces. Racemes twin, 2-flowered, with a flower in the fork. Corolla large, purple or blue. The roots are very bitter, and are used in decoction as a febrifuge, lihe those of *L. pendulus,* by the inhabitants of the mine provinces of Brazil.

Very large-Rowered Lisianthus. PI. *2* feet.

5 L. CGERULE'SCENS (Aubl. guian. 1. p. 207. t. 82. Mart. I. c. p. 100. t. 178. f. *2.)* stem tetragonal, leafless a long way at the top : leaves narrow-lanceolate: lower ones ovate, acute, few ; flowers bifidly racemose or solitary, drooping; calycine segments ovate, acute; corolla funnel-shaped; with a short, gibbous tube: and ovate, acute, erectish segments. ©. S. Native of Brazil, in the province of St. Paul, in moist fields ; and of Guiana, in humid meadows. Leaves small. Corolla small, blue, a nail in length.

Bluish-flowered Lisianthus. PL J to 1 foot.

6 L. PRATE'NSIS (H. B. et Kunthfnov. gen. amer. 3. p. 180.) stem simple, tetragonal ; angles a little winged ; leaves linear, obtuse, sessile, remote; flowers few, terminal; calycine segments ovate, obtuse ; corolla funnel-shaped, with ovate, acute segments. ©. S. Native of grassy places, near Esmeraldo, on the Orinoco. Flowers unequally pedicellate. Corolla blue. Nearly allied to *L. ccerulescens,* Aubl.

Meadow Lisianthus. Fl. May. PL 1 to ljfoot.

7 L. PURPURA'SCENS (Aubl. guian. 1. p. 205. t. 81.) stem branched, obsoletely tetragonal; leaves sessile, ovate, acuminated ; racemes terminal, dichotomous, on long peduncles ; calycine segments roundish, obtuse; corolla campanulately funnel-shaped : with roundish-ovate, acutish segments. ©. S. Native of the Missions of the Orinoco, in inundated places, between St. Fernando de Atabapo, and the falls of Maypure; and of Guiana. Lam. ill. t. 107. f. 2. H. B. et Kunth, nov. gen. amer. *3.* p. 182. Flowers solitary, remote, secund, at length drooping. Corolla purplish, 9 lines long. Stamens equal to the corolla in length, or a little exserted. Leaves reticulately veined.

Publish-flowered Lisianthus. Fl. May. PL 1 foot.

§ 2. *Flowers scarlet,*

8 L. PULCHE'RRIMUS (Mart. 1. c. p. 97. t. 176.) stem sub-tetragonal, finely winged; leaves sessile, ovate, acuminated; or broad-elliptic, revolute, with membranous margins; panicles terminal, dichotomous ; calycine segments ovate, acute; corollas large, campanulately funnel-shaped, from a slender tube. 7/ . G. Native of Brazil, in the mine provinces, especially near Villa Rica, Sabura, -Tepanhoa, Villa do Principe, Tejuco, &c. Corolla large, nearly 3 inches long, scarlet. Peduncles twin, dichotomous ; with a flower in each fork.

Very fair Lisianthus. PL 3 *feet.*

9 Li E'LEGANS (Mart. 1. c. p. 98. t. 177.) stem sub-tetragonal; leaves sessile, ovate, short-acuminated, with sub-revoluteedges; racemes on long peduncles; flowers drooping; calycine segments ovate, acute ; corolla funnel-shaped, from an elongated tube : with ovate-acute segments. %. G. Native of Brazil, in the mine provinces, in alpine pastures, especially near Villa Rica, Pires, Villa do Principe, and on mount Itambe, &c. Peduncles 2-3-flowered. Corolla 1| inch long, fine scarlet.

Var> a, *robusta* (Mart. 1. c.) stem 2-3-feet, branched, leafy; flowers large, red, more remote.

Var. /3, *simplex* (Mart. 1. c.) stem almost simple, leafy at bottom, and elongated at top into an almost 1-flowered pedicel ; flowers smaller.—Lis. pedunculatus, Schlecht, in Linnaea, 1. p. 199.

Elegant Lisianthus. PL 1 to 2 feet.

10 L. ANGUSTIFOLIUS (Mart. 1. c. p. 99. t. 178. f. 1.) stem tetragonal ; angles slightly winged; leaves sessile, narrow-linear-lanceolate, acute, with revolute edges; flowers drooping, usually solitary ; calycine segments ovate, short-acuminated ; corolla funnel-shaped, with a slender tube, and narrow, ovate, acute, erectish segments. ©. S. Native of Brazil, in the mine provinces, in elevated fields, near St. Domingo, &c. Corolla fine scarlet, an inch and more long.

Narrow-leaved Lisianthus. PL 1 to 11 foot.

§ 3. *Flowers yellow, or greenish yellow, or altogether green,*

11 L. INFLA'TUS (Mart. 1. c. p. 94. t. 173.) leaves ovate-oblong, acute, on short petioles; stems terete; racemes terminal, few-flowered, sub-secund, drooping ; calycine segments ovate, obtuse, apiculated; corolla with a narrow base, and a ventricosely campanulate top : with ovate, obtuse, spreading segments. ©. S. Native of Brazil, in subalpine fields, near Villa Rica, Sabura, and elsewhere, in the mine provinces. Racemes twin, 2-4-flowered, with or without a flower in the fork. Flowers pendulous. Corolla more than an inch long, pale greenish.

/w/L/ed-flowered Lisianthus. Fl. Feb. March. PL 2 to %\ feet.

12 L. KU'NTHII ; stem branched, terete; leaves lanceolate-linear, nearly sessile ; racemes terminal, simple ; calycine segments roundish, obtuse, concave; corolla funnel-shaped : with ovate, acute segments. Q. S. Native of grassy places, at the foot of mount Duida, near Esmeralda, in the missions of the Orinoco. L. angustifolius, H. B. et Kunth, nov. gen. amer. 3. p. 181. Leaves 1-nerved, obsoletely veined. Flowers solitary, or twin, secund, lower ones remote. Calyx quadrifid. ? Corolla green.

Kunth's Lisianthus. FL May. PL 1 *to 2* feet.

13 L. BIFIDUS (H. B. et Kunth, nov. gen. amer. 3. p. 181.) stem simple, obsoletely tetragonal; leaves nearly sessile, lanceolate, acute; racemes terminal, bifid ; calycine segments roundish-elliptic, obtuse ; corolla funnel-shaped : with ovate-obtuse segments. ©. S. Native *of* New Granada, near the mine of Santanna. L. racemdsus, Willd. herb, ex Roem. et Schultes, syst. 4. p. *788.* Leaves remote. Flowers solitary, secund. Corollas green. Stamens exserted.

Bifid-racemed Lisianthus. Fl. June. PL 1 to 2 feet.

14 L. MACROPHY'LLA (Willd. herb, ex Rcem. et Schultes, syst. 4. p. 788. H. B. et Kunth, nov. gen. 3. p. 183.) shrubby; branches tetragonal; leaves ovate, acute, on short petioles ; corymbs terminal, paniculately disposed ; calycine segments roundish ; corolla funnel-shaped: with ovate, obtuse segments. *2. S. Native of New Granada, on the declivity of Panama de Ahnaguer, between Pansitara and the river Ruiz. Stem articulated, rather hairy, having 2 of the sides convex, and the other 2 furrowed. Floriferous branches sub-fastigiate. Leaves reticulately veined ; having the nerves and veins hairy on the under side. Corollas yellow. Leaves 7-8 inches long.

Long-leaved Lisianthus. FL Nov. Shrub 6 feet.

15 L. TRIFIDUS (H. B. et Kunth, nov. *gen.* amer. *'i.* p. 182.)

stem branched, tetragonal: having the angles winged ; leaves on short petioles, ovate, acute; racemes terminal, trifid; calycine segments oblong, obtuse*, corolla funnel-shaped : with roundish obtuse segments. ©. S. Native of New Granada, between Mariquita and the mine of Santanna. Leaves quintuple-nerved, and reticulately veined, 3 inches long. Petioles connate at the base. Flowers secund, solitary, hardly an inch long. Corolla greenish. Branches of racemes fastigiate.

Trifid-racemed Lisianthus. Fl. June. PL 1 foot.

16 L. GLA'BER (Mutis, in Lin. suppl. 134. Smith, icon. 1. p. 29. t. 29.) shrubby; branches tetragonal; leaves elliptic or ovate-lanceolate, acute; corymbs terminal and axillary, few-flowered, involucrated by 2 or 3 leaves. J? . S. Native of Peru ; and New Granada, at Santa Fe de Bogota. H. B. et Kunth, nov. gen. amer. 3. p. 183. L. corymb6sus, Ruiz, et Pav. fl. per. 2. p. 14. t. 124. Corolla campanulately funnel-shaped, yellow.

Glabrous Lisianthus.- Shrub.

17 L. ALA'TUS (Aubl. guian. 1. p. 204. t. 80.) stem tetragonal ; angles winged; leaves oblong, acuminated, nearly sessile; cymes terminal, racemose, dichotomous, loose ; calycine segments yellowish; genitals exserted. ©. S. Native of Cayenne and Guiana, in waste places. Lam. diet. 3. p. 661, exclusive of />. *chelo?'iotdes,* Lin. Stem articulated. Leaves obliquely nerved. Pedicels each furnished with a gland-like body and a scale-like bractea. Corolla white, with a furrowed tube ; segments of the limb marked with a green spot on both sides at apex. Plant bitter like the rest.

Wing-stemmed Lisianthus. Fl. July, Aug. Clt. 1824. PL 2-3 feet.

18 L. CHELONOIDES (Lin. suppl. 134, exclusive of the syn. of Aubl. syst. 197.) stem terete; leaves oval-oblong, rather connate at the base, bluntish ; panicle terminal, dichotomously branched, racemose; racemes long; calyx globose. ©.? S. Native of Surinam and Cayenne. Flowers alternate, remote, secund. Corolla greenish yellow, with a sub-recurved tube. Plant bitter, and purgative. Stem sub-tetragonal at the base, becoming gradually terete to the top. Lower leaves connate; upper ones only sessile.

Chelone-like Lisianthus. PL 2 to 3 feet.

1!) L. GRANDIFLORUS (Aubl. guian. 1. p. 201. t. 79.) stem simple, tetragonal at the base, and terete at apex; leaves ovate, acuminated, connate at the base, beset with short hairs on both surfaces, but especially on the margins and middle nerve; panicle dichotomous; corolla with an undulated limb, and re-rlexed, roundish, sinuated segments. ©. G. Native of Guiana, and Cayenne, in humid places. Desf. in Lam. diet. 3. p. 661. Leaves rather large. Flowers large, solitary, greenish-yellow. 1 hree of the stamens are exserted.

Great-flowered Lisianthus. FL July, Aug. Clt. 1818. PL 2 to 3 feet.

20 L. LONGIFL6RUS (Willd. herb, ex Rcem. et Schultes, syst. 4. p. 787.) leaves lanceolate, rugosely nerved beneath, scabrous on both surfaces. ©.? S. Native of South America, Humb. et Bonp. Kunth knows nothing of this plant.

Long-flowered Lisianthus. PL

21 L. FRIGIDUS (Swartz. prod. p. 40. fl. ind. occ. 1. p. 352.) stem tetragonal; leaves petiolate, ovate, acuminated; panicles terminal, trichotomous; corollas ventricose : with roundish obcordate segments. 7£.S. Native of St. Dominica, on mount Soufriere; and of Guadaloupe. L. acuminatus, Desf. in Lam. diet. 3. p. 660.? Flowers yellow, erect. Segments of calyx obtuse.

Frigid Lisianthus. PL 2 to 3 feet.

22 L. FISTULOSUS (Poir. suppl. 3. p. 564.) stem terete, striated, fistular; leaves sessile, ovate, acute, 3-nerved; corymbs dichotomous, many-flowered; calycine segments very blunt; segments of corolla short, obtuse ; stamens length of corolla. 0. S. Native of Cayenne. Leaves 2-3 inches long. Flowers on short pedicels. Corolla yellow, an inch long, with a sub-inflated throat. Capsule ovate.

Fistular-stemmed Lisianthus. PL 1 to 2 feet.

23 L. LATIFOLIUS (Swartz, prod. p. 40. fl. ind. occ. 1. p. 348.) branches obsoletely tetragonal; leaves petiolate, lanceolate-ovate, acuminated; peduncles simple, trichotomous; calycine segments acute, unequal; segments of corolla erect, lanceolate, acute. J? . S. Native of Jamaica, on high mountains. Corolla yellow, an inch long. Very like *L. exsertus,* but differs in the stamens being inclosed. Corymbs hardly longer than the leaves.

Broad-leaved Lisianthus. FL July, Sept. Clt. 1821. Shrub 5 to 6 feet.

24 L. .UMBELLAVUS (Swartz. prod. p. 40. fl. ind. occ. 1. p. 350.) branches tetragonal; leaves petiolate, long, obovate, sub-acuminated ; peduncles terminal and axillary, a little compressed, bearing each an umbel of 20-30 pedicellate flowers ; calycine segments lanceolate; segments of corolla short, obtuse, erect; stamens sub-exserted. F? . S. Native of the west of Jamaica, on hills. Leaves a foot long. Corolla ^ an inch long, yellow. ? Capsule ovate.

Umbellate-flowered Lisianthus. FL July, Aug. Clt. 1822. Shrub 6 to 7 feet.

25 L. visedsus (Ruiz, et Pav. fl. per. 2. p. 14. t. 125.) stem obsoletely tetragonal, furrowed, branched at top ; leaves oblong, on short petioles, very veiny ; corymbs ample, terminal, clammy ; calycine segments concave ; segments of corolla roundish, cordate, spreading. F? . S. Native of Peru, in high places, at Munna. Leaves entire, and sub-sinuated, obtuse, shining. Bracteas ovate, recurved. Corolla greenish yellow. Capsule 3 inches long.

Clammy Lisianthus. Shrub.

26 L. REVOLU'TUS (Ruiz, et Pav. fl. per. 2. p. 14. t. 127.) stem branched, tetragonal, striated ; leaves lanceolate, petiolate, with revolute margins, beset with recurved pili on the nerves beneath ; corymbs terminal and axillary, bearing each 4-6 1-flowered pedicels. T?. S. Native of Peru, on cold mountains of Munna. Lower leaves approximate ; superior ones remote, ovate-oblong, 4-5 inches long. Bracteas lanceolate. Corolla yellowish-red.

Revolute-lesived Lisianthus. Shrub 6 feet.

27 L. PARVIFOLIUS (Desf. in Lam. diet. 3. p. 660. ill. 476.) stem filiform, tetragonal; leaves linear, sessile, mucronate, adpressed to the stem ; corymbs terminal, few-flowered; calyx cleft even to the middle, with sub-carinated segments; corolla 3 times longer than the calyx. ©.? S. Native of South America.? Root fibry. Stem yellowish.

Small-leaved Lisianthus. PL 1 foot.

28 L. ACUTA'NGULUS (Ruiz, et Pav. 2. p. 14. t. 122. f. a.) stem fistular, tetragonal; angles acute; leaves distant, connivent at the base; lower ones cordate, upper ones ovate ; peduncles dichotomous, panicled ; calycine segments ovate; corolla subringent: with an incurved tube, and roundish, revolute segments. %. ? S. Native of Peru, in the mountains of Panatahua. Pedicles short, thick, 1-flowered. Calyx short. Stem dichotomous. Corollas yellow. Capsules pendulous.

Acute-angled-stemmed Lisianthus. Fl. July. Aug. Clt. 1820. PL 6 feet.

29 L. OVA'LIS (Ruiz, et Pav. fl. per. 2. p. 13.) stem twiggy, terete, fistular, branched at top; peduncles axillary and terminal, corymbose, dichotomous ; pedicles secund; leaves ovate, veinless, on short petioles. *2 • S. Native of Peru, in groves. Corollas greenish yellow. Capsule pendulous.

Oi?aMeaved Lisianthus. Shrub 10 to 12 feet.

30 L. CAMPANULA'CEUS (Lam. diet. 3. p. 660. ill. p. 476. no. 21()1.) stem slender, simple, obsoletely tetragonal; leaves ovate

acute, petiolate, with 2 oblique nerves; peduncles solitary or twin, long, bracteolate under the flower; calyx turbinate ; corolla with a short tube, a ventricose sub-campanulate, inflexed limb; and ovate, obtuse, rather irregular segments. ©. S. Native of South America. Leaves 12-20 lines long, and 5-6 broad. Bracteas minute. Corolla yellow. ?

Campanulate-flowered Lisianthus. PI. 1 to lj foot.

31 L. NIGRE'SCENS (Cham, et Schlecht, in Linnaea, 6. p. *388.)* stem and branches terete; leaves of the sterile branches half stem-clasping, ovate, with rounded, stem-clasping auricles, which are lanceolate at the base, acuminated, pale green above, but paler beneath; panicle large, loose-flowered ; calycine segments narrow-lanceolate, acuminated ; corolla almost funnel-shaped ; with elliptic-acuminated segments* ©. G. Native of Mexico, in woods, at Papantla. Leaves 6 inches long, and 2 inches broad. Corolla blackish in the dried state, but probably greenish yellow in the recent state. Capsule elliptic.

Blackish-flowered Lisianthus. PI. 1 to 2 feet.

32 L. SAPONARIOIDES (Cham, et Schlecht. 1. c. p. 389.) stem branched, nearly terete at bottom, but obsoletely tetragonal at top ; leaves nearly sessile, ovate-lanceolate, acuminated, with rather scabrous edges ; inflorescence a compound cyme. % G. Native *of* Mexico, at Papantla, on the edges of woods. Leaves 5 inches long. Calycine segments lanceolate, acuminated. Corolla white, salver-shaped; with ovate, acuminated segments. Capsule elliptic or ovate.

Saponaria-like Lisianthus. PL 1 to *2 feet 1*

if Species not sufficiently known; *and probably not belonging to the genus.*

33 L. CARINATUS (Desr. in Lam. diet. 3. p. 659. ill. t. 107. f. 3.) glabrous ; stem branched ; branches tetragonal ; leaves roundish-ovate, sessile, 3-nerved; calyx prismatic, having the segments keeled upwards ; corolla with a slender tube, and ovate, spreading segments. 1? . S. Native of Madagascar. Leaves sub-connate. Flowers erect, pedicellate, terminal and axillary. Corolla 3 times longer than the calyx. Capsule ovate-oblong.

Keeled-calyxed Lisianthus. Shrub.

34 L. TRINE'RVIS (Desr. in Lam. diet. 3. p. 659. ill. p. 476.) downy ; stem sub-tetragonal; leaves ovate, mucronate, on short petioles; flowers in loose terminal, trichotomous panicles, pedicellate ; calyx deeply divided, with keeled segments ; limb of corolla parted nearly to the base into narrow segments. %. S. Native of Madagascar. Leaves beset with short hairs on both surfaces ; bracteas short, lanceolate, acute. Capsule ovate.

Three-nerved-\eaved Lisianthus. PI. 1J foot.

35 L. TUBIFLORUS (Pet. Th. in Willd. mss. ex Roem. et Schultes, syst. 4. p. 788.) glabrous ; stem terete ; leaves ovate, acuminated, petiolate, 3-nerved; umbels terminal, few-flowered; calyx ventricose, contracted at top; tube of corolla 6 inches long ; limb wide: with ovate, acuminated segments. ^ • ? S. Native of Madagascar. Superior leaves lanceolate, 4 inches long, longer than the internodes.

Tube-flowered Lisianthus. Shrub.?

*Cult** Most of the species of *Lisianthus* are very handsome when in blossom. A mixture of loam, sand, and peat is a good soil for them ; and cuttings of the shrubby and perennial species strike root readily in sand, under a hand-glass. The annual kinds require the same as that recommended for *E'xacum,* p. 213.

XL. IRLBA'CHIA (named by Martius, in honour of Gabriel, Count de Bray, of the dynasty of Irlbach, ambassador from the King of Bavaria to the Court *of* Spain.) Mart. nov. gen. bras. 2. p. 101.

LIN. SYST. *Pentdndria, Monogynia-* Calyx campanulate, 5-cleft ; segments erect, with membranous margins. Corolla funnel-shaped, equal, deciduous; limb 5-cleft; throat naked. Anthers revolute when dry. Stigma bifid; segments cylindrical, not bi-lamellate. Capsule 2-celled, 2-valved, many-seeded ; margins of valves placentiferous. bent inwards.—An erect, glabrous herb. Stems tetragonal, fistular. Leaves opposite, decussate, petiolate, triple or quintuple-nerved. Flowers alternate, disposed in dichotomous panicles. This genus differs from *Lisianthus* in the regular corolla, and structure of the stigma.

1 I. E'LEGANS (Mart. 1. c. p. 102. t. 179.) leaves lanceolate, acuminated; rachis of panicle geniculately bent. ©. S. Native of Brazil, in the province of Rio Negro, near Ega, in moist, sylvan meadows. Corolla blue, a nail in length. Racemes long, twin, with a flower in the fork between them.

Elegant Irlbachia. PI. 1| to 2 feet.

Cult. For culture and propagation see *E'xacum,* p. 213.

XLI. SYMBOLA'NTHUS (from *avfipoXov, symbolon,* a ring; in reference to the ring at the base of the filaments.) Lisianthus species, Ruiz, et Pav. and H. B. et Kunth.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted, pentagonal ; segments with membranous margins. Corolla salver-shaped, with a cylindrical tube, 3 times longer than the calyx ; and a 5-parted limb; segments with crenulately fringed edges. Stamens inserted in the tube, hardly exserted ; anthers sagittate, at length convolute, having a short, ring-formed, crenulated, membrane at the base of the filaments. Ovarium ovate, compressed, 1-celled, 2-valved; placentas 2, parietal, bilamellate, bearing seeds on the back. Stigma 2-lobed ; lobes linear-oblong, flat, blunt. Capsule ovate.—Glabrous, branched shrubs ; branches tetragonal. Leaves opposite, decussate, on short petioles, with a prominent middle nerve, obsoletely veined ; petioles round at the base. Flowers axillary, solitary, or 2-3 terminal, rose-coloured.

1 S. KU'NTHII ; leaves oblong, acute ; flowers pedicellate, axillary ones solitary, and terminal ones 2-3 together; corolla salver-shaped, with fringed segments. I? . S. Native of New Granada, on mountains between Honda and Mariquita. Lisianthus anomalus, H. B. et Kunth, nov. gen. amer. 3. p. 184. Branches sub-dichotomous. Leaves 2^ inches long. Flowers size of the following species. Bracteas oblong, sub-spathaceous.

Kunth's Symbolanthus. Shrub 5 to 6 feet.

2 S. PAVONII ; leaves ovate-lanceolate; flowers pedicellate, axillary, solitary ; calyx pentagonal ; corolla sub-ringent. ^ . S. Native of Peru, on the mountains. Lisianthus calygonus, Ruiz, et Pav. fl. per. 2. t. 126. Leaves 2-3 inches long. Pedicels curved, furnished with 3 ovate, concave, acuminated, bracteas each. The 3. outer segments of the calyx are lanceolate, and 2 inner, sub-sagittate, all with membranous, fringed edges. Corolla rub-ringent, rose-coloured, large, with acuminated, reflexed segments.

Pavon's Symbolanthus. Shrub 5 to 6 feet.

Cult. For culture and propagation see *Tachia,* p. 197.

XLII. EU'STOMA (from *evtrrofxoQ,* a beautiful mouth; in reference to the fair corollas). Sal. par. lond. t. 34.—Lisianthus species of authors.

LIN. SYST, *Pentdndria, Monogynia.* Calyx deeply 5-cleft, having the backs of the segments more or less winged. Corolla with a funnel-shaped tube, which is contracted a little at the apex ; and a deeply 5-cleft limb, which is longer than the tube, and is variegated below the middle above. Stamens 5, inserted near the middle of the tube, and a little longer than it; filaments erect, linear-lanceolate ; anthers rather sagittate. Ovarium

oblong, 1-celled, ex Sal. and 2-celled, ex Nutt. succulent; with short, stipitate placentas. Style short, erect; stigma large, deeply 2-lobed. Seeds scrobiculate.—Annual herbs, with the habit "of *Pneumondnthe.* Leaves glaucous, oblong, opposite, decussate, perfoliate. Corymbs few-flowered, dichotomous, terminal. Flowers blue. The plants have glaucous, perfoliate leaves, not unlike those of LobePs Catchfly, the *Silene Armeria.*

1 E. SILENIFOLIA (Sal. par. t. 34.) stems terete ; leaves obovate-lanceolate ; segments of calyx winged on the back. ©. H. Native of Providence, and of North America, on the sandy banks of the great salt river of the Arkansas ; and at sources of the Canadian river. Lisianthus glaucifolius, Lam. diet. 660. Jacq. col. 1. p. 64. icon. rar. 1. t. *SS.* Nutt. in amer. phil. trans, vol. 5. n. s. p. 177. Corolla purple: anthers yellow.

Catchjly-leaved Eustoma. Fl. July. Clt. 1804. PI. 1-2 foot.

2 E. EXALTA'TA (Sal. 1. c.) stem slightly tetragonal; leaves spatulate or oblong-lanceolate ; calycine segments winged on the back. ©. Ş. Native of St. Domingo and Vera Cruz. Lisianthus exaltatus, Lam. 3. p. 662. ill. p. 478. Gentiana exaltata, Lin. spec. 231. Lam. diet. *2.* p. *636.* Erythrae'a Plumieri, H. B. et Kunth. nov. gen. amer. 3. p. 176.—Plum, spec. 3. Burm. amer. icon. t. 81. f. 1. Leaves 3-nerved. Segments of corolla crenated. Fruit full of clammy seeds. This species differs from the preceding, in having a more angular stem, and a greater number of flowers ; in the wings of the calyx being broader, and in the filaments being inserted a little higher up.

Var. (3, albijlora; herb more glaucous than the species : and the flowers white and more expanded. ©. F. Native of Mexico, at Papantla, on the banks of rivulets. Cham, et Schlecht, in Linnaea, 6. p. 387.

Tall Eustoma. PI. 2 to 3 feet.

Cult. The seeds of the species of *Eustoma* require to be reared on a hot-bed, and otherwise treated like other tender annuals.

• *Tribe* II.

EXACIE'iE (the plants contained in this section agree with *E'xacum,* in having a 2-celled capsule.) Capsule 2-celled; margins of valves bent into the central placenta, which is at length free, and bears the seeds.

XLIII. SEBiE^A (named in memory of Alb. Seba, an apothecary of Amsterdam, author of Locupletissimi rerum naturalium thesauri descriptio,4 vol. fol. Amsterdam, 1734—1765.) Solander mss. R. Br. prod. p. 451. E'xacum species of Lin. and others.

LIN.SYST. *Tetra-Pentdndria, Monogynia.* Calyx 4-5-parted ; segments keeled or winged on the back. Corolla 4-5-cleft, salver-shaped, marcescent. Stamens 4-5, exserted ; anthers dehiscing lengthwise : when old, recurved, with a callous apex. Stigmas *2.* Capsule 2-celled, 2-valved ; valves with inflexed edges inserted into the central placenta, which is at length free.—Erect annual glabrous herbs, with tetragonal stems and branches; opposite, decussate, sessile leaves; and usually terminal, corymbose panicles of flowers.

1 S. CORDA'TA (R. Br. prod. p. 452.) stem dichotomous, tetragonal; leaves sessile, cordate ; flowers 5-cleft in the forks, on short pedicels, or in corymbs ; stamens inclosed; segments of calyx cordate, furnished each with a keel on the back. ©,G. Native of the Cape of Good Hope. E'xacum cordatum, Lin. syst. 155. suppl. 124. Cham, et Schlecht in Linnaea, 194. Gentiana exacoides, Lin. spec. p. E'xacum grandiflorum, Gaertn. fruct. 2. p. 158. t. 114.—Burm. afr. t. 74. f. 5. Corolla yellow, with a cylindrical tube and obovate segments. Habit of *Erythree"a Centaurium.* In all the varieties the stamens are said to be inclosed in the throat of the corolla.

Var. a, *macrdntha* (Cham, et Schlecht in Linnaea, 1. p. 191.) keels of the calyx, which is large, broadly winged, smooth, or scabrous; corollas large, an inch long: more than twice longer than the calyx.

Var. /3, intermedia (Cham, et Schlecht, 1. c.) keels of calyx with narrow, smooth, almost evanescent wings ; corolla smaller, half an inch long, twice as long as the calyx.

Var. y, *micrdntha* (Cham, et Schlecht. 1. c. p. 192.) keels of calyx winged, nerved, having the nerves ending in teeth ; corolla minute, 4 lines long, not quite twice the length of the calyx.—Plukn. aim. p. 94. t. 275. f. 4.

CWtfte-leaved Sebsea. Fl. July, Aug. Clt. 1815. PI. \ to f foot.

2 S. SULPHU'REA (Cham, et Schlecht. in Linnaea, 1. p. 192.) stem dichotomously and corymbosely branched, sub-tetragonal ; leaves sessile, broad, ovate, acute, 1-nerved; calyx nearly globose, with acute segments, which are winged by a narrow keel on the back; flowers 5-cleft; stamens exserted. 0. G. Native of the Cape of Good Hope, on the top of the Table Mountain. S. tabularis, Ecklon, mss. Leaves 3 lines long and two broad. Corolla sulphur coloured, with elliptic, acute segments. Calyx much shorter than the tube of the corolla.

Sulphur-coloured flowered Sebaea. PI. ^ foot.

3 S. CRASSUUEFOLIA (Cham, et Schlecht, 1. c. p. 193.) stem corymbosely branched ; angles winged ; branches straight; leaves cordate, roundish, acute, sessile, 3-5-nerved ; flowers quinquefid ; calyx ovoid, with acute, sharply keeled segments ; stamens exserted. ©. G. Native of the Cape of Good Hope, at Plettenbergsbay Poort. Stem naked at the base. Branches floriferous at top. Leaves 4-5-lines broad, and 3 lines long, with the margins and apexes inflexed. Flowers crowded, yellow.

Crassula-leaved Sebsea, PI. 1 to 1^ foot.

4 S. CAPITA'TA (Cham, et Schlecht, 1. c.) stem crowded with leaves at bottom, the rest naked and simple, terminated by a coarctate panicle ; leaves sessile, ovate, attenuated at the base, 3-nerved ; flowers quadrifid; calyx ovate, with keeled segments; stamens exserted. ©.G. Native of the Cape of Good Hope, on the top of the Table Mountain. Leaves with revolute edges. The superior part of the stem often furnished with one or two pairs of minute, stem-clasping leaves. Corolla yellow, much longer than the calyx, with obtuse segments.

Capitate-Cowered Sebsea. PI, \ foot.

5 S. AU'REA (R. Br. prod. p. 452.) stem dichotomous, slightly tetragonal; leaves sessile, cordate, ovate, 3-nerved; panicle corymbose, terminal; flowers quadrifid : calycine segments with winged keels; stamens inclosed. ©. H. Native of the Cape of Good Hope. Gentiana afirea, Thunb. E'xacum aiireum, Lin. syst. 155. suppl. 123. Lam. ill. t. 80. f. 2. E'xacum sessile, Lin.—Plukn. phyt. t. 275. f. 3. Corolla golden yellow, with lanceolate, acute segments. Habit of *Erythrcea Centaurium.*

Var. /3; flowers pale yellow. Cham, in Linnaea, 6. p. 646.

<7o/efen-flowered Sebaea. Fl. Ju. Aug. Clt. 1824. PI. \ foot.

6 S. A'LBENS (R. Br. 1. c.) stem tetragonal, dichotomously branched, fastigiate ; leaves cordate, decurrent, 3-nerved; flowers 5-cleft, terminal; calycine segments keeled on the back ; stamens exserted. ©. G. Native of the Cape of Good Hope. E'xacum albens, Lin. syst. 155. suppl. 123. E'xacum pedunculatum, Lin. Gentiana albens, Thunb. Corolla whitish; tube longer than the calyx ; and the limb length of the tube.—Burm, afr. p. 207. t. 74. f. 4.

JF/ii/e-flowered Sebaea. Fl. Aug. Clt. 1820. PI. \ foot.

7 S. OVATA (R_f Br. prod. p. 452.) stem branched, dichntn.

mous ; leaves sessile, ovate, 3-nerved ; flowers quinquefid; segments of calyx acuminated, with simple keels *on the* back, about equal to the segments of corolla in length. ©. G. Native of Van Diemen's Land, and of New South Wales. E'xacum ovatum, Labill. nov. holl. 1. p. 38. t. 52. Corolla red.?

Ovate-leaved Sebsea. Fl. Aug. Clt. 1820. PI. ± foot.

8 S. AMBIGUA (Cham, in Linnsea, 6. p. 346.) stem fastigiately cymose, dichotomous ; leaves broad-ovate, rather fleshy ; flowers quadrifid ; stamens exserted ; calyx obconical, with diaphanous, obtuse, rounded, toothed segments. ©. G. Native of the Cape of Good Hope.

Far. a, *gracilis* (Cham. 1. c.) outer branches of cyme evolute.

Far. /3, *crdssa* (Cham. 1. c.) outer branches of cyme contracted ; flowers glomerate.

Ambiguous Sebaea. PL \ foot.

9 S. PUSILLA (Ecklon, mss. Cham, in Linnaea, 6. p. 346.) flowers quinquefid ; stamens inclosed; calyx cylindrical, with narrow-lanceolate, keeled, acute segments, which are shorter than the tube of the corolla. ©. G. Native of the Cape of Good Hope. This species comes nearest to *S. ovata;* but differs from it in the tube *of* the corolla, being longer in the inclosed stamens, and whole habit.

Small Sebaea. PI. small.

Cult. These are elegant plants while in blossom. They should be treated like other tender annuals, by being reared on a hot bed, and afterwards planted out into a warm, sheltered border, about the end of May.

XLIV. E'XACUM (from *ex,* out; and *ago, to* drive ; expels poison.) Spreng. gen. 1. p. 8.—E'xacum species, Lin. gen. 141. Juss. gen. 142.—Centaurium, Plukn. mant. t. 343. f. 3.

LIN. SYST. *Tetrandria, Monogynia.* Calyx campanulate, 4-cleft; segments winged on the back. Corolla salver-shaped, or sub-rotate, with a globose or ventricose tube, and a 4-cleft limb. Stamens 4, declinate; filaments terete; anthers long, somewhat tetragonal, emarginate at the base, erect, dehiscing by 2 pores at the apex. Style filiform, declinate, flexuous ; stigma undivided, clavate, furnished with minutely papillose furrows on all sides. Capsule globose, crustaceous, 2-celled, with a septicidal dehiscence; placentas 2, adnate to a double dissepiment, thick. Seeds very minute, scrobiculate.—Erect, branched, annual herbs. Leaves opposite, decussate, sessile, 3-5-nerved. Flowers terminal and axillary.

1 E. SE'SSILE (Lin. spec. 163.) stem erect, tetragonal, simple, dichotomous at top ; flowers solitary, from the forks of the stem, and tops of the branches ; leaves sessile, ovate-cordate, obtuse, fleshy; capsule drooping. ©. S. Native of the East Indies. Flowers larger than the leaves.

Sessile-fioweved Exacum. PI | foot. ?

2 E. PUNCTA'TUM (Lin. syst. 155. suppl. 124.) leaves nearly sessile, oblong, 3-nerved, dotted like *Hypericum;* stamens exserted. ©. S. Native of the East Indies. Corolla bluish. Stamens yellow.

Dotted-lewed Exacum. PI. \ to 1 foot.

3 E. BI'COLOR (Roxb. fl. ind. 1. p. 413.) erect; stem and branches tetragonal : angles a little winged; leaves sessile, ovate, 5-nerved ; flowers axillary, solitary, on short pedicels ; anthers erect. ©. S. Native of Cuttack, in the East Indies. Root almost simple. Leaves variable in size ; floral ones small and narrow. Corollas large, white, having the segments tipped with blue.

Tivo-coloured-fLowered Exacum. PI. 1 to 2 feet.

4 E. TERAGONUM (Roxb. 1. c. Wall. pi. rar. asiat. 3. p. 47. t. 276) stem simple, erect, tetragonal; leaves sessile, ovate-lanceolate, 5-nerved; flowers numerous, terminal; stamens and style declinate. ©. S. Native of Bengal, where it is called Koochuri; Silhet, Nipaul, Kamaon, &c. E. Chulesium, Ham. herb. Leaves 2-4 inches long. Flowers large, of a most beautiful blue colour. Calycine segments dagger-shaped. Segments of corolla acute. Anthers linear. This is a most elegant, robust plant.

Tetragonal-stemmed Exacum. Fl. July, Sept. Clt. 1820. PI. 3 to 4 *feet.*

5 E. STYLOSUM (Wall. cat. no. 4355.) glabrous; stem tetragonal ; leaves ovate-lanceolate, acute, 3-nerved ; peduncles axillary and terminal, corymbose ; style longer than the stamens ; segments of corolla obtuse. 0. S. Native of the East Indies, about Prome.

Long-styled Exacum. PI. 2 to 3 feet.

6 E. TE'RES (Wall, in Roxb. fl. ind. 1. p. 414.) stem and branches terete; leaves lanceolate, acuminated, tapering at the base, nearly sessile, 3-nerved ; peduncles opposite, 3-flowered, forming a terminal corymb ; segments of corolla lanceolate, acuminated. ©. S. Native of Silhet, and Lower Nipaul. Leaves 3-4 inches long, and -| an inch broad in the middle. Flowers dark blue, large. Habit of the preceding.

jfere/e-stemmed Exacum. PI. 2 feet.

7 E. ZEYLA'NICUM (Roxb. fl. ind. 1. p. 414.) erect; stem and branches tetragonal: angles slightly winged : leaves nearly sessile, ovate-lanceolate, acuminated, 3-nerved; racemes terminal and axillary, forming an expanded, terminal, corymb-formed panicle ; flowers pentamerous ; calyx with 5 broad, membranous wings, with subulate points. ©. H. Native of Ceylon, and the Neelgherries. Chirdnia trinerva, Lin. fl. zeyl. p. 90. Willd. spec. 1. p. 1065.—Burm. zeyl. p. 145. t. 67. Leaves 1-3 inches long. Peduncles and pedicels tetragonal. Segments of calyx furnished with a broad, membranous wing on the back of each. Tube of corolla gibbous. Limb of corolla of 5 obovate, mucronate, beautiful, violet-coloured divisions. Anthers linear, straight, and hard, with 2 pores at the apex, and also opening on the sides.

Ceylon Exacum. PI. 1 to 2 feet.

8 E. GRANDIFLORUM (Wall. cat. no. 4358.) stem tetragonal ; leaves ovate-lanceolate to lanceolate, acute, 3-5-nerved ; peduncles axillary and terminal, trichotomous, or 3-flowered, corymbose. 0. S. Native of the East Indies, at Courtallum. Flowers large ; segments of corolla ovate-oblong, acute.

Great-flowered Exacum. PI. 1 to 2 feet.

9 E. PEDUNCULA'TUM (Lin. spec. 163. Vahl, symb. 1. p. 15.) erect; stem |with 1-2 pairs of opposite branches, then dichotomous, slightly tetragonal; leaves nearly sessile, oblong-lanceolate, obtuse, 3-nerved; segments of calyx membranously winged on the back ; stamens exserted ; style declinate. ©. S. Native of Ceylon. E. carinatum, Roxb. fl. ind. 1. p. 415. Sebcea carinata, Spreng. syst. 1. p. 426. Root branched. Flowers terminal, numerous, pretty large, yellow, collected in dichotomous corymbs, with a single, long, pedicellate flower in each fork. Filaments inserted on a membranous rim, round the inside of the mouth of the tube. Anthers erect, opening at the sides, yellow. Perhaps a species of *Sebcea.*

Peduncled Exacum. PI. \ foot.

10 E. PTERA'NTHUM (Wall. cat. no. 4360.) stem and branches tetragonal; leaves elliptic-oblong, tapering to both ends, 3-5-nerved ; flowers pedicellate, dichotomously cymose: with a flower in each fork; alternate wings of calyx the largest. 0. H. Native of Tavoy.

Wing-flowered Exacum. PI. 1 foot.

11 E. HAMILTONII; stem 4-winged; leaves elliptic-oblonor, acute, 5-nerved ; flowers terminal, corymbose; segments of calyx ovate, acuminated, each furnished with a membranous wing on the back. ©. G. Native of Nipaul, where it is called

Kashwa-swa. E. tetragdnum, D. Don, prod. fl. nep. p. 128, but not of Roxb. Stamens exserted. Flowers large, yellow.

Hamilton's Exacum. PI. 1 to 2 feet.

12 E. SULCA^TUM (Roxb. fl. ind. 1. p. 415.) erect, branched, furrowed on the opposite sides of the stem and branches ; leaves nearly sessile, lanceolate, fleshy, 3-nerved; flowers terminal, numerous, trichotomously corymbose ; segments furnished each with a keel on the back ; stamens erect; stigma bifid; capsule globular. £ . S. Native of Bengal. Sebae'a sulcata; Spreng. syst. 1. p. 426. E. dichotomum, Herb. madr. E. stellatum, Hamilt. herb. Root fibrous. Leaves from 1 to 2 inches long. Flowers bright blue, those on the forks solitary, and on long pedicels. Peduncles 4-sided. Bracteas ovate, recurved. Anthers ovate-oblong, connivent. This appears to be intermediate between *Sebce'a* and *E'xacum,* from the bifid stigma.

Furrowed-stemmed Exacum. PL -J- to 1 foot.

Cult. All the species of this genus are very showy when in blossom. The seeds should be reared on a hot bed, like those of other tender annuals; and about the end of May the plants may be planted out in the open border, in a warm, sheltered situation; and some of the larger, showy kinds may be planted in pots, and otherwise treated like Balsams.

XLV. MICROCA'LE (from *jjmcpoQ, micros,* small, and KCIOG, *kalos,* pretty ; plants small and very pretty). Link.—E'xacum species, Smith.—Gentiana species, Lin.

LIN. SYST. *Tetrtindria Monogynia.* Calyx divided about half way into 4 equal acute segments, permanent. Corolla with a swelling tube, length of calyx; and a 4-parted, spreading limb; segments equal, imbricate in the bud. Stamens 4, inclosed, filiform, erect; anthers roundish-oblong. Ovarium oval. Style filiform, inclining a little, as long as the limb. Stigma capitate, undivided. Capsule filling the tube of the corolla, which gradually enlarges with it; elliptic, compressed, imperfectly 2-celled. Seeds small, rough, atlached to a fixed or finally separated double placenta. — Herbaceous, glabrous, intensely bitter plants. Leaves simple, entire, and are, as well as the branches or flower-stalks, opposite. Flowers terminal, yellow, or rose coloured.

1 M. FILIFORME (Link. 1. c.) stem dichotomous from the bottom, filiform ; leaves chiefly radical, lanceolate, or spatulate, 1-nerved, sessile; flowers terminal, on long pedicels. ©. H. Native of Europe, in sandy, turfy bogs ; in England, in Hampshire, Devonshire, Cornwall, Dorsetshire, and Sussex, in rotten, marshy, sandy, turfy ground; in Ireland, in Dursey Island, Cork; in Chili, about Conception. Gentiana filiformis, Lin. spec. *335.* With. 263. Oed. fl. dan. 324. Ehrh. phyt. 43. E'xacum filiforme, Smith, fl. brit. 182. engl. bot. t. 235. Hook, fl. lond. fasc. 2. p. 91. t. 8.—Vaill par. p. *32. U* 6. f. 3. Root fibrous. Leaves an inch long. Corollas small, yellow.

Filiform Microcale. Fl. Ju. July. England. PI. | foot.

2 M. PULCHE'LLUM ; leaves lanceolate ? ; sessile ; panicle corymbose ; pedicels filiform; calycine segments subulate. ©. H. Native of New Jersey, on the sea coast. E'xacum pulchéllum, Pursh, fl. amer. sept. 1. p. 100. Sabbatia pulchella, Spreng. syst. 1. p. 581. Flowers rose coloured. Plant resembling very much the preceding.

Neat Microcale. Fl. May. Cult. 1826. Pl.-J- foot.

3 M. PUSILLUM ; stem much branched, dichotomous; leaves oblong, 3-nerved; peduncles short, crowded; segments of corolla connivent. ©. H. Native of Europe, in inundated places. Gentiana pusilla, Lam. diet. 2. p. 645. Chironia inaperta, Willd. E'xacum pusillum, D. C. fl. franc, no. Spreng. syst. 1. p. 425.—Vaill. par. t. 6. f. 2.

Small Microcale. PI. £ foot.

Cult. Sow the seed in a moist situation, in peat earth, or in pots, which should be kept moist, by being placed in pans of water.

Tribe III.

DESFONTAINIE^iE. Calyx 4-5-parted ; segments nearly equal, obtuse, cartilaginous, nerved, imbricate in aestivation. Corolla tubular, cartilaginous, 5-nerved ; nerves running through the axis of the segments; limb 4-5-lobed: lobes very veiny, roundish, retuse, with ciliated edges, imbricate in aestivation. Stamens 4-5, inclosed, glabrous, combined with the tube of the corolla nearly their whole length, free at apex, thick convex on one side and flat on the other; anthers erect, innate 2-celled : cells linear, parallel, separated by narrow intervals, inserted in a large fleshy connective (continuation of the filaments), which is shorter than them, dehiscing longitudinally. Ovarium globose, 1-celled; ovula very numerous, horizontal, without order, adnate to septiform placentas. Style filiform, glabrous ; stigma capitate. Berry globose, 1-celled, many-seeded. Placentas 4-5, parietal, hence the berry appears many-celled ; free from the inner margin; thickened, trigonal, having reflexed, seminiferous sides. Column none. Seeds numerous, disposed without order, erect, obovate, ventricose, angular; furnished with an umbilicus at the base, a dark brown dilated chalaza at apex, and a prominent, callous raphe on the inner side. Outer testa coriaceous, fulvous, full of pellucid dots: inner one membranous, paler, adhering to the nucleus. Albumen copious, fleshy, white. Embryo very minute, roundish, milk coloured, erect in the umbilical end of the seed, with very short cotyledons, and a thick, very blunt radical.— Evergreen shrubs, natives of South America, having a very bitter taste. Leaves opposite, petiolate, spinosely toothed: petioles articulated with the branches. Flowers terminal, solitary, pedunculate; peduncles bibracteate. Corollas scarlet, with a yellow limb. Berries white.

Some groups of plants exist in whose external features there is nothing that can lead to a knowledge of their affinities ; and among these may be ranked the remarkable genus under consideration. From observing the similarity in the disposition of the veins of the calyx and corolla, and the consistence of these organs, as well as the nervation and dentation of the leaves, I was led to conclude that it might be allied to *Theophrdsta;* but a closer examination did not confirm that conjecture ; although from remarking the nature of the albumen, and the structure and position of the embryo, I was afterwards induced to compare it with the *Gentianece,* to which family I am now fully persuaded it must be referred, notwithstanding its toothed leaves, and the greater number of its placentae.—D. Don, in edinb. phil. journ. July, 1Sept. 1831.

XLVI. DESFONTAINIA (for derivation see Fontanesia, p. 51. of the present volume.) Ruiz, et Pav. fl. per. syst. 1 . p. 59. fl. per. 2. p. 47. t. 186. gen. t. 5. Humb. et Bonpl. pi. sequin. 1. p. 157. t. 45. H. B. et Kunth. nov. gen. amer. 7. \u 274. syn. 4. p. 267. D. Don, in edin. phil. journ. July, Sept. 1831.—Linkia Pers. ench. 1. p. 219.

LIN. SYST. ***Telra-Pentdndria Monogynia.*** **Character the** same as that of the tribe.

1 D. SPINOSA (Ruiz, et Pav. 1. c.) calycine segments Ungulate, and are, as well as the leaves, glabrous. T? . G. Native of Peru, in forests, atChurupallana,Tarma, and betwixt Munna and Pozuzo, Ruiz, et Pav.; and on the Andes of Quindiu, and in Parama de Almaguer, Humb. et Bonpl. D. splendens, Humb. et Bonpl. pi. aequin. amer. 1. p. 157. t. 45. H. B. et Kunth. nov. gen. 7. p. 274. Linkia Peruviana, Pers. ench. 1. p. 219. An erect, much branched, evergreen, glabrous shrub. Leaves elliptic-oblong, coriaceous, glabrous, shining above, cuneated

and quite entire at the base, with spiny-toothed margins; teeth large, 7-14 in number. Calyx glabrous, hardly shorter than the peduncles. Corolla 4 times longer than the calyx. Berries white, size of cherries.

Spt7iy-toothed leaved Desfontainia. Shrub 10 feet.

2 D. PARVIFÒLIA (D. Don, in edinb. phil. journ. July, Sept. 1831.) ribs of leaves pilose beneath; calycine segments oval, ciliated. f? . G. Native of Peru, on the mountains at Munna, Ruiz. D. spinòsa, Ruiz, herb, but not of fl. per. A much branched,compact,evergreen shrub, with quadrangular branches; angles prominent. Leaves cuneated, 5-7-toothed, rarely tricuspidate, shining above ; teeth spiny. Bracteas connate at the base, having the edges and ribs pilose. Lobes *of* corolla ciliated. Stigma furnished with 4 tubercles, pruinose.

Small-leaved Desfontainia. Shrub 5-10 feet.

Cult. The species of *Desfontàinia* are shrubs worth cultivating in every collection, for the elegance of their foliage, as well as the brilliancy *of* their flowers. We would recommend them to be grown in pots filled with a mixture of peat, loam, and sand,, if they ever should be introduced to our gardens. Young cuttings will probably strike root in sand under a bell-glass.

XLVII. PALLA'DIA (meaning unknown to us.) Lam. ill. t. 285.-—Blackwèllia, Ga?rtn. fruct. 2. t. 117.

LIN. SYST. *Octandria, Monogynia.* Calyx funnel-shaped, coloured ; with a short tube, and 4 obovate segments. Corolla funnel-shaped ; tube long, with 8 plaits; limb in 8 oblong segments. Stamens 8, united to the tube of the corolla for more than half its length, permanent: anthers unknown. Ovaria *2* ; style simple, compressed, situated between the ovaria, and parallel to them, and connected with their base; its edges finely-toothed; stigmas 2, spreading. Capsules 2, club-shaped, prismatic, erect, parallel, close together, membranous, stiff, obscurely angular at one side, and marked with a deep furrow on the other, each of 1 -cell, and 2 finally spiral valves. Seeds numerous, minute, roundish, rather angular ; placentas spongy, as long as the capsule, to the edges of whose valves, at the furrowed side, it is attached, being marked there by a similar furrow ; while its other side is convex, and its whole surface rough with minute tubercles.

] P. ANTARCTICA (Lam. 1. c. Smith, in Rees' cycl.) Native at Cape Horn. ?

Antarctic Palladia. PI. small.

Cult. For culture and propagation see *Gentiàna,* p. 183.

ORDER CLVIII. BIGNONIA^CEiE. R.#Br. prod. p. 470. H. B. et Kunth. nov. gen. amer. 3. p. 132. D. Don, in edinb. phil. journ. july, sept. 1823.—Bignoniae,sect. II. Juss. gen. *139.* edit. Usteri, p. 154.

Calyx divided or entire, sometimes spathaceous. Corolla uionopetalous, hypogynous, usually irregular, with a 4-5-lobed limb. Stamens 5 ; filaments unequal, 4 of which usually bear anthers, and sometimes only 2 of them, seldom all fer« tile, therefore there are either 1 or 3 of them sterile; anthers 2-celled ; cells equal in insertion, usually divaricate. Ovarium girded by a glandular disk, 2-celled, or falsely 4-celled, many-seeded. Style 1 ; stigma bilamellate. Capsule 2-valved, 2-celled, sometimes falsely 4-celled ; dissepiment parallel or contrary, at length free, bearing the seeds at the com- . with the valves. Seeds transversely foliaceous, compe 1 Albumen none. Embryo straight, foliaceous; with a centrifugal radicle.—Trees or shrubs often twining or climbing. Leaves opposite, rarely alternate, usually compound, rarely simple, exstipulate. Inflorescence terminal and axillary, somewhat panicled.

This is readily distinguished from the allied orders, in the fruit, structure, and placentation of the seeds. The showy, trumpet-shaped flowers of all the species render them objects, of admiration. The greater number of them are tropical. *Tecoma* is a hardy, climbing shrub, of great beauty when in blossom; and the species of *Jacardnda* are resplendent with blue or purple flowers, and elegant supra-decomposed leaves, which emulate those of *Acacia.* The wood is said to resist the attack of worms. Nothing is known of their qualities.

Among the numerous tribes of vegetables which people the regions of equinoxial America, the *Bignoniacece* hold a distinguished rank, whether as regarded for the beauty of their flowers, and the diversity of their forms, which give to the vegetation peculiar features, or as objects highly deserving the attention and investigation of the botanist. Perhaps in no tribe of plants, does the form of vegetation assume such variety as in this family. In the beautiful genus *Jacardnda* are contained the loftiest trees to be met with either in this or any of the neighbouring orders. These splendid trees, which are entirely wanting in the ancient continents, form one of the brightest ornaments of the forests of tropical America. The genus *Bigndnia,* as constituted by Linnaeus, contained an assemblage of plants, which, generically considered, were widely different from each other. To Jussieu we are indebted for having set us an example worthy of imitation, by his judicious division of this overgrown genus. It is the great advantage which a natural system possesses over all artificial methods in the studying of vegetables, that it teaches us to examine and group them according to their respective affinities; and to give to the different parts their relative importance, in characterizing genera. Willdenow, and almost all those botanists who have followed the Linnaean artificial method of classification, have left the genus *Bigndnia* untouched, without even adopting the important divisions proposed by M. de Jussieu.

Synopsis of the genera.

TRIBE I.

BIGNONIE^. Capsule 2-valved, 2-celled. sometimes falsely 4-celled. Dissepiment parallel or contrary to the valves, at length free, bearing the seeds at the commissures with the valves. Seeds transverse, compressed, winged on the margins.

§ 1. *Stamens* 4, *didymous, with the rudiment of a sterile one.*

1 BIGNÒNIA. Calyx 5-toothed. Corolla with a short tube, a campanulate throat, and a 5-lobed limb. Stamens 4, didynamous, with a fifth sterile one. Lobes of anthers divaricate. Capsule silique-formed ; dissepiment parallel.

2 SPATHÒDEA. Calyx spathaceous, cleft on one side, and toothed or entire on the other. Corolla funnel-shaped, with a 5-lobed, somewhat bilabiate limb. Stamens 4, didynamous, with a fifth sterile one. Lobes of anthers divaricate. Capsule

silique-formed, falcate, falsely 4-celled; dissepiment contrary, corky.

3 TE'COMA. Calyx 5-toothed. Corolla with a short tube, a campanulate throat, and a 5-lobed sub-bilabiate limb. Stamens 4, didynamous, with a fifth sterile filament. Lobes of anthers divaricate. Capsule silique-formed; dissepiment contrary.

4 JACARA'NDA. Calyx 5-toothed, rarely entire. Corolla with a short tube, a campanulate throat, and a 5-lobed, bilabiate limb. Stamens 4, didynamous, with the rudiment of a fifth; anthers usually 1-lobed, rarely 2-lobed. Capsule broad, compressed; dissepiment contrary; valves woody.

5 AMPHILOPHIUM. Calyx with a double limb; inner one bilabiate; outer one undulately curled. Corolla sub-coriaceous; with a short tube, a large ventricose throat, and a bilabiate limb; upper lip galeate, bidentate; lower one tridentate. Stamens 4, didynamous; with the rudiment of a fifth. Lobes of anthers divaricate. Capsule ovate, rather ligneous; dissepiment parallel. ?

6 ZEYHE'RIA. Calyx spathaceous, closed, at length bipartite. Corolla with a short tube, and a 5-lobed, somewhat bilabiate limb. ? Stamens 4, didynamous, with the rudiment of a fifth. Capsule echinated, orbicular, compressed; dissepiment contrary.

7 FREDERICIA. Calyx coloured, pentagonal, 5-toothed. Corolla salver-shaped, with a cylindrical tube, and a spreading, 5-6-cleft, equal border. Stamens 4, didynamous, with the rudiment of a fifth. Capsule oblong, compressed, acutish; dissepiment contrary.

8 FERDINANDU'SIA. Calyx 4-toothed. Corolla funnel-shaped, 4-parted; segments bifid, bearded. ? Stamens 4, didynamous, with the rudiment of a fifth. Capsule compressed, elliptic, 2-celled, 4-valved; dissepiment contrary. ?

9 STENOLOBIUM. Calyx 5-toothed, small. Corolla with a narrow tube, a dilated, campanulate throat, and a 5-lobed, bilabiate limb. Stamens 4, didynamous, with the rudiment of a fifth; lobes of anthers linear, divaricate. Capsule linear, silique-formed; dissepiment parallel.

10 DELOSTOMA. Calyx 3-lobed, coriaceous. Corolla funnel-shaped, with a dilated throat, and a spreading, bilabiate limb. Stamens 4, didynamous, with the rudiment of a fifth. Lobes of anthers parallel. Capsule lanceolate, compressed; valves coriaceous; dissepiment parallel.

11 ASTIA'NTHUS. Calyx tubular, 5-toothed. Corolla with a short tube, a campanulate throat, and a 5-lobed, bilabiate limb. Stamens 4, didynamous, with the rudiment of a fifth. Lobes of anthers confluent. Capsule silique-formed; dissepiment parallel. Seeds winged, and pappose.

12 CHILOPSIS. Calyx ventricose, membranous, cleft even to the base on the lower side; limb oblique, tridentate. Corolla with a short tube, a campanulate throat, and a 5-lobed, bilabiate limb. Stamens 4, didynamous, with the rudiment of a fifth. Lobes of anthers equal, divaricate. Capsule short, silique-formed; dissepiment contrary.

13 OXE^RA. Calyx 4-parted. Corolla with a short tube, a dilated throat, and a 4-cleft, nearly equal limb. Stamens 4, didynamous, 2 of which are sessile. Ovarium 4-lobed, seated on a glandular disk. Fruit unknown. Probably a genus of *Cyrtandracece.*

§ 2. *Stamens* 5, *all fertile.*

14 PLATYCA'RPUM. Calyx 5-parted. Corolla with a short tube, a funnel-shaped throat, and a 5-lobed, nearly equal limb. Stamens 5, equal, fertile. Capsule didymous, ligneous, compressed; dissepiment contrary; cells 2-seeded.

15 CALOSA'NTHES. Calyx entire. Corolla with a short tube, a campanulate throat, and a 5-cleft, curled, bilabiate limb. Stamens 5, all fertile, the exterior pair the longest. Capsule silique-formed, compressed; dissepiment contrary.

§ 3. *Stamens* 4, *didynamous, without the rudiment of the sterile one.*

16 MILLINGT6NIA. Calyx slightly 5-parted. Corolla with a long, slender tube; a funnel-shaped, 4-parted limb; the upper segment broadest, and nearly half 2-cleft. Stamens 4, didynamous, without any rudiment of a fifth. Capsule silique-formed, slender; dissepiment parallel.

17 ARGY'LIA. Calyx 5-cleft. Corolla with a short tube, a campanulate throat, and a 5-lobed, somewhat bilabiate limb. Stamens 4, didynamous, without any rudiment of a fifth. Anthers bearded; lobes equal, divaricate. Capsule silique-formed, compressed; dissepiment parallel.

18 iNCARviLLEA. Calyx tri-bracteate, 10-cleft; the 5 outer segments subulate; the 5 inner shorter and bifid. Corolla with a short tube, a ventricose throat, and a 5-lobed, bilabiate limb. Capsule silique-formed, 6-ribbed; dissepiment bilamellate, contrary.

19 WIGHTIA. Calyx 4-toothed. Corolla funnel-shaped; limb 4-cleft, upper segment 2-lobed. Stamens 4, didynamous, without any rudiment of a fifth. Hypogynous disk wanting. Stigma clavate, undivided. Capsule silique-formed; dissepiment parallel. Seeds imbricated lengthwise.

§ 4. *Stamens* 5, 2 *of which fertile, and* 3 *sterile.*

20 CATA'LPA. Calyx 2-parted. Corolla with a short tube, a ventricose, campanulate throat, and an unequal, 4-lobed limb. Stamens 5, 2 fertile, and 3 sterile. Capsule silique-formed; dissepiment parallel.

21 SCHREBE'RA. Calyx tubular, bilabiate; lips nearly equal, emarginate. Corolla salver-shaped, with a cylindrical tube, and a spreading, 5-6-7-cleft border. Stamens, 2 fertile, and 3 sterile. Capsule pear-shaped, woody; dissepiment parallel.

TRIBE II.

TOURRETIE'JE. Capsule 1-celled, 2-valved; valves placentiferous in the middle. Placentas 2, large and fleshy. Seeds imbricated, horizontal, flattened, girded by a membranous margin.

22 TOURRE'TTIA. Calyx bilabiate; upper lip acuminated; lower one 4-notched. Corolla with the tube equal in length to the calyx, and a unilabia'e limb; upper lip drawn out into a

hollow ; lower lip wanting. Stamens 4, didynamous. Capsule ovate, or oblong, echinated, 2-celled; dissepiment prismatic, central, seminiferous.

23 ECCREMOCA'RPUS. Calyx membranous, 5-cleft, coloured. Corolla tubular, with an equal throat, and a 5-lobed, equal limb. Stamens 4, didynamous, with the rudiment of a fifth ; anthers versatile; cells parallel, combined ; wings of seeds repandly sinuated, nerved.

24 CALA'MPELIS. Calyx semi-5-cleft. Corolla with a tubular base, a ventricose throat, and a contracted, 5-lobed limb. Stamens 4, didynamous, without any rudiment of a sterile one. Lobes of anthers obtuse, divaricate, distinct at apex. Wings of seeds repandly sinuated, emarginate at the base.

TRIBE III.

CRESCENTIE'ZE. Fruit a large, melon-shaped, 1-celled berry ; with a solid rind, pulpy inside. Seeds nestling in the pulp.

25 CRESCE'NTIA. Calyx bipartite or bilabiate. Corolla large, campanulate, with a short tube, a ventricose throat, and an erect, 5-lobed, cleft, unequal limb. Stamens 4, didynamous, with the rudiment of a fifth. Berry large, many-seeded.

26 TAN^CIUM. Calyx cylindrical, truncate. Corolla with a very short tube, a large, ventricose throat, and a nearly equal, 5-lobed limb. Stamens 4, didynamous ; with the rudiment of a fifth. Berry large, corticate.

27 TRIPINNA'RIA. Calyx cup-shaped, 5-crenate. Corolla sub-campanulate ; tube longer than the calyx ; throat widened ; limb 5-cleft, spreading; upper segment the largest. Stigma bifid, acute. Berry large, fleshy. Seeds compressed.

Tribe I.

BIGNONIE^NiE (this tribe contains genera agreeing with the genus *Bignčnia* in important characters.) Capsule 2-celled, 2-valved, sometimes falsely 4-celled. Dissepiment parallel or contrary to the valves. Seeds transverse, compressed, winged on the edges.

§ 1. *Stamens* 4, *didynamous, with the rudiment of a sterile one,*

I. BIGNO'NIA (so named by Tournefort, in compliment to the Abbé Bignon, Librarian to Louis IV.) Tourn. inst. *72.* Juss. 139. Gaertn. fruct. t. 52. H. B. et Kunth, nov. gen. amer. 3. p. 132. D. Don, in edinb. phil. journ.—Bignónia species of Lin. and others.

LIN. SYST. *Didynamia, Angiosperma.* Calyx campanulate, 5-toothed, rarely entire. Corolla with a short tube, a campanulate throat, and a 5-lobed, bilabiate limb. Stamens 4, didynamous, that is, *2* long, and 2 short, with the rudiment of a fifth. Lobes of anthers divaricate. Stigma bilamellate. Capsule silique-formed, 2-celled; having the dissepiment parallel with the valves ; seeds disposed in 2 rows, imbricate, transverse, with membranous wings.—Usually scandent shrubs, furnished with tendrils ; rarely erect trees or shrubs. Leaves opposite, simple, conjugate, ternate, digitate or pinnate. Flowers axillary and terminal, usually panicled. Corollas trumpet-shaped, white, yellow, orange-coloured, purple, violaceous, or rose-coloured.

§ *2, Leaves simple.*

1 B. V.M.NVLIS (H. B. et K«nth, nov.gen. 3. p. 132.) arboreous; L«« 2TMPle, usually bv threes, linear, narrowed at terminal, glabrous. h s! Native of Mexico, on the western declivities of mountains, betwixt Mescala and Estola, at the altitude of 360 hexapods. A tall tree, with a dense, pyramidal head. Leaves 8-10 inches long, and 5 lines broad. Calyx 5-toothed ; teeth acute. Corolla yellow, campanulately funnel-shaped ; limb downy outside, with undulated margins.

Twiggy Trumpet-flower. Tree tall.

2 B. ? TOMENTÒSA (Thunb. jap. 252.) arboreous ; leaves simple, cordate, tomentose, opposite ; flowers in axillary panicles. Pj . H. Native of Japan. Too-vulgo Kiri, Kaempf. amcen. 859. t. 860. Incarvillea tomentósa, Spreng. syst. 2. p. 836. Lower leaves cordate ; upper ones ovate-acute, 5-nerved, downy above, and tomentose beneath, as well as the peduncles and pedicels. Panicles at first trichotomous, then dichotomous. Perhaps a species of *Catdlpa.*

Tomentose Trumpet-flower. Fl. ? Clt. 1820. Tree.

3 B. ? TENUISILIQUA (Vahl. eclog. 2. p. 43.) climbing; leaves simple, lanceolate, acuminated, glabrous, opposite ; panicles terminal; corolla glabrous. P? . ^. S. Native of South America. Branches beset with white dots. Leaves 2-3 inches long, and 1 broad. Capsule or follicle 1^ foot long.

Slender-podded Trumpet-flower. Shrub cl.

4 B. FLORIBI/NDA ; leaves opposite, simple, ovate-roundish, acuminated, sub-cordate, 3-nerved, petiolate ; flowers crowded, panicled. Pj. S. Native of Maranham, in low, bushy places. Flowers very showy, flesh-coloured, in great profusion.

Bundle-flowered Trumpet-flower. Shrub straggling.

5 B. PA'LLIDA (Lindl. bot. reg. 965.) erect, glabrous; leaves simple; opposite, oblong, obtuse, rather cordate at the base; flowers axillary, usually solitary; pedicels and calyxes lepidoted ; calyx turbinate, irregularly 5-toothed. *V?* . S. Native of St. Vincent. Branches terete. Corolla 2 inches long, funnel-shaped : with a yellow tube, and a pale lilac limb; lobes crenately ciliated.

/W<?-flowered Trumpet-flower. Fl. July. Clt. 1823. Shrub 6 feet.

6 B. ? OBTUSIFÒLIA (Lam. diet. 1. p. 418.) leaves alternate, simple, ovate-oblong, obtuse ; corymbs small, terminal; calyx 4-lobed, unequal; corolla tubular: with a 4-lobed, unequal, reflexed limb. P? . S. Native of Brazil. Leaves tapering into the petioles. Flowers large. This differs from all the rest, in the leaves being alternate, and in the corolla and calyx being 4-lobed.

Blunt-leaved Trumpet-flower. Shrub.

7 B. ? ILLICIFÒLIA (Pers. ench. 2. p. 170.) leaves nearly opposite, ovate, mucronate, coriaceous, glabrous : with revolute margins. P? • $. Native of Madagascar, Commers. There is also a variety of this, with emarginate leaves.

Holly-leaved Trumpet-flower. Shrub.

§ 3. *Leaves conjugate, that is, one pair of leaflets at the top of each petiole, which is extended into a tendril.*

8 B. U'NGUIS (Lin. spec. 869.) scandent, glabrous; branches terete?; leaves conjugate; leaflets ovate, acuminated; tendrils bent, tripartite ; peduncles axillary, 1-flowered. *2. w. S. Native of Barbadoes, St. Domingo, &c. Mill. diet. no. 5.—Tourn. inst. 164.—Sloane, jam. 90. hist. 1. p. 208.—Plum. amer. 80. p. 94.—Plukn. aim. 109. t. 163. f. 2. Flowers yellow. Follicles long.

Claw Trumpet-flower. Fl. ? Clt. 1759. Shrub cl.

9 B. UNCINA'TA (Meyer, prim, esseq. p. 210.) scandent, glabrous; leaves conjugate; leaflets oval, drawn out into a cuspidate point; tendrils trifid ; peduncles axillary. 1-flowered ; calyx bilabiate. P2 . ^. S. Native of about the Essequibo. Spathddea uncinàta, Spreng. syst. 2. p. 835. Leaflets *2* inches long, and 1\ broad, glabrous, shining above, having the veins red beneath. Peduncles short, rising from 2 ovate-acute brae-

teas. Corolla an inch long, yellow. Capsule a span long, Seeds 2-lobed, acute, acuminated at both ends by a wing. Very nearly allied to *Bignonia unguis-catL*

Hooked Trumpet-flower. Shrub cl.

10 B. STAMINEA (Lam. diet. 1. p. 416. Willd. spec. 3. p. 293.) scandent; leaves conjugate; leaflets ovate-oblong ; tendrils simple, convolute; peduncles axillary, 1-flowered; stamens and style exserted. *h*c . w. S. Native of St. Domingo.—Plum, spec. 5. icon. t. 56. f. 2. Flowers yellowish purple, scentless. Fruit hard, ovate. It differs from the rest, in the stamens being longer than the corolla, in the style being very long, and clavate.

Long-stamened Trumpet-flower. Fl. ? Clt. 1825. Shrub cl.

11 B. CAPREOLATA (Lin. spec. 870. hort. cliff. 317.) scandent; leaves conjugate; leaflets cordate-oblong: lower ones simple ; tendrils small, trifid: lobes bifurcate; peduncles axillary, 1-flowered, crowded. ^ • v^- H. Native of North America, in the more southern parts. Sims, bot. mag. 864.—Breyn. icon. 33. t. 25.—Duham. arb. 1. p. 104. t. 40.—Bocc. sic. 31. t. 15. f. 3i.—Zan. hist. 74. f. 2. ed. 2d 49. t. 33. Calyx entire. Corollas reddish yellow. Follicles flattened, a foot long.

Tendrilled Trumpet-flower. Fl. June, July. Clt. 1710. Shrub cl.

12 B. LONGIFLORA (Cav. icon. 6. p. 58. t. 581.) scandent; branches terete; leaves conjugate; leaflets lanceolate, glabrous, shining ; tendrils simple : peduncles terminal, twice trifid ; corolla funnel-shaped: upper lip erect, deeply emarginate ; lower lip tripartite. *h* . w. S. Native of Guayaquil. Corolla 3 inches long, scarlet, copper-coloured inside.

Long-Jlowered Trumpet-flower. Shrub cl.

13 B. CHAMBERLAYNII (Sims, bot. mag. 2148.) branches terete, glabrous; leaves conjugate; leaflets ovate, acuminated, glabrous, shining above ; tendrils strong, simple ; racemes axillary, 6-8-flowercd. J? . ^. S. Native of Brazil. B. aequinoxialis, /3, Chamberlaynii, Ker. bot. reg. t. 741. Calyx cupulate, entire, or obsoletely 5-toothed. Corolla funnel-shaped, yellow; segments obtuse.

Chamber layne's Trumpet-flower. Fl. April, Oct. Clt. 1820. Shrub cl.

14 B. ^EQUINOXIALIS (Lin. spec. 869. Meyer, esseq. p. 210.) scandent; branches terete, glabrous; leaves glabrous, conjugate ; leaflets oblong-lanceolate ; tendrils simple, axillary; peduncles 2-flowered : terminal ones racemose; follicles linear. *h* . w. S. Native of Cayenne, and the island of Arrowabisch. —Plun^pec. 5. icon. 55. f. 1.—Sabb. hort. 2. t. 85. Mill, diet, no!^^ Flowers yellow. Calyx 5-toothed. Anthers hairy, and peduncles 5. Vahl, 1. c.

Equinoxial Trumpet-flower. Fl. April, Oct. Clt. 1768. Shrub cl.

15 B. ALLIACEA (Swartz, prod. p. 91. fl. ind. occ. 2. p. 1039. Lam. diet. 1. p. 421.) branches tetragonal; leaves conjugate; leaflets elliptic, coriaceous ; tendrils simple ; peduncles axillary, 5-flowered ; calyx 5-toothed. J? . ^. S. Native of Guiana and Cayenne, and the West Indies. Barrel, aequin. 23. Aubl. guian. 2. p. 659. Leaflets large, acute at both ends, smelling of garlic. Flowers large, white. The garlic scent of this species is sufficient to distinguish it from all others, hence its trivial name, and its name in French, *liane a Vail.*

Garlic-scented Trumpet-flower. Fl. ? Clt. 1790. Shrub cl.

16 B. RIGESCENS (Jacq. schoenbr. 2. p. 44. t. 210.) scandent; leaves conjugate f leaflets elliptic, retuse; flowers racemose; peduncles 3-flowered ; tendrils simple, short; calyx 5-toothed. *2 . ^. S. Native of the Spanish Main, at Caraccas, Willd. spec. 3. p. 294. Leaflets ovate, stiffish, ex Jacq. Corollas white, with a tinge of red, yellow inside; tube incurved; segments of the limb obcordate. Branches terete.

Stiffish-leaved Trumpet-flower. Fl. Ju. July. Clt. 1823. Shrub cl.

17 B. SALICIFOLIA (H. B. et Kunth, nov. gen. amer. 3. p. 133.) scandent; branches terete, sulcate, glabrous ; branchlets hairy ; leaves conjugate; leaflets lanceolate, acute at both ends, quite glabrous, shining; tendrils simple ; peduncles axillary, *3-6*-flowered, downy. ^ • vy $• Native on the banks of the Orinoco, near Carichana, and of Trinidad. Leaflets membranous, 3 inches long. Calyx quite entire. Corollas funnel-shaped, 1^ inch long, copper-coloured ; with a white limb.

Willow-leaved Trumpet-flower. Clt. 1824. Shrub cl.

18 B. CHRYSOLEUCA (H. B. et Kunth, nov. gen. amer. 3. p. 134.) scandent; branches tetragonal, sulcately striated, glabrous ; leaves conjugate; leaflets oblong, acuminated, glabrous, rounded at the base, shining; tendrils undivided; peduncles 3-5-flowered. P? . ^. S. Native on the banks of the river Magdalena. betwixt Rio Viego, and Bogorgne. Leaflets 5-6-inches long, and 2 broad. Common petioles puberulous. Calyx quite entire. Corolla glabrous, yellow, with a white limb, 1£ inch long.

Yellow and White-Lowered Trumpet-flower. Fl. Ju. July. Clt. 1824. Shrub cl.

19 B. LACTIFLORA (Vahl, symb. 3. p. 80. t. *66.)* scandent, glabrous ; leaves conjugate ; leaflets cordate, ovate, glabrous; tendrils trifid; racemes leafy at bottom; limb of calyx quite entire. I?. y. S. Native of the Island of Santa Cruz. Branches striated. Leaflets 2 inches long. Racemes twin ; with a petiolate bractea at the base of each pedicel. Corolla 1^- inch long, milk white, villously tomentose on the outside. Follicles lanceolate, 2 inches long, acute at both ends.

Milk-Jlowered Trumpet-flower. Fl. Ju. July. Clt. 1823. Shrub cl.

20 B. CRUCIGERA (Lin. spec. 869.) scandent, glabrous ; leaves conjugate, lower ones ternate; leaflets ovate-cordate, acuminated ; racemes axillary ; stem muricated ; tendrils simple. Tj. ^. G. Native of Virginia, Mexico, &c. Lin. hort. cliff. 317. Mill, diet. no. 12.—Grov. virg. p. 73.—Plum. icon. 48. t. 58.—Morr. hist. 3. p. 672. sect. 15. t. 3. f. 16. Leaflets large. Flowers yellow, whitish beneath. A transverse section of the stem represents a cross, hence the trivial name. Follicles a foot long.

Cross-bearing Trumpet-flower. Fl.? Clt. 1759. Shrub cl.

21 B. GRANDIFOLIA (Jacq. schoenbr. 3. p. 19. t. 287.) scandent; petioles and branches scabrous ; leaves conjugate; leaflets oblong or ovate, acute at both ends; tendrils simple; corymb terminal, trifid ; peduncles 3-flowered, scabrous. T? . w. S. Native of the Spanish Main, about Caraccas, Willd. spec. 3 p. 296. Ker. bot. reg. 418. Hook. bot. mag. 3011. Leaflets large, a foot long. Calyx bluntly 4-toothed. Corollas yellow, *2* inches long.

Great-leaved Trumpet-flower. Fl. April, July. Clt. 1816. Shrub cl.

22 B. LATIFOLIA (Rich, in act. soc. hist. nat. par. 1. p. 11.) scandent, glabrous; leaves conjugate; leaflets ovate, nerved, membranous; tendrils ? spikes or racemes lateral; calyx inflated, f? . w. S. Native of Cayenne. Flowers crowded, large, yellow.

Broad-leaved Trumpet-flower. Fl. ? Clt. 1823. Shrub cl.

23 B. PUBESCENS (Lin. spec. p. 870.) leaves conjugate, cirrhose ; leaflets cordate-ovate, downy beneath, *h* . ^. S. Native of Campeche. Flowers yellow.

Downy Trumpet-flower. Fl. June, July. Clt. 1759. Shrub cl.

24 B. AFFINE ; leaves binate, cirrhose ? ; leaflets ovate-lanceolate, cordate at the base, downy beneath ; racemes terminal, compound. T? . *KJ.* S. Native of Maranham. Flowers middle-sized, yellow. Nearly allied to *B. pubescens.*

Allied Trumpet-flower. Shrub cl.

25 B. PICTA (H. B. et Kunth, nov. gen. amer. 3. p. \$A)

erect; branches compressed, striated, glabrous ; leaves conjugate ; leaflets ovate, obtuse, roundish at the base, rather coriaceous, glabrous, shining; panicles terminal, few-flowered ; corollas glabrous. *2 . S. Native of the province of Guayana, between the town of Angostura and Farrera. Leaflets about 4 inches long, and %\ broad. Calyx quite entire. Corolla funnel-shaped, white, striped with red ; throat yellow.

Painted-dowered Trumpet-flower. Clt. 1823. Shrub 4 feet.

26 B. MAGNOLI;EF6LIA (H. B. et Kunth, nov. gen. amer. 3. p. 136.) creeping; leaves conjugate; leaflets elliptic, short-acuminated, rounded at the base, glabrous, shining; panicles terminal, simple : corollas glabrous. Pj . S. Native of the Missions of Orinoco, in woods near Javita, on the banks of the rivers Tuamini and Temi. Leaflets coriaceous, reticulately veined. Panicles spike-formed, nearly a foot long. Corolla white, with a yellow throat.

Magnolia-leaved Trumpet-flower. Shrub creeping.

27 B. SPECTA'BILIS (Vahl, symb. 3. p. 80.) scandent, glabrous; leaves conjugate; leaflets ovate-oblong, acuminated, obtuse ; tendrils simple ; flowers racemose, glabrous ; calyx quite entire. ^ . w. S. Native of the Island of Santa Cruz. Willd. spec. 3. p. 294. Racemes terminal, short, having the 2 lower pedicels 3-flowered, and the rest 1-flowered. Bracteas setaceous. Corolla 3 inches long, rather coriaceous, glabrous, purple ; segments obovate. Anthers glabrous. Stigma oblong.

Showy Trumpet-flower. Clt- 1820. Shrub cl.

28 B. ELONGA'TA (Vahl, eel. 2. p. 45. t. 16.) scandent; leaves conjugate; leaflets oval, tomentose beneath ; racemes very long, terminal ; peduncles dichotomous ; tendrils strong, simple ? J?. *yj.* S. Native of South America. Leaflets membranous, 3 inches long, ending in a blunt acumen, clothed with yellowish tomentum beneath. Calyx truncate, entire. Corolla purple ?, 1\ inch long, clothed with fine tomentum, as well as the calyxes.

Elongated-racemed Trumpet-flower. Fl. ? Clt. 1820. Shrub climbing.

29 B. CORYMBIFERA (Vahl, eclog. 2. p. 45. t. 17.) leaves conjugate, without tendrils ; leaflets sub-cordate, ovate, acuminated, glabrous; corymbs axillary and terminal ; calyx quite entire. T? . S. Native of South America. Corymbs trichotomous. Corollas an inch long, downy.

Corymb-bearing Trumpet-flower. Shrub.

30 B. LAURIFOLIA (Vahl, eclog. 2. p. 44.) leaves conjugate ; leaflets oblong, glabrous; racemes terminal; branches dichotomous ; corollas clothed with soft tomentum outside. J? . S. Native of Cayenne. Tendrils none.

Laurel-leaved Trumpet-flower. Fl. ? Clt. 1804. Shrub.

31 B. MOLLISSIMA (H. B. et Kunth, nov. gen. amer. 3. p. 133.) scandent; branches terete, striated, downy; leaves conjugate; leaflets ovate, acute, cordate, clothed with soft hairs above, and fuscescent tomentum beneath ; tendrils undivided; panicles axillary ; corollas downy ouside. ^ • *v* S. Native of the province of Caraccas, in the valleys of Aragua, where it is called *Vejuco* by the natives. Leaflets 2-3 inches long, and \\ to 2 broad. Branches of panicle dichotomous, downy. Calyx 5-toothed. Corollas somewhat funnel-shaped. Follicles 7 inches long, downy.

Very soft Trumpet-flower. Clt. 1820. Shrub cl.

32 B. DIVERSIFOLIA (H. B. et Kunth, nov. gen. amer. 3. p. 133.) scandent; branches quadrangular, striated, glabrous; leaves conjugate and simple ; leaflets roundish-ovate, acuminated, sub-cordate, glabrous, shining ; tendrils undivided; panicles terminal; corollas glabrous. ^ • S. Native of Mexico, near Campeche. Leaflets reticulately veined, and somewhat 5-nerved, membranous, 2| inches long, and 1J broad. Partial petioles downy inside. Calyx 5-toothed. Corollas campanulately funnel-shaped.

Diverse-leaved Trumpet-flower. Clt. 1825. Shrub cl.

33 B. FLORIBU'NDA (H. B. et Kunth, nov. gen. amer. 3. p. 134.) scandent; branches tetragonal, striated, warted ; leaves conjugate ; leaflets oblong-elliptic, acuminated, acute at the base, glabrous, shining ; tendrils undivided ; panicles axillary ; corollas downy outside. P? . y. S. Native of Mexico, near Campeche. Branches beset with white warts and fine powder. Leaflets %\ inches long, and 15-16 lines broad. Panicle powdery, with opposite branches, and dichotomous branchlets. Calyx obsoletely 5-toothed. Corolla funnel-shaped, 8 lines long.

Bundle-flowered Trumpet-flower. Clt. 1824. Shrub cl.

34 B. OBLIQUA (H. B. et Kunth, nov. gen. amer. 3. p. 135.) scandent; branches terete, striated, powdery ; leaves conjugate; leaflets ovate-oblong, obtuse, retuse, obliquely cordate at the base, coriaceous, glabrous, shining; tendrils undivided; peduncles axillary, dichotomous ; corollas glabrous. \^ . w. S. Native of the province of Caraccas, in Isle de las Aves, situated in the lake Tacarigua. Leaflets 3 inches long, and from 18 to 20 lines broad. Calyx quite entire, or irregularly 5-toothed. Corollas funnel-shaped, red.

Oblique-leaved Trumpet-flower. Shrub cl.

35 B. GLABRA'TA (H. B. et Kunth, nov. gen. amer. 3. p. 135.) scandent; brandies terete, warted, glabrous ; leaves conjugate ; leaflets ovate, obtuse, retuse, rounded at the base, rather coriaceous, glabrous, shining ; tendrils undivided ; inflorescence unknown. ^ • *KJ- &•* Native of the Spanish Main, near Cumana, where it is called *Vejuco bianco* by the natives. Capsule 7 inches long. It only differs from the preceding, in the form of the leaves.

Glabrous Trumpet-flower. Shrub cl.

36 B. HONDE'NSIS (H. B. et Kunth, nov. gen. amer. 3. p. 135.) scandent; branches terete, furrowed, glabrous; leaves conjugate; leaflets elliptic-ovate, acuminated, rounded at the base, rather coriaceous, glabrous, shining; tendrils and inflorescence unknown. ^ . w. S. Native of New Granada, near Honda, at the altitude of 130 hexapods. Branches whitish. Leaflets 5-6 inches long, and 3 inches broad. Follicles 12-Hi inches long.

Honda Trumpet-flower. Shrub cl.

37 B. TILLEFOLIA (H. B. et Kunth, 1. c. p. 136.) branches terete, striated, downy ; leaves conjugate; leaflets roundish, acuminated, cordate, membranous, glabrous, downy on the veins beneath; tendrils unknown ; spikes terminal; corollas tomentose outside. Jj . ^. S. Native on the banks of the Orinoco. Leaflets 3 inches long. Spikes 5-6-flowered, tomentose. Calyx obsoletely 5-toothed. Corolla funnel-shaped, with a curved tube, widened upwards. Ovarium oblong, clothed with silky tomentum.

Lime-tree-leaved Trumpet-flower. Shrub cl.

38 B. VILLOSA (Vahl, eclog. 2. p. 44.) leaves conjugate ; leaflets ovate, clothed with very soft villi; tendrils filiform. ^ . ^*j.* S. Native of the Island of St. Martha. Leaflets glabrous above, except the midrib, 2 inches long, acuminated. Calyx truncate, quite entire. Corolla 3 inches long, glabrous, purple. Perhaps the same as *B. pubescens,* Lin. ; but the leaflets in that plant are cordate, and the flowers yellow.

Villous Trumpet-flower. Shrub cl.

39 B. PYRAMIDA'TA (Rich, in soc. hist. nat. par. no 1. Pers. ench. 2. p. 171.) scandent, glabrous; leaves conjugate ; leaflets rather coriaceous ; panicles terminal, rather pyramidal, many-flowered, composed of cymose corymbs. T? . ^. S. Native of Cayenne.

Pyramida l-pan\c\ed Trumpet-flower. Shrub cl.

40 B. CA'NDICANS (Rich. 1. c.) scandent; leaves conjugate ; leaflets roundish-ovate, clothed with white tomentum beneath •

panicles very loose, small-flowered. J?. ^. S. Native of Cayenne.

Whitish-\eaved Trumpet-flower. Shrub cl.

41 B. LONGISILIQUA (Bert, ex Spreng. syst. 2. p. 330.) scandent, cirrhiferous; leaves conjugate ; leaflets deeply cordate, acuminated, membranous, glabrous; racemes terminal, simple; calyx 5-toothed, and are, as well as the corollas, glabrous. ^ . ^. S. Native of New Granada, on the banks of the river Magdalena.

Long-podded Trumpet-flower. Shrub tw.

42 B. SELLOI (Spreng. syst. 2.p. 831.) scandent, cirrhiferous; leaves conjugate; leaflets oblong, sub-cordate, acute, glabrous, shining; panicles opposite, horizontal, many-flowered ; calyxes and corollas glabrous. h_c . ^. S. Native of Brazil.

Sello's Trumpet-flower. Shrub tw.

§ 2. *Lower leaves ternate; upper ones conjugate, furnished with tendrils.*

43 B. ECHINA'TA (Jacq. amer. 183. t. 176. f. 52. Gaertn. fruct. 1. p. 240. t. 52.) branches nodose, angular; petioles of lower leaves dichotomous: branches trifoliate; upper leaves ternate and conjugate ; leaflets ovate, acuminated ; tendrils simple ; corymbs axillary. h_c . vjf. S. Native of Carthagena and Guiana, in sandy places. Aubl. guian. 2. p. 648. t. 264. Lam. diet. 1. p. 415. Jacaranda echinata, Spreng. syst. 2. p. 834. Corolla flesh-coloured, an inch long. Follicles 5 inches long, elliptic, muricated.

Echinated-yodded Trumpet-flower. Clt. 1804. Shrub cl.

44 B. MICROCA'LYX (Meyer, prim, esseq. p. 211.) lower leaves ternate: superior ones conjugate ; leaflets oval, obtuse ; flowers racemose; calyx 5-toothed, very short. f? . $_{KJ}$. S. Native about Essequibo, climbing on the highest trees. Branches nodose at the insertion of the leaves ; nodi compressed. Tendrils none. Racemes axillary, few-flowered. Corollas 3 inches long* purple, elegantly striped inside ; segments obtuse. Lobes of stigma obtuse, crenulated. This species is closely allied to *Bign. echinata,* and *Bign. heterophylla.*

Small-calyxed Trumpet-flower. Shrub cl.

45 B. CHERE^RE (Aubl. guian. 2. p. 644. t. 260.) lower leaves ternate; upper ones conjugate, cirrhose; leaflets ovate, acuminated, sometimes sub-cordate, glabrous ; cymes axillary. J? . $_{yj}$. S. Native of Guiana, in woods, on the banks of rivers. B. heterophylla, Willd. spec. 3. p. 298. B. Kerere, Lam. diet. 1. p. 420. Branches angular. Corollas 2 inches long, yellow. Follicles ovate, hard, compressed.

Cherere Trumpet-flower. Fl. ? Clt. 1824. Shrub cl.

46 B. VENU'STA (Ker, bot. reg. t. 249.) scandent; branches angular, glabrous ; lower leaves ternate ; superior ones conjugate ; leaflets oblong-ovate, acuminated, oblique at the base; petioles villous inside ; corymbs terminal, many-flowered. ^ • ^,. S. Native of Brazil. Calyx villous, short, 5-toothed. Corolla clavately funnel-shaped, with a spreading border, villous inside, crimson.

Lovely Trumpet-flower. Fl. Sept. Dec. Clt. 1816. Shrub climbing.

47 B. INCARNA'TA (Aubl. guian. 2. p. 645. t. 261.) scandent; leaves large ; lower ones ternate ; upper ones binate; tendrils simple ; leaflets ovate, acuminated ; corymbs axillary. T? . $_{yJ}$. S. Native of Guiana, in woods, on the banks of the river Sinemari. Shrub sarmentose. Flowers numerous, rose-coloured. Fruit long, flat.

Flesh-coloured-flowered Trumpet-flower. Shrub cl.

§ 3. *Leaves ternate or trifoliate, destitute of tendrils.*

48 B. TRIPHY'LLA (Lin. spec. 870. Mill. diet. no. 14.) leaves ternate, glabrous; leaflets ovate, acuminated; stem shrubby, erect. Tj . S. Native of the Island of Vera Cruz. Flowers white, in terminal panicles.

Three-leaved Trumpet-flower. Clt. 1733. Shrub erect.

49 B. MOLLIS (Vahl, eclog. 2. p. 46. icon. pi. amer. t. 10.) scandent; leaves trifoliate; leaflets ovate, sub-cordate, downy on both surfaces; panicles terminal, many-flowered; flowers small. J?. $_{v}$. S. Native of Cayenne. B. tomentdsa, Rich, in act. soc. hist. nat. par. 1. p. 11. Branches beset with rufous hairs. Leaflets 5 inches long, obtuse, with a short acumen. Calyx clothed with brownish down, obsoletely 5-toothed. Corolla downy.

Soft Trumpet-flower. Clt. 1818. Shrub cl.

50 B. PILULIFERA (Rich, in act. soc. hist. nat. par. 1. p. 11.) scandent; leaves trifoliate ; leaflets obovate, with a short acumen ; panicles brachiate, composed of compound piluliferous racemes. T? . S. Native of Cayenne. Flowers small.

Pill-bearing Trumpet-flower. Shrub cl.

51 B. CARICHANE'NSIS (H. B. et Kunth, nov. gen. amer. 3. p. 137.) erect; branches terete, striated, glabrous; leaves simple and ternate ; leaflets oblong, obtuse, glabrous, shining, white beneath ; panicles terminal, sessile ; flowers pentandrous ; corollas glabrous. 1/ . S. Native on the banks of the Orinoco, betwixt Encaramada and Carichana. Branchlets rather downy. Branches of panicle dichotomous, hairy. Calyx obsoletely 5-toothed, smoothish. Corolla having the tube widened above, oblique, much longer than the calyx; segments roundish ovate, the 2 upper ones rather the largest. The 2 longer stamens exserted ; filaments all pilose at the base. Anthers sagittately bifid, with diverging lobes. Perhaps a new genus.

Carichana Trumpet-flower. Shrub erect.

52 B. VERRUCOSA (H. B. et Kunth, 1. c. p. 137.) erect?; branches terete, striated, warted, glabrous ; leaves ternate ; leaflets oblong, narrowed at top, obtuse, acutish at the base, glabrous, shining ; panicles terminal, sessile; corollas glabrous. T? . S. Native on the banks of the Orinoco, near the town of Caicaro. Leaflets *9* inches long, and 5 lines broad. Petioles downy. Branches of panicle dichotomous, downy. Calyx downy, 5-toothed. Corolla funnel-shaped, red. Follicles 3 inches long, glabrous.

Jfiarted-branched Trumpet-flower. Shrub erect.

53 B. APURE'NSIS (H. B. et Kunth, 1. c. p. 138.) scandent; branches terete, a little striated, glabrous; leaves ternate ; leaflets elliptic-oblong, short-acuminated, acutish at the base, glabrous, downy on the veins beneath ; spikes terminal, sessile; corollas glabrous. J? . $_{w}$. S. Native on the shady banks of the river Apures, near El Diamante. Branches white. Flowers pedicellate, 2 inches long. Calyx irregularly 3-4 or 5-toothed. Corolla funnel-shaped, yellow, with roundish, spreading, nearly equal lobes. Filaments hairy at the base; the sterile one not seen.

Apures Trumpet-flower. Clt. 1824. Shrub cl.

54 B. UMBROSA (H. B. et Kunth, 1. c. p. 138.) scandent?; branches compressed, striated, clothed with fine, downy hairs; leaves ternate ; leaflets ovate-oblong, acuminated, cordate, glabrous, shining.; flowers panicled ; corollas downy outside. *2. $_{w}$. ? S. Native of New Andalusia, in valleys, about Caripe. Leaflets 5 inches long, and %\ broad. Petioles downy. Branches of panicle dichotomous, downy. Calyx almost quite entire. Flowers sweet-scented. Stamens with glabrous filaments, and ciliately fringed anthers.

Shaded Trumpet-flower. Shrub cl. ?

55 B. RIPARIA (H. B. et Kunth, I.e. p. 138.) scandent; branches terete, striated, clothed with fine downy tomentum; leaves ternate; leaflets obovate-roundish, acuminated, cordate, beset with soft hairs on the veins beneath; panicles axillary, pedunculate ; corollas downy outside. J? . ^. ? S. Native of New Granada, near Mompox, on the banks of the river Magda-

lena. Petioles downy. Bracteas linear, tomentose. Calyx tomentose, almost quite entire. Corolla funnel-shaped, white. The sterile filament has not been seen.

River-side Trumpet-flower. Shrub cl. ?

56 B. LITTORA'LIS (H. B. et Kunth, 1. c. p. 139.) scandent, cirrhose ; branches terete, glabrous; branchlets hairy ; leaves ternate ; leaflets roundish-ovate, acuminated, clothed with soft hairs oh both surfaces ; panicles axillary ; corollas downy outside. *?. ^. ? S. Native of Mexico, about Acapulco. Petioles tomentose. Branches of panicle dichotomous, tomentose. Calyx downy, obsoletely 5-toothed. Corolla funnel-shaped, red. The sterile filament has not been seen.

Seashore Trumpet-flower. Clt. 1824. Shrub cl. ?

57 B. H^MA'NTHA (Bert, ex Spreng. syst. 2. p. *832.)* erect; leaves ternate ; leaflets elliptic, retuse, coriaceous, quite glabrous ; peduncles short, axillary, few-flowered. J?. S. Native of Porto Rico.

Blood-flowered Trumpet-flower. Shrub erect.

§ 4. *Leaves digitate, destitute of tendrils.*

oS B. LEPIDO'TA (H. B. et Kunth, nov. gen. amer. 3. p. *139.)* arboreous ; leaves quinate ; leaflets lanceolate-oblong, obtuse ; with revolute edges, coriaceous, glabrous, covered with small, scale-like dots beneath ; peduncles axillary, usually 3-flowered ; corollas glabrous. J?. S. Native of Cuba, between Havannah and Regla. Branches angular, dichotomous. Peduncles clothed with rusty powder. Calyx irregularly "5-6-toothed, lepidoted outside. Corolla *2* inches long, funnel-shaped, rose-coloured ; with a curved tube, and roundish, undulated lobes.

Scaly-dotted Trumpet-flower. Tree.

59 B. FLUVIA'TILIS (Aubl. guian. *2.* p. *655.* t. 267. H. B. et Kunth, 1. c. p. 139. Meyer, esseq. 211.) arboreous; leaves quinate ; leaflets ovate-oblong, acuminated, coriaceous, glabrous, shining; corymbs axillary, somewhat dichotomous; corollas downy outside. J?. S. Native of Guiana, on the banks of rivers, but always so near their mouths that the water is salt, Aublet; in humid places, on the banks of the Orinoco, near Carichana. Branches terete, warted. Petioles puberulous. Calyx irregularly 3-5-cleft, clothed with white tomentum, ex Kunth, 4-5-toothed, ex Aubl. Corolla funnel-shaped, white. Follicles oblong, compressed, obtuse. Meyer's plant differs from that of Aublet, in the peduncles being few-flowered and terminal, in the calyxes being sub-quinquefid, and in the flowers being fasciculately racemose. Corolla 2 inches long. Lobes of stigma roundish, white.

River Trumpet-flower. Clt. 1824. Tree tall.

60 B. ÆSCULIFO'LIA (H. B. et Kunth, nov. gen. amer. *3.* p. 140.) arboreous ; leaflets 7, obovate-oblong, short-acuminated, narrowed at the base, membranous, downy above, clothed with canescent tomentum beneath ; panicles terminal, sub-corymbose ; corollas downy outside. J?. S. Native of Mexico, in hot valleys, between Acapulco and Mescalo. A very tall tree. Calyx 5-toothed. Corolla sub-campanulate, orange-coloured; with a very short tube; a ventricose throat, which is plicate, longitudinally inside ; the 2 upper segments of the limb erect, smaller; the *3* lower ones reflexed, bearded, marked by a yellow spot.

Horse-chestnut-leaved Trumpet-flower. Tree tall.

61 B. LEUCO'XYLON (Lin. spec. p. 870.) arboreous; leaves quinate; leaflets ovate-lanceolate, acuminated, glabrous ; flowers terminal', solitary or twin. *?. S. Native of Jamaica, on the banks of rivers. Andr. bot' rep' p. 43. t' 43. Swartz, obs p. 233—Brown, jam. 263.-Pluk. aim. 215'. t. 200. rl-Sloane, jam. p. 154. hist. 2. p. 62' Leaves with 5-7-8 leaflets. Calyx bilabiate ; upper lip rounded ; ower lip bifid ; with ovate, sharp teeth. Corolla rose-coloured; with a long, narrow tube, swelling a little at top; limb bilabiate; upper lip the shortest; all the segments rounded and waved, and somewhat villous. Follicles long, Swartz, pendulous. The wood is very hard and white. The flowers are white, not unlike those of *Stramonium,* rising before the leaves, several together, from the ends of the shoots. Pods square, Sloane.

White-wooded Trumpet-flower. Fl. June, July. Clt. 1759. Tree.

62 B. CHRYSA'NTHA (Jacq. schcenbr. 2. p. 45. t. 211.) arboreous ; leaflets 5, ovate, acuminated, tomentose ; flowers terminal, crowded. >?. S. Native at Caraccas. Leaflets on long pedicels, 5 inches long. Calyx tubuJarly-campanulate, 5-toothed. Corollas 2 inches long, yellow. Flowers copious at the tops of the branches; peduncles 1-2-flowered.

Yellow-flowered Trumpet-flower. Fl. May. Clt. 1823. Tree 12-26 feet.

63 B. HIRSU'TA (Lam. diet. 1. p. 222. Willd. spec. 3. p. 299.) arboreous ; leaves quinate ; leaflets obovate, emarginate, downy beneath ; panicles terminal ; corollas curved, clothed with rufescent, yellowish hairs outside. *fy* . S. Native *of* the East Indies. Leaflets nearly 3 inches long. Flowers small, yellow-red. Calyx nearly truncate, furnished with 4 very short teeth. Stamens exserted.

Hairy Trumpet-flower. Tree.

64 B. ANTISYPHILITICA (Mart, reise. bras, ex Linnaea, 5. p. *38.)* arboreous ; lower leaves bipinnate ; superior ones digitately quinate; leaflets ovate, long-acuminated, glabrous ; panicles dichotomous ; capsule linear, flat. ^. S. Native of Brazil, in the province of Rio Negro. Flowers green. Calyx inflated.

Antisiphylitic Trumpet-flower. Tree.

65 B. MEGAPOTA'MICA (Spreng. syst. add. p. 237.) leaves quinate, glabrous; leaflets petiolate, obovate-oblong, quite entire ; peduncles bifid, axillary, cymose ; calyx 5-toothed ; corolla downy. J?. S. Native of Brazil, about Rio Grande.

Rio Grande Trumpet-flower. Shrub or tree.

66 B. ORBICULA'TA (Jacq. amer. 184. t. 180. f. 79.) scandent; leaves quinate; leaflets oblong, acuminated, glabrous; racemes axillary. J?. ^. S. Native of Carthagena, in woods. Jacaranda orbiculata, Spreng. syst. 2. p. 834. Leaflets on long petioles There is a tendril on the upper leaves, in place of a terminal leaflet. Flowers middle-sized, sweet-scented, yellowish, with a paler limb. Follicles large, orbicular, compressed, flat, shining, nearly like those of *Jacaranda Bahamensis.* This is perhaps a species of *Jacaranda.*

Orbicular-podded Trumpet-flower. Shrub cl.

§ 5. *Leaves abruptly pinnate, or bipinnate, furnished with tendrils.*

67 B. CHI'CA (Humb. et Bonpl. pi. aequin. 1. p. 107. t. 31. H. B. et Kunth, nov. gen. 3. p. 142.) scandent; leaves abruptly bi-pinnate; leaflets conjugate, elliptic-ovate, acuminated, deeply cordate, glabrous; panicles axillary, pendulous. J?. w. S. Native on the banks of the Orinoco, and Cassiquiares, near Maypures; Esmeralda; and Mandavaca. Bark clunky. Branches terete, green, dotted with brown. Leaves 8-10 inches long, abruptly bi-pinnate ; pinnae 2 pair; leaflets conjugate. Tendrils simple, from the tops of the general and partial petioles. Branches of panicle dichotomous. Calyx almost quite entire, fleshy. Corolla funnel-shaped, violaceous ; limb with nearly equal, rounded segments. Follicles 2 inches long, compressed, £ an inch broad.

Chica Trumpet-flower. Clt. 1819. Shrub cl.

68 B. CLE'MATIS (H. B. et Kunth, nov. gen. amer. 3. p. 141.) scandent; leaves conjugately pinnate, with an odd one; leaflets 2 pairs, ovate, narrowed at top, acute, cordate at the base, glabrous; flowers panicled. I?. ^. S. Native of Llanos de

Caraccas, betwixt the town of Calabozo, and the river Guarico. Habit of *Clematis vitdlba.* Branches quadrangular, glabrous. Leaves 7-8 inches long ; leaflets 2 inches long, and 1 broad. Tendrils petiolar, trifid at apex. Panicles axillary; downy. Calyx obsoletely 5-toothed, cleft lengthwise, tomentose. Corollas white, yellowish inside ; lobes nearly equal, roundish, red.

Virgin-bower-like Trumpet-flower. Clt. 1820. Shrub cl.

69 B. JASMINIFŌLIA (H. B. et Kunth, nov. gen. amer. 3. p. 141.) scandent; leaves conjugately bipinnate, with 2-3 pair of pinnae, and an odd one ; leaflets 3-4 pair, with an odd one, ovate, obtuse, rounded at the base, the terminal one twice as long as the lateral ones, ovate-lanceolate. ^ . w. S. Native on the banks of the rivers Orinoco and Atabapo, near San Fernando. Branches quadrangular. Leaflets rather coriaceous, 5-8 lines long, lower ones sometimes ternate. Stipulas ? twin, dimidiate, roundish-ovate. Follicles compressed, 7 inches long. This is a very elegant species.

Jasmine-leaved Trumpet-flower. Clt. 1826. Shrub cl.

70 B. TTRNA'TA ; scandent; leaves ternate; divisions pinnate ; leaflets oblong, acute, coriaceous; panicles terminal. J? . w. S. Native of Maranham, among bushes, but rare. Flowers pale red.

TernateAe&ved Trumpet-flower. Shrub cl.

71 B. BĪJUGA (Vahl. symb. 2. p. 68.) glabrous; scandent? ; leaves abruptly pinnate; with only 2 pair of elliptic, acuminated, obtuse, shining leaflets ; petioles margined ; racemes terminal; peduncles" articulated, compressed ; pedicels filiform ; calyx with an almost entire border. ^ • S. Native of Madagascar. Branches alternate, compressed. Leaves rarely conjugate. Leaflets petiolate.

T?vo-}aired-\eaved Trumpet-flower. Clt. 1822. Shrub cl. ?

§ 6. *Leaves impari-pinnate, destitute of tendrils.*

\ 72 B. RACEMŌSA (Lam. diet. 1, p. 424.) glabrous, scandent; leaves impari-pinnate ; leaflets 5-7, ovate, acute ; common petioles winged ; racemes simple, loose, longer than the leaves ; calyx short, almost truncate ; corolla tubular, with a very short, nearly equal limb. ^ . w. S. Native of Madagascar. Leaflets fining, almost an inch long. Calyx truncate.

Var. /3 ; leaflets more numerous, ovate-lanceolate J?. S. Native of Madagascar. Leaflets 9-11. Flowers smaller, disposed in racemes, which are hardly the length of the leaves.

Racemose-flowered Trumpet-flower. Shrub cl. ?

73 B. COMPRE'SSA (Lam. diet. 1. p. 424.) glabrous, scandent?; branches alternately nodo>e and compressed ; leaves impari-pinnate ; leaflets 3 to 7, oval-oblong, obtuse, coriaceous ; common petioles margined ; ultimate branches compressed; calyx almost truncate, with 5 very minute teeth. i?. w. S. Native of the East Indies. Leaves on the compressed branches very rnmute, and simple. Flowers small, few, nearly sessile, at the tops of the branches.

Compressed-hmnched Trumpet-flower. Shrub cl. ?

74 B. MACROSTA'CHYA (Wall. cat. no. 6505.) young branches and rachi of leaves downy; leaves impari-pinnate; leaflets 9, coriaceous, obovate-oblong, acuminated, the lower ones smaller and rounder: having small, subulate stipels at the base of the petiolules ; racemes long, terminal, simple ; corolla downy outside ; bracteas long, linear, one to each pedicel. 1?. S. Native of the East Indies, on the banks of the Saluen river, and on rocks at Kogun.

Long-spiked Trumpet-flowe/. Tree.

75 B. FIMBRIATA (Wall. oat. no. 6500.) erect? ; leaves impari-pinnate ; leaflets hair^, ovate-lanceolate, long-acuminated ; panicles terminal, trichotomous, beset with glandular hairs, as well as the calyxes, which are 5-lobed ; corolla funnel-shaped, with lacerately-fringed segments ; capsule long. ^ • S. Native of the Burmese Empire, at Moalmeyne.

Fringed-flowered Trumpet-flower. Shrub or tree.

76 B. MULTIJUGA (Wall. pi. rar. asiat. 1. p. 81. t. 95. t. 96.) arboreous ; leaves impari-pinnate, with many pairs of leaflets ; leaflets dimidiately ovate-cordate, acuminated, quite entire ; panicles large, terminal; capsule flat, lanceolate, membranaceously winged. f? . S. Native of Silhet and Penang. A large tree, with thick, dotted branches, long leaves, and large leaflets. Flowers large, 3 inches long, by threes, dirty yellow, purplish inside, of a saponaceous odour. Panicle 4 feet long, erect. Calyx pentagonal,*divided into 5, acute, cuspidate teeth. Corolla campanulate, densely villous outside. Wings of seed drawn out at both ends.

Many-paired-leaved Trumpet-flower. Clt. 1827. Tree.

77 B. ADENOPHY'LLA (Wall. cat. no. 6503.) branches downy ; leaves impari-pinnate, downy beneath, as well as the rachi ; leaflets obovate-oblong, mucronate, sessile ; the terminal one the largest, becoming gradually smaller to the base; the lowest pair close to the stem, and rounder, distant from the others; panicles terminal, clothed with rusty down ; calyx large, campanulate, thickly clothed with rusty down ; lobes triangular, acute; corolla large, thickly clothed with woolly tomentum outside, but glabrous inside, with rounded lobes. ^ . S. Native of the Burmese Empire, on mount Taong-Dong, banks of the Irrawaddi; Prome ; Segaen. Peduncles and pedicels thick. Bracteas ovate-acuminated, deciduous. Pods long, terete, ribbed, and curved, tomentose.

Gland-leaved Trumpet-flower. Tree.

78 B. TELFAIRI*: (Bojer, mss. ex Hook. bot. mag. 2976.) arboreous; leaves impari-pinnate, with 6-9 pair of ovate-oblong, acuminated, shining leaflets; panicles terminal, loose ; capsules terete, acuminated, fleshy ; seeds broadly winged. ^ • $• Native of Madagascar, in the temperate regions of the mountains of Angove. Flowers horizontal, drooping, large, of a most delicate rose-colour. Calyx campanulate, with acute, green teeth, edged with red. Lobes of corolla rounded, crenately fringed.

Telfair's Trumpet-flower. Tree 20 feet.

79 B. COLE'I (Bojer, mss. ex Hook. bot. mag. 2817.) leaves 3 in a whorl, impari-pinnate; leaflets 5, elliptic, quite entire ; flowers rising from the main stem, in clusters, on short pedicels ; capsules oblong, acuminated, warted. I? . S. Native of the Mauritius, and Timor. B. ramifldra, Nov. ann. mus. 3. p. 381. Calyx angular, 5-toothed, coloured ; teeth obtuse. Corolla with a cylindrical tube, swollen upwards, thrice as long as the calyx, reddish, veined with yellow; segments of the limb roundish, waved, reddish purple. Anthers 1-celled, the other cell bein^r abortive.

Lady Cole's Trumpet-flower. Tr *e.

§ 7. *Leaves decompound.*

80 B. VARIA'BILIS (Jacq. hort. schcenbr. 2. p. 45. t. 212.) scandent, glabrous; branches tetragonal; lower leaves biternate; superior ones conjugate, divisions ternate ; tendrils trifid, terminating the common petioles, as in the rest of the species ; racemes simple, short, many-flowered, terminal; calyx 5-toothed. J?. ^. S. Native of Caraccas. Leaflets oblong, acuminated, glabrous. Corollas 3 inches long, with a greenish yellow tube, having the limb at first of the same colour ; but this afterwards becomes white.

Variable Trumpet-flower. Clt. 1819. Shrub cl.

81 B. A'LBA (Aubl. guian. 2. p. 653. t. 266.) scandent ; glabrous: leaves composed of 3 pinnate divisions, each division composed of 5 ovate-acuminated, petiolate leaflets ; corymbs axillary, dichotomous, many-flowered. ^ • y $• Native of Guiana, on the banks of the river Sinemari, Lam. diet. 1. p. 420. Willd. spec. 3. p. 505. Jacarānda ālba, Spreng. syst. 2. p. 831. Petioles and branchlets nodose. Flowers white. Fruit ovate-oblong, rugged.

White-flowered Trumpet-flower. Clt. 1823. Shrub cl.

8«'"B AM^NA (Wall. pi. asiat. rar. *2.* p. 78. t. 183.) leaves tripinnate : each pinnae furnished with 3 to 9 lanceolate, acuminated, quite entire, smooth leaflets ; panicle terminal, trichotomous'; calyx bluntly 3-lobed ; limb of corolla puberulous outside. ' J? . S. Native of the Mauritius. Bign. amàra, Loud, hort'. brit. p. 483. Branches cylindrical, dotted. Flowers very fragrant, pale yellow, orange-coloured inside, drooping, subcorymbose. Capsule cylindrical, slender, spiral. Leaves and leaflets on long, angular stalks.

Pleasing Trumpet-flower. Clt. 1828. Tree.

83 B. GHÓRTA (Hamilt. herb, ex Wall. cat. no. 6510.) glabrous : leaves impari-bipinnate; common rachi jointed : partial ones winged, as also jointed ; leaflets ovate, acuminated, attenuated at the base, sessile, the odd one the largest; panicles terminating the branches ; lobes of calyx slight, mucronate ; corolla glabrous. T? . S. Native of the East Indies. Flowers middle-sized. Leaves puberulous in the young state. Leaves with 3 pair of pinnae, the pinnae furnished with 2-3 pairs of leaflets.

Ghorta Trumpet-flower. Tree or shrub.

Cult. All the species of this genus are truly splendid while in blossom, and the greater number of them climbers ; they are therefore desirable plants to train up rafters and pillars, in stoves, as they grow and flower freely. A mixture of loam and peat suits them best; and cuttings taken from young shoots strike root readily, under a hand-glass, in heat, either in mould or sand.

II. SPATHODEA (from *(nra$r}, spathe,* a spathe, in reference to the form of the calyx.) Beauv. fl. d'ow. 1. t. 29. R. Br. prod. p. 471. H. B. et Kunth, nov. gen. amer. *3.* p. 146.—Bignònia species, Lin. Roxb. and others.

LIN. SYST. *Didyndmia, Angiospérmia.* Calyx spathaceous, cleft on one side, and toothed or entire on the other side. Corolla funnel-shaped, with a 5-lobed, rather unequal, subbilabiate limb. Stamens 4, didynamous, that is, 2 long, and 2 short, with the addition of a fifth sterile filament. Cells of anthers divaricate, hanging by their connective. Stigma bilamellate. Capsule silique-formed, falcate, falsely 4-celled ; dissepiment contrary, corky. Seeds furnished with membranous wings, transverse. — Erect shrubs or trees, rarely climbing shrubs. Leavet opposite, rarely alternate, simple, conjugate, but usually impari-pinnate. Leaflets entire. Flowers somewhat panicled, orange-coloured, yellow, or purple.

§ 1. *Leaves simple.*

IS.? ALTERNIFÓLIA (R. Br. prod. p. 472.) leaves alternate, simple, somewhat ovate, entire, coriaceous, glabrous ; stem arborescent. T? . S. Native of New Holland, within the tropic, Bauer.

Alternate-leaved Spathodea. Tree.

2 S. ? COMOSA ; tender parts very downy ; leaves opposite, simple, cordate ; corymbs terminal, short, leafy ; calyx 5-cleft; corolla with a long, slender tube, and bilabiate border. T? . S. Native of Moluccas. Bignonia comdsa, Roxb. fl. ind. 3. p.-103.

Tufted Spathodea. Tree.

§ 2. *Leaves conjugate, tendrilled.*

3 S. LAURIFOLIA (H. B. et Kunth, nov. gen. amer. 3. p. 146.) scandent; branches compressed, a little striated, glabrous; leaves conjugate ; tendrils simple ; leaflets ovate, obtuse, coriaceous, glabrous ; peduncles terminal, few-flowered ; calyx cleft on one side, and entire on the other. *? . ^ S. Native of New Aulalusia, in woods, near Bordones and Cumana. Leaves 3± inches long, and 2 broad. Peduncles dichotomous, 3-7-flowered Corollas orange-coloured.

Laurel-leaved Spathodea. Shrub cl.

4 S. ORINOCF/NSIS (H. B. et Kunth, 1. c. p. 147.) scandent • branches terete, furrowed, glabrous ; leaves conjugate ; tendrils simple ? ; leaflets oblong, acute, coriaceous, glabrous; calyx cleft on one side, and entire on the other. ^ . ^. S. Native on the banks of the Orinoco, near Carichana. Leaflets 4 inches long. Inflorescence and colour of flowers unknown.

Orinoco Spathodea. Shrub cl.

5 S. OBOVA^TA (H. B. et Kunth, 1. c.) scandent; branches terete, striated, downy; leaves conjugate; tendrils simple?; leaflets obovate, acuminated, glabrous; axillary peduncles 1-flowered, and the terminal ones 3-flowered; calyx irregularly 3-5-cleft. F? . *KJ.* S. Native of New Granada, near Turbaco. Bign. obovàta, Spreng. syst. 2. p. 330. Petioles puberulous. Leaflets 4 inches long, and *2*\ broad. Corollas about 2 inches long, violaceous. This plant, from the form of the calyx, probably does not belong to the genus,

(Jbovate-leaved Spathodea. Shrub cl.

6 S. UNCA^TA (Spreng. syst. 2. p. 835.) scandent, glabrous; branches terete; leaves conjugate, undulated ; tendrils longer than the petioles, trifid at apex, hooked ; calyx spathaceous, bilabiate ; flowers lateral, umbellate, aggregate. J? • ^» §• Native of Guiana, and the West Indies. Bignòniu uncàta, Andr. bot. rep. t. .530. Sims, bot. mag. t. 1511.—Pluk. aim. p. 109. t. 163. f. 2. ? Flowers yellow. Perhaps a species of *Bignònia.*

Hooked Spathodea. Fl. Sept. Clt. 1804. Shrub cl.

§ 3. *Leaves impari-pinnate,*

7 S. HETEROPHY'LLA (R. Br. prod. p. 472.) arboreous; leaves glabrous, pinnate and ternate, or simple ; leaflets lanceolate-linear, entire ; flowers racemose. J?. S. . Native of New Holland, within the tropic.

Various-leaved Spathodea. Tree.

8 S. GLANDULOSA (Blum, bijdr. p. 762.) arboreous; leaves impari-pinnate and ternate; leaflets ovate-oblong, acuminated, glabrous, furnished with many glands beneath at the base; panicles axillary and terminal, straight. F? . S. Native of Java, on the mountains of Parang, and at the foot of Mount Tjerimai.

Glandular-leafietted Spathodea. Fl. year. Tree 15 to 25 feet.

9 S. ADENA'NTHA ; leaves ternate, ve'rticillate, or impari-pinnate; leaflets ovate-oblong, acuminated, serrated; racemes terminal. h_c . S. Native of Guinea. Bignònia glandulòsa, Sebum, pi. guin. p. 274. Limb of calyx obsoletely 4-toothed. Corolla pale purple ; segments roundish, scattered with glands outside.

Gland-flowered Spathodea. Tree 30 feet.

10 S. RHEE'DII (Spreng. syst. 2. p. *'835,)* arboreous; leaves downy, impari-pinnate; leaflets *3-7* pairs, roundish, downy ; racemes terminal, erect; calyx spathaceous; corolla much curved, slender. b- S. Native on the coast of Coromandel and Malabar. Bignònia spathàcea, Lin. suppl. 283. Retz. obs. 5. p. 5. Roxb. cor. 2. t. 144. fl. ind. 3. p. 103. Bign. falcata, Kon. mss.—Rheed. 6. p. *53.* t. 29. Shoots covered with whitish down. Racemes length of leaves. Flowers white, pretty large. Limb spreading. Fruit about a foot long, pendulous, twisted in various forms. This tree is called *Woody* by the Telingas; *Will-padri* by the Tamuls.

Rheede's Spathodea. Clt. 1794. Tree.

11 S. cRisPA.(Wall. cat. no. *6515.)* arboreous ; leaves villous, while young, pinnate; leaflets 6-7, oblong; racemes solitary, terminal, bearing a few flowers on long pedicels; calyx spathaceous ; corolla salver-shaped, having the segments of the border nearly equal, and much curled. J? . S. Native of Mysore, where it was collected by Dr.. Buchanan. Bign. atrovirens' Roth. herb. madr. S. atrovirens, Spreng. syst. 2. p. 835* Leaves 6-10 inches long. Leaflets simple, very rarely ternate'

Tube or corona '\a
.-ndutaus, 12-14 inches
..,-!ul-i: rree 25 feet.
I S. F> :. 2.p. 885.)arboreous; leaves scattered, impari-pinnate ; leaflets from 4 to 5 inooth ; panicles erect, terminal, dense, downy, 'lowered; fruit narrow, 4-celled ; calyx generally 2-part- !i the uj*per Yfy 2-cleft, Very downy. • i? . S. Native of cars. Bignonia quadrilocularis, Roxb. cor. 2. u\45. fl. .,. p. 107. Bark grey* with a few scabrous spots'. Branches i.jnuing :• dcsnse, spreading head. Flowers large, rose-coloured, I ^- t fully fragrant. Limb of cor<^-> m>n,ly equ;l,* having the legantly waved.* Fruit a i'< I inches broad* \ an ck, straight, 2-valved, 4-ceiic-a . dissepiment enlarged in idle, on each side, into a sharp ridge, which touches the valve?, and divi<l ' of the usual cells into 2 compartments ; and in these ri seed* are fixed. This sjjfecies is also able oh f the serrated leaves. 'JHk- wood eel for m» ses by ttye natives.
Jiuxburg Clt. 1820. Tree la J
13 S. SJ iK cat. no. 6J18.) arl ;
, arts Villoi > impari-pinnate; leaflets 1-6 pairs from vate to o' --'n••. m.iin;nn petioles channelled ; stinulas tuft of se he axils of the* leaves S. Native ^(iv-.«.ci ^tipulata, Roxb. fl. in<J. .^. ,-• 108. Bra- ed. Calyx ond peduncles very woolly.

eiicn. :;. p. 1 / o.) arlx
impari-pi' ; about»4 pairs, ovate
ire, cuspidate, young; low£r pair the
?uucles large, "ininal; corolla bilabiate :
foilicii us, long, &k '^cylindrical, with sha:
v(l;;es, \\s\y curved. Native about Coromanci
. the more inoun well as oi
iva. Bignonia ci ,uppl. 28J.
: ind. S. p. 106. Bignonia longirlora, VVilld. spec. Padri, Rheed', mal. 6. p. 53. t. 29. Pori-p«<' the Tamuls,-§nd Tagct(ta of the Telingas.
'is, brown. Leaves a foot long, glabrous in the u Leaflets 1 inches long, and 2 broad. Ramifications of es decussate, the smaller or terminal x>nes dichotomou?, viiii a ^ile flower in the fork, Flowers pretty large, yellow, very iragje-••• The.wood of this tree is high-colon!-• much use amonfrst the inhabitants of the hills, where*it is plentiful.
I'OHir-Jlorv: red Spathodea. Clt. 1816. 1
S. CORYMBOSA (Vent, ex Pers. eucli. 2. p. 17a. ? Spreng. . p. 83^.) erect; leaves conjugate, glabrous; leaflets idate, acute, quite entire ; petioles glandular at the base ; , corymbose. u. ^ v.,r.,.. „f T,,,;.!^! Flowers

':tf-flowereu opatnuui.* t. v^it. io^t, x rcc.
viPANULATA (Beanv. fl. d'ow. 1. p. 47. t* 27-28.) .dliM M . -I .(broiis; leaves alternate, impari-pinnate; leaflets <). oi;i. ;r--l .nctolate, tapering to both ends ; flowers racemose, terminal? cttlyx thick, arcuately reflexed, rather villous. i ^ K-AUX • of the west coast of Africa, in the kingdom of Wan ^e, campanula reddish orange-colour, having 'I. i,m,!, r#wi A. Genitals dcclinptc. Tins

Tree or shrul
ered Sp:r
iuv. fl. d'ow. i. JI.-48. t. 29.) er^.c, .v«,v.> lets 9, ovate, acuminated, toothed from the inal. ^2 • S. Native of Guinea, aves alternate. Racemes com-

corolla uneqi
toothed;
toothed.
Smooth bp;.
J8 S. TUI.;
entire, hairy beneath; racemes cor;, Native of Guinea, at Aquapim. Big. Schum. pi. guin. p. ,273. Pedicefs so'! scarlet; segments ovato. wuV. purl^.l corolla short.
Tulip-bear
19 S.? FRAXINIFOLIA (H. B. et K 147.) sea--[1] -* • branches compressediy glabrous impari-pinnate; leaflfis ir- glabrous, snming ; panicles dichotomous branches ; c< ; otlier- h • iabozo, in hi mgri r() _ * leah. glandular. Corolla yellow, 5- rarcl\ ^pathodea. Clt. 1822.* Shru! pinnately dec
(,.,.,u,
•wre it *
"<• .^pairiotica. ri. year. 1 ree J'J teet.
See Bixnbma, p. 222, for* culture and LiiKe tli£jspeci([rno/tia, they are splen blossom.

ixochitl, the
one oi uio sprcK\s.; o uss, gen, p. 139. R. Br. prod> 1/i. B. et Kunth, nov. gen. amer. 3. p. 142.—Bignonia species, and others.
LIN. SYST. mia, Angiosjh
5-toothed. Corolla with a short tube, and a cat throat; limb 5-lobed, bilabiatg. Stamens 4, didynai is, 2 long, and 2 short, with the rudiment of a fi filament. ., Stigm-> lul^nnMlat^ ^apst^e silique-fo celled, having th, irary to the valve disposed in 2 rows, .ui.mrair, wmged, tv —Erect or shrubs, rarely scandent shrubs. L >osite, si. irnpnri-pinnate or digii or flesh-co loured.

1. Leave* simpi<
1 T. <———_. , irboreous ; leaves o;,,,,.,,,. , .Mupc, „ lanceolate, undulated ; racemes lateral; limb of calvx cut emarginate segments ; follicles linear, a \/\ S. Native of Hindostan. Bignonia ind, 3.* p. 101. Bignonia salicifolia.. Iiauiilt, scabrous. Branches drooping like tho W^y\v.<r /• clothed with minute, long, 5-6-flovvered. 1
's or teeth of calyx often emarginate. Corolla wr 'y campanulate tube, and a 4-'partc<l I;.«K- »>- division large, and divided into 2 rounded euual, with rounded, curled '^- '*> ^ v thin meyibranous mm
• thi hited-flow red Te<
SPLE'NDIDA (Spt
cemose, ter^

§ 2. *Leaves digitate.*

3 T. DIGITA'TA (H. B. et Kunth, nov. gen. amer. 3. p. 142. arboreous; branches terete, glabrous; leaves digitate; leaflets obovate-oblong, quite entire, acute, glabrous. ♄. S. Native of New Andalusia, near Santa Cruz. Bark white. Leaflets 7 on each leaf, middle leaflet the largest. Capsule terete. Perhaps belonging to a distinct genus.

Digitate-leaved Tecoma. Clt. 1818. Tree 30 to 40 feet.

4 T. PENTAPHY'LLA (Juss. gen. 139.) arboreous; leaves digitate, quinate; leaflets obovate-lanceolate, quite entire, acute. ♄. S. Native of the West Indies and Brazil, if Guari-pariba, Marcgr. bras. 103. t. 118. Bignonia pentaphylla, Linn. spec. p. 870, hort. cliff. 297. Schlecht. in Linnæa, 6. p. 759. Swartz, obs. 253. Flowers 4-5 together, at the ends of the branches, pale blue, sweet scented. Corolla 2 inches long. Leaves pale green, whitish beneath, beset with minute glabrous dots, as well as the calyxes and pedicels. Leaflets on longish petioles. Calyx bilabiate; upper lip subtridentate, a little longer than the lower one, which is entire or bifid. Capsule 4-5 lines long, and 2 lines broad.

Five-leaved Tecoma. Tree 25 feet.

5 T. SERRATIFO'LIA; arboreous; leaves digitate; leaflets 4-5, ovate, attenuated, serrated, glabrous; pedicels terminal, crowded, 1-flowered; calyx bilabiate. ♄. S. Natives of Trinidad, where it is called *Poay* by the Spaniards. Bignonia serratifolia, Vahl. eclog. 2. p. 40. Lateral leaflets smaller than the middle one, all unequally serrated from the middle. Peduncles clothed with farinaceous tomentum, sometimes 2-flowered. Corolla yellow, 3 inches long.

Serrated-leaved Tecoma. Clt. 1822. Tree.

§ 3. *Erect trees and shrubs, with impari-pinnate leaves.*

6 T. AZADIRACHTA (H. B. et Kunth, nov. gen. amer. 3. p. 142.) arboreous; branches quadrangular, glabrous; leaflets 3-4 pair, oblong, obtuse, serrated, glabrous; panicles simple, terminal. ♄. S. Native of the eastern declivities of the Andes of Peru, near Sondorilla, on the banks of the river Guancabamba, where it is called *Frexno* by the natives. Branches brown. Leaves 5 inches long; leaflets small. Panicles composed of simple racemes. Flowers flesh-coloured. Capsule compressed, 4 inches long.

Azadira-leaved Tecoma. Tree 10 to 15 feet.

7 T. ROSEIFO'LIA (H. B. et Kunth, l. c. p. 143.) arboreous; branches terete, striated a little, glabrous; leaflets usually 2 pair, oblong, obtuse, serrated, glabrous; racemes terminal, simple. ♄. S. Native of Quito near Chillo. Leaves usually impari-pinnate, rarely ternate or simple. Leaflets 1 inch long. Corollas yellow. Capsule as in the preceding species.

Rose-leaved Tecoma. Tree.

8 T. SAMBUCIFO'LIA (H. B. et Kunth, l. c. p. 143.) arboreous; branches a little compressed, glabrous; leaves usually 2-3 pair, oblong, acuminated, serrated, glabrous; panicles terminal, simple. ♄. S. Native of the Andes of Peru, near Montan. Leaves usually impari-pinnate, intermixed also with ternate and simple ones. Leaflets 1½ inch long. Panicle composed of simple racemes. Flowers yellow. Capsule 4 inches long, warted.

Elder-leaved Tecoma. Clt. 1824. Tree 10 feet.

9 T. SAMBUCUS (Juss. gen. 139.) arboreous; branches somewhat tetragonal, glabrous; leaflets ovate-lanceolate, acuminated, serrated, glabrous; racemes terminal, simple. ♄. S. Native of various parts of South America and the West Indies, Mexico, &c. Hook. bot. mag. 3191.—Bignonia stans, Lin. spec. 871.—Plum. spec. 3. icon. 54.—Sloan. hist. 2. p. 63. Leaflets 4-5 pair. Terminal leaflets 3 inches long, the rest shorter. Fl. were yellow.

Lav. fl. incisa; leaflets more deeply cut. ♄. S. Native of South America. Bignonia incisa, Colv. cat. Tecoma incisa, Sweet, hort. brit. p. 139.

Standing Tecoma. Fl. Aug. Clt. 1730. Tree 10 to 12 feet.

10 T. SORBIFO'LIA (H. B. et Kunth, l. c. p. 144.) arboreous; branches tetragonal, glabrous; leaflets usually 2 pair, oblong, acuminated, serrated, clothed with white tomentum; panicles terminal, simple. ♄. S. Native near the town of Quito. Terminal leaflets about 4 inches long, lateral ones 2 inches long. Branches of panicle simple, downy. Flowers unknown, but probably yellow. Capsule narrowed, 7-8 inches long, warted.

Service-leaved Tecoma. Clt.? Tree or shrub.

11 T. MOLLIS (H. B. et Kunth, l. c.) arboreous; branches compressedly tetragonal, downy; leaflets 4 pairs, oblong, acuminated, almost quite entire, clothed with soft down-like hairs, on both surfaces; panicles terminal, simple. ♄. S. Native of Mexico, near Guanaxuato. Terminal leaflets 3 inches long; lateral ones 2½. Branches of panicle simple, downy. Corollas yellow.

Soft Tecoma. Clt. 1824. Tree or shrub.

12 T. ? AFRICA'NA; arboreous; leaflets 2 pair, obovate, coarsely toothed, wrinkled; racemes terminal, simple, 6-7-flowered. ♄. S. Native of Senegal. Bignonia Africana, Lam. dict. 1. p. 424. Leaves scabrous above. Terminal leaflet petiolate, lateral ones sessile. Calyx cup-shaped, unequally 4-cleft. Corollas 2 inches long, 4-cleft. Perhaps a distinct genus.

African Tecoma. Tree tall.

13 T. ? FULVA; arboreous; branches tetragonal; leaflets many pairs, cuneate, serrated, small, villous; racemes axillary. ♄. S. Native of South America. Bignonia fulva, Cav. icon. 6. p. 58. t. 580. Stem of a fuscous-violaceous colour. Common petioles winged. Corollas yellowish.

Fulvous-flowered Tecoma. Shrub 5 to 6 feet.

14 T. SUAVEOLENS; arboreous; leaflets 3 pair, oval, serrulated, glabrous; panicles terminal, thin; first divisions brachiate; corolla woolly; calyx villous, with a 4-cleft limb; upper division furnished with 2 minute points. ♄. S. Native of Bengal, and of the southern parts of the Coromandel coast. Bignonia suaveolens, Roxb. fl. ind. 3. p. 104. Bign. foetiflora, Hamilt. herb. Bign. grandiflora, Kon. Bign. cheiroides, Kön. *Patali* is the Sanscrit name of the tree, see Asiat. res. p. 221. *Parul* is the Bengalese name; and *Parul* is the Hindostanee name. Bark ash-coloured, rather scabrous. Leaflets ending in narrow, blunt ish points; the outer ones the largest, 6 inches long, and 3 broad. Panicle composed of a few spreading branches; the first and second series thereof opposite; the upper ones dichotomous, with 3 solitary, pedicellate flower in each fork; all are thickly beset with glandular, viscid hairs. Flowers large, of a dark, dull crimson colour, exquisitely fragrant. Corolla with an ample woolly throat, convex beneath, flat, and plaited above; the upper division of the border shortest; having the margins of all curled. Ovarium oblong-clavate, on a glandular receptacle.

Sweet-scented-flowered Tecoma. Tree.

§ 4. *Climbing shrubs; with impari-pinnate leaves.*

15 T. AUSTRA'LIS (R. Br. prod. p. 471.) scandent, glabrous; leaflets 5, elliptic, glabrous in the adult state, entire; panicle terminal; capsule oblong. ♄ ◡ G. Native of New Holland, within the tropic, and of New South Wales. Bignonia Pandorea, Vent. malm. t. 45. Andr. bot. rep. t. 86. Sims. bot. mag. 655. Panicle composed of simple racemes; also the racemes are often axillary. Flowers pale red, with a dark purple, bearded throat.

Southern Tecoma. Fl. April, July. Clt. 1793.

16 T. MONOSTYLA; scandent, glabrous; branches angular; leaflets 5, lanceolate, subserrated, blunt ish, mucronate, dotted beneath; panicles terminal; corolla with a bearded throat. ♄ ◡ G. Native of New Holland. Bignonia monostylis, Link. enum. 2. p. 150. Bign. pandorea minor, hort. angl. Serratures of leaves few, blunt ish. Corolla subventricose, 8 lines long, of

reddish-white colour. Leaves and flowers smaller than in *T. capensis*. *T. australis*. Upper lip of corolla emarginate.

Smaller-flowered Tecoma. Fl. April, July. Cl.? Shrub cl.

12 T. leucoxylon; leaves impari-pinnate, glabrous, shining; leaflets 5, oblong-lanceolate, bluntly acuminated, entire, paler beneath; panicles terminal, trichotomous. ☽. G. Native of New Holland, in Moreton Bay. Bignonia jasminoides, Cunningh. in Lond. hort. brit. p. 382. Branches terete, glabrous, green. Calyx crenately 5-toothed. Corolla funnel-shaped, downy inside and outside, and a little bearded in the throat, of a pale blush colour, almost white, with a dark purple throat. Segments of corolla rounded, rather unequal. The fifth or sterile filament very short, bearded at top; all the rest bearded at the base.

Jasmine-like Tecoma. Fl. July, Aug. Cl. 1820. Shrub cl.

13 T. jasminoides; leaves impari-pinnate, very variable; lower ones smallest, with 11 sessile, ovate-roundish, unequal-sided, deeply crenated leaflets; the terminal leaflets the largest, ovate-oblong, and bluntly acuminated, having the common petiole winged, and articulated at the pairs of leaflets; the leaves become, as they ascend the stems, gradually larger, the leaflets more entire; the ultimate ones are therefore the largest, with only 3 leaflets, which are ovate-oblong, blunt, and repandly crenate, having the terminal leaflet twice the size of the lateral ones. ♄. ☽. F. Native of New Holland. The petioles have always narrow wings, and the leaves are dark green, glabrous, and shining.

Diverse-leaved Tecoma. Fl.? Cl. 1820.? Shrub cl.

14 T. Capénsis (Lindl. bot. reg. 1117.) scandent, glabrous; branches terete; leaflets 9, ovate, serrated, bearded in the axils of the veins beneath; racemes terminal on long peduncles; calyx 5-toothed; limb of corolla 4-parted; segments nearly equal, obtuse, the upper one emarginate. ♄. ☽. G. Native of the Cape of Good Hope. Bignonia Capensis, Thunb. prod. p. 165.; Ait. hort. kew. 4. p. 56. Flowers middle-sized, of an orange-scarlet colour, 2 inches long.

Cape Tecoma. Fl. July, Sept. Cl. 1783. Shrub cl.

20 T. capénsis (Sweet, hort. brit. p. 184.) slightly scandent, glabrous; leaflets 7-9, ovate, acuminated, coarsely serrated, attenuated at the base; panicles terminal, pendulous; calycine segments lanceolate, length of the tube of the corolla. ♄. ☽. G. Native of China and Japan. Bignonia grandiflora, Thunb. jap. 257. Blum. bijdr. 728. Bign. Chinénsis, Lam. dict. 1. p. 471. Bjonjo, Kæmpf. amœn. p. 876. Banks, icon. Kæmpf. t. 21. Incarvillea grandiflora, Spreng. syst. 2. p. 836. *Tang-tsoo-fa* of the Chinese. Branches rooting. Young shoots spotted with dark purple. Leaves 6-10 inches long; petioles margined. Flowers pendulous, forming terminal, cross-armed panicles, large, of a tawny orange colour on the outside, and of a tolerably bright reddish orange inside, with brighter streaks. Nectary a glandular, crenated ring. Anterior lobe of stigma recurved.

Great-flowered Tecoma. Fl. July, Aug. Cl. 1800. Shrub climbing.

21 T. radicans (Juss. gen. p. 132.) scandent, glabrous; branches rough, radicant; leaflets 9, ovate, acuminated, coarsely serrated; racemes terminal, corymbose, on long peduncles; tube of corolla 6 times longer than the calyx. ♄. ☽. H. Native of Carolina, Florida, and Virginia. Bignonia radicans, Lin. spec. 871. hort. cliff. 317. ups. 17. Catesb. carol. 73. Mill. icon. t. 65. Dahoon. arb. 1. p. [illegible]. t. 1. Sabb. hort. 2. t. 84. Du Roi, harbk. 1. p. 18[illegible]. Wangenh. amer. 65. t. 26. f. 52. Willd. arb. 47. Curt. bot. mag. 435.—Riv. mon. p. 101.—Mor. hist. 3. p. 612. s. 15. t. 3. f. 1.—Cent. cap. 192. t. 103. This is a beautiful hardy climber, fixing itself to trees or walls, by roots, like ivy. The flowers are produced at the ends of the shoots, in large bunches; and have long swelling tubes, shaped somewhat like a trumpet, whence this species as well as the species of *Bignonia*, have the name of Trumpet-flower. The corolla is large, scarlet orange-coloured.

Less, or minor, Bowery smaller, scarlet. ♄. ☽. H. Native of Carolina. There is a remarkable difference between the leaves and the species, in the shape and size of the leaves, as well as in the colour and size of the flowers.

Rooting Tecoma. Fl. Aug. Cl. 1640. fl. 1724. Shrub cl.

§ 5. *Leaves decompound.*

22 T. ? xylocárpa; arborescent; leaves bi-tripinnate; leaflets from obliquely oblong to semicordate; panicles terminal; segments of the limb of the corolla round, and curled; capsules long, linear, crooked, ligneous, tuberculed. ♄. S. Native of Senegal, in the East Indies. Bignonia xylocarpa, Hoch. fl. sen. 2. p. 108. Bark ash-coloured, rather spongy, and considerably corked. Leaves 1-4 feet long. Common petioles scabrous. Branches of panicle opposite or four, 2-3 or more times dichotomous, slightly downy, with 3 single flowers in each fork. Bracteas ovate-oblong. Flowers large, white, with a tinge of yellow, delightfully fragrant. Capsule 2 feet long; dissepiment contrary.

Woody-fruited Tecoma. Tree 30 to 40 feet.

Cult. All the species of this genus are elegant plants well worth the cultivator's care. *T. radicans* is a hardy climbing shrub, well fitted for decorating a wall, or front of a house. The other species require the same treatment as that recommended for the species of *Bignonia*, see p. 222.

IV. JACARA'NDA (the name of *J. Brasiliana* in Brazil; Juss. gen. p. 138 ed. Usteri, p. 155. R. B. et Kunth, nov. gen. 3. p. 145. Humb. et Bonpl. pl. æquin. 1. p. 59. D. Don, in edinb. phil. journ. 1823.—Bignonia species of some authors.

Lin. syst. *Didynámia, Angiospérmia.* Calyx campanulate, 5-toothed; rarely tubular, truncate, entire. Corolla tubular, at the base, very much dilated above, campanulate; ventricose beneath; limb bilabiate, 5-lobed. Stamens 4, didynamous; with a fifth longer, sterile filament, which is villously bearded at top. Anthers 1-lobed in most of the species, with an obsolete rudiment of another lobe; rarely 2-lobed (as in *Jacaranda ovata*, Pers.), with the lobes equal and diverging. Stigma bilamellate. Capsule broad, compressed, 2-celled; valves thick, ligneous; dissepiment contrary to the valves, placentiferous on both sides. Seeds flat, transverse, with foliaceously-winged edges; outer testa coriaceous, rugosely plicate.—Trees natives of South America, with the habit of the fine-leaved species of *Acacia*. Leaves opposite, bipinnate. Flowers showy, panicled, terminal, rarely lateral, blue, violaceous, or yellow.

§ 1. *Anthers 1-lobed. Leaves abruptly bi-pinnate.*

1 J. acutifólia (Humb. et Bonpl. pl. æquin. 1. p. 59. t. 17.; nov. gen. 3. p. 145.) leaves bipinnate, usually with 5-6 pair of alternate pinnæ; leaflets 9-12 pairs, linear-lanceolate, acuminated, glabrous; corolla silky, with a straight tube. ♄. S. Native of Peru, near San Felipe; and on the banks of the river Guancabamba. Bark grey, chinky. Leaflets opposite or alternate. Panicle terminal, large, pyramidal, many-flowered. Calyx campanulate, 5-toothed; teeth ovate, acute. Corolla large, violaceous; with a campanulate throat, ventricose beneath. Capsule oval, acuminate.

Acute-leaved Jacaranda. Tree 10 feet.

2 J. ovalifólia (Humb. et Bonpl. pl. æquin. 1. p. 62. t. 18.; Kunth, nov. gen. 3. p. 146.) leaves bipinnate; with many pairs

alternate or opposite pinnæ (about 16 pairs); leaflets many-pairs alternate oropposite, oval-oblong, obtuse, downy; corolla glabrous, having an arched tube, which is three times shorter than the throat. ♄. S. Native on the banks of the Orinoco, in shady places, near Carichana, where it is called *Arbol del ruido*. Bark grey, wrinkled. Leaves a foot long. Leaflets contiguous. Panicle large, many-flowered, diffuse, axillary lateral. Calyx small, campanulate, 5-toothed; teeth acute. Corolla violaceous, glabrous, larger than those of *J. ovalifolia*; throat much dilated. Ovarium ovate, 2-edged.

Obtuse-leaved Jacaranda. Tree 30 feet.

3 *J. acutifolia* (D. Don, in hort. trin. t. 631.) leaves bipinnate, with many pairs of opposite pinnæ (14-24 pair), each pinna bearing 10-18 pair of trapezoid-oval oblong, mucronate, downy leaflets, the odd or terminal leaflet lanceolate, and longer than the lateral ones; corollas silky, having the tube a little arched, and 3 times shorter than the throat. ♄. S. Native of Brazil. *J. ovalifolia*, R. Br. in bot. mag. t. 2827. Bark grey, incloses from cicatrices at bottom. Leaves beset with scattered, shining dots. Leaves 1½ foot long. Panicles large, terminal, naked, erectly pyramidal. Flowers showy, drooping, blue. Calyx villous, 5-toothed. Ovarium ovate-oblong, acuminated.

Mimosa-leaved Jacaranda. Fl. April, May. Clt. 1818. Tree 6 to 10 feet.

4 *J. mimosifolia* (D. Don, in edinb. phil. journ. 1828.) leaves bipinnate, with many pairs of opposite pinnæ (9-18 pair), each pinna bearing from 6 to 15 pair of contiguous trapezoid-oval, mucronate, glabrous, coriaceous leaflets; the odd or terminal one elliptic-rhomboid, acute, larger; corolla glabrous, with an arched tube about equal in length to the throat. ♄. S. Native in woods, at the river Essequibo. *J. rhombifolia*, Meyer, prim. esseq. p. 215. Bignonia Sicilifolia, Anderson, cat. hort. St. Vincent, in trans. soc. arts, &c. vol. 25. p. 200. Branches elongated, with broad cicatrices occasioned by the falling of the leaves. Leaves 1 to 1½ foot, shining above, and glaucous beneath. Panicles lateral and terminal. Calyx campanulate, 5-toothed. Corolla large, violaceous, with a narrow cylindrical tube, and a wide, campanulate throat. Ovarium elliptic.

Fern-leaved Jacaranda. Fl. ? Clt. 1800. Tree 25 to 40 feet.

5 *J. Caroba* (D. Don, in edinb. phil. journ. 1823.) leaves bipinnate, with 4-5 pairs of opposite pinnæ, each pinna bearing 3-6 pair of elliptic or emarginated, obtuse, coriaceous, glabrous leaflets; calyx tubular, truncate; corollas velvety. ♄. S. Native of Guiana, in woods. Bignonia, Caroba, Aubl. guian. 2. p. 650. t. 265. and 262. *J. procera*, Spreng. syst. 2. p. 831. Bignonia procera, Willd. spec. 3. p. 397. Pers. ench. 2. p. 179. Bark thick, grey, wrinkled. Leaves 1½ to 2 feet long. Panicle large, terminal. Calyx truncate, entire, with a short cleft on both sides of the mouth. Corolla blue, size of those of *Digitalis ambigua*, with a dilated, ventricose, bearded throat. Capsule oval, obtuse.

Cocoa Jacaranda. Clt. 1793. Tree 60 to 80 feet.

6 *J. Bahamensis* (Sims, bot. mag. under no. 2397.) leaves bipinnate; pinnæ alternate; leaflets opposite or alternate, acute at each end; calyx truncate; corollas glabrous. ♄. S. Native of the Bahama Islands, particularly of the Island of Providence, near the town of Nassau, Carolby. Bignonia corollata, Lam. spec. 572. Mill. dict. no. 12. Willd. spec. 3. p. 397.—Catesb. car. 1. p. 42. t. 42. Panicle terminal. Flowers blue. Pinnæ conjugate.

Bahama-island Jacaranda. Fl. July, Aug. Clt. 1794. Tree.

7 *J. Brasiliana* (Lam. dict. 1. p. 420.) leaves bipinnate; leaflets oblong, acute; panicles lateral; fruit short, with crenated edges. ♄. S. Native of Brazil. Bignonia Brasiliana, Willd. spec. 3. p. 397. Jacaranda II. Pis. bras. p. 105. Flowers yellow. This species will be easily distinguished from the rest, by its yellow flowers. We know nothing of the anthers.

Brazilian Jacaranda. Clt. 1820. Tree 20 to 30 feet.

§ 2. *Anthers* 2-lobed. *Lobes equal. Leaves* bipari-bipinnate.

8 *J. rosæfolia* (R. Br. in bot. mag. under no. 2822. in bot. reg. 1163.) leaves bipinnate, with 3-5 pairs of pinnæ and an odd one; leaflets ovate or elliptic, acute or acuminated, unequal, tomentose in the young state, and beneath in the adult state; corollas silky; branches downy. ♄. S. Native of Brazil, Sir George Staunton, and Sello. *J. puberula*, Lodd. cat.? Bark grey. Leaves a span long. Panicles small, terminal, tomentose; pedunculs 1-3-flowered. Calyx campanulate, 5-toothed; teeth ovate, acute. Corolla violaceous or blue; with a widened throat. Capsule oval-orbicular.

Tomentose Jacaranda. Fl. ? Clt. 1824. Tree 20 to 30 feet.

Obs. Jacarandæ is a genus composed of elegant trees, having much the habit of the fine-leaved *Acaciæ*; bearing large, usually terminal panicles of showy blue, or violaceous flowers, and on that account are worth cultivating in every collection of stove plants. They grow freely in a mixture of loam, peat, and sand, or any light rich soil; and cuttings half ripened, strike root readily, if planted in sand, with a hand-glass placed over them; but the leaves of these cuttings should not be shortened, or cut in any way. If the trees are kept dry in winter, it will check their growth, and throw them into flower.

V. AMPHILO'PHIUM (*from* ἀμφὶ, *around*, and λόφος, *a crest*; *alluding to the lobe of the corolla being crested on all sides*.) H. B. et Kunth, nov. gen. amer. 3. p. 148.—Bignoniæ species, Lin.

Lin. syst. *Didynamia, Angiospermia*. Calyx campanulate, with a double limb; inner one bilabiate; outer one spreading, undistinctly 4-lobed. Corolla somewhat coriaceous, with a short tube, a large ventricose throat, which is subgately compressed in front; limb bilabiate; upper lip large, helmet-shaped, bidentate; lower one straight tridentate, about equal in length to the superior one. Stamens 4, didynamous, that is, 2 long, and 2 short, with the rudiment of a fifth. Lobes of anthers coherent at top, divaricate. Stigma bilamellate. Capsule ovate, rather ligneous, 2-celled, 2-valved. Seeds imbricate, membranaceously-winged, transverse.—Climbing, carinose shrubs; with opposite, conjugate leaves, and terminal panicles of rose-coloured or red flowers.

1 *A. paniculatum* (H. B. et Kunth, l. c. p. 149.) leaves conjugate; leaflets ovate-roundish, acuminated, subcordate, finely lepidoted on both surfaces, clothed with down-like hairs on the middle nerve beneath, and on the inside of the petioles; tendrils trifid. ♄. ⟋. S. Native of New Andalusia, near the monastery of Caripe, and on mount Cocollar. Bignonia paniculata, Lin. spec. 869. Jacq. amer. 132. t. 110. Vahl. symb. 3. p. 80.—Plum. spec. 8. icon. 58. t. 11. Panicle compound of 3-flowered pedunculs. Corollas rather fleshy, rose-coloured. Jacquin's plant has the lower leaves ternate.

Var. β. scalle; leaflets orbicular, acuminated, corniate, clothed with adpressed, rufescent, stellate, branched tomentum beneath. ♄. ⟋. S. Native near Vera Cruz. *A. scalle*, Cham. et Schlecht. in Linnæa, 5. p. 120. Branches tetragonal, tomentose.

Panicled Amphilophium. Fl. ? Clt. 1738. Shrub climbing.

2 *A. Martium* (H. B. et Kunth, nov. gen. amer. 3. p. 149. t. 219.) leaves conjugate; leaflets ovate-roundish, acuminated, cordate, finely lepidoted on both surfaces; petioles glabrous; tendrils unguiculate, trifid at top. ♄. ⟋. S. Native of New Granada, near Marquita, in temperate places. Branches somewhat 6-angled, glabrous, white; branchlets green, beset with powdery atoms. Branches of panicle few-flowered. Corollas

downy, rose-coloured. Very nearly allied to the preceding species.

Mart.'s Amphilophium. Shrub cl.

3 *A. microphyllum* (H. B. et Kunth, l. c. p. 160.) leaves conjugate; leaflets ovate-roundish, acuminated, cordate, hairy and shining above, and clothed with fugacious tomentum beneath as well as the petioles; tendrils? ♄. ♀. S. Native of *New Granada*, near Turbaco. Hairs and tomentum stellate. Branches sulcately angular. Panicles axillary and terminal, clothed with fugacious tomentum. Branches dichotomous. Corollas red.

Large-leaved Amphilophium. Shrub cl.

4 *A. paniculatum* (Spreng. syst. 2. p. 836.) leaves ternately bipinnate, downy; leaflets oblong, obtuse, sessile, almost quite entire; flowers axillary, opposite, peduncled. ♄. ♀. S. Native of Brazil.

Downy Amphilophium. Shrub tw.

Cult. For culture and propagation see the climbing species of *Bignonia*, p. 224.

VI. ZEYHERIA (named in honour of M. Zeyher, director of the Botanic Garden at Baden; and author of several botanical papers.) Mart. nov. gen. bras. 2. p. 65. t. 159.

Lin. syst. *Didynamia. Angiosperma.* Calyx spathaceous, closed, at length bipartite. Corolla tubular; tube nearly equal; limb 5-lobed, hardly bilabiate. Stamens 4, didynamous, with the rudiment of a fifth sterile one. Stigma bilamellate. Capsule echinated, orbicular, compressed, having the dissepiment contrary to the valves. Seeds with membranous wings, imbricated.—A small tree, or large shrub; branches opposite. Leaves opposite, digitate. Flowers terminal, particularly corymbose; bracteas twin, naked, axillary.

1 *Z. montana* (Mart. nov. gen. brasc. 2. p. 66. t. 159.) leaves digitate; leaflets 5, lanceolate, clothed with fulvous, farinaceous, stellate tomentum beneath, as well as outer branches and inflorescence. ♄. S. Native of Brazil, in the province of St. Paul. Spathella ovate, Spreng. syst. add. p. 237. Corolla 1 to 1½ inch long, clothed with golden, lepidoted tomentum outside; segments ciliated, the 3 superior ones narrower and shorter.

Mountain Zeyheria. Shrub 7 feet.

Cult. For culture and propagation, see *Jacaranda*, p. 226.

VII. FREDERICIA (named in compliment to Frederick William III. King of Bavaria, a great promoter of the sciences.) Mart. in nov. act. bonn. 10. p. 1. t. A. and B.

Lin. syst. *Didynamia, Angiosperma.* Calyx tubularly campanulate, pentagonal, coloured; with 5 short teeth. Corolla salver-shaped; with a cylindrical tube, and a spreading bottom; limb 5-6-cleft; segments spreading, roundish. Stamens 4, didynamous, with the rudiment of a fifth sterile one; filaments bearded at the base; lobes of anthers divaricate. Stigma bilamellate. Capsule compressed, oblong, acutish, almost as broad as long; dissepiment contrary to the valves. Seeds transverse, with membranous margins.—Branched, rambling shrubs. Leaves ternate; leaflets quite entire. Flowers terminal, panicled, bracteate. Inflorescence scarlet.

1 *F. speciosa* (Mart. l. c. p. 9. t. A.) leaflets oblong, acuminated, flattish, bearded in the axils of the veins beneath; panicle pyramidal, spreading; calyx and corolla 5-cleft. ♄. ♀. S. Native of Brazil, in the provinces of St. Paul and Rio Janeiro, in woods. Branches terete, striated, glabrous. Panicle large, having the rachis and peduncles tetragonal, purplish scarlet, and clothed with fine villi. Corollas scarlet, or reddish yellow. There are varieties of this species, having the corolla more or less red or yellow, with a pubescent or downy throat.

Showy Fredericia. Shrub cl.

2 *F. Gardneri* (Mart. l. c. p. 11. t. B.) leaflets ovate-oblong, acute at the base, and short-acuminated at the apex, usually conplicate, quite glabrous on both surfaces; panicle compact; calyx, but particularly the corolla, for the most part 6-cleft. ♄. ♀. S. Native of Brazil, in the interior parts of the province of Bahia, in woods. Branches terete, glabrous, often rough from warts. Rachis, peduncles, and pedicels tetragonal, scarlet, and downy. Corolla yellow, downy outside, as in the first species.

Gardner's Fredericia. Shrub cl.

Cult. For culture and propagation see *Bignonia*, p. 222.

VIII. FERDINANDUSA (named in honour of Ferdinand, hereditary prince of Austria.) Pohl, bot. zeit. 1827. col. 70. p. 553. pl. bras. 2. p. 5.

Lin. syst. *Didynamia, Angiosperma.* Calyx 4-toothed. Corolla funnel-shaped, 4-parted; segments unequal, bifid, bearded at apex. Stamens 4, didynamous; rudiment of a 5th not seen. Anthers inverted at the base and apex; cells parallel or combined; pollen spherical, yellow. Ovarium globous at apex, 4-cleft. Style elongated. Stigma bipartite. Capsule large, elliptic, acute, 2-celled, 4-valved. Seeds unknown.—Erect, middle-sized trees. Leaves large, opposite, coriaceous, blackish or yellowish green, shining, quite entire, ovate, on short petioles; bracteas small. Flowers terminal and axillary, corymbose, scarlet or whitish-green. Stamens and stigma exserted. Throat of corolla naked. This genus is nearly allied to *Fredericia* and *Zeyheria*, Mart.

1 *F. externa* (Pohl, bras. 2. p. 9. t. 109.) leaves ovate-elliptic, obtuse at the apex; bracteas roundish, trifid. ♄. S. Native of Brazil, in the province of *Goyaz*, in boggy places. Leaves dark green above, and yellowish green beneath. Corollas whitish green.

Elliptic-leaved Ferdinandusa. Tree 12 feet.

2 *F. ovalis* (Pohl, pl. bras. 2. p. 10. t. 110.) leaves oval, marginated, acutish at the apex; bracteas roundish, quite entire, acute, half stem-clasping, ciliated at their confluence. ♄. S. Native of Brazil, in the province of Goyaz, near to the town of the same name, at Serra de Manoel Gomez. Corollas dark red or scarlet. Leaves dark green above, and yellowish beneath.

Oval-leaved Ferdinandusa. Tree 10 to 12 feet.

3 *F. discolor* (Pohl, pl. bras. 2. p. 12. t. 108.) leaves ovate-elliptic, emarginate, acute; bracteas lanceolate, quite entire, scarious. ♄. S. Native of Brazil, in the province of Minas Geraes, on Serra de Spinosa; and of the province of Goyaz, at Cara de Telha, and St. Cruz. Corollas scarlet, 2 inches long. Leaves greenish yellow.

Showy Ferdinandusa. Tree 9 feet.

Cult. For culture and propagation see *Jacaranda*, p. 226. The species are extremely elegant when in blossom.

IX. STENOLOBIUM (from στενος, *stenos*, narrow, and λοβος, *lobos*, a pod; in reference to the narrow, linear, siliquose capsule. D. Don, in edinb. phil. journ. 1823.

Lin. syst. *Didynamia, Angiosperma.* Calyx small, campanulate, 5-toothed, equal. Corolla with a narrow tube; dilated, inflated, campanulate throat; and a 5-lobed, equal, bilabiate limb. Stamens 4, didynamous, thus 2 long, and 2 short, with a very short rudiment of a fifth; lobes of anthers linear, slightly divaricate. Stigma bilamellate. Capsule narrow, linear, siliquose, compressed, 2-celled; dissepiment parallel with the

valves. Seeds flat, transverse, with membranous margin.—A frondose, erect tree. Leaves opposite, simple, very like those of the sweet chestnut, elliptic, coriaceous, acute, feather-nerved, petiolate, with serrated edges, clothed with copious mealy tomentum beneath. 5-7 inches long, and 2-3 broad, glabrous above. Flowers terminal, numerous, spicately panicled, reddish purple, size of those of *Incarvillea*. Style slender, shorter than the stamens. Capsule 8 inches long.

1 S. CATANTHOIDES (D. Don, l. c.) ♄. G. Native of Peru, in woods, at Huayapé. Bignonia spicata, Pav. mss. in herb. Lamb.

Chestnut-leaved Smallobium. Tree erect.

Cult. For culture and propagation see *Jacaranda*, p. 226.

X. DELOSTOMA (from δηλος, *delos*, manifest; and στομα, *stoma*, a mouth; in allusion to the wide mouth of the flower.) D. Don, in edinb. phil. journ. 1830.—Bignonia species of Pav.

Lin. syst. *Didynamia, Angiosperma.* Calyx campanulate, 5-toothed, coriaceous. Corolla funnel-shaped, with a dilated throat, and a spreading, bilabiate limb; lower lip 3-lobed; upper lip shorter, and 2-lobed; lobes broad, roundish, flat. Stamens 4, didynamous, that is, 2 long and 2 short; with the addition of a short fifth sterile, glabrous one. Lobes of anthers parallel, equal. Stigma broad, bilamellate. Capsule lanceolate, compressed, 2-celled; valves coriaceous, rather fleshy; dissepiment parallel with the valves. Seeds flat, transverse, with broad, membranous edges.—Frondose trees, natives of Peru. Leaves simple, opposite, elliptic, petiolate, bluntly acuminated. Flowers terminal, spicately racemose, large, rose-coloured. The campanulate, 5-lobed calyx, the figure of a corolla; the parallel lobes of the anthers; and the structure and form of the capsule, are the marks which particularly characterize this genus.

1 D. MACRANTHUM (D. Don, l. c.) leaves elliptic-oblong, toothed, downy beneath. ♄. S. Native of Peru. Bignonia glaucescens, Pav. mss. in herb. Lamb. Flowers rose-coloured.

Feather-leaved Delostoma. Tree.

2 D. SERICANTHUM (D. Don, l. c.) leaves elliptic, quite entire, tomentose beneath. ♄. S. Native of Peru. Bignonia amplifolia, Pav. mss. in herb. Lamb.

Entire-leaved Delostoma. Tree.

Cult. For culture and propagation see *Jacaranda*, p. 226.

XI. ASTIANTHUS (from αστριος, *astrios*, beautiful; and ανθος, *anthos*, a flower; in allusion to the brilliant flowers.) D. Don, in edinb. phil. journ. 1830.

Lin. syst. *Didynamia, Angiosperma.* Calyx tubular; limb equal, 5-toothed. Corolla tubular at the base, but with a dilated, campanulate, veiny throat; limb 5-cleft, bilabiate; lower lip 3-lobed, the middle lobe large; the superior lip 2-lobed, and reflexed. Stamens 4, didynamous; with a shorter, glabrous rudiment of a fifth sterile one. Stigma bilamellate. Anthers naked; lobes equal, confluent. Capsule very long, elliptic, 2-celled. Dissepiment parallel with the valves; thick, placentiferous on both sides. Seeds transverse, compressed; with winged margin, and pappose from numerous villi.—An erect, branched, frondose shrub, native of Mexico. Branches terete, glabrous. Leaves simple, tern, elongated, broad-linear, coriaceous, quite entire, glabrous, 6-10 inches long, 1-nerved, attenuated at both ends. Flowers terminal, numerous, panicled. Corolla larger than that of *Digitalis purpurea*, reddish purple. Lobes of the limb of the corolla broad, round, with curled and crisped edges. This genus is distinguished from *Bignonia*, in the confluent lobes of the anthers, by its seeds being furnished with a villous pappus, and by its habit. It differs from *Tecoma*, and by the characters above enumerated, in having a parallel

and not a transverse dissepiment; and from *Spathodea*, with some species of which it agrees in habit, but is readily distinguished by the structure of its capsule, in having seeds furnished with a villous pappus, and lastly, in the lobes of the anthers being confluent.

1 A. TOMENTOSUS (D. Don, l. c.) ♄. S. Native of Mexico. *Long-leaved* Astianthus. Shrub.

Cult. For culture and propagation see *Jacaranda*, p. 226.

XII. CHILOPSIS (from χειλος, *cheilos*, a lip; and οψις, *opsis*, resemblance; on account of the calyx being furnished with a distinct lip.) D. Don, in edinb. phil. journ. 1833.—Bignonia species, Cav.

Lin. syst. *Didynamia, Angiosperma.* Calyx membranous, oblong, tubulous, cleft on the lower side, even to the base; limb oblique, truncate on the upper side. Corolla with a tubular base, and a dilated campanulate throat; limb 5-lobed, bilabiate; lobes oval-roundish, with curled, crenated edges; lower lobe large, oblong. Stamens 4, didynamous; beside the rudiment of a fifth sterile, glabrous one. Stigma bilamellate. Anthers naked; lobes equal, divaricate. Capsule short, ellipsoidal, 2-celled; dissepiment contrary, placentiferous. Seeds transverse, with membranous margins.—An erect, branched shrub, native of Mexico, with terete, downy branches. Leaves alternate, linear, flat, elongated, 3-5 inches long, glabrous, coriaceous, attenuated at both ends. Racemes terminal, short, dense, tomentose; pedicels short, furnished with 2 linear-lanceolate bracteoles each. Lobes of stigma replicate. Corolla dark purple, size of those of *Cheiri*. This is a well-marked genus, readily distinguished from *Spathodea*, in the structure of its capsule, and by having simple, alternate leaves.

1 C. SAUVEOLENS (D. Don, l. c.) ♄. S. Native of Mexico. Bignonia linearis, Cav. icon. 3. t. 269.

Willow-leaved Chilopsis. Fl. ♀ Cit. 1825. Shrub 10 feet.

Cult. For culture and propagation see *Jacaranda*, p. 226.

XIII. OXERA (from οξυρος, *oxeros*, tumid; in allusion to the swollen throat of the corolla.) Labill. nov. vel. 2. t. 28.—Oncinia, Spreng. gen. 1. p. 24.

Lin. syst. *Diandria, Monogynia.* Calyx 4-parted, scarious. Corolla tubular at the base and dilated at the throat; limb 4-cleft, nearly equal. Stamens 4, 2 of which are fertile. Anthers 2-celled, exserted. Ovarium 4-lobed, seated on a glandular disk. Ovula numerous, fixed to fleshy, central placentæ. Style central, incurved; stigma bifid. Fruit probably baccate.—A shrub, about 6 feet high, with pale, sulphur-coloured, varied branches. Leaves opposite, ovate-oblong, exstipulate. Racemes axillary. Flowers pendulous, sub-umbellate. Fertile stamens, and style exserted. Peduncles twice trichotomous, bracteate. Flowers large.

1 O. PULCHELLA (Labill. l. c.) ♄. G. Native of New Caledonia.

Neat-leaved Oxera. Shrub 6 feet.

Cult. For culture and propagation see *Jacaranda*, p. 226.

XIV. PLATYCARPUM (from πλατυς, *platys*, broad; and καρπος, *carpos*, a fruit; in reference to the broad compressed fruit.) Humb. et Bonpl. pl. æquin. 2. p. 81. H. B. et Kunth, nov. gen. amer. 3. p. 151.

Lin. syst. *Pentandria, Monogynia.* Calyx 5-parted, equal. Corolla with a short tube, a funnel-shaped throat, and a 5-cleft, equal limb. Stamens 5, equal. Stigma bilamellate. Capsule didymous, ligneous, compressed, 2-celled, 2-valved; dissepiment contrary to the valves, and adnate to them; cells 2-seeded. Seeds membranaceously winged.—A large tree; with opposite, simple entire leaves; and terminal panicles of pale red flowers.

1 P. Orinoco'nse (Humb. et Bonpl. pl. æquin. 2. p. 81. t. 104.). ♄. S. Native on the banks of the Orinoco, near Santee. Sterculia Orinocénsis, Spreng. syst. 1. p. 922. A tree, with a dense head. Bark thin, smoothish; wood white. Branchlets clothed with rusty tomentum at top. Leaves petiolate, obovate-oblong, obtuse, 3-6 inches long, white beneath, and clothed with rusty down on the nerves and veins. Petioles pilose. Branches of panicle filiformi-pilose.

Orinoco Flaxy-carpus. Tree 25 to 40 feet.

Cult. For culture and propagation see *Jacaranda*, p. 226.

XV. CALOSA'NTHES (from καλος, *calos*, beautiful; and ανθος, *anthos*, a flower; in reference to the beauty of the flowers.) Bignónia species of Roxb. Blum. bijdr. 760.

Lin. syst. *Pentándria*, *Monogynia*. Calyx entire, coriaceous, tubular, campanulate. Corolla with a short tube, a campanulate throat, and a bilabiate border; upper lip 2-cleft; under lip 3-cleft; segments wrinkled. Stamens 5, all antheriferous; the exterior pair the longest, bending in under the upper lip, very woolly at the base; anthers double, each part oblong, bursting on the under side. Hypogynous disk, a somewhat pentagonal, fleshy body. Style length of stamens, hollow its whole length, having a funnel-shaped mouth, opening between the membranous, orbicular lobes of the stigma. Capsule silique-formed, large, compressed transversely, a little curved, having the convexity upwards; dissepiment contrary to the valves. Seeds numerous, surrounded by a delicate, semi-circular, membranous wing.—A large tree, with opposite, supra-decompound leaves, and terminal, secund racemes of flowers.

1 C. Indica (Blum. bijdr. 761.) ♄. S. Native of the coast of Coromandel and Malabar, in forests, among the mountains; and of Java, where it is called *Pamparas*. Bignónia Indica, Lin. Willd. spec. 3. p. 306. Roxb. fl. ind. 3. p. 110. Bignónia pentándra, Lour. coch. 400. Spathodoa Indica, Pers. syn. 1. p. 175. Palego-Pajoneli, Rheed. mal. 1. t. 47 and 44. *Shyonaka* and *Mandooka-puna*, are two of its Sanscrit names; *Shyona* is its Hindostanee name; *Fanga mara* is the Tamul name; and *Pampena*, the Telinga name. Tree large. Leaves opposite, decussate, 4-5 feet long. Leaflets obliquely cordate, smooth, pointed. Peduncles and pedicels scabrous. Racemes terminal, secund, erect, stiff; lower two thirds naked and scabrous, somewhat quadrangular; upper third part imbricated on one side by very large, fleshy, dark red flowers; with scarcely any bracteas. Capsule long, linear.

Indian Calosanthes. Fl. ? Clt. 1775. Tree 40 to 50 feet.

Cult. For culture and propagation see *Jacaranda*, p. 226.

XVI. MILLINGTO'NIA (named in honour of Thomas Millington, an English botanist, who has written on vegetable physiology.) Lin. suppl. 291. Juss. gen. 133. Willd. spec. 3. p. 382. Bignónia suberósa, Roxb.

Lin. syst. *Didynámia*, *Angiospérmia*. Calyx small, slightly 5-parted; with nearly equal divisions. Corolla funnel-shaped; tube from 2 to 3 inches long, slender and cylindrical; limb 4-parted; the upper division broadest, and nearly half 2-cleft. Stamens 4, didynamous, exserted, without any rudiment of a sterile filament: anthers sparred. Ovarium oblong. Style as long as the corolla; stigma bilamellate. Capsule sleader, linear, pretty smooth, 2-celled, thin, pointed, about a foot long, and 3 inches broad, and one line thick; dissepiment parallel with the valves. Seeds numerous, round, surrounded by a remarkably fine pellucid membrane. Embryo with 2 emarginate, reniform cotyledons.—A large tree. Bark deeply cracked, and spongy. Leaves opposite, supra-decompound; leaflets subcordate, ovate. Petioles terminal. Wood white, firm, and close-grained.

1 M. horténsis (Lin. suppl. 291. Willd. spec. 3. p. 382.) ♄. S. Native of the East Indies, but in what particular place is unknown. Bignónia suberósa, Roxb. fl. ind. 3. p. 114. Leaves about 2 feet long. Leaflets acuminated, 1-3 inches long. Panicle cross-armed; ramifications horizontal, the first trichotomous, then dichotomous, with generally a simple flower in the fork. Bracteas minute. Flowers numerous, large, pale white, delightfully fragrant.

Garden Millingtonia. Fl. ? Clt. 1820. Tree 50 to 60 feet.

Cult. For culture and propagation see *Jacaranda*, p. 226.

XVII. ARGYLIA (this beautiful genus is dedicated to the memory of Archibald, Duke of Argyle, a nobleman distinguished for his patriotic virtues, and love of science, and more especially of botany. His fine garden at Whitton Park, in Middlesex, was justly celebrated towards the middle of the last century. It contained a very extensive collection of plants, particularly of ornamental and useful American trees, many of which he himself first introduced to this country.) D. Don, in edinb. phil. journ. 1823, and 1829, July.

Lin. syst. *Didynámia*, *Angiospérmia*. Calyx 5-parted. Corolla with a tubular base, and a ventricose throat; limb nearly equal, 5-lobed, imbricate in æstivation. Stamens 4, didynamous, that is, 2 long, and 2 short, without any rudiment of a sterile one. Anthers beardless, 2-parted; lobes obtuse, divaricate, distinct at apex, dehiscing by a longitudinal chink. Stigma bilamellate, prunose. Capsule silique-formed, 2-celled, 2-valved, many-seeded, torulose; valves crustaceous, navicular. Seeds transverse, wingless, reniform, 2-lobed at apex, with an obtuse margin, concave and striated on one side, and convex and tuberculed on the other; outer testa coriaceous. Embryo conforming to the cavity of the seed.—Perennial, green herbs. Roots thick, divided, fleshy, fusiform. Stem erect, terete, branched, viscid, downy, fleshy. Leaves alternate, remote, petitately digitate, petiolate; leaflets deeply bi-tripinnatifid, unequal, disposed in a circle, minutely downy and viscid. Peduncle a continuation of the stem, fleshy. Flowers terminal, racemose, numerous; pedicels short, alternate, each furnished with a bracteæ at the base. Corollas large, yellow? size of those of *Catálpa syringæfólia*, showy, marked with numerous red dots in the throat.

1 A. canéscens (D. Don, in edinb. phil. journ. 1829, July.) clothed with hoary down; segments of the leaves linear, channelled: tube of corolla exceeding the calyx. ♃. G. Native of Chili, about Coquimbo, Caldelengh. The herb is more slender, the down more copious, short, and canescent, than in *A. radiata*; and the flowers are smaller, but also yellow.

Canescent Argylia. Pl. 1 foot.

2 A. radiáta (D. Don, in edinb. phil. journ. no. 5. p. 1828. and July 1829.) glabrous; segments of the leaves flat, dilated at apex; tube of corolla twice longer than the calyx. ♃. G. Native of Peru. Bignónia radiáta, Lin. spec. 871. Willd. spec. 3. p. 301.—Feuill. per. 1. p. 734. t. 22. Corolla large, yellow, dotted with red in the throat. The plant, in the general description, is said to be clothed with minute viscid down.

Ray-leaved Argylia. Pl. 1 foot.

Cult. The species of *Argylia* are extremely splendid while in blossom. They will thrive best in a light rich soil, such as a mixture of loam, peat, and sand. Cuttings will strike root in sand, under a hand-glass, if kept free from damp.

XVIII. INCARVILLEA (named after P. Incarville, a Chinese Jesuit, who first sent specimens of it to Bernard de Jussieu, in the year 1742; and seeds of many other plants, as, for instance, the Chinese Aster, so common in our gardens.) Juss. gen. 156. ed. Usteri, p. 154. Lam. dict. 3. p. 233. ill. t. 527. Bunge, in mem. acad. petersb. 2. p. 120.

Lin. syst. *Didynamia, Angiospermia.* Calyx tubiracteate, pentagonal, 10-cleft; the 5 outer segments subulate, elongated, and glabrous, thickened; the inner ones shorter and bifid. Corolla bilabiate; segments nearly equal. Stamens 4, didynamous; filaments glandularly thickened at apex; anthers bisetose, 2-celled; cells horizontal, opposite, dehiscing at bottom. Stigma bilamellate. Capsule silique-formed, 6-ribbed, falcate, dehiscing laterally; dissepiment bilamellate, contrary to the fissures. Seeds numerous, winged, Bunge, l. c. Calyx 5-cleft, tribracteate. Corolla with a tubular base, a ventricose throat, and an unequal, 5-lobed limb. Stamens didynamous; anthers 2-lobed. Stigma bilamellate. Capsule silique-formed, compressed, long, narrow, 2-celled, 2-valved; dissepiment opposite the valves, many-seeded. Seeds winged.—A Chinese herb; with alternate, striated branches; alternate, pinnately jagged leaves; and loose, spicate racemes of flowers. Corolla like that of *Digitalis*; and the capsule like that of *Catálpa*, or *Fraxinus Orientalis*. The rudiment of a sterile filament not seen, ex Juss. l. c.

1 I. Sinénsis (Lam. dict. 3. p. 233.) ♃. G. Native of China, on *way sides*, near Pekin, and from that to the north, even to the limits of the empire. *J. Chinénsis*, Bunge, mem. acad. petersb. 2. p. 120. Campsis adrepens, Lour. coch. 378. Stem 1-2 feet high, herbaceous, erect. Leaves bipinnatifid; leaflets cut; lobes linear. Racemes terminal, loose. Flowers nearly sessile. Corollas large, scarlet, deciduous. Capsule 2 inches long and more. The figure of Lam. expresses the upper part of the plant well, ex Bunge, l. c. Stem branched, erected, a foot high. Leaves like those of *Chelidónium hybridum*, pinnately jagged, petiolate, glabrous. Flowers like those of *Digitalis*, loosely spiked, terminal, purple, ex Willd. spec. 3. p. 289. The plant of Jussieu is probably distinct from that of Bunge.

Chinese Incarvillea. Pl. 1 to 2 feet.

Cult. This is a most elegant plant when in blossom. Should it ever be introduced to our gardens, we would recommend its being treated as a greenhouse plant. A mixture of loam, peat, and sand, or any light rich soil, will suit it; and cuttings will probably be easily rooted.

XIX. WIGHTIA (named after Richard Wight, F.L.S. 01 the East India Company's Medical Service; lately in charge of the botanical establishment at Madras.) Wall. pl. rar. asiat. 1. p. 71. t. 81.

Lin. syst. *Didynamia, Angiospermia.* Calyx 4-toothed. Corolla funnel-shaped; limb 4-cleft; upper segment 2-lobed. Stamens 4, didynamous, without any hypogynous disk, or sterile filament. Stigma clavate, undivided. Capsule follicular, 2-valved; dissepiment parallel with the valves, placentiferous on both sides, at length free. Seeds imbricated lengthwise, winged at both ends. Radicle inferior.—A large, twining shrub. Leaves opposite, simple, and are, as well as the peduncles, covered with minute, stellate, deciduous down. Racemes large, axillary; peduncles dichotomous. This genus differs from all other Bignoniaceous plants, in the complete absence of a hypogynous disk, and sterile filament; and in the margins of the valves being bent inwards, so much so as to form the dissepiment; in the seeds being erect; and in the radicle being inferior.

1 W. arborea (Wall. l. c.) ♄. ⁂. S. Native of Nipaul, on Shoopore and Sumbaugh. Flowers rose-coloured, scentless, an inch long.

Great Wightia. Shrub cl.

Cult. For culture and propagation see *Bignonia*, p. 222.

XX. CATALPA (the Indian name of the first species.) Juss. gen. 156. ed. Usteri, p. 155. Spreng. gen. 1. p. 24. Sims, bot. mag. 1094. Schkuhr. handb. t. 175.—Bignonia species, Lin. and others.

Lin. syst. *Diandria, Monogynia.* Calyx 2-parted. Corolla campanulate, with a ventricose tube, and an unequal, 4-lobed limb. Stamens 5, 2 of which are fertile, and the other 3 sterile. Stigma bilamellate. Capsule silique-formed, long, cylindrical, 2-valved; dissepiment opposite the valves. Seeds membranously margined, and pappose at base and apex.—Trees with simple leaves, opposite, or disposed 3 in a whorl. Flowers terminal, panicled.

1 C. syringifòlia (Sims, bot. mag. 1094.) leaves cordate, flat, 3 in a whorl. ♄. H. Native of North America, on the banks of the Ohio, Mississippi, and Delaware, &c. in gravelly soil; it is found in considerable quantities in the forests of Wabash, Illinois territory, where the wood is even split for palings. Schkuhr, handb. t. 175. Bignonia Catálpa, Lin. spec. 868. Willd. spec. 3. p. 282. Waugh. amer. p. 58. t. 39. f. 45. Catálpa bignonioides, Walt. fl. car. p. 64. Catálpa cordifòlia, Nutt. gen. amer. 1. p. 10.—Duham. arb. 1. p. 104. t. 41.—Catesb. car. 1. p. 49. t. 29.—Schmidt, arb. 1. t. 14. Lin. hort. cliff. 317. Branches strong. Leaves large, deciduous. Panicles large, branchy, terminal. Corollas white, speckled with purple and yellow. This tree has a good effect when it stands in the middle of large openings, where it can freely send forth its side branches, and show itself to advantage; but it always requires a sheltered situation. The leaves, however, come out very late. The branches dye wool a kind of cinnamon colour. This tree appears to have been introduced by the aborigines, hence its name of Catawba, derived from the Indians residing on Catawba river.

Syringa-leaved Catalpa. Fl. July, Aug. Clt. 1726. Tree 20 to 40 feet.

2 C. ovàta; leaves ovate-cordate, 3 in a whorl. ♄. H. Native of Japan and China. Bignonia Catálpa, Thunb. fl. jap. 255. Azusa Fisagi Kaempf. amoen. 841. t. 842. *Azusa* is the Japanese name of the tree. Thunberg remarks that the Japanese lay the leaves on parts of the body affected with pain, supposing them to be beneficial to the nerves; and that a decoction of the pods is esteemed serviceable in asthma.

Ovate-leaved Catalpa. Tree.

3 C. longissima (Juss. gen. ed. Usteri, p. 155.) leaves oblong, or ovate-lanceolate, acuminated, 3 in a whorl, undulated. ♄. S. Native of the West Indies. Bignonia longissima, Swartz. prod. 91. fl. ind. occ. 2. p. 1037. Ait. hort. kew. 2. p. 447. B. longisiliqua, Jacq. amer. 188. t. 176. f. 78. Bignonia Quércus, Lam. dict. 1. p. 412.—Plum. spec. 5. icon. 97. Corolla whitish, undulately crenulated; upper segment emarginate. Capsule very long and slender. Seeds woolly.

Very-long-capsuled Catalpa. Clt. 1777. Tree 30 to 40 feet.

4 C. cassinoides (Spreng. syst. 1. p. 70.) leaves opposite, ovate or elliptic, coriaceous, glabrous; racemes terminal, few-flowered. ♄. S. Native of Brazil, near Rio Janeiro. Bignonia cassinoides, Vahl. symb. 2. p. 58. Lam. dict. 1. p. 418. Leaves 2 inches long, many-nerved, terminated by a small acumen. Corollas large, 2 inches long, glabrous.

Cassine-like Catalpa. Shrub or tree.

5 C. HinstfTA (Spreng. syst. 1. p. 70.) leaves opposite; oblong, attenuated at both ends, hairy ; flowers axillary, almost sessile ; segments of corolla entire. \ . S. Native of Brazil.

Hairy Catalpa. Shrub or tree.

6 C. MICROMY'LLA (Spreng. syst. 1. p. 70.) leaves opposite, obovate, obtuse; peduncles terminal, usually 3-flowered. .V} . S. Native of St. Domingo. Bigndnia microphy lla, Lam. diet. 1. p. 418.—Plum. spec. 5. icon. *55.* f. 2. Shrub size of *Prunus spinbsa.* Leaves sessile. Flowers large, white; limb undulat. 1.

Small-leaved Catalpa. Clt. 1820. Tree 10 to 20 feet.

Cult. The *C. syringcefblia* is an elegant flowering tree, very proper for large shrubberies. It thrives well in common garden soil; and is generally increased by seed, or slips of the root. For the culture and propagation of the rest of the species, see *Jacardnda,* p. 226.

XXI. SCHREBE[N]RA (named in honour of J. C. D. Von Schreber, Author of an edition of Linnaeus's Genera plantarum, 2 vols. 8vo. 1788, and several other botanical works.) Roxb. cor. 2. t. 101. fl. ind. 1. p. 109.

LIN. SYST. *Didndria, Monogynia.* Calyx tubular, bilabiate ; lips nearly equal, emarginate, and sometimes there is a tooth in each fissure, which separates the lips. Corolla salver-shaped, with a cylindrical tube, and a spreading, 5-6-7-cleft border; segments cuneate, and truncate. Stamens 2 ; anthers oblong, hid within the tube of the corolla. Stigma bifid, acute. Capsule large, pear-shaped, woody, 2-celled, 2-valved, scabrous, opening from the apex ; dissepiment parallel with the valves. ? Seeds 4 in each cell, oval, compressed, with a long, membranous wing.—A large timber tree. Leaves opposite, impari- pinnate. Leaflets 7-9 in number, oblique, ovate or cordate, entire, 3-4 inches long. Panicles terminal, thin, trichotomous. Flowers rather small, white and brown, variegated, very fragrant during the night.

1 S. SWEITENIOIDES (Roxb. 1. c.) ^ • S. Native of the East Indies, on the Raja-mundri, Circar, Balaghata mountains, &c. *Mucaadi* is the Telinga name of the tree, and *Mogalinga-marum* of the Tamuls. Trunk erect. Bark scabrous. Branches narrow, spreading in every direction, so as to form a large, beautiful shady head. The wood of this tree is of a grey colour, very close-grained, heavy and durable. It is used for a great variety of purposes, for which it is suitable, being less liable to warp than most other woods.

Ala hog any-like Schrebera. Tree large.

Cult. For culture and propagation see *Jacardnda,* p. 226.

Tribe II.

TOURRETIE'JE (this tribe contains plants agreeing with Tourrétia in important characters.) D# Don, in edinb. phil. journ. 1829. July. Bignoniaceae, sect. 2. R. Br.

Capsule 1-celled, 2-valved ; valves bearing placentas in the middle. Placentas 2, large, fleshy. Seeds horizontal, obovate, imbricate, flattened, surrounded by a wing, which is emarginate at the base.

XXII. TOURRE'TIA (so named by Dombey, after Marc Antoine-Louis Claret la Tourrette, a friend of Rousseau, author of Chloris Lugdunensis, and Botanicae Scholae Veterinariae, Ludg. praelectiones.) Domb. ex Juss. gen. ed. Usteri, p. 155. Juss. gen. 139. Schreb. gen. no. 1009. Lam. ill. 527. —Dombeya, Lher. t. 17.

LIN. SYST. *Didynamia, Angiosperma.* Calyx bilabiate ; upper lip, acuminated ; lower one broader, four notched. Corolla tubular, contracted in the middle ; tube length of calyx ; limb unilabiate; upper lip drawn out into a hollow ; lower lip wanting, but in place of it there are 2 teeth. Stamens 4, didynamous, lying in the hollow of the upper lip of the corolla. Anthers 2-lobed. Hypogynous disk urceolate. Stigma bifid. Capsule ovate or oblong, ligneo-coriaceous, echinated with hooked spines, 2-celled, 2-valved at apex; dissepiment prismatic, central, seminiferous, continuous with the middle of the valves, rising into a wing on both sides, which divides each cell into 2 parts, hence the capsule appears to be 4-celled. Seeds few, girded by a membranous margin, emarginate, and crenulated at the base.—A climbing herb : with tetragonal, dichotomous branches. Leaves opposite, conjugately ternate; furnished with a branched tendril from the top of the common petiole; and also having a ciliary crown surrounding the stem in the axils of the leaves. Flowers disposed in terminal racemes, each flow[7]er furnished with a narrow bractea. Corollas of a dusky violet colour.

1 T. LAPPA'CEA (Willd. spec. 3. p. 263.) 0 . ^ . H. Native of Peru. Dombeya lappacea, Lherb. stirp. nov. 1. p. 33 t. 17. Stem fistular. First leaves ternate, having the lateral leaflets bipartite ; the rest of the leaves conjugate ; ternate or biternate.

Burdock Tourretia. Fl. June, Aug. Clt. 1788. Shrub cl.

Cult. For culture and propagation see *Caldmpclis,* p. *232.*

XXIII. ECCREMOCA'RPUS (from *eKKpe$_{HV}$s, ekkremes,* pendant; and *KaprroQ, karpos,* a fruit; fruit pendulous.) Ruiz. et Pav. gen. fl. per. p. 90. t. 18. syst. 157. Humb. et Bonpl. pi. aequin. 1. p. 229. t. 65. H. B. et Kunth, nov. gen. 3. p. 150.

LIN. SYST. *Didynamia, Angiosperma.* Calyx large, membranous, 5-cleft, coloured. Corolla tubular ; throat equal ; limb 5-lobed, equal. Stamens 4, didynamous, with the rudiment of a fifth sterile one; anthers linear, inserted by the middle, versatile ; cells parallel, almost connate. Stigma 2-lobed. Capsule ovate, somewhat tetragonal, 1-celled, 2-valved ; placentas 2, large, fleshy, adnate to the middle of the valves. Seeds imbricate, horizontal, surrounded by a membranous wing.—Scandent sub-shrubs. Leaves opposite, abruptly bi-tripinnate, terminated by a branched tendril. Peduncles opposite the leaves, many-flowered. Corollas green or yellow.

1 E. LONGIFLORUS (Humb. et Bonpl. pi. aequin. 1. p. 229. t. *65.* Kunth. nov. gen. 3$_{\%}$ p. 150.) leaves abruptly tripinnate; leaflets oval, entire, rarely* bifid or trifid. Tj . $_{w}$. G. Native of Peru, in forests, near the mount Saraguru. Stem furrowed, glabrous at bottom, but clothed with rusty tomentum at the nodi above. Leaflets sessile. Peduncles pendulous, 3-4-flovvered. Calyx campanulate, 5-cleft, loose, red. Corolla a little arched, 3-4 times longer than the calyx, yellow, with a green limb. Capsule slightly tetragonal.

Long-flowered Eccremocarpus. Fl. July, Aug. Clt. 1825. Shrub cl.

2 E. VIRIDIS (Ruiz, et Pav. fl. per. syst. p. 157.) leaves bipinnate, with 2 pairs of pinnae ; leaflets ovate, quite entire. ^ • ^. G. Native of Peru, in forests. Calyx tubular, membranous, 5-cleft. Capsule pedicellate. Corolla green.

GVmi-flowered Eccremocarpus. Shrub cl.

Cult. The species of this genus are extremely handsome when in blossom. They should be treated in the same manner as recommended for the species of *Calampelis.*

XXIV. CALA'MPELIS (from KaXoc, *kalos,* beautiful; and a/iTreXie, *ampelis,* a vine.) D. Don, in edinb. phil. journ. July 1829. Sweet, fl. gard. n. s. t. 13.—Eccremocarpus species, Ruiz, et Pav.

LIN. SYST. *Didynamia, Angiosperma.* Calyx campanulate, half 5-cleft (f. 22. a.). Corolla with a ventricose throat, a tubular base (f. 22. <?.), and a contracted, 5-lobed mouth (f. 22. /.). Stamens 4, didynamous (f. *22. d.),* without any rudiment of a sterile one ; anthers bipartite (f. 22. 6.); lobes obtuse, divari-

cate, distinct at apex. Stigma bipartite (fl. 22. e.), hispid at top. Capsule 1-celled, 2-valved; valves placentiferous in the middle. Placentas 2, large, fleshy. Seeds obovate, horizontal, imbricate, flattened, surrounded by a broad, regularly sinuated wing, which is emarginate at the base; outer testa black, crustaceous, wrinkled, and a little scrobiculate.—A suffruticose, scandent plant. Leaves opposite, petiolate, abruptly bipinnate, terminated by a spiral, compound tendril. Leaflets coarsely serrated. Flowers racemose, secund. Racemes opposite the leaves, pedunculate, secund, many-flowered. Calyx short, green. Corolla scarlet, or deep orange red. Capsule large, muri[illegible]ait

1 C. scandens (Sweet, fl. gard. n. s. t. 20.) ♄. ♀. G. Native of Chili. Eccremocarpus scaber, Ruiz. et Pav. syst. fl. per. 167. Lindl. bot. reg. 939. Leaves with 2 pairs of pinnæ; leaflets alternate, obliquely cordate, ovate, serrated or entire. Stems angular, thickly clothed with short, stiff, pellucid hairs, when young, but afterwards smooth. Leaves, racemes, and corollas clothed with glandular hairs.

FIG. 22.



Scabrous Calampelis. Fl. July, Aug. Clr. 1824. Shrub climbing.

Cult. This beautiful, climbing plant is generally raised from seeds in spring, in a hot bed; and when the plants are of sufficient size, they are potted singly in separate pots. They answer well to be trained in a conservatory; or to be planted out in the open ground, against a wall or house, with a south exposure, along with *Cobæa scandens*, where, if the summer prove warm, it will make a showy appearance.

Tribe III.

CRESCENTIÆ Æ. (the plants contained in this section agree with *Crescentia*, in having a large, baccate fruit.) Fruit a large melon or gourd-shaped, 1-celled berry; with a corticate, solid rind; filled with pulp and seeds inside.

XXV. CRESCENTIA (named by Linnæus after Pietro Crescentio, an Italian writer on agriculture, in the thirteenth century.) Lin. gen. 762. Schreb. gen. no. 1021. Juss. gen. 127. edit. Usteri. p. 142. Gærtn. fruct. suppl. 1. p. 225. t. 223. H. B. et Kunth, nov. gen. 3. p. 157.—Cujete, Plum. gen. p. 23. t. 16. icon. 109.

Lin. syst. *Didynamia, Angiospermia.* Calyx bipartite, equal, deciduous. Corolla large, sub-campanulate; tube very short; throat large, ventricose, incurved; limb erect, 5-cleft, unequal; lobes toothed or curled. Stamens 4, didynamous; with the rudiment of a 5th; anthers 2-lobed. Stigma bilamellate. Berry large, form of a gourd, 1-celled, pulpy inside; rind solid. Seeds nestling in the pulp.—Large, spreading trees. Leaves alternate, solitary or in fascicles, simple, ternate or pinnate. Flowers solitary, rising from the trunk or branches.

1 C. Cujete (Lin. spec. 873. Jacq. amer. 175. t. 111. ed. piet. p. 86. & 167.) leaves oblong, acute or obtuse, cuneate at the base, in fascicles. ♄. S. Native throughout equinoxial America.—Plum. gen. 23. t. 109.—Comm. hort. 1. p. 187. t. 71. Branches horizontal. Flowers scattered over the older branches, and even in the trunk itself, solitary, pedicellate, sometimes all green, but most often variegated with green, purple, red, and yellow; they do not wither, but become putrid, and in that state exhale a nauseous and intolerable smell. The form and size of the fruit are variable; from spherical to bottle-shaped, and from 2 inches to a foot in diameter. These, however, if they are no more than varieties, are very constant. The fruit is covered with a thin skin, of a greenish yellow colour when ripe; under this is a hard, thin, woody shell, inclosing a pale yellowish soft pulp, of a tart, unsavoury flavour, surrounding a great number of flat seeds. These shells, cleansed of their pulp, and deprived of their outer skin, and dried, are used by the inhabitants of tropical America, for drinking cups; those of the long, small-fruited kind, are formed into spoons and ladles; those which are round are cut through the middle, and used as cups for chocolate and coffee; in short, these shells are converted into a variety of domestic furniture. They are frequently large enough to hold a gallon of fluid; they serve to boil water in, as they bear the fire well. The thicker parts are frequently used as button moulds in the West Indies. The Caribs engrave the outside with a number of grotesque figures, which they sometimes colour black or red. The pulp is sometimes eaten by the negroes, but is not looked upon as being either agreeable or wholesome; it is, however, much used by way of poultice; and a syrup made of it is in much request among the natives, in disorders of the breast, in contusions and inward bruises. The wood being very tough and flexible, is very fit for the coach-makerj and is frequently used for making saddles, stools, and other furniture. The leaves and branches are eaten by cattle in times of scarcity, as is also the pulp of the fruit. The tree is called *Tutuma* in some parts of America.

Var. β; leaves narrow; fruit smaller, globose or ovate. Plum. gen. 23.

Var. γ, *Cujete minima, fructu duro.* Plum. gen. 23. The smallest Calabash tree, with a hard fruit.

Cujete or Common Calabash Tree. [illegible] Clt. 1690. Tree 20 to 30 feet

2 C. cucurbitina (Lin. syst. p. 565. mant. 250. Swartz ob*. 234.) leaves oblong, rather coriaceous, solitary; fruit ovate, acuminated. ♄. S. Native of Jamaica, in dry rocky places, and about Campeachy. C. latifolia, Mill. dict. no. 2. C. Cujete, var. 2, Lin. spec. 873.—Plum. gen. 23. icon. 509. Brown, jam. 206.—Pluk. alm. 124. t. 171. f. 2.—Sloan. jam. 206. hist. 2. p. 172. Branches erect. Pedicels 2-3, terminating, one-flowered, shorter than the leaves. Corollas size of those of the preceding, dusky; the base of the tube and throat is white. The fruit varies in size; the shell is so thin as to be unfit for any purpose; the seeds are also much thinner; and the pulp a deeper yellow than that of the preceding.

Gourd-like Calabash-tree. Fl. ? Clt. 1733. Tree [illegible] feet.

3 C. acuminata (H. B. et Kunth, nov. gen. amer. 3. p. 157.) leaves oblong-lanceolate, acuminated, cuneately narrowed at the base, in fascicles. ♄. S. Native of the Island of Cuba, near Havannah and Los Guines. Branches elongated, white. Flowers size of those of the two preceding. Fruit globose, 3-4 inches in diameter. It differs from *C. Cujete* in the leaves being narrower, acuminated, and less [illegible]inn.

Acuminated-leaved Calabash tree. [illegible] 1822. Tree.

4 C. aculeata (H. B. et Kunth, l. c. p. 158.) branches [illegible]ly; leaves ternate or simple, twin; common petiole furnished with a narrow wing above. ♄. S. Native of Mexico near Campeachy.—Hern. mex. 290. Branches terete; warts. Leaves ovate-oblong, obtuse, running into the petioles at the base. Prickles nearly opposite, subulate at top, and thickened at the base. Flowers solitary or twin on the tops of the branches. Corolla as in the genus, greenish. Fruit oblong, ribbed.

Prickly Calabash tree. Tree.

5 C. ELATA (H. B. et Kunth, l. c. p. 155.) unarmed; leaves 3 together, all ternate; or the middle one of the three is ternate, and the lateral ones simple; common petioles broadly winged. ♄. S. Native of Mexico, in very hot places, near Acapulco. There are prickle-like tubercles, which rise from the same point as the leaves. Leaves 3, from the axil of each tubercle; middle leaf ternate, on a long petiole; lateral ones simple and smaller, and sessile. Simple leaves obovate-oblong, coriaceous; leaflets of the ternate ones oblong, obtuse, scutish at the base. Flowers scattered, size of those of *Cobæa scandens*, on short pedicels, pale red, reticulately veined. Fruit globose, 4-6 inches in diameter, ex. Bampl.

Winged-petioled Calabash tree. Tree 20 to 30 feet.

Cult. The species of *Crescentia* grow well in a mixture of loam, peat, and sand; and ripened cuttings will strike root in sand, under a hand-glass, in heat. The trees require to be so large before they come to a flowering state, that it is not likely they will ever be brought to blossom in this country.

XXVI. TANAECIUM (from τανηκες, *tanaekes*, long; stems elongated.) Schreb. gen. no. 1022, and p. 834. Swartz, prod. p. 91. fl. ind. occ. 2. p. 1049. Crescentia species of authors. Tanaecium species, Spreng. gen. 8. p. 506.

LIN. SYST. *Didynamia, Angiosperma.* Calyx tubular, truncate, entire. Corolla with a long, cylindrical tube, a wide throat, and an erectly spreading, 5-cleft, nearly equal limb; the 2 upper segments approximating, less divided, nearly upright; the 3 lower spreading, a little reflexed. Stamens 4, nearly equal in length, with the rudiment of a fifth; anthers 2-lobed. Stigma 2-lobed. Berry large, pedicellate, globular or oblong, 2-celled. Seeds oblong, angular, nestling in the pulp.—Climbing shrubs, natives of Brazil. Leaves alternate, simple, or binate, ternate, glabrous.

1 T. PARVIFLORUM (Swartz, prod. 92. fl. ind. occ. 2. p. 1053.) leaves ovate, coriaceous; stem climbing. Grubby, radicanl. Ij. S. Native of Jamaica and Caraccas. Swartz. sehoenbr. 1. p. 61. t. 115.—Brown, jam. 262. Leaves shining. This plant sustains itself by the help of the neighbouring trees, or is found spreading on the ground, if it does not meet with support.

Parviflorous Tanaecium. Fl. ? Clt. ? Shrub climbing.

2 T. JAROBA (Swartz, prod. 92. fl. ind. occ. 2. p. 1050.) lower leaves ternate: superior ones twin; tendrils from the tops of the petioles, between the leafletfi; stem scandent. ♄. S. Native of Jamaica, most common between St Elizabeth's and Westmoreland.—Willdenow, jam. 207. Swartz. ist. 2. p. 1*.—Jaroba Marcg. bras. 25. Pis. bras. 173. Flowers white. This species climbs to the tops of the loftiest trees, and overtops their tops.

Jaroba Tanaecium (Swartz, prod. 92. fl. ind. occ. 2. p. 1050.) cl.

Cult. For culture and propagation see *Bignonia*, p. 222.

XXVII. TRIPINNA'RIA (so named, from the leaves of one of the species being tripinnate.) Spreng. gen. 2. p. 842. S. Tripinnata, Lour. cochin. 391.

LIN. SYST. *Didynamia, Angiosperma. Calyx* unequally 5-cleft, or 5 crenate, campanulate or cup-shaped. Corolla funnel-shaped, or sub-campanulate, with a widened throat, and a 5-cleft spreading limb; segments ovate, undulated, villous, upper one the largest. Stamens 4, didynamous, about equal in length to the corolla, with the rudiment of a fifth. Stigma bifid, acute or bilamellate. Berry large, fleshy, 1-celled, filled with pulp. Seeds oblong, compressed, nestling in the pulp.—Large trees, with pinnate or tripinnate, alternate leaves. Flowers racemose terminal.

1 T. ASIA'TICA (Spreng. syst. 2. p. 842.) leaves tripinnate, acuminated; racemes terminal. ♄. G. Native of Cochinchina, in woods on the mountains. Tripinna tripinnaria, Lour. cochi. p. 391. A large tree, with spreading branches. Leaves glabrous. Flowers yellowish, disposed in terminal corymbose racemes.

Asiatic Tripinnaria. Tree large.

2 T. AFRICA'NA (Spreng. syst. 2. p. 842.) leaves pinnate; leaflets oblong, serrated; flowers lateral from the trunk. ♄. S. Native of Mozambique. Crescentia pinnata, Jacq. coll. 3. p. 293. t. 18. Tanaecium pinnatum, Willd. spec. 3. p. 312. A large tree. Calyx unequally 5-cleft. Corolla funnel-shaped, purple inside; having the tube dilated above; segments of the limb ovate, acute. Stamens 4, didynamous, with the rudiment of a fifth. Berry size of a man's head.

African Tripinnaria. Clt. 1824. Tree large.

Cult. For culture and propagation see *Crescentia*, above.

ORDER CLIX. PEDALINEÆ. (this order contains plants agreeing with the genus *Pedalium* in important characters.) R. Br. prod, p. 512.—Sesameæ, Kunth, syn. 3. p. 251. Martyniaceæ?, Link, handb. 1. p. 504.

Calyx divided into 5 nearly equal parts (f. 23. a.). Corolla monopetalous, hypogynous, irregular, having the throat ventricose, and the limb bilabiate. Stamens 4, didynamous, inclosed; with the rudiment of a fifth (f. 23. b.). Ovarium girded by a glandular disk at bottom, of many spurious, 1-2-seeded cells. Style simple; stigma undivided. Fruit dry, pericarpous, dry, usually muricated fig. 23. c., with GI several cells formed by the splitting of 2 placentas, and the divergence of their lobes as in the ovarium. Seeds pendulous, erect or horizontal, with a papery testa. Albumen none. Embryo straight.—Herbaceous plants; with opposite leaves; and axillary, bilobracteate flowers.

This order differs from *Bignoniaceæ*, in the seeds being usually definite and wingless; in the woody, 2-4-lobed placentas, which spread and divide variously inside the pericarpum, so as to produce a 4-8-celled fruit, out of a 1-celled ovarium.

The leaves of *Sesamum* are emollient; its seeds contain an abundance of fixed oil, as tasteless as that of olive oil, for which it might be substituted, and which is expressed in Egypt in large quantities. The fresh leaf of *Pedalium murex*, when agitated in water, renders it mucilaginous, in which state it is prescribed by the Indian doctors, in cases of dysuria, &c.

Synopsis of the genera.

1 SESAMUM. Capsule oblong, compressed, tetragonal, 4-celled, 2-valved; dissepiment contrary to the valves, bipartite. Seeds numerous, imbricated in one row in each cell.

2 MARTYNIA. Drupe oblong, beaked at apex, the anterior horn solid, obscurely-toothed, containing a 4-celled nut; cells few-seeded.

3 CRANIOLA'RIA. Drupe ovate, containing a 4-celled, woody nut, which is furnished with 2 short horns at apex. Seeds 4 in each cell, but often solitary.

4 JOSAWNSIA. Drupe bifid. Drupes prickly, containing a 4-5-celled nut; cells 1-seeded. Seeds erect.

5 PEDA'LIUM. Drupe ovate, 4-cornered (f. 23. c.), the corners furnished each with a thorn towards the base (f. 23. d. e.), containing a 2-celled, 4-winged, corky nut. Seeds pendulous, 2 in each cell.

I. SESAMUM (from Σησαμον, *Sesamon*, of Theophrastus and Dioscorides; from Semps'am, the Egyptian name of one of the species.) Lin. gen. no. 782. Schreb. gen. no. 1046. Gaertn. fruct. 2. p. 122. t. 110. Juss. gen. 135. Lam. ill. t. 528. —Digitalis species, Tourn.

Lin. syst. *Didynamia, Angiospermia*. Calyx 5-parted; the upper segment the smallest. Corolla with a short tube, and a campanulate throat; limb quinquefid, somewhat bilabiate; the lower segment the longest. Stamens 4, didynamous, inclosed, with the rudiment of a fifth sterile one. Stigma bilamellate. Capsule oblong, compressedly tetragonal, 4-celled, 2-valved; dissepiment contrary to the valves, bipartible. Seeds numerous, disposed in one series, somewhat imbricated, ovate, a little compressed, wingless, erect.—Annual herbs, with opposite and alternate leaves. Flowers axillary, solitary. Peduncles bigibbular: glands bracteate. Corollas white, pale red or yellow.

1 S. INDICUM (Lin. spec. 884.) downy; lower leaves ovate, 3-lobed; superior ones lanceolate, undivided; stem erect, branched. ⊙. S. Native of the East Indies, common. Sims, bot. mag. 1788. S. trifoliatum, Mill. dict. no. 2.—Rumph. amb. 5. t. 204. f. 76. f. 1.—Pluk. phyt. t. 109. f. 4. Stem scabrous. Leaves on long petioles, downy on both surfaces, glaucous beneath. Flowers white, tinged with red. In the plant found by Martius in Brazil, the rudiment of a fifth filament is wanting. This species was first introduced to Jamaica by the Jews, and is now cultivated in the West Indies. It is called *Jungle*, or oil plant. The seeds are frequently used in broth, by many of the Europeans; but the Jews make them chiefly into cakes. Many of the Oriental nations look upon the seeds as a very wholesome food, and express an oil from them, not unlike, or inferior to, the oil of almonds. A decoction of the leaves and buds, is looked upon as a good resolutive, and frequently ordered in inflammations of the eyes, where no fomentations become requisite.

Var. β. casa (Blum. bijdr. 775.) flowers rose-coloured. ⊙. H. Native of Java, on the mountains.

Indian Oily-grain, or Oil-seed. Fl. July. Clt. 1731. Pl. 1½ to 2 feet.

2 S. ORIENTALE (Lin. spec. 883.) leaves ovate-oblong, eniire. ⊙. S. Native of the East Indies, and is now cultivated in South America. Lin. hort. cliff. 318. fl. zeyl. 318. Willd. spec. 3. p. 338. Gaertn. fruct. 2. p. 122. t. 110. Thunb. ja Loeur. cochin. 382. S. veterum, Bauh. pin. 27. Riv. mon. t. 114.—Burm. zeyl. 37. t. 28. f. 1. Schia-ela, Rheed. mal. 9. p. 105. t. 54. Corolla dirty white, or pale red. Plant rather hairy. This species is frequently cultivated in the Levant, and also in Africa, as a pulse; the seeds have been introduced into Carolina, by the African negroes. An oil is expressed from them, which will keep many years, without acquiring any rancid smell or taste, but in two years becomes quite mild, so that, when the warm taste of the seed which is in the oil when first drawn is worn off, it is used as a salad oil, and for all the purposes of sweet oil. They are also used by the negroes for food; they parch them over the fire, then mix them with water, and stew other ingredients with them. A pudding is made from them in the same manner as from millet or rice, called *Benny*, or *Bonny*, in Carolina. In Japan, where they have no butter, they use the oil for frying fish, and in dressing other dishes; as a varnish; and medicinally, as a resolvent and emollient. In China and Cochinchina, they are used for the same purposes.

Eastern Oily-grain, or Oil-seed. Fl. July. Clt. 1731. Pl. 1½ to 2 feet.

3 S. LATIFOLIUM (Retz. obs. 6. p. 21. no. 56.) leaves lanceolate, on long petioles; corollas hispid on the outside. ⊙. S. Native of the East Indies, in forests, at Nidrapore. Stem a little branched. Leaves alternate, having the margins and nerves beneath scattered with short hairs. Calyx and capsule hispid. Corolla deep yellow.

Yellow-flowered Oil-seed. Pl. 1 to 2 feet.

4 S. RADIATUM (Schum. pl. guin. p. 274.) hairy; leaves usually 3 in a whorl, on short petioles: lower ones roundish-ovate, deeply toothed: upper ones ovate-oblong, quite entire; bracteas setaceous, solitary. ⊙. S. Native of Guinea. Stem slightly tetragonal. Flowers purple.

Radiate Oil-seed. Pl. 2 feet.

5 S. LACINIATUM (Klein, Willd. spec. 2. p. 339.) leaves all bipartite and jagged; stem prostrate, hispid. ⊙. S. Native of the East Indies, near Hydrabad. Branches ascending at top. Leaves on short petioles, scabrous on both surfaces. Margins of the teeth of the calyx hispid. Capsule obtuse at both ends. Sesamum prostratum, Retz. obs. 4. p. 28, is a very doubtful plant, or probably a synonyme of *Trewia Asiatica*.

Jagged-leaved Indian Oil-seed. Pl. prostrate.

Cult. The species of Sesamum are grown in our gardens only as botanical curosities. The seeds of them require to be reared on a hot-bed frame in early spring, and otherwise treated like other tender annuals, by planting them out in the open border, in a warm, sheltered situation, about the end of May.

II. MARTYNIA (so named by Houston, in honour of John Martyn, F.R.S., professor of botany at Cambridge; author of Historia Plantarum rariorum, and several other works; editor of Virgil's Georgics and Eclogues, born Sept. 1699, died 1768.) Houston, rel. t. 10. Lin. gen. no. 753. Schreb. gen. no. 1010. Mart. t. 42. Juss. gen. 140. ed. Usteri, 156. Gaertn. fruct. 2. p. 131. t. 110. Glox. obs. 1. 1-2.—Proboscidea, Juss. Schmidel. icon. t. 12.

Lin. syst. Didynamia, Angiospermia. Calyx 5-cleft, nearly equal, bracteate at the base. Corolla sub-campanulate; limb 5-lobed, unequal. Stamens 4, didynamous, 2 of them sometimes sterile, with always the rudiment of a fifth. Stigma bilamellate. Drupe or capsule oblong, bicornute at apex; the anterior horn sulcately toothed, containing a 4-celled, woody nut; cells few-seeded. Seeds ovate, a little compressed, wingless, pendulous? Radicle superior.—*Herbs with opposite, rarely alternate leaves.* Flowers spicate, axillary and terminal.

1 M. ANNUA (Lin. syst. 550. spec. 862. Swartz, obs. 250.) stem branched; leaves alternate, lobed, cordate at the base; stamens 4, all fertile. ⊙. H. Native of Mexico, in high plains; and on the banks of the Mississippi. Sabb. hort. t. 91. Gaertn. fruct. 2. p. 131. t. 110. M. proboscidea, Glox. in obs. p. 14. Ait. hort. kew. 2. p. 339. Mill. dict. t. 236. Sims, bot. mag. 1056. M. alternifolia, Lam. dict. 2. p. 112. Proboscidea Jussieui, Schmidt, icon. 10. t. 12-15. Med. bot. beob. 1783. p. 20. M. Louisiana, Mill. dict. no. 2. This is a large annual, villous, viscid plant. Corollas with a yellowish white tube, variegated with green, yellow, and violet spots and lines; limb wide, pale violet, marked with saffron-coloured and violet dots and lines. The lobes of stigma close when touched, according to Torra.

Var. β. triloba; leaves oblong-deltoid, irregularly cordate at the base, 3-lobed: middle lobe long, sinuated, undulated, and finely denticulated. ⊙. H. Native near Vera Cruz. M. triloba, Cham. et Schlecht. in Linnæa, 5. p. 124. Smaller than the species.

Annual Martynia. Fl. July, Aug. Clt. 1728. Pl. 1 to 2 feet.

2 M. LOUISIANA (Lin. syst. p. 559.) stem simple; leaves opposite, roundish, repand; flowers axillary, solitary, on short pedicels; tube of corolla gibbously flattened at the base; stamens 4, all fertile. ⊙. G. Native of the Cape of Good Hope. Ait. hort. kew. 2. p. 339. Mœnch. icon. 7. Willd. spec. 3. p.

265. Martynia Capénsis, Glox. obs. p. 13. Stem erect, scabrous. Leaves 3-nerved. In place of bracteas at the base of the peduncles, there is a pedicellate gland. Tube of corolla very long. Corollas purplish.

Long-flowered Martynia. Fl. July, Aug. Clt. 1731. Pl. 2 feet.

3 M. DIANDRA (Glox. obs. p. 14. t. 1. Jacq. schœnbr. 3. p. 21. t. 289.) stem branched; leaves opposite, ic ate at the base; stamens 4, 2 of them sterile. ⊙. G. Native of Mexico, at Vera Cruz; and near Campeche. Andr. bot. rep. 675. M. angulosa, Lam. dict. 2. p. 112. Martynia reliq. Houst. p. 5. t. 10. M. fragrans, Lin. spec. ed. 1. syst. d. 10.—Martyn. rem. 42. t. 42. Erbert. act. t. 1. f. 5, pliil. trans. 38. no. 487. p. 3. Stem reddish, branches villous and viscid. Flowers thyrsoid, in the forks of the stem, drooping. Corolla with a white tube, tinged with purple, and spotted with red and yellow; limb pale red, with a shining purple spot at each segment; upper lip reflexed.

Diandrous Martynia. Fl. July, Aug. Clt. 17 !, 1*l. 2 f:

4 M. LUTEA (Lindl. bot. reg. t. 934.) stem branched, clothed with glandular down; leaves opposite, cordate-orbicular, toothed, clothed with glandular down, beaks much longer than the pericarp. ⊙. H. Native of Brazil. Calyx involucrated by 2 bracteas. Corolla large, funnel-shaped, orange-yellow, clothed with blood-colour inside.

Yellow-flowered Martynia. Fl. Aug. Clt. 1825. Pl. 1 to 2 feet.

5 M. ZANQUEBARICA (Loar. coch. 386.) stem procumbent; leaves pinnatifid, pilose; flowers axillary, solitary; beaks of capsule second. ♄. S. Native of Zanzibar. Leaves petiolate, pilose. Flowers pale purple. Calyx pilose, with lanceolate, nearly equal, deciduous, expanded segments. Corolla ringent, with a large, roundish, gibbous tube, and a short limb; upper lip trifid, obtuse, the middle segment emarginate; the lower lip ovate, longer, entire. Fruit bivalvate on both sides, 4-beaked, 4-celled, 1-seeded, 2-valved.

Zanzibar Martynia. Shrub procumbent.

Cult. The seeds of the species should be reared on a hot-bed, as other tender annuals; and when transplanted into other pots, they should be kept in the hot-house or green-h until the seed is ripened. A light rich soil suits them best.

III. CRANIOLA'RIA (from *κρανιον, kranion*, a skull; some resemblance in cap • Uj.) Lin. gen no. 868. JnsSsgeti. ed. Usteri, p. 156. H. B. et Kunth, nov. get). • oer. 2. :. 153.—Martynia species of authors.

Lin. syst. *Didynamia, Angiospermia.* Calyx campanulate, spath-formed, 3-toothed, cleft on one side, bracteate at the base. Corolla funnel-shaped, w till aver; long tube, a campanulate throat, and a bilabiate limb; upper lip bifid; lower one trifid; the middle lobe the broadest. Stamens 4, didynamous, with the rudiment of a fifth. Stigma bilamellate. Drupe ovate, acute, containing a 4-celled, woody nut, which is furnished with 2 short horns at apex. Seeds 4 in each cell, or often solitary, ovate, a little compressed, wingless.—Villous, clammy herbs. Leaves opposite, 5-lobed. Flowers racem rsose from the forks of the branches, or axils of the leaves, or tops of the ! nches. Corollas white, with a painted throat.

1 C. ANNUA (Lin. mant. 417. syst. 417. Jacq. amer. 173. t. 110. Noes, et Mart. in n-t. bonn, 11, p. <JS.) stemi annual, branched; leaves cordate, palmate, toothed ! tufee -• corolla longer than the calyx, which is bibracteate. Q. G. Viitiv. of the tropical parts of America. Martynia craniolaria, Swartz, obs. 230. Glox. obs. p. 14. Willd. spec. 3. p. 262. Martynia spathacea, Lam. dict. 2. p. 712.—Erbr. piet. t. 1. f. 2. Corolla white. The natives of Venezuela prepare from the dried roots of this plant a bitter and cooling drink.

Annual Craniolaria. Fl. July, Aug. Clt. 1733. Pl. 1 to 2 feet.

2 C. UNIBRACTEATA (Nees, in. Mart. nov. act. bonn. 11. p. 67.) stem perennial, branched; leaves cordate, rather angular, toothed; tube of corolla length of calyx, which is unibracteate. 2*. S. Native of Brasil, about Cachuera, and at Rio das Contas. Holoregmia viscida, Mart. in bot. zeit. 1831. 1. p. 300. bras. reise. 2. band. p. 339 and 341. Martynia sparbasea, Sprang. syst. add. p. 338. Leaves a hand broad. Flowers disposed in long, simple racemes from the tops of the branches. Corolla pale sulphur-coloured, having the bottom painted with purple dots. Plant canescent.

Unibracteate Craniolaria. Pl. 4 to 5 feet.

Cult. The seeds and plants of *C. diversa* should be treated in the same manner as those of the species of *Martynia*. *Craniolaria unibracteata* should be treated like other common perennial stove plants; and it may either be increased by seeds or cuttings.

IV. JOSEPHI'NIA (named in honour of the Empress Josephine, a great patron of botany and gardening.) Vent. malm. **p. 67. t. 67.** R. Br. prod. p. 520. Blum. bijdr. 770.

Lin. syst. *Didynamia, Angiospermia.* Calyx 5-parted, equal, corolla with a short tube, a large campanulate throat, and a 5-lobed, spreading, bilabiate limb; upper lip semi-bifid; lower one trifid; the middle segment the longest. Stamens 4, didynamous, with the rudiment of a fifth; anthers free. Stigma bifid; the segments emarginate, or semi-bifid; therefore the stigma is commonly called 4-cleft. Drupe dry, prickly, falsely 4-8-celled, opening at top, by 2-4 holes; cells 1-seeded; seeds erect. Radicle anterior.—Diffuse herbs. Leaves opposite, entire. Peduncles axillary. Flowers purplish.

1 J. LUPULINA (Vent. malm ii. p. 67, t- 67. mem. de l'Inst. sc. phys. 1806. 1. sem. p. 71.) ovarium 4-5-celled; leaves lanceolate-el site, downy beneath, as well as the stem; calyx equal. ♃. G. Native of New Holland, on the west coast. Hamulin. Leaves ovate-cordate, ex Vent. Flowers pale pink, dotted, like those of *Catalpa syringæfolia*, ex Vent.

Lupulus's Josephinia. Fl. Clt. Pl. 2 to 3 feet.

2 J. CHAMPIONA (Blum. bijdr. prod. p. 520.) ovarium 3-celled; leaves lanceolate, acuminated, downy beneath; stem glabrous; upper segments of calyx one half shorter than the rest; lower segment of corolla more than twice the length of the rest. ♃. S. Native of New Holland, within the tropic. Flowers purplish.

Great-flowered Josephinia. Shrub?

3 J. CELEBICA (Blum. bijdr. 770.) ovarium 3-celled; leaves oblong-lanceolate, downy; peduncles shorter than the petioles; **drupes tomentow**; calyx equal. ♄. S. Native of the Celebes, in woods.

Celebes Josephinia. pi. Aa g. Sept. Shrub.

Cult. For alturc and pro; agation, see *Martynia*, above.

V. PEDA'LIUM (from πηδαλιον, *pedalion*, the rudder of a ship; in reference to the dilated angles of the fruit.) Lin. gen. no. 794. Schreb. gen. no. 1065. Roxb. in coll. hafn. 2. p. 255. Gærtn. fruct. 1. p. 276. t. 58. Juss. gen. 140. ed. Usteri, p. 206.—Mürex. Lin, fl. v. syl. 440.

Li; syst. *Didynamia, Angiospermia.* Calyx 5-parted (f. 23. a.); the upper segment very short; and the lowest longest. Corolla with a 3-cornered tube, a widened campanulate throat, flat beneath, and a 5-lobed, sub-bilabiate limb. Stamens 4, didynamous, with the rudiment of a fifth (f. 23. b.); filaments pilose at the base. Anthers twin, crucate, terminated by a gland. Stigma bifid, revolute. Drupe dry, ovate-conical (f. 23. c.), 4-cornered, the corners thorny on the angles (f. 23. c. d.), containing a 2-celled, 4-winged, corky nut; cells 2-seeded; seeds pendulous, arillate, one above the other: there is an empty cell

below the fertile ones.—A trichotomous herb, with the habit of *Martynia*. Leaves opposite. Flowers axillary, solitary. Fruit like those of *Trapa*.

1 P. murex (Lin. spec. 892.) ☉. S. Native of the East Indies, Ceylon, Malabar, Coromandel, &c. near the sea. Lars';. Ill. t. 538. Murex, Lin. fl. zeyl. 440. Burm. ind. 159. t. 44. f. 2.—Herm. zeyl. p. 42. Circu-Mullu, or Kakri-toli. Rheed. mal. 10. p. 143. t. 72. A pretty large, succulent, branched plant. Root deep orange-coloured, branched. Stem hardly any. Branches 1-2 feet. Leaves obovate, obtuse, regularly toothed, trun•;Lle, pretty smooth, 3-nerved, 2-3 inches long, and 1½ to 2 inches broad; petioles glandular. Flowers pretty large, yellow, on short pedicels, erect; on each side of their insertion is a small, roundish, brown gland.

FIG. 23.



Drupe netant, armed with 4 sharp spines, one on each co'net, at the base. The whole plant has an odour of musk. Of' the same genus is the *Planta Euphratica affinis*, Pluk. t. 373. f. 2. The sterile filament is terminated by an orange-coloured head. This plant, when fresh, has the singular property of rendering water or milk mucilaginous, without altering the taste, or colour, or smell of the liquid. This effect goes off in the course of 8 or 12 hours, leaving the liquid in its former state. Butter-milk is often sold in the markets of India; and in order to make a greater profit on their merchandize, they dilute it with water, and then thicken the whole by turning it round a few times with a few fresh leafy branches, which makes the adulterated butter-milk seem rich, and of the best sort.

Cult.—4-fruited Pedalium. Fl. Aug. Sept. Clt. 1778. i>L 1 to 2 feet.

Cult. For culture and propagation see *Martynia*, p. 235.

Order CLX. COBEACEÆ (this order only contains the genus *Cobæa*.) D. Don, in edinb. phil. journ. 1824. vol. 10. p. 5.

Calyx leafy, 5-cleft, equal (*f.* 24. *a.*) Corolla inferior, campanulate, regular, 5-lobed (*f.* 24. *b.*), imbricate in æstivation. Stamens 5, unequal (*f.* 24. *b.*), rising from the base of the corolla; anthers 2-celled, compressed. Ovarium superior, 3-celled, surrounded by a fleshy, annular, hypogynous disk; ovula several, ascending. Style simple; stigma trifid (*f.* 24. *b.*). Fruit capsular, 3-celled, 3-valved; with a septicidal dehiscence; placenta very large, 3-cornered in the axis, its angles touching the line of dehiscence of the pericarpium. Seeds flat, winged, imbricated in a double row; their integument mucilaginous. Albumen fleshy. Embryo straight. Cotyledons foliaceous, radicle inferior.—Climbing shrubs. Leaves alternate, abruptly pinnate; the common petiole lengthened into a tendril. Flowers axillary, solitary. This order is readily distinguished from *Bignoniaceæ* and *Pedaliaceæ*, the two foregoing orders, in the flowers being regular and pentandrous, in the presence of albumen to the seeds, &c.; and from *Polemoniaceæ* it is readily distinguished, by habit alone, and by the winged seeds.

1. COBÆA (named in honour of B. Cobo, a Spanish botanist.) Cav. icon. 1. p. 11. t. 16-17. and vol. 5. p. 69. t. 500. Pers. syn. 1. p. 185. H. B. et Kunth, nov. gen. amer. 3. p. 151.

Lin. syst. Pentandria, Monogynia. Character the same as that of the order. Calyx permanent, covering the capsule; segments large, orbicular.

1 C. scandens (Cav. l. c.) leaflets 3 pairs, elliptic, mucronate, marginate, and slightly ciliated: lower pair close to the stem, and sub-auriculate on one side at the base; tendrils Wartfilied; ca broad, r ycine segments oundish, mucronulate; stamens about equal in length, hardly longer than the corolla. ♆. ◡ G. Native of Mexico, in various parts. Sims, boi. mag. 851. Calyx glaucous, 5-winged, before expansion. Flow ers large, campanulate, with a short tube of a dark, dirty purple colour. ♪ (fig. 24. Lobes of corolla rather spreading, broad, short, roundish, imbricate, ciliated.

FIG. 24.



Climbing Cobæa. Fl. May, Oct. Clt. 1792. Shrub cl

2 C. tenuis (D. Don, in edinb. phil. jo nr. \/ l. 10. p. 4.) leaflets 3 pairs, oblong-lanceolate, acute; lower pair close to the stem; tendrils branched at top; calycine segments lanceolate, tapering to the apex; stamens twice the length of the corolla. ♆. ◡ G. Native of Guayaquil. Flowers yellowish, about half the size of those of *C. scandens*.

Yellow-flowered Cobæa. Shrub cl.

Cult. The *C. scandens* is a great favourite with most gardeners; it is a quick-growing, and profuse-flowering climber. It is well adopted for a large conservatory or greenhouse. It grows also well in the open air, in summer, trained against a south wall, or against a house, where it will flower in abundance. The plant is best raised from seeds, which ripen in abundance; but it may also be raised from cuttings, which latter mode is almost needless.

Order CLXI. ARAGOACEÆ (this order only contains the genus *Aragoa*.) Genera Bignoniaceis affinia. H. B. et Kunth, nov. gen. amer. 3. p. 154.

Calyx deeply 5-parted (*f.* 25. *a.*) Corolla tubular, salver-shaped (*f.* 25. *b.*); limb 5-parted; the lobes convolutely imbricate in æstivation; at length spreading. Stamens 4 (*f.* 25. *c.*), inserted in the sinuses between the lobes of the corolla, exserted; anthers cordate (*f.* 25. *c.*), the cells confluent, opening by a continuous line. Style filiform (*f.* 25. *c.*); stigma capitate, minutely papillose. Capsule 2-celled, 2-valved (*f.* 25. *g.*); valves cloven; dissepiment parallel with the valves. Seeds 4-5 in each cell, compressed, with a membranous border. Albumen copious, fleshy. Embryo erect; with plano-convex, obtuse, fleshy, cotyledons, furnished with 3 nerves; and a bi iHIT 1 radicle, much shorter than the cotyledons.—Much branched shrubs, natives of the mountains, near the city of Santa Fe de Bogota, in New Granada; with opposite branches. Leaves small, coriaceous, imbricated in 2 rows. Flowers axillary, solitary, nearly sessile, small, white.

This order is nearly related to the *Polemoniacea:*; but differs HT it, m its undivided stigma, in the confluent cells of the hers and bilocuhr ovarium; and from *Scrophtilarmece,* in its Regular flowers, ibliaceous embryo, and convolute aestivation of sshe corolla,

§£1. AB.AGCTA (named in honour of Francisco Arago, member Academy of Paris; the celebrated astronomer.) H. B, et gfcntb, nov. gen. amer. 1. p. 154. t. 216-217.

^JLIK. SYST. *Telrandria, Monogynia.* Character the same as !%; of the order.

FIG. 25.



iR A. CUPRE'SSINA (H. B. et jiKunth, nov. gen. amer. 3. p. [56. t. 216.) branches downy; Jeaves scale-formed, ovate-del- .:id, glabrous, closely adpressed, vith rather woolly edges; throat }(corolla villous. h_t ,*G.* Native If Santa Fe de Bogota. A. (serina, H. B. et Kunth, 1. e. 16. *b.* Segments of corolla jjbovate, ciliated. Margins of nents of the calyx ci- iiit.d. Antliers cordate, reni- form. Filaments villous at the >ase.

Cypress-like Aragoa. Shrub.

2 A. ABIETJNA (H. B. et Kunth, nov. gen. amer. 3. p. 156.) branches glabrous; leaves ^Jtnear, spreading, ciliated a little; corolla glabrous. T;. G. ^^•'ative along with the preceding. Branches 3--1 in a whorl.

FiT'llke Arogoa. Shrub.

| *Cult. Aragoa* is a genus of beautiful and singular shrubs. Should either of them ever be introduced to our gardens, we tould recommend their being treated as greenhouse plants; to V planted in pots, well drained with sherds, in a mixture of (at and sand.

jORDER CLXIL POLEMONIACEJE (the plants contained , * this order agree in important characters with the genus *Polc- •Jonium.)* Juss. gen, p, 130. ed. Usteri, p. 1,52. I>. Don, in dinb. phil. journ. H. B. ct Kunth, nov. gen. amer. 3. p. 160.

Calyx tubular (f. 26. *a.,* f. 27. «.)> 5-cleft (f. 27. a.}, or 5- ootlied (f. 2(i. *a.).* Corolla rotate (f. 26. 6.), or salver-shaped f. 26. *d.),* or often funnel-shaped (f, 29. *b.);* limb 5-lobed (f. *27. d.,* f. 29. *b.),* imbricate or twisted in aestivation. Stamens 5 (f. 26. c, f. 27. &., f. 29. c,), inserted sometimes beneath, and sometimes above the middle of the tube; anthers sagittate (f. 29. c), incumbent, 2-cellcd. Ovarium simple, 3-celled (f. 28. /".), entire; ovala numerous, rarely definite. StyJe very long f. 23, (/.); stigma 3-lobed (f. 87. c, f. 29. <?,) : lobes linear, c&jbtuse. Capsule 3-celled (f. 28./.), 3-valved, oblong, trigonal, rarely globose ; valves opposite to the margins, septiferous inside in the middle, usually membranous, rarely tlnckish, and crustabous, as in the genus *CAnttta;* placenta trigonal, central, applied o the angles of the dissepiments. Seeds convex, angular, naked ; or compressed and girded by a membrane; testa simple, membranous, the surface roocilaginous. Albumen fleshy, conforming; to the seed. Embryo straight, large ; with flat, orbicular or oval, somewhat foliaceoui cotyledons; and a thickisb, obtusp, straight, inferior radicle, which is generally shorter than the cotyledons.—Beautiful herbs or shrubs, usually branched. Leaves usually alternate, more rarely opposite, ex stipulate, undivided, pinnatifid, or pinnate. Flowers terminal, numerous; or axillary, and nearly solitary, in most of the species bracteate. Corollas showy, blue, red, or white.

This order is characterized by a regular, 5-lobed corolla j a triple stigma; a 3-celled, 8-va)ved capsule, with septiferous valves ; seeds numerous, or definite, attached to a *3*-sided, central placenta, covered by a thin, mucilaginous integument, and furnished with a fleshy albumen ; and, lastly, by a straight embryo, with somewhat foltaceous cotyledons. The most nearly allied order to it is *Conrohulucea,* which, however, is readily distinguished from it, by having a simpU or double stigma; by the septa instead of proceeding from the centre of the valves, being directed to their margins; and the seeds having no central placenta, being attached to the bottom of the cells. The seeds are very different, being covered by a thin, very fragrant, mucilaginous albumen; with a curved embryo, having large, foliaceous, plaited, and wrinkled, emarginate cotyledons. The *Polemonicwece,* through the genus *Cdntua,* bas some affinity likewise with *Bignoniacetf,*- but that order has an irregular corolla; a bilamellate stigma ; a very different capsule ; transverse seeds, destitute of albumen; and lastly, a foliaceous embryo, with a curved radicle. Externally the *Piumbaginece,* have some resemblance to the *PolemoniacitF,* through *Phlox* and *Plumbago;* but the former order has 4 or 5 stigmas, and a simple ovarium attached to the bottom of the calyx.

Synopsis of Ote genera,

1 POLEMQJCIUM. Calyx campanulate, 5-cleft (f. 26. a.) Co-1 rolb rotate (f, 26. 6.) ; limb erect. Stamens inserted in the throat (f. 26. c), bearded at the base; cells of capsule many-seeded.

2 DIAPE'NSIA. Calyx 5-parted, coriaceous, tri-bracteatf at the base. Corolla Batver-ihaped ; tube short. Stamens inserted in the recesses of the corolla, nearly sessile. Stigma obsoletely 8-lobed. Cells of capsule many-seeded.

3 PHLOX. Calyx deeply 5-ck-ft (f. 27. «.), connivent. Corolla salver-shaped (f. 27. *d.)* ; tube elongated; lirtib twisted in {Estivation ; with cuneated segments. Stamens inserted above the middle of the tube. Cells of capsule 1-seeded.

4 HCGE'LIA. Calyx tubularly campanulate ; segments somewhat spinosc, linear. Corolla funnel-shaped ; tube abort, exscrted; segments of the limb oblong. Stamens inserted at i\n throat. Cells of capsule many-seeded.

5 LINVNTHUS. Calyx tubular; with *5* strong green nerves, which are drawn out into subulate, recurved teeth at the apex Corolla funnel-shaped ; tube short; segments of limb oboi ate, crenulated at apex. Stamens inclosed. Cells *uf* capsule many-seeded,

6 LisPTosir-HON. Calyx tubularly-campanulate ; lobes linear, subulate. Corolla funnel-shaped ; tube very long, slender ; limb caiitpaiuihite ; with oval, obtuse lobes. Stamens inserted at the throat. Cells of capsule many-seeded.

7 Pu'nelia. Calyx tubularly campanulate, deeply 5-cleft; segments linear. Corolla somewhat funnel-shaped; tube short; segments of the limb obovate, toothed; anthers exserted from the tube. Cells of capsule many-seeded.

8 Gilia. Calyx campanulate, 5-cleft (f. 28. a.). Corolla funnel-shaped (f. 28. b.), or sub-campanulate; segments of the limb obovate. Stamens inserted in the throat. Cells of capsule many-seeded.

9 Ægochlöa. Calyx tubularly campanulate, 5-cleft; segments unequal, spiny, entire as multifid. Corolla somewhat salver-shaped; segments oblong, entire; tube equal in length to the calyx. Stamens inserted in the upper part of the taS:. Cells of capsule many-seeded.

10 Collomia. Calyx campanulate, 5-cleft. Corolla salver-shaped; tube slender; segments of the limb oblong, entire. Stamens inserted towards the middle of the tube. Cells of capsule 1-2-seeded.

11 Calda'sia. Calyx tubular, 5-toothed, equal to the tube of the corolla in length. Corolla funnel-shaped; lobes of limb cuneated, emarginate. Stamens inserted in the middi; of the tube. Cells of capsule 1-seeded.

12 Lœsk'lia. Calyx tubular, involucrated by pungent bracteas (f. 29. e. f.); segments pungent. Corolla funnel-shaped (f. 29. b.); tube long; (f. 29. g.) lobes of limb broadly obovate, entire. Cells of capsule few-seeded. Seeds flat, orbicular, girded by a narrow membrane.

13 Ca'ntua. Calyx tubular, 5-toothed, often deft to the middle on both sides. Corolla funnel-shaped; tube long; lobes of limb oncordate, convolute in æstivation. Stamens inserted near the base of th<: tube. Cells of capsule many-seeded. Seeds compressed, girded by an oblong, membranous wing.

1. POLEMONIUM (πολεμονιον, polemonion, of Dioscorides, from πολεμος, polemos, war.) Tourn. inst. 146. t. 61. Lin. gen. no. 217. Schreb. gen. no. 289. Juss. gen. 136. ed. Usteri, p. 132. Gærtn. fruct. 1. p. 299. t. 62. Lam. ill. t. 106. Schkuhr. handb. t. 38. ed. H. B. et Kunth, nov. gen. amer. 3. p. 160. Led. fl. alt. 1. p. 232.

Lin. syst. *Pentandria, Monogynia.* Calyx campanulate, 5-cleft (f. 26. a.). Corolla rotate (f. 26. b.), with a short tube, and a 5-lobed, equal, erect limb. Stamens 5 (f. 26. c.), equal, inserted in the throat of the corolla; filaments dilated at the base, bearded, in a continuous ring, and nearly closing the throat; anthers incumbent. Capsule roundish, with membranaceously crustaceous valves, covered by the permanent calyx; cells many-seeded. Seeds oblong, trigonal, filled with large albumen. Radicle twice longer than the cotyledons.—Erect, herbaceous plants, with alternate, usually impari-pinnate, seldom impari-bipinnate leaves; leaflets entire; terminal, panicled corymbs of bracteate flowers, and blue or white corollas.

1 P. cœru'leum (Lin. spec. 230.) stem glabrous; leaves pinnate; leaflets ovate-lanceolate, acuminated, glabrous; segments of calyx ovate or elliptic lanceolate, acuminated; flowers erect, corymbose; calyxes hairy; segments of corolla roundish-oval, obtuse; anthers elliptic. ♃. H. Native of Siberia, and the north of Europe; as of Germany, Switzerland, Lapland, Denmark, in shady places. It is sometimes found apparently wild, in some parts of Britain; as at Malham Cove, in Yorkshire; at Matlock, in Derbyshire; as well as near Bakewell, and at Lover's Leap, Buxton, Smith, engl. bot. t. 17. Fl. dan. t. 255. Schb. hort. 2. t. 52. Valeriana cœrulea, Bauh. pin. 164. Valeriana Grw'er, Dod. pemps. 252. f. 1.—Berl. syst. 9. t. 11. f. 2.—Gmel. sib. 4. p. 103. t. 63. Capsule ovate, globular, obsoletely 3-grooved. Flowers blue. This plant is called *Greek Valerian, Jacob's Ladder, or Ladder of Heaven.* It is a common border flower; with erect, stiff stems.

Var. β, flore albo; flowers white. The white-flowered common Greek-Valerian. Berl. syst. 9. t. 11. f. 3.

Var. γ; stem and calyxes woolly. ♃. H. Native of Siberia. P. cœrúleum, β, Lin. sps. p. 46.—Gmel. sib. 4. p. 103. t. 50.

Var. δ, variegata; leaves variegated.

Var. ε, picta; flowers variegated with white and blue.

Var. ι, piliferum (Lindl. bot. reg. t. 1305.) stem erectish, hardly longer than the radical leaves; calyxes villous. ♃. H. Native of Nonh Amerk;!, Kii hardson. Stem and leaves pilose. Flowers blue.

*Blue-flowe*vt't! (>r Common (Greek-Valerian. Fl. June.

2 P. gra'cile (Wilid. enum. suppl. p. 10.) stems simple, elongated; leaves pbnait': calyx full of glandular down; segments of coro'a oval, obtuse; anthers sagittate. ♃. H. Native of Dahuria. P. cœrúleum, γ gracile. Horn. hort. hafn. 2. p. 957. Rœm. et Schultes, syst. 4. p. 364. Flowers pale blue.

Slender Greek-Valerian. Fl. June, 1803. Pl. 1½ feet.

3 P. Sibiricum (G. Don, mss. Sweet, fl. gard. t. 152.) erect, glabrous; leaves pinnate; leaflets petiolate, pinnatifid; segments lanceolate; petioles and calyxes pilose; calycine segments ovate, acute; segments of corolla elliptic; stamens sagittate; stem fistular, angular, glabrous, but downy at top. ♃. H. Native of Siberia. P. lacteum, Lehm. hort. sem. hamb. 1825. p. 17. pug. 1. p. 27. act. bonn. 14. p. 815. Pol. dissectum, Rchb. icon. t. 463. Lower leaflets ciliated. Flowers white, crowded, sub-corymbose. Filaments pilose at bottom. This species differs from all others, in the bipinnate leaves. Perhaps only a variety of *P. cœrúleum.*

Siberian Greek-Valerian. Fl. June, July. Cit. 1800. Pl. 2 feet.

4 P. pulche'rrum (Bunge, in Led. fl. alt. ill. t. 20. fl. alt. p. 233.) stems downy, nearly naked; radical leaves pinnate; leaflets oblong, acute; upper ones confluent, all glandular, ciliated; calycine segments linear-oblong, acutish; flowers erect, corymbose. ♃. H. Native of Siberia, in stony places, the Kurnie Islands, and at the river Tschuja. Nearly allied to *P. humilis,* Willd.; but differs, in the stem being suffruticose, in the calyxes being hairy, in the stamens being sagittate. Flowers smaller than those of *P. cœrúleum,* from white to blue. Calyx glandularly ciliated; segments of corolla roundish; stigma and anthers white.

Neat Greek-Valerian. Pl. ¼ to ½ foot.

5 P. acutiflorum (Willd. mss. in herb. ex Rœm. et Schultes, syst. 4. p. 792.) stem nearly leafless; leaves nearly all radical, pinnate; leaflets oblong; calyx hairy at the base; segments of corolla ovate, acute, ciliated. ♃. H. Native of the north-west coast of America, Pallas. P. boreale, Adams. Flowers blue, few in a corymb.

Acute-flowered Greek-Valerian. Pl. ½ foot.

6 P. pulche'rrimum (Hook. bot. mag. 2979.) stems many, ascending, leafy, and are, as well as the calyxes, downy; leaflets ovate, obtuse, glabrous; panicles sub-corymbose; calycine segments ovate, acute; segments of corolla ovate, acutish. ♃. H. Native of the rocky mountains. Flowers pale blue, varying to white. Leaves with a faint smell of mark, mostly radical; rachi of leaves downy. Corymbs drooping. Corolla rotately campanulate. Nearly allied to P. [illegible]

Prettiest Greek-Valerian. Fl. July, Aug. Clt. 1827. Pl. ½ foot.

7 P. RICHARDSONII (Graham, in edinb. phil. journ. dec. 1827. bot. mag. 2800.) stems pilose, angular, branched at the base, leafy; leaves pinnate; leaflets ovate-roundish, mucronulate, downy beneath; flowers nutant; calyx villous, viscid, with ovate, pointed segments; segments of corolla obtuse, crenulated; root very long, somewhat fusiform. ♃. H. Native of North America, in deep sandy soil, about the Great Bear Lake, Richardson; and of Siberia. P. speciósum, Fisch. mss. P. cœrúleum, var. nana, Hook. in Lin. trans. 14. p. 377. Root yellow. Stem purplish at the base. Flowers in terminal corymbs; but drooping. Corolla with a yellow tube, and a pale purple limb, marked with deeper veins. P. speciósum, Fisch. mss. from the islands of St. Lawrence and St. Paul; and P. lanátum, Fisch. mss. from Kamtschatka, is a variety of the same, with more downy stems.

Richardson's Greek-Valerian. Fl. July, Oct. Clt. 1826. Pl. ½ foot.

8 P. HUMILE (Warmkiold, mss. ex Graham, edinb. phil. journ. June 1820.) stems diffuse, branched; leaves pinnate, slightly downy, rather fleshy; leaflets roundish-cordate; calyx hairy, with obtuse segments; segments of corolla obtuse. ♃. H. Native of North America. Drummond. Root fibrous. Stems angular, reddish. Leaflets about 10 pairs; those of the cauline leaves oblong-ovate, the terminal one obovate in both. Flowers paniculately corymbose, somewhat drooping, nearly inodorous; peduncles generally 2-flowered, sometimes drooping. Peduncles, pedicels, calyxes, and stem clothed with glandular down. Corolla with blue limb, having deeper veins, indistinctly crenated. Hooker considers this plant the same as *P. Richardsonii*.

Musky-scented Greek-Valerian. Fl. May, June. Clt. 1827. Pl. 3 to 4 inches.

9 P. VISCÓSUM (Rudolf, Georgi, besch. des. russ. reichs, 3. p. 271. Sweet, fl. gard. t. 266.) stem pilose, angular, erect; leaves with many pairs of leaflets, which are ovate-bluntish, pilose on both surfaces; flowers a little panicled, drooping; segments of corolla roundish, crenulated. ♃. H. Native of Siberia, Kamtschatka, &c. P. lanátum, Fisch. mss. P. húmile, Roem. et Schultes, syst. 4. p. 792. Lindl. bot. reg. 1304. Pol. cœrúleum, β, Gmel. sib. 4. p. 105. no. 60. Stem leafy. Calyxes villous and viscid; with ovate-bluntish segments. Corollas blue. Perhaps only a variety of *P. Richardsonii*.

Viscid Greek-Valerian. Fl. July, Oct. Clt. 1826. Pl. ½ foot.

10 P. MEXICÁNUM (Cerv. in Lagasc. gen. et spec. nov. diagn. p. 10. no. 140. Ker. bot. reg. 242.) plant viscid, and clothed with glandular down on every part; leaves pinnate, downy; leaflets lanceolate; outer ones combined, usually forming a 3-lobed, terminal leaflet; flowers drooping; calyx clothed with clammy villi. ♃. H. Native of Mexico. P. ciliátum, P. barsifólium, P. pimpinelloídes, Willd. mss. ex Roem. et Schultes, syst. 4. p. 793. Flowers corymbose, pale blue. Plant very pale green. Mr. Nuttall found this, or a nearly allied species at Flat-Head river, in which the leaflets are somewhat rhomboid-ovate, acutish; and the calycine segments oblong, acute. Mr. James also found it on the banks of the Canadian river; but the flowers in his plant are said to be smaller.

FIG. 26.



Mexican Greek-Valerian. Fl. April, May. Clt. 1817. Pl. 1 foot.

11 P. ? CILIÁTUM (Willd. mss. ex Roem. et Schultes, syst. 4. p. 792.) leaves pinnatifid, hairy, ciliated; segments of corolla ciliately toothed. ♃. H. Native of Pennsylvania, Muhlenburgh. Leaves sessile, with acute segments. Flowers terminal, racemose. Calycine segments linear, ciliated, acute, length of corolla. Perhaps a species of *Ruiocia*.

Ciliated-leaved Greek-Valerian. Pl.

12 P. REPTANS (Lin. spec. 230.) root creeping; stems leafy, glabrous; leaves pinnate; leaflets 7, ovate, acute, glabrous; flowers nutant; segments of corolla crenate. ♃. H. Native of North America, from Pennsylvania to Carolina, on the sides of rich hills. Mill. fig. t. 209. Sims, bot. mag. 1587. Leaflets 7 to 11 in number. Flowers in a loose, panicled corymb. Flowers blue, and sometimes white.

Creeping Greek-Valerian. Fl. April, May. Clt. 1758. Pl. ½ foot.

Cult. The species of Greek-Valerian are all handsome, hardy, border flowers, of easy culture. They grow in any common garden soil; and are readily increased by dividing of the root, or by seed.

II. DIAPENSIA (the ancient Greek name for the Saxifr.)

Lin. gen. no. 194. fl. lapp. 1. Juss. gen. 134. edit. Usteri, p. 141. D. Don, in Sweet, fl. gard. n. s. t. 251.

LIN. SYST. *Pentándria, Monogýnia.* Calyx 5-parted, coriaceous, tribracteate at the base. Corolla salver-shaped; tube short, wide; limb flat, 5-cleft. Stamens 5, inserted in the sinuses of the corolla nearly sessile; anthers linear, obtuse, inserted by their bases, dehiscing lengthwise. Stigma obsoletely 3-lobed. Cells of capsule many-seeded. Seeds roundish. — Small, tufted, North American herbs. Leaves alternate, crowded at the roots, coriaceous, quite entire. Peduncles scapeformed, 1-flowered. This genus is said to be nearly allied to *Phlox*, but is easily distinguished from that genus, in the 5-cleft corolla, in the concrete lobes of the stigma, in the many-seeded cells of the capsule, in the alternate leaves and inflorescence.

1 D. LAPPÓNICA (Lin. fl. lap. no. 88. t. 1. f. 1. spec. p. 294. leaves linear-spatulate, coriaceous, glabrous, with callous, revolute edges; peduncles usually 1-flowered, erect; anthers oblique, mutic. ♃. F. Native of the mountains of Norway and Lapland, among stones covered with moss; and New Hampshire, on the highest mountains, among moss; also of the Rocky mountains. Sweet, brit. fl. gard. n. s. t. 251. Wahl. fl. lapp. p. 58. t. 2. (Ed. fl. dan. t. 47. Sims, bot. mag. t. 1108. D. obtusifólia, Sal. par. lond. t. 104. Pursh, fl. amer. sept. 1. p. 147. Corollas salver-shaped, with obtuse segments, pure white.

Lapland Diapensia. Fl. Feb. March. Clt. 1801. Pl. 1 inch.

2 D. CUNEIFÓLIA (Sal. par. lond. t. 104. Pursh, fl. amer. sept. 1. p. 148.) leaves lanceolate-cuneated, downy below; anthers horizontal, beaked at the base. ♃. F. Native of North Carolina, on high mountains; plentiful on pine barrens of New Jersey, near the sea coast. In the island called Grand Cayman we have seen this plant, or a nearly allied species, growing near the sea, along with *Jacquinea lucáris*, and *Heliotropium gnaphaloides*. D. Americana, Herb. Banks. Pyxidanthera barbulata, Michx. fl. bor. amer. 1. p. 132. t. 17. Calyx ciliated? Flowers small, white. Leaves bearded inside at the base. Stems trailing.

Wedge-leaved Diapensia. Fl. July. Clt. 1806. Pl. 1 to 2 inches.

Cult. The species of *Dasystoma* are small, tufted, evergreen, alpine plants, difficult of culture. They should be grown in small pots, well-drained with sherds, in a mixture of sand and peat, and placed among other alpine plants. They require to be protected from frost and wet in winter, by placing them in a frame. They may be increased by dividing at the roots.

III. PHLOX (*from* φλοξ, *phlox*, flame; in reference to the bright colour of the flowers.) Lin. gen. no. 214. Schreb. gen. 344. Juss. gen. 130. edit. Usteri. 152. Gaertn. fruct. 1. p. 199. t. 42. Lam. ill. 103. Nutt. gen. amer. 1. p. 143. Ly-grandria, Dill. eth. 148.

Lin. syst. *Pentandria*, *Monogynia*. Calyx deeply 5-cleft (f. 27. *a*.), sub-cylindrical or sub-prismatic; segments acute, connivent. Corolla salver-shaped (f. 27. *d*.), with a narrow, sub-cylindrical tube, which is a little curved, and longer than the calyx; limb spreading, twisted in æstivation, as in *Apocyneæ*; segments obtuse. Stamens 5, unequal (f. 27. *b*.), 3 longer, and 2 shorter, inserted in the tube above the middle; filaments filiform; anthers sagittate, elevated to the orifice of the tube of the corolla. Capsule roundish; valves membranous; cells 1 seeded. Seeds oblong, convex outside. Albumen large. Radicle twice longer than the cotyledons.—Herbaceous, perennial, rarely subfruticose plants, with opposite, simple leaves: but the floral ones are sometimes alternate, sessile. Flowers terminal, panicled or corymbose, lilac, rose-coloured or red, blue, or white.

§ 1. *Leaves broad. Plants without any barren stems.*

1 P. PANICULA'TA (Lin. spec. 216. Ait. hort. kew. 1. p. 205.) erect, glabrous; leaves lanceolate, gradually narrowed, flat, with rough edges; corymbs panicled; segments of corolla roundish, of the calyx awned. ♃. H. Native of Virginia and Lower Carolina, in rich moist meadows. Mill. fig. 2. t. 295. f. 2.—Dill. eth. f. 106. f. 205. Flowers purple.

Var. β. alba; flowers white, with a tinge of red. ♃. H. [illegible] of North America, Lyon. A more robust filaol than the type, and probably a distinct species.

[illegible]-cicled-flowered Phlox. Fl. Aug. Sept. Clt. 1732. Pl. excelsa 4 feet.

[illegible] P. VIRIDULA'TA (Ait. hort. kew. 1. p. 205.) erect, glabrous; [illegible] oblong-lanceolate, somewhat undulated, with scabrous [illegible]; corymbs panicled; segments of corolla obovate, somewhat retuse; of the calyxes awned. ♃. H. Native of Virginia and Carolina, in high mountains and meadows. P. paniculata, Michx. fl. amer. 1. p. 144. Flowers purple. A beautiful plant, resembling the preceding; and the flowers of the same colour.

Undulated-leaved Phlox. Fl. July, Aug. Clt. 1759. Pl. 4 to 5 feet.

3 P. PYRAMIDA'LIS (Smith, exot. bot. 2. p. 55. t. 87.) erect, glabrous; stem scabrous, spotted; leaves cordate-oblong, acuminated; panicle fastigiate, pyramidal; segments of corolla obcordately truncate; calycine teeth erect, lanceolate, acute, glabrous, with scabrous edges. ♃. H. Native from Pennsylvania to Carolina, in mountain meadows. Lodd. bot. cab. 349. Redout. fl. gard. 253. P. Carolina, Walt. fl. car. 296. Flowers pale flesh-coloured, or lilac.

Var. β. pendulifora (Hort.) flowers rather pendulous.

Var. γ. corymbosa (Hort.) flowers densely corymbose.

Pyramidal-flowered Phlox. Fl. Jn. Aug. Clt. 1800. Pl. 2 to 3 feet.

4 P. [illegible] (Michx. fl. amer. bor. 1. p. 143.) erect, glabrous; stem smooth; leaves lanceolate; flowers fastigiately corymbose; segments of corolla nearly orbicular; teeth of calyx lanceolate, hardly acuminated. ♃. H. Native of Carolina, in shady places, among Sphagnum. Flowers large, purple. Perhaps only a variety of *P. pyramidalis*.

Broad-leaved Phlox. Fl. Jn. Aug. Clt. 1812. Pl. 2 feet.

5 P. STRIA'TA (Ell. fl. carol. 2. p. 49. Sweet, fl. gard. n. s. t. 18.) stems smooth, slightly tetragonal; leaves oblong-cordate, acuminated, with scabrous edges; corymbs panicled, pyramidal; pedicels and calyxes downy; calycine segments long-awned; corolla with a downy tube, and obovate, rounded, distinct segments. ♃. H. Native of Carolina. Corollas of a bright purplish lilac colour.

Cordate-leaved Phlox. Fl. July, Aug. Clt. 1827. Pl. 2 to 3 feet.

6 P. CORYMBO'SA (Hortul. ex Sweet, fl. gard. n. s. t. 114.) stem erect, downy, branched at top, rather tetragonal; leaves oblong-lanceolate, undulated, downy beneath, with scabrous edges; corymbs panicled; calycine teeth subulate; segments of corolla roundish-obovate, imbricate. ♃. H. Native of North America. Stems more or less purple. Branches of corymb many-flowered. Corollas purplish lilac, with a white star at the base. Tube of corolla downy.

Corymbose-flowered Phlox. Fl. [illegible] Clt. [illegible] 3 to 4 feet.

7 P. MACULA'TA (Lin. spec. 216.) erect; stem scabrous, spotted; leaves oblong-lanceolate, glabrous, with rough edges; panicle oblong, crowded with flowers; segments of corolla roundish; teeth of calyx acute, reflexed. ♃. H. Native from New England to Carolina, in wet meadows. Pursh, fl. 1. p. 149. Jacq. hort. vind. 2. p. 58. t. 127. Gaertn. fruct. p. 299. Flowers purplish, violet or purple. Stem marked with brown spots.

Spotted-stemmed Phlox. Fl. July, Aug. Clt. 1740. Pl. 3 feet.

8 P. OBCORDA'TA (Sweet, fl. gard. t. 224.) stems erect, branched at top, rather scabrous; leaves acuminated, glabrous, with scabrous edges; lower ones linear; middle oblong-lanceolate; superior ones cordate-ovate; branches corymbose, many-flowered, somewhat fastigiate; teeth of calyx ovate, shortly acuminated, erect; segments of corolla emarginately obovate. ♃. H. Native of North America. Phlox bimaculata, Hort. Flowers of a bright red lilac colour, sweet-scented. Branches of corymb forming a thyrsoid raceme. Nearly allied to *P. glaberrima* and *P. maculata*.

Sweet-scented Phlox. Fl. Aug. Clt. [illegible] Pl. 2 feet.

9 P. REFLE'XA (Hortul. Sweet, fl. gard. t. 232.) stems downy, scabrous, spotted; leaves reflexed, glabrous, shining above: lower ones narrow-lanceolate: superior ones cordate, acute; flowers crowded, panicled, with many-flowered branches; teeth of calyx lanceolate, mucronate, spreading; tube of corolla glabrous, curved; segments of the limb roundish-obovate, imbricated at the base. ♃. H. A hybrid production. Flowers dark purple, in close, crowded panicles, sweet-scented.

Reflexed-leaved Phlox. Fl. July, Sept. Clt. [illegible] Pl. 2 or 3 feet.

10 P. [illegible]'RRA (Sweet, fl. gard. t. 248.) stem glabrous at bottom, and downy at top; leaves oblong-lanceolate, acute, scabrous above, with undulated, denticulately scabrous edges; flowers in loose panicles; calyxes pilose; teeth of calyx subulate, straight; tube of corolla curved, villous; segments of corolla obovate, spreading, slightly emarginate. ♃. H. Native of North America. Phlox Americana. Hortul. Flowers pale lilac, fragrant.

Scabrous Phlox. Fl. Aug. Clt. [illegible] Pl. 3 to 4 feet.

11 P. [illegible]'RSA (Pursh, fl. amer. sept. 2. p. 732. Sims, bot. mag. 1850.) erect, downy; stem angular; leaves ovate-

lanceolate, acuminated, narrowed below, somewhat petiolate, downy beneath; floral leaves subcordate; corymbs subpaniculed; corolla with roundish segments, and a downy tube; calycine segments awned. ♃. H. Native of Georgia and South Carolina on the mountains. Flowers variegated with pale and deep purple. P. decussata, Lyon, mss.

Decussated-leaved Phlox. Fl. Oct. Nov. Clt. 1812. Pl. 3 to 4 feet.

13 P. PANICULÀTA (Sweet, hort. brit. ed. 2d. p. 328. fl. gard. n. s. t. 46.) stem rather flexuous, obsolescely quadrangular, clothed with rough pubescence, spotted; leaves oblong-lanceolate, acuminated, nearly sessile, glabrous and shining above, having the margins and nerves scabrous beneath; corymbs many-flowered, panicled, drooping before expansion; calyxes downy, with lanceolate, mucronate segments; segments of corolla roundish, imbricate. ♃. H. Native of North America. Flowers of a rosy purple colour, sweet-scented; tube smooth, a little recurved.

Pendulous-flowered Phlox. Fl. Aug. Oct. Clt. 1823. Pl. 3 to 4 feet.

14 P. CAROLÍNA (Lin. spec. 216.) erect; stem downy, scabrous; leaves ovate-lanceolate, acuminated, glabrous, except the margins and nerves, which are scabrous beneath; corymbs panicled, subfastigiate, with many-flowered branches; segments of corolla roundish; teeth of calyx glabrous, lanceolate, erect; segments of corolla roundly obovate. ♃. H. Native of Lower Carolina, in wet meadows; and on the mountains of Virginia. Sims, bot. mag. 1544. Mart. cent. t. 10. Sweet, fl. gard. 190. Flowers beautiful, pale purple, the size of those of *P. suaveolens*; tube of corolla smooth. P. Carolina, Pursh, fl. amer. supt. 1. p. 149, is probably P. triflòra, Michx.

Carolina Phlox. Fl. July, Sept. Clt. 1725. Pl. 2 to 3 feet.

14 P. TRIFLÒRA (Michx. fl. bor. amer. 1. p. 143.) erect; stem obsolescely tetragonal, rather downy; leaves lanceolate, glabrous; branches of corymb usually 3-flowered; teeth of calyx linear; segments of corolla roundly obcordate, slightly undulated, at length reflexed. ♃. H. Native of Virginia, on the mountains. Sweet, fl. gard. 49. P. cærnea, Sims, bot. mag. t. 2155. Lodd. bot. cab. 711. Flowers in loose spreading corymbs, pale lilac. Segments of calyx nearly as long as the tube of the corolla.

Three-flowered Phlox. Fl. July, Sept. Clt. 1816. Pl. 1 to 2 feet.

15 P. SUBULÀTA (Pursh, fl. amer. supt. 2. p. 730.) erect, quite glabrous; stems terete, spotted, smooth; leaves ovate-oblong, rather fleshy, shining and dark green above, pale beneath; corymbs fastigiate; lower branches elongated, nearly naked; segments of corolla broad-obovate, rather retuse; calycine teeth lanceolate, mucronate. ♃. H. Native of South Carolina. P. suffruticosa, Hort. Nearly allied to *P. Carolina*; but the flowers are large, long, and of a beautiful purple colour.

Shining-leaved Phlox. Fl. July, Aug. Clt. 1800. Pl. 2 feet.

16 P. SUFFRUTICÒSA (Vent. malm. 2. p. 197.) erect, glabrous; stem glabrous, trifid at top, and suffruticose at the base; leaves lanceolate, shining on both surfaces, and acute at both ends, almost sessile; corymbs crowded with flowers. ♃. H. Native of North America. Willd. enum. 1. p. 200. Pois. encycl. suppl. 4. p. 297. Mordaunt Delaury, herb. amat. 3. t. 4. Ker. bot. reg. 68. Stem much branched, ex Vent. Corolla deep purplish violet, with deeper lines at the base; segments of the limb roundish-obovate.

Suffruticose Phlox. Fl. July, Sept. Clt. 1790. Pl. 2 feet.

17 P. OLIVERIÀNA (Lin. spec. 217. Sweet, fl. gard. n. s. t. 36.) plant tufted; stems erect, glabrous; leaves linear-lanceolate, sessile: corymbs terminal, trifid, sub-fastigiate; fascicles 3-4-flowered; segments of corolla roundish; teeth of calyx acuminated, spreading, mucronate. ♃. H. Native of Lower Carolina, in wet meadows; and on the mountains of Virginia. Pursh, fl. 1. p. 149.—Dill. elth. t. 165. f. 202.—Bot. Mag. 18. t. 6.—Kerner, oek. plant. t. 155. Flowers of a reddish lilac, dying off blush.

Quite glabrous Phlox. Fl. Jn. Aug. Clt. 1753. Pl. 1½ to 2 feet.

18 P. VARIEGÀTA (Penny, in Young, hort. eqc. p. 35. Lond. hort. brit. p. 136.) stem roughish, obscurely spotted; leaves lanceolate, acuminated, quite glabrous on both surfaces, shining, with scabrous edges: upper leaves the broadest; racemes panicled; segments of corolla rounded; tube very long, 3 times longer than the calyx; calycine teeth lanceolate, acute, erectish. ♃. H. Native of North America. P. longiflòra, Sweet, brit. fl. gard. n. s. t. 31. Stem bluntly tetragonal. Flowers pure white, fragrant. Very nearly allied to *P. suaveolens*.

Late-flowering Phlox. Fl. Aug. Oct. Clt. 1808. Pl. 2 to 3 ft.

19 P. SUAVEÒLENS (Lehm. sem. hort. hamb. 1826. p. 17. sem. boon. 14. p. 814. t. 46.) stems erect, obscurely tetragonal, glabrous; leaves lanceolate, acuminated, scabrous, but glabrous beneath; flowers disposed in large corymbose panicles, which are, as well as the calyxes, downy; bracteas ciliated; teeth of calyx subulate, margined with red, ciliated; segments of corolla obovate; stigma bifid. ♃. H. Native of North America. P. scàbra, Sweet, fl. gard. 3. t. 248. Stem pale purple above, marked with dark purple spots at the axils of the leaves. Leaves rather undulated; lower ones attenuated at the base; upper ones subcordate. Limb of corolla violaceous, each segment marked by an obcordate, white spot at the base.

Suksdan's Phlox. Fl. Aug. Clt. 1826. Pl. 2 to 3 feet.

20 P. GLABERRÌMA (Ait. hort. kew. 1. p. 206.) erect; stem quite glabrous, without spots; leaves ovate-lanceolate, smooth; racemes panicled; segments of corolla roundish; calycine teeth lanceolate, acute, erectish. ♃. H. Native from Canada to Virginia, in meadows. P. maculàta, γ, candida, Michx. fl. bor. 1. p. 143. Flowers white, sweet-scented. There is a variety of this species, having the leaves edged with white, or pale yellow.

Smooth-stemmed-flowered Phlox. Fl. July, Aug. Clt. 1760. Pl. 1 to 2 feet.

21 P. DRUMMÒNDI (Hook. bot. mag. t. 3441.) annual; stems erect, simple at bottom, but a little branched at top, beset with spreading hairs, as well as the edges of the leaves, calyxes, bracteas, &c.; leaves ovate-lanceolate, half stem-clasping, all mucronate and downy, lower ones opposite, upper ones alternate; panicle trichotomously corymbose; flowers on very short pedicels; calycine segments linear-subulate, mucronate, a little reflexed; tube of corolla much [illegible] hairy, 3 times longer than the calyx; segments of corolla [illegible]-ovate, cuneate, obtuse, entire. ☉. H. Native of Mexico, in the Texas. D. Don, in Sweet, fl. gard. n. s. t. 316. Flowers of a beautiful purple, with a darker eye. Lower leaves always opposite; upper ones nearly ovate.

Drummond's Phlox. Fl. Aug. Sept. Clt. 1835. Pl. 1 foot.

§ 2. *Leaves broad. Plants with herbaceous stems.*

22 P. OVÀTA (Lin. spec. 217.) erect, glabrous; radical leaves ovate, acute, rather fleshy, cauline ones ovate-oblong; corymbs subfastigiate: segments of corolla undulated, retuse; teeth of calyx linear, acute. *H.* H. Native of North America. Willd. spec. 1. p. 842. Pursh, fl. 1. p. 150.—Plukn. mant. p. 122. t. 343. f. 4. Flowers beautiful, reddish purple.

Var. β, Listoniana (Hort.) radical leaves ovate; cauline ones lanceolate. ♃. H. Native of North America. P. ovàta, Curt. bot. mag. t. 352.

Ovate-leaved Phlox. Fl. May, July; β, July, Aug. Clt. 1759; β, 1816. Pl. 1 to 1½ foot.

23 P. RÉPTANS (Michx. fl. amer. bor. 1. p. 144. Vent. malm.

t. 316.) plant creeping, viscid-villous, downy; radical leaves obovately-spatulate; caniine leaves lanceolate; corymbs divaricate, few-flowered; segments of corolla obovate; teeth of calyx linear, reflexed. ♃. H. Native of Virginia and Carolina, on high mountains. Phlox acuminata, Curt. bot. mag. 562. Flowers blue, with a purple centre, very handsome.

Var. β, crassifolia (D. Don, in Sweet, fl. gard. n. s. t. 293.) leaves thicker; flowers deeper coloured. ♃. H. Native of North America. Phlox crassifolia, Lodd. bot. cab. 1390. Flowers rose-coloured. Branches simple. Leaves and petioles minutely fringed with soft hairs on the midrib and edges. Calycine segments white, lanceolate, acuminated, erect, connivent, with scarious edges. Tube of corolla deep purple, clothed with glandular hairs, twice as long as the calycine segments; limb purple, with rounded, slightly crenulated segments.

Creeping Phlox. Fl. June, Sept. Clt. 1800. Pl. ½ foot.

24 P. STRAMINEA (Lin. spec. 217.) decumbent, downy; leaves oval-lanceolate, superior ones alternate; branchlets divaricate, loose, few-flowered; segments of corolla somewhat obcordate; teeth of calyx linear-subulate. ♃. H. Native from Pennsylvania to Virginia, on the mountains, and on the banks of the Missouri. Curt. bot. mag. 169. Mill. fig. t. 205. f. 1. Flowers purplish blue. Caryxles dichotomous.

Discolorate Phlox. Fl. May, July. Clt. 1746. Pl. ½ to 1 foot.

25 P. CANADENSIS (*Hort. ex* Sweet, fl. gard. t. 221.) erect; stems rather downy; lower leaves ovate; superior ones broad-lanceolate, opposite and alternate; branches downy, few-flowered, compact; teeth of calyx subulate-linear; segments of corolla broad, obcordate; tube a little curved, ascending, much longer than the calyx. ♃. H. Native of Canada. Flowers blue, tinged with lilac, disposed in a terminal, corymbose panicle. This plant is very nearly related to *P. divaricata*.

FIG. 31.



Canadian Phlox. Fl. April, May. Clt. 1825. Pl. 1 foot.

§ 3. *Leaves linear-lanceolate, linear, or subulate.*

26 P. AMŒNA (Michx. fl. bor. amer. 1. p. 146.) weak, erect, clothed with viscid down; leaves linear-lanceolate; panicle loose, fastigiate; pedicels generally twin; segments of corolla obcval; tube curved, downy; calycine teeth very long, subulate. ♃. F. Native from Pennsylvania to Carolina, in sandy fields; and of the Rocky mountains, in the valley of the Loup Fork. ex Torrey. Pursh, fl. 1. p. 150. Lodd. bot. cab. 1731. P. pilosa, Sims, bot. mag. 1507.? Flowers usually red, but sometimes white.

Var. α, virens (Pursh, fl. 1. p. 150.) corollas reddish purple.

Var. β. albiflora (Pursh, fl. c.) corolla whitish rose-coloured.

Awned-calyxed Phlox. Fl. April. Clt. 1823. Pl. procumbent.

27 P. RIGIDA (Michx. fl. bor. amer. 1. p. 145.) humble, decumbent, downy; leaves linear-lanceolate, short, roughish, upper ones furnished with nearly sessile fascicles of flowers; segments of corolla roundish, obtuse; tube straight, glabrous; calycine teeth subulately acuminated. ♃. H. Native of Carolina, in sandy fields; and on the mountains of Georgia. Lodd. bot. cab. 1341.—Pluk. phyt. t. 98. f. 1. Flowers usually pur-

Var. β, *ovata* (Sims, bot. mag. 1508.) this is probably nothing more than a luxuriant garden production of the species. ♃. H.

Pilose Phlox. Fl. Ju. July. Clt. 1769. Pl. ½ to 1 foot.

28 P. PILOSA (Lehm. cat. hort. hamb. 1829. Sweet, fl. gard. n. s. t. 7.) stems procumbent, branched; branches ascending, clothed with hair-like down, as well as the peduncles and calyxes; leaves lanceolate, acute, attenuated at the base, smoothish, ciliated on the edges; calycine segments linear, acute; segments of corolla cuneately obcordate, with a hairy, erect tube, twice longer than the calyx. ♃. H. Native of North America. Flowers disposed in terminal, few-flowered panicles, composed of 1-2-flowered peduncles. Corollas bluish purple. In habit this species is intermediate between *P. subulata* and *P. pilosa*.

Procumbent Phlox. Fl. May, Clt. 1827. Pl. procumbent.

29 P. SUBULOSA (Pursh, fl. amer. sept. 1. p. 149.) erect, branched, frutescent, glabrous; leaves linear, acuminated, pungent, dilated and somewhat ciliated at the base, with callous edges; upper leaves alternate; flowers cymose; calycine segments broad from the base, membranous, acuminated, about equal in height to the tube of the corolla; segments of corolla cuneate-oblong, entire. ♄. F. Native of North America, on the plains of the Columbia. Dougl. in hot. reg. 1551. Branches of corymb 3-flowered. Corollas flesh-coloured.

Showy Phlox. Fl. May, June. Clt. 1825. Shrub ½ to 1 foot.

30 P. SPECIOSA (Lin. spec. 217.) plant tufted, whitish from down; leaves linear, pungent, ciliated; corymbs few-flowered; peduncles trifid; teeth of calyx subulate, hardly shorter than the tube of the corolla; segments of corolla cuneately obcordate. ♃. H. Native from New Jersey to Carolina, on dry sandy hills and rocks. Curt. bot. mag. 411. Jacq. fragm. t. 44. f. 4.—Pluken. phyt. t. 98. f. 2. Flowers pink-coloured, with a handsome purple star in the centre. Calyx villous.

Subulate-leaved Phlox. Fl. April, June. Clt. 1780. Pl. ½ ft.

31 P. HOODII (Richards. in Frankl. journ. append. ed. 2d. p. 9. t. 78.) plant humble, moss-stemmed: leaves subulate, with woolly edges; flowers sessile, solitary; segments of the limb obovate. ♃. H. Native of the west coast of America, about Carlton House: and of the Rocky Mountains, in the valley of the Loup Fork. This is a singular and beautiful species.

Hood's Phlox. Pl. dwarf, tufted.

32 P. EXSERTA (Nutt. journ. acad. nat. sc. phil. 7. p. 41.) plant diffuse, procumbent; leaves subulate, ciliated, short, with reflexed edges; flowers solitary, on short pedicels; calycine segments spatulose; segments of corolla cuneated, entire. ♃. H. Native of the Rocky mountains, at Flat Head river, on the sides of dry hills. General habit of *P. subulata*. Stems downy. Leaves ending in pungent points. Flowers terminating the branches solitary, pale violet or white.

Tufted Phlox. Pl. tufted.

33 P. CESPITOSA (Nutt. journ. acad. phil. 7. p. 41.) plant somewhat tufted, many-stemmed: leaves subulate, very long, and very narrow, glabrous; stems few-flowered, very short, puberulous, irregularly trichotomous; peduncles filiform, elongated; calycine segments acuminated; segments of corolla oblong-cuneated, entire. ♃. H. Native of the Rocky mountains, in valleys, flowering most part of the summer. Stems almost a span high, many from the same root. Flowers apparently white. Very nearly allied to *P. Hoodii*.

Long-leaved Phlox. Fl. summer. Pl. ½ foot.

34 P. LONGIFOLIA (Nutt. l. c. p. 42. t. 6. f. 2.) plant densely tufted, small; leaves closely imbricated, oblong-lanceolate, copiously ciliated, very short; flowers sessile, hardly exserted; segments of corolla cuneated, entire. ♃. H. Native of Alpine situations, at the sources of the Missouri. Root large, descend-

ing. The whole plant depressed to the appearance of a hoary *Bryum,* no part of it hardly rising to the height of | an inch from the ground. Leaves all hoary, lanuginose at the edges, ending in acute points. Flowers large, white, with a yellow spot towards the orifice.

Moss-like Phlox. PI. tufted, \ inch.

35 P. HE'NTZII (Nutt. 1. c. p. 110.) plant tufted, downy ; leaves linear or lanceolate, ciliated, pungent; flowers corymbose, glomerate, few-flowered ; segments of corolla cuneated, obtuse, entire ; teeth of calyx acute, shortish. %. H. Native of the United States in the southern pine barrens. Habit of P. *subulata,* but producing short, leafy stems, the summits of which only are floriferous.

Hentzius's Phlox. PI. | foot

36 P. NIVA'LIS (Sweet, fl. gard. 185.) plant suffruticose, much branched, procumbent; branches ascending, crowded, downy, usually 3-flowered; leaves linear, in fascicles, cuspidate, ciliated, recurved ; pedicels and calyxes villous ; tube of corolla twice as long as the calycine segments, which are linear, and sharp-pointed: segments of corolla obcordate, plicately lined. 1/. H. Native of North Carolina. Phlox nivea, Lodd. bot. cab. 780. Flowers snow-white.

Snowy-flowered Phlox. Fl. April, May. Clt. 1820. PI. procumbent.

37 P. SETA'CEA (Lin. spec. 217.) tufted, downy; leaves in fascicles, subulate, pungent, ciliated ; peduncles few, terminal, subumbellate ; segments of corolla cuneated, emarginate ; teeth of calyx subulate, 3 times shorter than the tube of the corolla. %. H. Native from Virginiato Carolina, on rocks and barren sandy hills. Curt. bot. mag. 415. Pursh, 1. p. 151.—Plukn. phyt. t. *98.* f. 2. Flowers pale rose-coloured, with a purple star in the centre. Calyx hairy.

Setaceous-tewed Phlox. Fl. April, July. Clt. 1786. PI. procumbent.

38 P. SIBI'RICA (Lin. amcen. acad. 2. p. 342. spec. 217.) tufted ; stems numerous, from the same centre, pale green ; leaves linear, villous ; pedicels 2-4, hairy from the axils of the upper leaves ; segments of corolla cuneated, entire, and are, as well as the calyxes, the length of the tube of the corolla. 1/ . H. Native of Siberia, at the Lena.—Gmel. sib. 4. p. 81. t. 46. f. 2. Flowers purplish, as also white, with 10 purple stripes. Calyx cylindrical, hairy, ex Gmel. Segments of corolla from 4 to 6, often emarginate.

Siberian Phlox. PL \ to \ foot.

N.B.—*The following names occur in garden catalogues; but these, in most instances, are synonymous with some of the above, or are names given to hybrids or I rifling varieties.*

1 P. excelsa, Penny. 2 P. Wheeleriana, Sweet, a hybrid. 3 P. Shepherdii, Sweet, a hybrid. 4 P. disticha, Sabine. 5 P. involucrata, Nutt. 6 P. laeta, Penny. 7 P. elata, Penny. 8 P. Virginica, Lodd. 9 P. intermedia, Lodd. cat. 10 P. acutifdlia, Sweet.

Cult. Phlox is a genus of elegant border flowers ; the most of them thrive in common garden earth, but prefer a rich loamy soil. Those species belonging to the third section of the genus, being tender, more dwarf kinds, will require to be protected under frames in winter, if severe ; and it is therefore safest to have a plant or two of all these dwarfer kinds in pots. The larger kinds are easily increased by dividing at the root; and cuttings of the dwarf kinds strike root freely if planted under a hand-glass.

IV. HIPGELIA (named' by Bentham, in honour of Baron Charles de Hugel, of Vienna.) Benth. in bot. reg. under no. 1622., but not of Rchb., which is *Didiscus.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx tubularly campanulate, half 5-cleft, with the recesses hardly membranous; segments rather unequal, linear, stiff, somewhat spinose. Corolla funnel-shaped, with a short exserted tube, a 5-parted limb, and oblong, quite entire segments. Stamens inserted at the throat; anthers linear, sagittate. Cells of capsule many-seeded.—Annual or perennial herbs, clothed more or less with white woolliness. Leaves alternate, linear, entire or pinnatifid. Flowers disposed in dense, corymbose heads ; with the calyxes and bracteas imbricate, immersed in dense wool. *Hugelia* differs from *Gilia* in the anthers and habit.

1 H. DENSIFOLIA (Benth. 1. c.) plant humble : stem smoothish; leaves numerous, nearly all pinnatifid, glabrous, with *2-3* acerose segments on each side; tube of corolla longer than the calyx ; stamens about equal in length to the corolla. ©. ? H. Native of California, Douglas. Corollas blue.

Dense-leaved Hugelia. PI. \ foot. ?

2 H. ELONGATA (Benth. 1. c.) branches elongated, divaricate or procumbent, tomentose ; leaves short, simple, or furnished with 1-2 segments on each side, all clothed with white tomentum, or at length hardly glabrous; tube of corolla exserted; stamens exceeding the corolla. ©. ? H. Native of California, Douglas. Flowers deep blue.

Elongated Hugelia. PI. 1 foot. ?

3 H. VIRGATA (Benth. 1. c.) plant erect ; leaves elongated, simple or pinnatifid, clothed with loose white wool; tube of corolla longer than the calyx ; stamens shorter than the corolla. ©.? H. Native of California, Douglas. Flowers deep blue.

Twiggy Hugelia. PI. \ foot. ?

4 H. LUTEA (Benth. 1. c.) erect; lower leaves elongated, simple, glabrous : superior ones short, pinnatifid, clothed with white wool; corymbs small; tube of corolla shorter than the calyx ; stamens equal in length to the corolla. ©. ? H. Native of California, Douglas. Flowers yellow.

reWow-flowered Hugelia. PI. \ foot. ?

Cult. For culture and propagation see *Gilia,* p. 245.

V. LINA'NTHUS (from \ivov, *linon,* flax ; and avSoc, *anthos,* a flower ; from the resemblance of the flowers to several species of *Linum)* Benth. in bot. reg, under no. 1622.

LIN. SYST. *Pentdndria, Monogynia.* Calyx tubular, membranous ; with 5 strong, green nerves, which are drawn out into subulate, recurved teeth at the apex. Corolla funnel-shaped; with a short tube, a 5-cleft limb, and obovate segments, which are crenulated at the apex. Stamens inclosed in the tube ; anthers filiform, hardly sagittate at the base. Cells of capsule many-seeded. This is a very distinct genus, from the calyx, anthers, and habit.

1 L. DICHOTOMUS (Benth. 1. c.) Q. H. Native of California. Douglas. A glabrous, annual herb. Leaves opposite, sessile, palmate, with *3-5* linear-subulate segments. Flowers solitary in the forks, almost sessile, bractless, but numerous and approximate towards the tops of the branches. Corolla size, colour, and form of *Linum sujfrutiedsum.*

Dichotomous Linianthus. PI.

Cult. For culture and propagation see *Gilia,* p. 245.

VI. LEPTOSITHON (from *XETTTOQ, leptos,* slender; and *a«f>wv, siphon,* a tube ; the tube of the corolla is long and slender.) Benth. in bot. reg. under no. 1622.

LIN. SYST. *Pentdndria, Monogynia.* Calyx tubularly campanulate, equal, semi-5-cleft ; lobes linear-subulate, acute; sinuses membranous. Corolla funnel-shaped ; with a very long, very slender tube, and a campanulate 5-cleft limb, with oval, obtuse, quite entire lobes. Stamens inserted at the throat of the corolla ; anthers oblong, sagittate at the base. Cells of capsule many-seeded.— Annual herbs, glabrous at the base, and downy at top. Leaves opposite, sessile, palmately cut; with linear or subulate segments. Flowers disposed in dense corymbose heads,

with the axis rather woolly. Bracteas imbricate, conforming to the leaves; with ciliately-hairy segments. This genus differs from *Gilia*, sect. *Dactylophyllum*, in the form of the corolla.

1 L. GRANDIFLO'RUS (Benth. l. c.) plant nearly simple; leaves 7-11 cleft; segments subulate, straight, with revolute margins; tube of corolla hardly twice longer than the limb; filaments very short. ☉. H. Native of California, Douglas. Corolla blue, with a golden yellow or purple bottom.

Great-flowered Leptosiphon. Pl. ½ root.

2 L. ANDROSA'CEUS (Benth. l. c. hort. lions- n. & l. t. 18. f. 1. bot. reg. 1710.) leaves 5-7-cleft; segments oblong-linear; tube of corolla 2-3 times longer than the limb; stamens 3 times shorter than the limb of the corolla. ☉. H. Native of California, Douglas. A bushy... pilose herb. I corolla smaller, and more intensely coloured than the preceding, from white to pale blue or pink: the tube usually red. The multitude• of flowers gives the plant a very gay appearance.

Androsace-like Leptosiphon. Fl. June, July. Clt. 1833. ½ foot.

3 L. LU'TEUS (Benth. in bot. reg. under no. 1622.) leaves 5-7-cleft; segments oblong-linear; tube of corolla about 4 times longer than the limb; stamens about 3 times shorter than the limb of the corolla; style scarcely equal in length to the corolla. ☉. H. Native of California, Douglas. Corolla yellow, having the throat deeper coloured.

Var. β; corollas paler.

Yellow-flowered Leptosiphon. Pl. I foot.

4 L. PARVIFLO'RUS (Benth. l. c.) leaves 5-7-cleft; segments oblong-linear; tube of corolla 4 times longer than the limb; stamens hardly one-half shorter than the limb of the corolla; style a little exserted. ☉. H. Native of California, Douglas. Corolla pale yellow, with a deep yellow bottom.

Small-flowered Leptosiphon. Pl. ½ foot.

5 L. DENSIFLO'RUS (Benth. l. c. bot. trans. n. s. 1. t. 18. f. 2. bot. reg. 1725.) leaves 9-11-cleft; segments subulate, erect, with revolute margins; tube of corolla shorter than the limb. ☉. H. Native of California, Douglas. Habit of *androsaceus*, only it is greyer in appearance, being more glandular. The corollas in this are, however, 3 times larger, with a short, thick tube, instead of a long, slender one; its colour varies from purple to blue and white, but are not produced in the same profusion as those of *L. androsaceus*. From the short tube of the corolla, this plant probably belongs to *Gilia*, sect. *Dactylophyllum*, Benth.

Dense-flowered Leptosiphon. n. Jfuiv, Nov. Clt. 1833. Pl. ½ foot.

Cult. All the species of this genus are very gay when in blossom, and are therefore worth cultivating in every garden. The seeds of them only require to be sown in the open ground, in April; and if sown in large patches, the plants, when in blossom, will have, according to the size of the patch or bed, a gayer appearance.

VII. FENZLIA (so called by Bentham, in honour of Dr. Fenzl, of Vienna, now publishing a monograph of *Alsineæ*.) Benth. in bot. reg. under no. 1622.

Lin. syst. Pentandria, Monogynia. Calyx tubularly-campanulate, deeply 5-cleft, with membranous sinuses, and linear, acutish, erect segments. Corolla somewhat funnel-shaped, with a short tube, and a 5-parted limb; segments of the limb obovate, notched. Anthers ovate-sagittate, a little exserted from the tube. Cells of capsule many-seeded.

1 F. DIANTHIFLO'RA (Benth. l. c.) ☉. H. Native of California, Douglas. A small, annual, nearly simple herb, about 2-3 inches in height, glabrous or downy. Leaves opposite, linear, quite entire. Flowers 1-3 together, pedunculate. Corolla nearly an inch long, purplish, with a yellow bottom.

Pink-flowered Fenzlia. Pl. 2 to 3 inches.

Cult. For culture and propagation, see *Leptosiphon*, above.

VIII. GILIA (named after Philippe Salvador Gilio, a Spanish botanist.) Ruiz et Pav. fl. per. 3. p. 17. t. 223. Benth in bot. reg. under no. 1622. IjKitnopjes, Sm. exot. bot. 1. p. 23. I 13

Lin. syst. Pentandria, Monogynia. Calyx campanulate, 5-cleft (f. 28 *a*.), with the margins and recesses membranous. Corolla funnel-shaped, or sub-campanulate (f. 28. *b*.); limb 5-parted; segments obovate, (f. 28. *c*.). Stamens inserted at the tube of the corolla, or hardly within the tube; anthers ovate-roundish. Capsule oblong, subrigonal; valves membranous; cells many-seeded. Seeds angular. Albumen sparing. Radicle shorter than the cotyledons.—Usually annual, rarely biennial herbs. Leaves alternate, pinnate, with entire or cut segments, in the sections *Ipomopsis* and *Eugilia*; but in the section *Dactylophyllum*, the leaves are opposite, palmately cut, with entire, subulate segments;

SECT. I. DACTYLOPHYLLUM (from δακτυλον, *dactylos*, a finger; and φυλλον, *phyllon*, a leaf; in reference to the palmately-cut leaves.) Benth. in bot. reg. under no. 1622. Lower leaves opposite, all sessile, and palmately cut. Flowers solitary, on long peduncles. Corolla with a very short tube, and spreading limb. Perhaps a proper genus? Benth. l. c.

1 G. LINIFLO'RA (Benth. l. c.) lower leaves opposite, all sessile, and palmately cut; corolla 3 times longer than the calyx. ☉. H. Native of California, Douglas. Flowers white?, form and size of those of *Linum tenuifolium*.

Flax-flowered Gilia. Pl. *t*

2 G. PHARNACEOIDES (Benth. l. c.) lower leaves opposite, all sessile, and palmately cut; corolla twice longer than the calyx. ☉. H. Native of California, Douglas. This species differs from the preceding, in the flowers being one half smaller.

Pharnaceum-like Gilia. Pl. *I*

3 G. PUSILLA (Benth. l. c.) lower leaves opposite, all sessile, and palmately cut; corolla hardly exceeding the calyx. ☉. H. Native of Chili, Bertero. Habit of *Arenaria tenuifolia*. It differs from *G. pharnaceoides*, in the flowers being one half smaller, and in the corollas being less spreading.

SECT. II. IPOMO'PSIS (from εψ, ips, to strike forcibly; and οψις, *opsis*, sight; brilliancy of flowers.) Benth. in bot. reg. under no. 1622. Ipomopsis, Michx. and other authors. Leaves alternate, pinnate or pinnatifid. Flowers solitary, or somewhat glomerate. Tube of corolla elongated, much exserted beyond the calyx.

4 G. CORONOPIFO'LIA (Pers. ench. 1. p. 187.) stem erect, tall, panicled at top, and clothed with glandular down; leaves pectinately pinnate; leaflets linear, acuminated; tube of corolla 5 times longer than the calyx; limb of corolla spreading, with oblong or ovate, acute, flat segments. ☄. H. Native of Carolina; and on the banks of the Canadian river. Lindl. bot. reg. 1691. Sweet, fl. gard. n. s. t. 289. Ipomopsis picta, Hort. gall. Ipomopsis elegans, Michx. fl. bor. amer. 1. p. 141. Smith, exot. bot. 1. p. 23. t. 13. Ipomopsis coronopifolia, Nutt. gen. amer. 1. p. 134. Cantua coronopifolia, Willd. spec. 2. p. 879. Andr. bot. rep. 415. Pursh, 1. p. 147. Cantua pinnatifida, Lam. ill. 1. p. 479. C. elegans, Poir. dict. suppl. 2. p. 80. Polemonium ruberum, Lin. spec. 1. p. 251. Ipomœa rubra, Lin. syst. 171. Cantua thyrsoidea, Juss. ann. mus. 3. p. 119.—Dill. elth. 2. p. 321. t. 241. f. 312. Stem clothed with fine glands, mixed with downiness. Corollas scarlet, blotched with white.

Buckhorn-leaved Gilia. Fl. A tig. Sept. Clt. 1726. Pl. 3 to 5 feet.

J(3. AGGREGA'TA (D. Don, in e-flinl). phil.journ. 1822. Sweet, fl. gard. n. s. t. 21 B.) stem erect, tall, glabrous, panicled at top; leaves pectinately pinnate, and are, as well as the bracteas, covered with cobwebby (1 villi; leaflets or sepmt-nii linear, mucronate; flowers fascicled at the extremities of the *h* anches, drooping a hule; tube of the corolla fi times Iongi-r than the caly •. segments o fthe limit ovate-lanceolate, acuminated, clannetted. 0. LI. Native of ihe north-west coast of \mei ica, particularly towar< Is the sources of the Columbia, and on the Can-ulian rh er. Ipomopiis •elegant, Lintll. bot. leg. 1281, Gi)i:t puichella, Doitgl. rn s. Cántua aggregáta, Pursh, ar,ier. I. p. 1*7. I pper leaves undivided. Calyx • lotlicd with ^landinV hairs. Cor ilia an inch Ion g. scarlet; limb at first <Tect, at length recurved. Stamens a little exsei; ed. Segmen ;s of corolla spotted.

Aggregate-flowered Gilia. Fl. Aug. Sept. Clt. 1827. Pl. 2 feet.

6 G. FLOKIDAVA; p]ant glab rout; leaves pinna)e, capillary; flowers dispo od in loose racL'nn ; corolla tubular, narrowed at bottom; limb 4 times shorter ih^n tlie tube; cai yx short, vitli setaceous segments. ^. F. Siitive of i lorida. Cántua floridàna, Nutt. in jou rn. acini. phil. 2. p. 110. Very lik- *G. coronopifólia*, but is a more slen icr plant.

Florida Gilia. Pl. 2 to 3 feet.

7 G. SESSILIS; stem dwarf, branched, clothed with glandular down j I aves pinnatifid; segments cuneated, with pointed teeii ; bracteas ovate-lane olate, mucronate, longer than the caly *K*; corol):i with a filiform tube, elmilile ilie length of the calyx; flowers fascicled. G- H. Native of Mexico. Gilia pinnatifida, Sesse • t Moeino, in lierb. Lamb. Stamens inclosed. *Sesse's* Gilia. Pl. ½ foot.

8 G. TENUIFLO'RA (Benth. I. c.) stem erect, tall, clammy, nearly *as* ked, and I panicled at top; lawei glabross, bipinnate; flow frs usually solitary; a orymbs loose, on long peduui les; corolla 4 times longer than the calyx. *Q.* H. Native of < alifornia, Douglas. Flowers blue.

Thin-flowered Gilia. Pl. 3 ;o *i* feet,

9 G. SGIKLORA i jil.iiH quit* glabrous; leaves scattered, finely pinaiifid; btcm much bra ched, panicled a i top; flowers disposed in loose terminal, panicled, •.ledunculatc corymbs; lube of corolla vi ry long. ⊙. H. Native on ilie banks of tlie Canadian river. Cántua longifl6ra, I orrcy, in aon. ly- p. 221. Corolla salver-shaped, having t le tube an inch long. \ rL•lL^a^k-able species, having n f such the appear :mce of a *Phlox,* It differs from •\\\ ntlk-r spei ies, in the salver-sluiped col olla.

Long-flowered Gilia. Pl. 2 to 3 fee

10 G. AMENA'RIA (Benth. I. c.) stem humble, dummy, nearly naked; leaves pil natifid; lubes ovate; flow what glomerate; corollas 8 times longer tban tlie calyx. ©. II Native of California, Dougl:i s. Flowers blue.

Sand Gilia. **Pl. dwarf.** *fa*

II (4. CHASSALA'RIA O'UA ^Bentli, 1. c.) stem erect, clammy, nearly naked, ami piiiiit- ed at top; leaves pinnatilid, rather woolly, but at length **glabrou** segments oblong-lanceolate, entire or cut; flowers nearly **olitary, di** varicately panicled; corollas twice lon**ger** tiian the caly s. *Q,* H. **Native** i of Chili, Cuming. Fir. wers yel l.iwish?

Thick-leaved Gilia. Pl. I to 2 **Eeet** *I*

Sect i. **111.** EUOI'HA (from eu, well, Mr. Bentham) *Gilia*; this section ia roiis. dered to contain the true species of the ge .ms.) Benih. I. c. Leaves alternate, pinnatifi -\ or pinnate, i flowers almost solitary, h nt usually glomerate. **Tui** e of corolla rather -horter than i he calyx.

12 G. PARVIFLO'RA (Sprcng. syst. 1. p. 626.) stem much branched, and n, as well as the calyxes, clothed with glandular down; leaves pinnatifid, lower ones bipinnate; segments linear; Hoi-. ers solitary, lerminal, panicled; corolla about twice the length oi the calyx. ⊙. H. Native of North-west America. Gilia inconspicua, Do; gl. in bot. mag. 2853. Ipomopsis inconBpicu;i, Smith, exot. bot. 1. t. 14. Cántua parviflora, Pursh. amer. 2, suppl. p. 730. Corolla small, blue; tube nearly white.

Inconspicuous Gilia. Fl. Sept. Nov. Clt. 1793. Pl. ½ to 1 foot.

13 G. TRICOLOR (Benth, 1, cliort. tran s. 1. t. 18. f. 3. bot. reg. t. 1794.) stem erect, glabrous, leafy; leaves bipinnate; leaflets or segment-i linear-su bulatc; corymbs S-6-i lowered, virgately panicled; coi olla about 3 times longer than the calyx. ⊙. H. Native of Cnlitbvr. ia, Douglas. Sweet, fl. gard. n. s. t. 264. The peduncles form a large and rather di nse panicle. Corolla with an orange y 'How tube iind centre, and tl e light purple or whi- e of the margin sepa rated by a circle of deep purple. Not[1] ing can be pret tier than this, and other species, when thickly covering a bed a few feet in length and breadth.

Three-coloured-flowered Gilia. Fl. June, Sept. Clt. 1833. Pl. I foot.

14 G. LACTEA'TA (Ruiz, et Pav. fl. per. 2. p. 17. t. 123. f. *b* Pers. **ench. 1. p. 187.) do** ny; stem erect; leaves pinnatifid; segments narrow-oblong, sinuated; peduncles axillary, solitary, 1-3- **•flowered**; rorolla tubular, hardly l onger than the calyx; calj cine segments subulate. ⊙. H. Native of Chili, Peru, California, tvc., •n sandy hills. Cántua breviflòra, Juss. ann. mus. 5. **|i. 1 1 '.K** Thómia mul **jifida, Dumb,** herb. Corollas **pui|** lish, with lanceolate segments.

Jagged-l aved Gili Fl. July. Clt. 1831. Pl. ½ to 1 foot.

15 G. **!iat \>\ pit matt'.** ILTICAU'LIS (Benth, 1. c.) stem erect, smoothish; leaves somew smoothish; segments linear; corymbs 3-10-flowere!, uu very long jiedui^ es, scarcely panicled; corollas h •vtlly twiee Iwigrr than the calyx. Oi, II- x ative of California, Douglas. Coro Has blue.

Many-stemmed Gilia. Pl. 1 foot.

lij <• ACHILLEIFO'LIA (Benth, 1. *c.*\ stem erect, smoothish; lea^ es twice or tliriLf pinnate; Bl gments or leaflets linear-subulate; toryinlis capr te, many-flowered, on very long ptdunci. s; caly Ld rather woolly. corollas twice longer than the calyx; stamens shorter than tlie corolla, • . 11 Native of California, Doug]. Lindl. bot. reg. I68t' Sweet, fl. gard. n. B. t. 28o. Hi rb branched, pak- green, glabrous. Bases of lea. es ciliated 1. Corollas purplish 1;! ue. This species resembles *G. capitata.*

Milfoil-leaved G lia. Fl. Aug. Dec. Clt. 1833. Pl. 1 foot.

17 G. CATITA'TA (Dl ug. in bot. mag. 2698. bot. reg. 11 70.) plant glabrous, i erect; leaves bipinmuifid; segmen is lim-ar. cul ; flowers sessile, disposed in dense heatla, similar to those oi' *J-* ense, on long peduncles; corolla longer than the calyx; stamens shorter than the corolki ⊙. H. Native of No ith-west America. Flowers blue.



Capitate-flowered Gilia. II. Jnn. Sept. Clt. la2ti. 1'l. 1 to 2 feet.

Cult. All the species of *Gilia* are elegant, hardy annuals, of easy culture, the seeds only requiring to be sown in the

open border in spring. The larger the quantity of each grown together, the more showy they appear.

IX. ÆGOCHLOA (from αἴξ, αἰγός, *aix, aigos*, a goat; and χλόα, *chloa*, a green herb; from the fetid smell of some of the species.) Benth. in bot. reg. under no. 1622.—Gilia species, Dougl.

Lin. syst. *Pentándria, Monogýnia.* Calyx tubular or campanulate, membranous at the base, 5-cleft at the apex; segments unequal, stiff, entire or multifid, spinose. Corolla somewhat salver-shaped; tube about equal in length to the calyx; limb 5-parted; segments oblong, entire. Stamens inserted in the upper part of the tube inside; anthers ovate-roundish. Cells of capsule many-seeded.—Herbs usually clammy and fetid. Leaves pinnate; segments or leaflets cut, very acute.

1 Æ. INTERMÉDIA (Benth. l. c.) plant erect, branched; leaves glabrous, pinnate; leaflets or segments linear-subulate, very acute, cut, divaricate, rather spinose; calyx woolly, having the teeth for the most part multifid; corolla rather shorter than the calyx; stamens exserted. ☉ H. Native of California and North-west America, Douglas.

Intermediate Ægochloa. Pl. 1 foot.

2 Æ. COTYLEDÓNIA (Benth. l. c.) plant erect, strict; leaves glabrous, bipinnate; segments linear-subulate, very acute, those of the upper and floral leaves spinose; bracteas villous; calycine teeth nearly entire; corolla equal in length to the calyx; stamens exserted. ☉. H. Native of California, Douglas.

Cotula-leaved Ægochloa. Pl. 1 foot.

3 Æ. CYNOSURÓIDES (Benth. l. c.) plant clothed with soft down; stem branched; leaves pinnate; leaflets deeply pinnatifid; lobes divaricate, rather spinose; calyxes and bracteas membranous at the base, glabrous, deeply pinnatifid, and villous at the apex; corolla about twice longer than the calyx; stamens exserted from the tube. ☉. H. Native of California, Dougl.

Dissay Ægochloa. Pl. 1 foot.?

4 Æ. PUNGÉNS (Benth. l. c.) plant erect, much branched, clothed with clammy down; leaves pinnate; leaflets entire or cut, the lobes lanceolate-linear, very acute and spinose; bracteas ciliately hairy, dilated at the base; calycine segments lanceolate, nearly entire; corolla longer than the calyx; stamens inclosed. ☉. H. Native of California, Douglas; and of the west coast of America, in moist ground, in mountain valleys, near the sources of the Multnomack river, one of the southern branches of the Columbia. Gilia pungens, Dougl. in bot. mag. t. 2977. Gilia squarrosa, Hook. et Arn. in Beech. voy. p. bot. p. 115. Holtzia squarrosa, Eschscholz, in mem. acad. petersb. 10. p. 233, and in Linnæa, 1823, p. 147. Flowers glomerate, terminal. Calyx longer than the corolla, ex Hooker. Tube of corolla swelling upwards, almost white; limb spreading, pale blue; segments ovate.

Pungent Ægochloa. Fl. July. Clt. 1833. Pl. 1½ foot.

5 Æ. ERYNGIOÍDES (Benth. l. c.) plant smoothish; leaves linear, opposite, floral ones pinnatifid, spiny; flowers glomerate; calyx multifid. ☉. H. Native of Chili. Gilia eryngioides, Bot. reg. 1835. t. p. 122. Gilia microcalyx, Lehm. cat. sem. hort. hamb. 1832? Nearly allied to the preceding; but differs, in the smoothness of the plant, and in the leaves, calyx and corolla.

Eryngium-like Ægochloa. Pl. 1 foot.?

6 Æ. ATRACTYLIOÍDES (Benth. l. c.) plant very clammy; leaves pinnatifid; rachis dilated; segments subulate, divaricate, spinose; floral leaves ovate, imbricated, spiny-toothed, clasping the flowers; calycine teeth subulate, entire. ☉. H. Native of California, Douglas. Habit of *Atractylis humilis*.

Atractylis-like Ægochloa. Pl. 1 foot.

7 Æ.? TORREÝI; plant erect, simple, or a little branched, stiff, glabrous; leaves sessile, digitate, alternate, imbricate; segments 3-6, pungent; flowers axillary in the upper part of the stem, solitary, sessile; segments of corolla obovate, obtuse. ☉. H. Native of the Rocky mountains, in the valleys of Loup river. Gilia pungens, Torrey, in ann. lyc. 2. p. 220. Leaves sessile, digitate, appearing as if in clusters. Corolla salver-shaped, with a long, slender tube. Stamens inclosed. Cells of capsule many-seeded. Seeds angular. This has a very distinct habit from the other species.

Torrey's Ægochloa. Pl. 1 foot.

Cult. The species of *Ægochloa* require the same treatment as those of *Gilia*. They are singular, but by no means showy plants.

X. COLLOMÍA (from κόλλα, *colla*, glue; in reference to the seeds being enveloped in a kind of gluey, sticking substance.) Nutt. gen. amer. 1. p. 126. Dougl. in bot. reg. 1160. and 1174. Gilia species, Hook.

Lin. syst. *Pentándria, Monogýnia.* Calyx campanulate, 5-cleft, or somewhat 5-parted; lobes lanceolate or linear, equal, entire. Corolla salver-shaped; with a slender, exserted tube; and a spreading, 5-parted limb; segments oblong, entire. Stamens inserted towards the middle of the tube; anthers ovate-roundish. Cells of capsule 1-2-seeded.—Annual herbs. Leaves alternate, the lower ones rarely opposite, quite entire, or deeply toothed, rarely pinnatifid. Flowers disposed in dense heads, propped by broad ovate, quite entire bracteas.

1 C. HETERODÓXA (Hook. bot. mag. 2893. Lindl. bot. reg. 1547.) plant prostrate, branched, clothed with glandular down; lower leaves pinnatifid and cut; superior ones cuneated, pinnatifid or cut; bracteas or involucral leaves, oblong, acute, quite entire. ☉. H. Native of North-west America. Flowers crowded, shorter than the involucral leaves. Corolla red, with a white centre.

Various-leaved Collomia. Fl. Ju. Aug. Clt. 1836. Pl. ½ to ¾ foot.

2 C. COCCÍNEA (Lehm. del. sem. hort. hamb. 1832. Benth. bot. reg. 1622.) plant erect, branched, beset with glandular down; leaves lanceolate-linear; upper ones ovate-lanceolate, quite entire, or deeply 2-4-toothed at the apex; calyx semi-5-cleft, with broad-lanceolate, obtuse segments; corolla more than twice longer than the calyx; cells of capsule 1-seeded. ☉. H. Native of Chili, about Conception and Talcahuana. C. Cavanillésii, Hook. et Arn. p. 37. Phlox lineàris, Cav. icon. 6. p. 17. t. 527. Phlox bilòba, Ruiz et Pav. fl. per. 2. p. 17. C. laterítia, D. Don, in Sweet, fl. gard. t. 206. This species resembles *C. linearis*; but from which it is distinguished by its deep red flowers, and by the leaves being frequently divided at the apex into 2-3 sharp segments, of unequal size.

Scarlet-flowered Collomia. Fl. Ju. Oct. Clt. 1832. Pl. 1 to 1½ foot.

3 C. LINEÁRIS (Nutt. gen. amer. 1. p. 126. Lindl. bot. reg. 1166.) plant erect, branched, clothed with glandular hairs; leaves ovate-lanceolate, quite entire, opaque, uniform, superior ones downy beneath; calyx cup-shaped, 5-parted; corolla more than twice longer than the calyx; cells of capsule 1-seeded. ☉. H. Native of North America, from Lake Winepeg to the Western Ocean; and at the sources of the Arkansas. Hook. bot. mag. 2863. Heads of flowers involucrated like the rest. Corolla with a rufous tube, and a rose-coloured limb. Segments of calyx 3-veined.

Linear-leaved Collomia. Pl. Ju. Oct. Clt. 1826. Pl. 1 foot.

4 C. GRANDIFLÓRA (Dougl. in bot. reg. t. 1174. Hook. bot.

mag. 2894.) plant erect, branched, rather downy at top ; leaves oblong-lanceolate, entire, shining, ciliated with glands ; calyx 5-cleft, villous, glandular ; corolla ventricose ; limb spreading ; cells of capsule 1-seeded. ©. H. Native of North-west America, in the country bordering on the river Columbia; and as far eastward as the Rocky mountains. Stem purple. Heads of flowers hemispherical, pruinose, clammy. Corollas like those of *C. linearis,* of a peculiar reddish yellow, or nankeen colour.

Great-flowered Collomia. Fl. Ju. Oct. Clt. 1826. PL 1| to 2 feet.

5 C. GILIOIDES (Benth. in bot. reg. under no. 1622.) leaves pinnate; leaflets linear, entire ; calyx deeply 5-cleft; stamens inclosed; cells of capsule 1-seeded. ©. H. Native of California, Douglas. Corollas very like those of *C. grdcilis.*

Gilia-like Collomia. PL 1 foot.

6 C. GLUTINO'SA (Benth. 1. c.) procumbent; leaves deeply pinnatifid, almost pinnate ; segments oblong-linear, entire, or a little cut; calyx nearly 5-parted; stamens longer than the corolla; cells of capsule 1-seeded. 0. H. Native of California, Douglas. Corollas like those of *C., grdciUs.*

Clammy Collomia. PL procumbent.

7 C. NAVARRE[N]TIA ; leaves pinnately multifid ; segments linear-subulate ; flowers capitate, involucrated by numerous bracteas; stem downy, simple, or a little branched. ©. H. Native of Chili. Navarrètia involucràta, Ruiz, et Pav. fl. per. 2. p. 8. Segments of calyx furnished with 3 pungent teeth. Stamens exserted. Stigma bifid. Capsule 2-celled, few-seeded, ex Ruiz, et Pav. 1. c. Corolla purple.

Navarretia Collomia. PL \ to 1 foot.

8 C. GRA'CILIS (Benth. 1. c.) plant erect, branched, clothed with glandular down; leaves lanceolate-oblong, obtuse; calyx 5-parted ; calycine segments long, subulate ; stamens inclosed ; cells of capsule 1-seeded. ©. H. Native of the north-west coast of America, on the banks of the Spokan river; and on high ground, near Flat Head river, on light soils ; and California, Douglas; Chili, Cuming ; &c. Gilia grdcilis, Doug, in bot. mag, 2924. Lower leaves opposite. Flowers crowded at the extremities of the branches, at length elongated into racemes. Calyx clothed with black glands. Corolla small, with a yellow tube, rose-coloured limb, and oval segments.

Slender Collomia. Fl. Ju., Oct. Clt. 1826. PL 1 foot.

9 C. CAVANILLESIA'NA ; suffruticose ; leaves pinnate ; leaflets long, linear, entire; peduncles axillary, solitary, usually 5-flowered; corolla 3 times. longer than the calyx, which is 5-cleft; cells of capsule 1-seeded. *? . G. Native of Monte Video and Buenos Ayres. Phlox pinnàta, Cav. icon. 6. p. 17. t. 528. f. 1. Poir. diet, suppl. 4. p. 397. Cántua glomeriflora, Juss. ann. mus. 3. p. 119. Rccm. et Schultes, syst. 4. p. 368. Flowers disposed in heads, small, cream-coloured.

Cavanilles's Collomia. PL 1 to 2 feet.

Cult. All the species are of the most easy culture, the seeds only requiring to be sown in the open border in spring. Some of the kinds are rather showy.

XI. CALDA'SIA (named after J.Caldas, a botanist of Santa Fe de Bogota.) Willd. hort. berol. 1. p. 71. t. 71. enum. 1.p.202. H. B. et Kunth, nov. gen. amer. 3. p. 166. D. Don, in edinb. phil. journ. Bonplàndia, Cav. icon. 6. p. 21. t. 532.

LIN. SYST. *Pentdndria, Monogyma.* Calyx tubular, 5-toothed, equal to the corolla in length. Corolla somewhat funnel-shaped, unequal; limb 5-lobed ; lobes cuneated, emarginate. Stamens 5, equal, inserted in the middle of the tube, declinate, exserted. Capsule oblong, trigonal; valves membranous; cells 1-seeded. Seeds oblong, somewhat trigonal, convex outside, mucilaginous. Albumen sparing. Radicle hardly shorter than the cotyledons.—A much branched, annual, erect herb, clothed with glandular hairs. Leaves alternate, simple, elliptic-acuminated, serrated. Flowers axillary, twin, pedicellate, bractless. Corolla of a violet-blue colour, or purple.

1 C. HETEROPHY'LLA (Willd. 1. c.) ©. S. Native of New Spain, gathered by Humboldt and Bonpland, in the Botanic Garden of Mexico. Bonplàndia geminiflora, Cav. 1. c. Pers. ench. 1. p. 187. Roem. et Schultes, syst. 4. p. 370. Leaves lanceolate. Corolla an inch long; with linear segments, red filaments, and yellow anthers.

Various-leaved Caldasia. FL Ju. Aug. Clt. 1813. PL \\ foot.

Cult. This plant requires the treatment of other tender annuals; that is, the seeds should be sown on a hot-bed, in spring, and the plants, when of sufficient size, should be planted in separate pots, and placed in the greenhouse during summer.

XII. LCESELIA (so named, by Linnaeus, after John Loesel, author of Flora Prussica, 1654, published at Gottsched, with additions, in 1703.) Lin. gen. 767. Schreb. gen. no. 1029. Gaertn. fruct. 1. p. 295. t. 62. Juss. gen. p. 135. Lam. ill. *527.* Royèna, Houston, in phil. trans.—Cántua species, Willd. Hoitzia, Juss. gen. ed. Usteri, p. 152. Cav. icon. 4. p. 44. t. *366,* H. B. et Kunth, nov. gen. amer. 3. p. 162.

LIN. SYST. *Pentdndria, Monogynia.* Calyx tubular, dry, 5-cleft (f. 29. a.), with pungent segments, furnished with 5 lanceolate, pungently mucronate bracteas outside (f. 29. /.). Corolla funnel-shaped (f. 29. &.), 3 times longer than the calyx; tube a little curved ; limb 5-lobed ; lobes broadly obovate, entire. Stamens equal, exserted (f. 29. c). Capsule trigonal; cells few-seeded; valves membranously crustaceous. Seeds compressed, nearly orbicular, girded by a very narrow membrane. Albumen sparing. Radicle about equal in length to the cotyledons.—Stiff, branched shrubs, natives of Mexico ; branches terete, downy or villous. Leaves alternate, ovate or lanceolate, mucronate, hairy, sharply serrated, reticulately veined, cuneated at the base, on very short petioles. Flowers solitary or twin, axillary, pedicellate, large, showy, scarlet or violaceous.

1 L. CILIA'TA (Lin. spec. 875.) leaves ovate-lanceolate, acutely serrated ; corymbs many-flowered ; stamens, 4 of which are exserted, and the fifth short, seated on the middle ot the segment; bracteas roundish-ovate, cordate, ciliately toothed. T? . G. Native of Vera Cruz. Lam. ill. 527. Gaertn. frucr. 1. p. 295. t. 62. f. 3. Stem quadrangular, branched. Flowers yellow. Bracteas imbricated. Cells of capsule 2-seeded.

C?7iatec/-bractead Loeselia. Shrub 4 to 6 feet.

2 L. COCCINEA ; leaves nearly sessile, ovate ; flowers axillary, solitary, on short peduncles ; bracteas lanceolate, subserrated, veiny, hairy. T?. G. Native of Mexico, plentiful near Guanaxuato, and elsewhere. ; it is also cultivated in the gardens. Hoitzia coccinea, Cav. icon. 4. p. 44. t. *365.* H. B. et Kunth, nov. gen. amer. 3. p. 162. Hoitzia Mexicàna, Lam. diet. 3. p. 134. Cántua Hoitzia, Willd. spec. 1. p. 878. Cántua coccinea, Poir. suppl. 2. p. 80. Bracteas villous. Leaves acutely mucronate, cuneated at the base, scabrous above, and hairy beneath ; serratures mucronately awned. Calycine segments lanceolate-subulate, 1-nerved. Corollas scarlet, glabrous; segments of the limb obovate, spreading*

FIG. 29.



Scarlet Lexelia. Fl.? Clt. 1824. Shrub 3 to 4 feet.

3 L. CRASSIFLÒRA; leaves nearly sessile, lanceolate, or oblong-lanceolate, sharply serrated: flowers usually solitary, on the tops of the branchlets; bracteas obovate, mucronately serrated, diaphanous, white, veined with green, smoothish. ♄. G. Native of Mexico, along with the preceding species. Hoitzia cœrùlea, Cav. icon. 4. p. 44. t. 368. H. B. et Kunth, nov. gen. 3. p. 163. Cántua cœrùlea, Poir. suppl. 2. p. 80. Stems diffuse. Branches clothed with hair-like down. Leaves acutely mucronate, obtuse at the base, scabrous above, and hairy on the veins beneath; serratures mucronately awned. Flowers usually solitary, but sometimes twin or turn, ex Bonpl. Calycine segments oblong, mucronate, 3-nerved in the middle. Corolla blue, glabrous, with obovate, spreading segments.

Blue-flowered Loxelia. Fl.? Clt. 1824. Shrub 1 to 2 feet.

4 L. ACARDIOÒDES; leaves ovate-lanceolate, petiolate, spiny-toothed; those of the branches nearly linear; flowers axillary, solitary, pedunculate; bracteas lanceolate, obsoletely denticulated. ♄. G. Native of Mexico, between Actopan and Salvaterra, where it is called by the natives, *Huitzitzilzin*; hence the generic name. Hoitzia glandulòsa, Cav. icon. 4. p. 45. t. 367. Cántua glandulòsa. Poir. suppl. 2. p. 80. Stem beset with glandular hairs. Calycine segments subulate. Bracteas beset with glandular pili on the back. Corolla red. Capsule ovate-oblong.

Glandular Loxelia. Fl.? Clt. 1825. Shrub 2 feet.

5 L. ARISTÀTA; leaves petiolate, ovate, doubly serrated; flowers numerous, crowded at the tops of the branches; bracteas ovate, dentately awned, diaphanous, reticulated with green veins, glabrous, outer ones corilate, remote, and smaller. ♄. G. Native of Mexico, between Lagura and Actopan, &c. Hoitzia aristàta, H. B. et Kunth, nov. gen. amer. 3. p. 164. Branches glabrous, but the branchlets are downy. Leaves acute, rounded at the base, scabrous above, and paler and hairy on the nerves and veins beneath; teeth mucronately awned. Calycine segments lanceolate, subulate at the apex, 1-nerved. Corolla violaceous; with spatulate, rounded, ciliated segments.

Awned Loxelia. Shrub.

6 L. CERVANTÌTA; branches clothed with glandular hairs; leaves nearly sessile, oblong or oblong-lanceolate, sharply serrulated; flowers twin, crowded at the tops of the branches; bracteas linear, 1-nerved, mucronate, acutely serrulated towards the top, and beset with glandular villi. ♄. G. Native of Mexico, with the preceding. Hoitzia Cervantèsii, H. B. et Kunth, nov. gen. amer. 3. p. 164. H. spicàta, Ruiz. et Schultes, syst. 4. p. 165. Shrub much branched. Leaves scabrous on the nerves and veins, on both surfaces; teeth mucronate. Calycine segments lanceolate, acutely mucronate, serrulated at apex, marked with 3 green nerves. Corolla violaceous; with obovate segments.

Cervantes' Loxelia. Shrub.

7 L. CONGLOMERÀTA; branches clothed with glandular villi; leaves on short petioles, ovate, sharply serrated: flowers solitary, crowded into heads at the tops of the branchlets; bracteas lanceolate, acutely serrulated, veiny, and clothed with glandular hairs. ♄. G. Native of Mexico. Hoitzia conglomeràta, H. B. et Kunth, nov. gen. 3. p. 165. H. capitàta, Willd. rel. in Roem. et Schultes, syst. 4. p. 370. Shrub canescent. Leaves acuminated, narrowed at the base, hairy on both surfaces; teeth mucronate. Calycine segments 5-toothed at top; teeth subulate. Corolla violaceous.

Conglomerate-flowered Loxelia. Shrub.

8 L. SERRATIFÒLIA (Schlecht. et Cham. in Linnæa, 6. p. 385, under Hoitzia.) stems erect, terete, compressed at the nodi, and are, as well as the bracteas, downy; cauline leaves connated, entire, ovate, acute, serrated, tapering into the petioles; serratures acuminated, paler beneath, with that part of the stem ciliated which runs from the middle of the nerves of the leaves; flowers nearly sessile, solitary, or loosely approximate, each involucrated by 4-5 bracteas; teeth of bracteas cuspidate; stamens equal in length to the corolla. ♄. G. Native of Mexico, in meadows, about Misantla and Colipa. Habit of *Lobelia*. Flowers small, purple, or bluish purple.

Nettle-leaved Loxelia. Shrub.

9 L. INVOLUCRÀTA; plant clothed with minute, glandular pubescence; leaves petiolate, ovate, acute, doubly toothed, and fringed on the margins; bracteas about as long as the flowers; flowers in fascicles. ♄. G. Native of Mexico. Phlòx involucràta, Sesse et Moc. in herb. Lamb. Calyx with membranous, acuminated segments. Stem nearly glabrous, slender.

Involucrated Loxelia. Shrub 2 to 3 feet.

Cult. The species of *Loxelia* are extremely elegant shrubs, particularly while in blossom. A mixture of loam, peat, and sand, is the best soil for them; and cuttings will strike root in sand, under a hand-glass.

XIII. CA'NTUA (Cantu is the Peruvian name of one of the species.) Juss. gen. ed. Usteri, p. 152. ann. mus. 3. p. 117. Lam. ill. t. 106. f. 1. H. B. et Kunth, nov. gen. amer. 3. p. 161. D. Don, in edinb. phil. journ. Periphragmos, Ruiz. et Pav. fl. per. 2. p. 17.

Lin. syst. *Pentàndria, Monogynia.* Calyx tubular, 5-toothed, usually cleft to the middle on both sides. Corolla funnel-shaped, 3 times longer than the calyx; tube curved a little; limb 5-lobed; lobes obcordate, convolute in æstivation. Stamens inserted in the tube near the base, exserted. Capsule oblong, trigonal, with 3 deep furrows opposite the dissepiments; valves coriaceously crustaceous; cells many-seeded; seeds oval, compressed, girded by an oblong, membranous wing. Albumen sparing. Radicle shorter than the cotyledons.—Erect, branched shrubs, natives of Peru, with the habit of *Lycium*. Leaves alternate, petiolate, elliptic, acuminated, or cuneate-oblong, quite entire, or serrated, or rarely pinnatifidly sinuated, downy on both surfaces while young, but always on the under surface. Flowers terminal, corymbose, rarely almost solitary, as in *C. ovàta*, white or purple; in *C. bazifòlia*, large and showy.

1 C. PYRIFÒLIA (Juss. ann. mus. 3. p. 117. t. 7.) leaves elliptic, acuminated, quite entire; corymbs dense-flowered; peduncles downy; stamens twice as long as the corolla, which is curved. ♄. G. Native of Peru, near Loxa, where it is called *Tara* by the natives. Lam. ill. t. 106. f. 1. H. B. et Kunth, nov. gen. amer. 3. p. 161. Periphragmos flexuòsus, Ruiz. et Pav. fl. per. 2. p. 17. t. 181. Cántua flexuòsa, Pers. ench. 1. p. 187. Cántua Peruviana, Gmel. syst. 1. p. 347. Cántua buxifòlia, Willd. herb. in Roem. et Schultes, syst. 4. p. 369. Leaves fascicled. Corolla white. Calyx 5-5-toothed, ex Ruiz. et Pav. The saliva becomes yellow by chewing the leaves of this species.

Pear-leaved Cantua. Shrub 5 to 6 feet.

2 C. PYRIFÒLIA (D. Don, in edinb. phil. journ. 1823.) leaves ovate-lanceolate, bluntly acuminated, serrated; corymbs few-flowered; peduncles glabrous; stamens shorter than the corolla, which is curved. ♄. G. Native of Peru. Periphragmos species, nova Pavon mss. Habit of the preceding; but differs in characters indicated above, and in the larger flowers, in the longer capsules, and much larger seeds.

Tea-leaved Cantua. Shrub 5 to 6 feet.

3 C. BUXIFÒLIA (Juss. ann. mus. 3. p. 118.) leaves oblong, sinuately pinnatifid, acuminated; corymbs many-flowered; peduncles clothed with glandular hairs; stamens much exceeding the corolla, which is salver-shaped. ♄. G. Native of Peru, where it is called *Pysio* by the natives; and on the Andes, near Nabon. H. B. et Kunth, nov. gen. 3. p. 161. Branches

clothed wiili clammy, glandular hair (('orolhis white.

Oak-leaved Cantua. shrub 10 to 12 tent.

4 C. QUERCIFOLIA (Juss. ann. mus. 8. p. 118. t. S.) ten: •s cuneat* t-niiro ; enryi: flowered; ped ': • ^- Native of Peru, where it is *l'A\n.* did. 1. p. 603. ill. '•. , each, J.]>. 187. P auiz. *c*\ Pav. fl. per. 2. p. 18. *t.* 133. Tops of brane! ny. Corollas pa! 1! as of oilier -species, when I yellow colour, and might

Box-leaved Cantua. Shru]> 5 to 0 f

5 C. OVATA (Cav. ic m. *i.* p. +3, t, 363. Jnss. ;inn. mus. p. 1 L . on ate, entii cut JUIRU-M solitary, 1-flowered) glabrous; etamens irolla, which . the na- Corolla Ijiuisli r lite.

Ovate-leaved Cantua. Shru ub (i to 8 ; 6 C.? CORDATA (Juss. ann. mus. . p. 119.) branch* s op, vny ; leaves nearly opposite, cordate, doui r, much . and downy ; an- ther unknown, *h* . 8. Native of Peru.

Cordate-leaved Cantua. i. Shrul> 4 to (1 fi 7 C. CUNEIFOLIA (Jusa. 1. c.) this is s very doubtful species of the g< us.]. S. Native of Peru.

Wedge-leaved Cantua. Shrub 4 to 6 feet.

8 C.? MEDIAVOLA'SMCA (Spreng. syst. add. p, 64.) leaves oblong-lanceolate, attenuated at both ends, quite glabrous, entire, shining above; panicles axilliiiry. I; . S. Nativt- of Brazil. at Rio Grande, Sel!o.

Rio Grande Cantua. Shrub.

Cult. All the species are showy, and worth cultivating. See *Lavelia*, p. 248, for culture and propagation.

ORDER CLXI1I. UVDIlOLE.VCI-.r, (this order comprehends it^rfi'ii, irtantchai *nsHydrblea.)* D. Don, in edinb. phil. journ. July 1832. Choisy. in mem. soc. pin- gen. 6, p. IOC. Hydroleffi, R. Br. cong, p. 32.—Convolvulaceæ, part. Juss. gen.

C;Jyx 5-cleft; segments equal, usually distiiit't even to the base, frequently spathaceous (lately dilated at top, permanent. Corolla ii]onopf;talous, usually campanulas, 5-Iobed at top. Stamens inserted in the corolla, alternating with its lobes, sometimes included, and sometimes exserted. Styles 2, exceeding the stamens; stigmas thick or **capitate. Ovarium 2-celled; many-seeded.** Capsule 2-celled, localicidal-2-valved; dissepiments fixed to the middle of the valves; placentas 2 in each cell, fixed to the middle of the dissepiment, sometimes spongy and combined, sometimes laminaform and separated. **Seeds** very numerous, sessile on the placentas. **Albumen** *thin.* Embryo straight.—**Annual, herbaceous, or shrubby** plants. Stems straight or diffuse, glabrous **or** downy, also very hispid, rarely exceeding 2 feet in height; with **alternate** branchlets. Leaves alternate, simple, entire, or usually toothed, more **or** less crowded, usually petiolate. Flowers corymbose or spicate, sometimes also disposed in the manner of *Heliotropium.*

This order is often combined with *Convolvulaceæ*, but is more closely allied to *Scrophularineæ* and *Solaneæ*; but it differs from these orders, in the regular corolla, 5 stamens, and straight embryo.

Sepals of the genera.

1 HYDROLEA. Calyx 5-sepalled. Corolla rotately campanulate. Stamens inserted in the tube of the corolla. Stigmas depressedly capitate. Capsule 2-celled; placentas spongy, terete.

3 HYDROI.]., Calyx 5-cleft. Corolla rotate. Stamens insuTted in the lobes of the corolla. Capsule 2-celled, dehiscing at top ; receptacles or placentas fleshy.

3 NAMA. Calyx 5-sepalled. Corolla tubularly funnel-shaped. Stamens nearly inclosed. Stigmas bluntish. Capsule 2-celled ; placentas 4, laminaform, at first joined by twos, afterwards free.

4 WIGA'KDIA. Calyx 5-sepalled. Corolla funnel-shaped. Stamens exserted. Stigmas depressedly capitate. Capsule 2-celled; placentas like those of *Nama.*

5 (ODON. Calyx 10-lS-parted. Corolla tubular; limb 10-12-cleft. Stamens 10-12. Stigmas simple. Capsule 2-celled, dehiscing at top; dissepiment double, with seminiferous edges.

I. II\IDRO'LEA (from ὕδωρ, *hydor*, water; and ἐλαία, *elaia*, an olive; in reference to the habitats of the species, and their oiliness,) Lin. gen. no. 318. Gaertn. frutt. 1. p. 268, t. 55. Juss. gen. 134. Stëris, Lin. gen. edit. Reich. 342. Nama species, Lin. Sagonea, Aubl. guian. 1. p. 285. t. 111. Reichëlia, Schreb. gen. no. -'"12.

LIN. SYST. *Pentandria Digynia.* Calyx permanent, of 5 sepals. Corolla rotately cantpanulate. SILIVH; tube of the corolla. Styles 2 ; stigmas depressedly capitate. Capsule 2-celled; dissepiment placentiferous in the middle; placentas terete, spongy.—Annual or perennial plants, either unarmed or spiny. Flowers panicled or corymbose, axillary or terminal.

§ 1. *Plants unarmed.*

1 H. ZEVLA'XICA (Vahl, symb. 2. p. 46.) branched; leaves lanceolate, attenuated at both ends, glabrous; panicles axillary, branched, K nfy ; sepals lanceolate-linear, clothed with viscid down at the base. (). S. Native of the East Indies. Nama zeylanica, Lin. spec. p. 327. fl. zeyl. 117. 49. t. 2. Stëris Javàna, Lin. mant. p. 54. - syst. p. 264. Stëris aquática, Burm. ini). p. 73. t. 39, f. 3. Attalerie, Poir. suppl. 1. p. 555.—Plukn, alm. 22. t. 130. f. 2.—Anagallis Zeylánica, &c. Herm. mus. zeyl. p. 36. Burm. zeyl. 19. Tsjeru-vallei, Rheed, mal. 10, p. 55. t. 28. Stem a little compressed, glabrous. Leaves 1-2 iiichis l<ni(T. Peduncles usually opposite the leaves, downy, viscid. Corollas blue, *;i* liule longer than the calyx.

Var. β; leaves finely ciliated above. ⊙. S. Native of Jav. about Bantam. Hydrolea Javánica, Blum. bijdr. p. 725.

Var. y ; stem lowny a' top; flowers on short peduncles. O- H, Native of Mexico. Stëris villósa, Pav. mss. in herb. Deless.

Var. δ; plant quite glabrous; flowers on short peduncles; peduncles in the forks; sepals quite glabrous. ⊙. S. Native about Rio Janiero. Evólvulus, no. 1365, Burchell, mss.

Ceylon Hydrolea. Pl. 1 foot.?

2 H. INCANA (Laur. coch. p. 172.) simple; leaves linear-

lanceolate, nearly sessil••, glabrous; pedm icles 1-3-flowered; sepals acute, quite glabrous, ☉. G. Native of China, about Canton, in humid places. (•'lowers Li[1],. Very nearly allied to the preceding; but the leaves are longer and broader, and the peduncles axillary, 1-3-flowered, twin and tern, 1-flowered. Capsule wrinkled, ovate.

Unarmed Hydrolea•. Pl. 1 foot.

3 H. corymbosa (Ell. carol. 1. p. 336.) branched; leave* ovate-lanceolate, sessile, smoothish; flowers terminal corymbosely approximate; sepals acute, lanceolate, hispid; corolla 3 times higher than the calyx. 4- I"- Native of Carolina, in sterile, stagnate places, at St. Stephen*; a;v of Georgia, in like situations. Branchlets hairy. >. eaves rather downy on the veins and edges, reflexed. Corolla azure blue, veined with yellow, marked by 5 white spots at the base, mu;h longer than the calyx. Capsule globose, glabrous.

Corymbose-flowered Hydrolea. Pl• 2 feet.

§ 2. *Spiny shrubs.*

4. quadrivalvis (Walt. fl. carol. 1. p. 109—110.) leaves lanceolate, very acute, attenuated at both ends; flowers 1-3 together, axillary, almost sessile; sepals ovate-lanceolate; capsule glabrous. ☌. F. Native of South Carolina, in stagnate places. Hydrolea Carolinian, Michx. fl. bor. amer. 1. p. 177. Stem somewhat compressed, hispid from long, rarely spreading, white hairs. Leaves 1-3 inches long, quite glabrous, or hardly hispid on the middle nerves. Spines straight, axillary, acutish. Peduncles and sepals hispid. Corolla blue, a little longer than the calyx.

Var. β; unarmed; flowers commonly trigynous. ~*a*, S. Native of Guiana, on the banks of rivulets. Sagœa palustris, Aubl. guian. 1. p. 285. t. 111. Reichelia palustris, Schreb. gen. no. 512. Willd. spec. 1. p. 1002. Stem glabrous, *we* hardly downy. Leaves 3-4 inches long, rough in•ng, glabr- im dots. Flowers axillary, 3-6 together.

Four-valved capsuled Hydrolea.- n. July, Aflg. Clt. 1824. Pl. 1 to 2 feet.

5 H. ovata (Nutt. in amer. phi), trans, n. s. 5, p. 186. ex Choisy, in mem. soc. phys. gen. 6. [>, 109. t, 1.,: eaves ovate, acute at both ends, petiolulate; ^.>wers corymtjosts, somewhat dichotomously disposed; sepals lanceolate; capsule downy. *If.*. F. Native of the Arkansas territory, on the edges of ponds. The whole plant downy, branching only at <*hc* time of fiowcring. Stem a little compressed, clothed with grey, velvety down. Leaves deciduous, soft, downy on the nerves beneath i. I .V inch long, those of the radica I shoots almost linear. Spmes long, acute, terete, d iwny. Flovfer^ bright blue, er<i te branch tbe summits of the fastigi s. Sepals airy. CW] those of //. .*ijHTiosa.* Styles

Ovate-leaved Hydrolea. I[1]!, 1 to 2 feet.

6 H. strigosa (Lin. spec. p. 828. Aubl. guian. 1. p. 281. t. 110.) leaves ovate-lanceolate, acute, attenuated at both ends, nearly sessile; flowers terminal, sub-corymbose; sepals linear-lanceolate; capsule glabrous. ♄. S. Native of South America, by the sides of rivulets. Andr. bot. rep. 566. Hydrolea trigyna, Swartz, fl. ind. occ. 1. p. 558. Cav. icon. 6. p. 19. t. 529. f. 1. Plant downy and clammy. Spines axillary, spreading, villous. Peduncles 5-6-flowered, villous. Sepals joined at the base, villous and ciliated. Corollas blue, exceeding the calyx.

Var. β; styles 3; stamens, sepals, and lobes of corolla, 6; cells of capsule 3.

Spiny Hydrolea. Fl. Ju. July. Clt. 1791. Shrub 1 to 2 feet.

7 H. ciliata (Herit. mss. brit. ex Miller. Choisy, in mem. soc. phys. gen. 6. p. 110.) leaves lanceolate, acute, attenuated at both ends, nearly sessile, quite glabrous; flowers terminal, few;

sepals linear-lanceolate; capsule glabrous. ♄. S. Native of New Spain; and of Guinea, ex Schum. pl. guin. p. 161. Stems terete, glabrous; branches ascending. Spines axillary, stiff, horison) al, very acute, glabrous. Peduncles few, at the t branches, 1-flowered, villous. Sepals downy. Corolla blue, a

Glabrous i Hydrolea. Shrub) to 2 feet.

Cult. All the species of *Hydrolea* fi odsome wh< in blossom. Tbe i hrubby and perennial species grow well in a mixture of loam and peat; and cuttings of them will i"oot, if planted in sand, with a hand-glass over tbem The annual kinds require the t eat merit • rider *i*

II, HYDRO[1]LIA (tee last genus For derivation.) IV •i, mad, p. *8,* Cbuisy, i bys. gen. <. p- ! 11.

Lin. SI'ST. *Fentandriui f>* gynia. Calyx 5-cleft. C orolb rotate. Stamens F the coroS l«ghy

V marsh herb. SegBgeots of the calyx dilated at the h oil* with a short, ventricoso tube. J laments ibort; antl LTh.!. c. iple, teret(i base; flowers axillary, pedunculate, twin or solitai en. *6.* y. ☌. S. Native of Madagascar, in marshes.

Madagascar Hydmlis. PI, 1 f! ot.

Cult. For culture an i propagai on see *Hydrolea.*

III, NAWIA (from »*ifi£t*[1]*Jiama,* a stream or spring of water; habitat of plants.) Lin. gen. no. 31[7]. . Sehrel Gartis fruct. t. 44. Juss. gen. p. 151.—Nama and Hydrolea gpecics, WiHd, *wd* Ku;<; et Pav.

Lin. syst. *Pentandria, Digy* x permanent, of 5 Corolla tubularly funnel-shaped. Stamens sub-inclosed. Styles 2; stigmas bluntish. Capsule 2-celled, loculicidal-2-va sepiment placentiferous in the middle; placentas 4, laminiform at first combined by pairs, afterwards free.

1 N, U»&V).A[1]IA (H. 15. et K«ntl , nov. gen. amer. 3. p . 130. Choisy, in mem. acad. phys. 6. p. 112. t. 2. f. 1.) herbaceous; leaves lanceolate-linear, sessile, with undulately curled edges; flowers terminal or axillary, 3-5 in a fascicle, on short pedicels; corolla hardly exceeding the calyx. ☌. S. Native among rubbish, new ^^ xico, Laredo, Matamoros, &c. Hydrolea congesta, \Vi!kl. m8«. in R um. et Schultes, syst. 6. p. 192. Hydrolea ruptcola, Moc. e) Sesse, fl. mex. ined. Hyd. radiata, Moc. et *tc, t* mex. ioed. with a Sgun Stem multifid at the base, ascending, clothed with cinereous down. Leaves obtuse, sometimes obovate-lanceolate, downy. Sepals dow •iy. Cor olla violaceous, glabrous inside, downy outs ;de,

Var. β, ma (Choisy, in mem. soc. phys. gen. 6. p. 112.) leaves obovate-lanceolate, sessile, with sub-undulated edges; floK ther, on 3-5 to long | edicels; corolla twice longer than the calyx.

Undulated-leaved Nama. Pl. 1 foot.

2 N. Jamaicensis (Lin. spec. p. 327.) herbaceous; leaves obovate-sub-spatulate, attenuated into the petioles at the base, and a little decurrent; flowers 1-3, axillary, on short pedicels; corolla hardly exceeding the calyx. ☉. S. Native of Jamaica, St. Domingo, and Mexico. Brown, jam. 155. t. 18. f. 2. Hydrolea decurrens, Moc. et Sesse, fl. mex. ined. Stem diffuse, prostrate, hairy. Leaves hairy. Pedicels hispid. Sepals hairy. Valves of capsule keeled.

Jamaica Nama. Pl. prostrate.

3 N. ruderosa (Ruiz et Par. fl. per. 3. p. 72. t. 244. f. 4.) herbaceous; leaves oblong-spatulate, tapering into the petioles;

floriferous branches dichotomous; flowers solitary, and nearly sessile in the forks; corolla shorter than the calyx. ©. S. Native of Peru, near Huanaco ; and of Mexico. Nama tetrandra, Pav. mss. Stems branched, reddish, clothed with clammy down. Leaves downy and ciliated. Floriferous branches fastigiate. Sepals linear-spatulate. Capsule ovate, villous.

Far. (3; leaves long-lanceolate ; flowers few. ©. H.

Dichotomous Naraa. PI. 1 foot.

4 N. ORIGANIFOLIA (H. B. et Kunth, nov. gen. amer. 3. p. 130. t. 218.) woody; leaves oblong-lanceolate, very obtuse, tapering into short petioles; flowers 2-4 together, terminal, or in the axils of the superior leaves, pedunculate ; corolla a little higher than the calyx. f?. S. Native of St. Jago, in valleys. Nama subincana, Willd. mss. ex Rcem. et Schultes, syst. 6. p. 189. Hydr61ea tenella, Moc. etSesse, fl. mex. ined. icon. Root thick, twisted. Stems tufted, clothed with greyish down, as well as the leaves and pedicels. Sepals spatulate, downy. Corolla white, downy outside.

Marjoram-leaved Nama. PI. J foot.

5 N. RuricoLA (Bonpl. herb, ex Choisy, in mem. phys. gen. 6. p. 114.) suffruticose; leaves ovate, obtuse, petiolate ; flowers few, terminal, pedicellate ; corolla exceeding the calyx. T?. S. Native along with the preceding. Stem slender, having the epidermis separating at the base, clothed with grey down. Leaves clothed with velvety down ; petioles villous. Flowers intermixed with leaves. Pedicels villous. Sepals sub-spatulate, downy. Capsule small, smoothish.

Rock Nama. Shrub.

6 N. LONGIFLORA (Choisy, in mem. soc. phys. 6. p. 114.) suffruticose ; leaves ovate-lanceolate, acute at both ends, clothed with silky, hoary down beneath, on short petioles ; flowers disposed in loose, few-flowered, leafy cymes ; corollas twice longer than the calyx. T? . G. Native of Mexico. Nama sericea, Bonpl. herb. Willd. mss. Rcem. et Schultes, syst. 6. p. 189. Hydrolea violacea, Moc. et Sesse, fl. mex.. icon. ined. Stem villous. Leaves ciliated, downy and blackish above; petioles villous. Peduncles villous. Sepals spatulate, clothed with silky down. Corolla of a bluish violet colour. Stigmas acutish.

Long-flowered Nama. Shrub dwarf,

N.B.—Nama evolvuloides, and N. convolvuloides, Willd. mss. in Rcem. et Schultes, syst. 6. p. 189, is *Evolvulus alsinoides.*

Cult, For culture and propagation see *Hydrblea,* p. 250.

IV. WIGA'NDIA (named by Kunth, in memory of John Wigand, author of Verae Historiae de succino Prussico, et de herbis in Borussia nascentibus, Jen. 1590.) H. B. et Kunth, nov. gen. amer. 3. p. 126. Choisy, in mem. soc. gen. 6. p. 115.—Hydrdlea species, Ruiz et Pav. Willd. and Lam.

LIN. SYST. *Pent&ndria, Digynia.* Calyx permanent, of 5 sepals. Corolla funnel-shaped. Stamens exserted. Styles 2; stigmas depressedly capitate. Capsule 2-celled, loculicidal-2-valved ; dissepiment placentiferous in the I *[1] , placentas 4, laminiform, at first combined by twos, but at length free.—Usually suffruticose herbs, very hispid and unarmed. Leaves alternate, entire. Spikes terminal, panicled, secund. Flowers sessile, bractless, violaceous, white or yellow.

1 W. URENS (Ruiz et Pav. fl. per. 3. p. 21. t. 243.) plant very hispid; leaves ovate-cordate, doubly serrated, acutish, pilose on both surfaces: spikes unilateral, scorpioid; sepals linear-lanceolate, very acute, clothed with hispid tomentum on both surfaces; capsule hispid or smoothish. i/.S. Native of Peru, among broken rocks. Stem angular. Flowers dense, disposed in 2 rows. Corolla pale violet.

Stinging Wigandia. PI. 3 to 4 feet.

2 W. KU'NTHII (Choisy, in mem. phys. gen. 6. p. 116.) plant very hispid; leaves ovate-cordate, doubly crenated, pilose on both surfaces obtuse ; panicles terminal, branched; sepals linear-lanceolate, acutish, clothed with hoary tomentum ; capsule densely clothed with hoary hairs. %. A. Native of Mexico, near Tasco. Wig. urens, H. B. et Kunth, nov. gen. amer. 3. p. 127, but not of Ruiz et Pav. Hydrolea auriculata, Moc. et Sesse, fl. mex. icon. ined. Hydrolea urens, Willd. herb. no. 5459. Leaves clothed with rusty tomentum above, as well as the petioles. Corolla pale violet, clothed with silky hairs outside.

Kuntlis Wigandia. Shrub 6 feet.

3 W. CARACASSA'NA (H. B. et Kunth, nov. gen. amer. 3. p. 128.) plant hairy; leaves elliptic-cordate, doubly crenated: teeth acutish, and are, as well as the tips of the leaves, clothed with hairy tomentum on both surfaces; spikes secund, revolute at the apex; sepals linear-lanceolate, clothed with hoary tomentum; capsule hardly clothed with hoary down. *?. S. Native near Caraccas. Hydrolea mollis, Willd. rel. in Rcem. et Schultes, syst. 6. p. 190. Very nearly allied to the preceding. Leaves longer and acuter, clothed with rusty tomentum above, as well as the petioles. Corolla villous outside, violaceous.

Caraccas Wigandia. Shrub 12 feet.

4 W. CRISPA (H. B. et Kunth, nov. gen. amer. 3. p. 129.) plant very hairy ; leaves ovate-cordate, acutish, irregularly and doubly serrated, pilose on both surfaces : teeth acute; spikes panicled, secund, revolute at top, very hispid; sepals linear-lanceolate, very hispid; corolla showy. ^ . S. Native of Quito, near Alausi; and on the banks of the river Pozuzo. Hydrolea cnspa, Ruiz et Pav. fl. per. 3. p. 22. t. 244. f. a. Nicotiana urens, Plum. amer. p. 204. t. 211< Wigandia pruritiva, Spreng. syst. 1. p. 865. Leaves long and broad, hoary, tomentose. Corolla large, yellow, ex Humb., campanulate, hoary from down outside.

Curled-\ewe& Wigandia. Shrub 2 to 3 feet.

5 W. MACROFHY'LLA (Cham, in Linnaea, 6. p. 382.) stinging; stem branched ; spikes scorpioid, thin, bractless; flowers sessile, subalar, on short pedicels. ^ • S. Native of Mexico. Plant 6 feet high. Flowers blue.

Large-leaved Wigandia. Shrub 6 feet.

6 W. HERBA'CEA (Choisy, in mem. soc. phys. 6. p. 117.) plant villous; leaves lanceolate, entire, acute at both ends, attenuated into the short petioles ; flowers disposed in loose, corymbose panicles ; sepals linear-lanceolate. %. ? S. Native of Monte-Video. Leaves 1-2 inches long. Sepals acute. Capsule glabrous. Hydrolea Megapotamica, Herb. Kunth, ex Otto.

Herbaceous Wigandia. PI. 1 to 2 feet.

\ *A species hardly known.*

7 W. SCORPIOIDES (Choisy, in mem. soc. phys. 6. p. 117.) plant downy; leaves ovate-cordate, toothed, acutish, clothed with white tomentum beneath ; spikes loosely panicled, revolute ; sepals acutish, downy. *If.,* G. Native of Mexico. Hydrolea scorpioides, Moc. et Sesse, fl. mex. icon. ined. Leaves petiolate. Panicles terminal. Flowers superior. Corolla violaceous, with a short tube, and a spreading, 5-cleft limb.

Scorpion-like Wigandia. PL?

Cult. The species are all very pretty when in flower. A mixture of loam, peat, and sand, is the best soil for them ; and young cuttings will strike root readily in sand, under a hand-glass, in a little bottom heat.

V. CORDON (from *KWSW, kodon,* a bell; shape of corolla.) Lin. gen. edit. Reich, no. 563. Schreb. gen. 715. Juss. gen. 424. Gaertn. fruct. 2. p. 88. t. 95. D. Don, in edinb. phil. journ. July 1833.

LIN. SYST. *Decdndria, Monogynia.* Calyx 10-12-parted; segments subulate, erect; alternate ones smaller. Corolla tubular, longer than the calyx, torulose at the base, and furnished

with as many ribs as there are lobes of the limb; limb 10-12-cleft; lobes oblong, obtuse, keeled, imbricate in æstivation; alternate ones smaller. Stamens 10-12, alternating with the lobes of the corolla, rising from an equal number of compressedly tetragonal arches, which are inserted in the bottom of the corolla; filaments subulate, glabrous. Anthers adnate by their middle, incumbent, 2-celled; cells combined at the extremities; pollen mealy. Scale semi-bifid, pilose at the base; stigma simple, obtuse. Capsule ovate-acuminated, 2-celled, 2-valved, dehiscing at top. Dissepiment double, with revolute, seminiferous edges. Seeds numerous, angular, papillose; testa simple, cartilaginous. Albumen copious, horny. Embryo erect, slender, a little arched, with very short cotyledons, and a long, filiform, obtuse radicle, looking to the hylum. This genus agrees with *Hydroleaceæ*, although the stamens, and the divisions of the calyx and corolla, are double in number, the symmetry of the flower is preserved; but this mere increase of parts is of little importance, when the number of points of agreement are taken into account. In *Codon*, and some of the *Hydroleaceæ*, particularly in *Wigandia*, the leaves have lobed margins, and are clothed with bristly points, which in the former genus are developed into prickles. The stamens and pistilla entirely agree in both genera: but the albumen is more copious, and the stigmata less developed in *Codon*, whose affinities, however, to the *Hydroleaceæ*, may be considered as completely established.

1 C. Royéni (Lin. syst. nat. ed. 13. p. 292. Thunb. prod. p. 86. Willd. spec. 2. p. 340. Andr. bot. rep. t. 325.) ☉. F. Native of the Cape of Good Hope. Codon aculeátum, Gærtn. fruct. 2. p. 85. An annual herb, furnished with copious white, straight, subulate prickles. Root fusiform? Stem erect, branched, terete, flexuous, robust. Leaves alternate, petiolate, ovate-oblong, a little attenuated towards the apex, but obtuse, thickish, fleshy, and ribbed beneath, with recurved, sub-repand edges. Flowers large, solitary, pedunculate, extra-axillary, somewhat racemose at the top of the stem, usually bracteate by two narrower leaves at the base. Corolla white, variegated with purple.

Royen's Codon. Fl. Sept. Ch. 1601. Pl. 1 to 1½ foot.

Cult. This is a singular plant, the seeds of which should be sown in a pot, in rich, light earth, and the pot placed in a frame: and when the plants are of sufficient size, they may be moved into separate, small pots, and shifted into other larger ones by degrees, as they grow. They may afterwards be placed among other greenhouse plants.

ORDER CLXIV. CONVOLVULA'CEÆ (this order contains plants agreeing with the genus *Convólvulus* in important characters.) Juss. gen. p. 132. edit. Usteri. p. 148. R. Br. prod. p. 481. H. B. et Kunth, nov. gen. amer. 3. p. 94. Choisy, in mem. soc. phys. gen. 6. p. 383.

Calyx of 5 sepals (except in *Wilsónia*, which is gamosepalous and 5-toothed;) sepals permanent, equal or unequal, disposed in one, two, or three series, often enlarged round the fruit. Corolla monopetalous, hypogynous, regular, tubular, campanulate or funnel-shaped; having the limb sometimes of 5 plaits, and sometimes of 5 lobes, which are twisted in æstivation. Stamens 5, opposite the sepals, and therefore alternating with the lobes or plaits of the corolla, inserted more or less towards the bottom of the corolla; filaments usually unequal, dilated at the base, sometimes villous, naked, or furnished with scales, usually inclosed, rarely exserted; anthers long, usually sagittate, and adnate at the base, often twisted afterwards. Nectarium or hypogynous disk annular, surrounding the ovarium in most of the species, more or less showy. Ovarium usually simple, 2-4-celled, rarely almost 1-celled, or altogether 1-celled: sometimes the ovarium is double or quadruple; in each cell there is 1 or 2 erect ovula. Style usually simple, entire, or more or less deeply cleft; rarely two. Stigmas acute, flattened or globose; in those with the simple style, 2-lobed. Fruit a capsule or a dry berry, 1-4-celled; cells 1-2-seeded. Capsule usually dehiscing valvately, rarely transversely. Seeds usually rounded on one side, and flattened on the other, inserted by the base, glabrous or villous: having the testa usually black and hard. Albumen mucilaginous. Cotyledons foliaceous, corrugated, except in the genus *Maripa*, in which they are thick and straight. Radicle incurved, inferior.—Stems herbaceous, suffruticose, frutescose, also arborescous; sometimes erect, sometimes creeping, but for the most part twining. Leaves alternate, simple, entire or lobed, sessile or petiolate. Peduncles axillary or terminal, 1- or many-flowered. Pedicels articulated to the peduncles, usually bibracteate; bracteas more or less, approximating the flower, sometimes also involving the flower. Roots simple or tuberous, edible or medicinal. Juice milky, purgative, often filling the stem.

Nearly the whole of the *Convolvulaceæ* are twining plants, with showy flowers, expanding under the influence of sunshine. A few are shrubs, but the greater part are herbaceous, and very many annual. All parts of the world produce them. *Cuscúta* is a singular parasite, wholly destitute of leaves. The root of many is filled with a milky, acrid juice, which is very purgative. Scammony, jalap, and some other drugs, are the produce of *Convolvulaceæ*. The roots of *Ipomœ'a fúrida*, *scopária*, and *Quámoclit*, are stimulatory: that of *Ipomœ'a Batátas*, which is the sweet potato of America and South Europe; and that of *Ipomœ'a edúlis*, are wholesome articles of food.

Synopsis of the genera.

TRIBE I.

ARGYRE'IEÆ. Embryo cotyledonous. Carpels combined into a simple ovarium. Pericarp baccate, indehiscent.

1 RIVE'A. Ovarium 4-celled; cells 1-seeded.

2 MAXIVA. Ovarium 2-celled; cells 2-seeded. Cotyledons not plicate? Stigma furrowed.

3 ARGYRE'IA. Ovarium 2-celled: cells 2-seeded. Stigma 2-lobed; lobes capitate. Corolla campanulate.

4 BLEUXŒ'STRIA. Ovarium 2-celled; cells 2-seeded. Corolla urceolate. Calyx calyculate.

5 HUBER'TIA. Ovarium 2-celled; cells 2-seeded. Stigma hollow-flattened. Stamens exserted.

6 MOORCRO'FTIA. Ovarium 2-celled; cells 1-seeded.? Fruit 2-seeded.

TRIBE II.

CONVOLVE'LEÆ. Embryo cotyledonous. Carpella combined into a simple ovarium. Pericarp capsular, dehiscent.

§ 1. *Style simple, entire even to the stigma.*

7 QUA'MOCLIT. Ovarium 4-celled; cells 1-seeded. Corolla tubular. Genitals exserted.

S Ll.P: 2-lohcd, c;i|)it, olla with a slender tube, an<; liml,.

9 BATA'TAS, Ovarim-.i Corolla camp,: I •.

10 PHARR'ITIS. Ova;

11 CALOHT'!atrium 2-cellod, • lud. Corolla inn [DM. Ov Us 2-seeded. Corolla

13 i Ovarium -seeded. Si •h.

14 rolls 2-seeded. lobed ; lobes e;ipitately glcr

15 \. Ovarium '2-eelled; cells 2-seeded, tbed; lobes compkoately ovi

16 icded. Si mens inclosed. Stigma 2-lobed ; lobes teretely filiform.

17 • mi S-celled; I. Lobe:. of stigma capitate. Sepals : verticillately inserted.

18 I'oLVMi.'itiA. Ovurtu i; cells 1 -seeded ; stigmas

19 Ov;iriuiu 1-L-clkid, as also somev Lobea oi stigma filiforin.

20 Ovarium 1-cell. d, '1-ovutatc:. Stigma 2-lobed ; lobes complanately o •ate.

21 Ovarium I-celled, 4-ovdate. Stigma 2-lobed ; lobes capit itciy gloti:

22 Ovari oi 1-tclled, 2-1-nvnbiL. Sepals increasing itiequully after flowering. .Sii^inas globose.

23 iRE^YA. Capsule 1-celled, 1-seeded. Stigma large, Uiick. Calyx propped by S small brae teas.

§ S. *Style bifid, or styles two.*

24 i-Tis. Orarinm]-celled. Styles 2; tigroas fleshy. Capsule dcd. Uiactijas large, surrounding the capsule.

25 ,. Ovarium 2-celled. Style 1, bifid. Outer sepals involvir ig the flower.

Ovarium 2-celled. Style 1, biiid. Sepals nearly equal. Genital-, inclo d.

27 B Ovariii: nearly equal. G d.

28 Gl Ovariuiii 2-celled. Styles 2 ; stigmas globose. Stamens exse -led.

29 Ovarium 2-celled. Styles S, bifid.

30 . Capsule i-celled, I-seeded. Styles 2, bifid.

31 Ovarium small, **2-seedecL** Style I, bifid. Calyx tubular.

TRIBE III.

tyledans. Carpel la dia-

32 Ovaria two.

33 Ovaria 4.

TRIBE IV.

Cust Rmbryo ; cotyledonous.

34 Plants parasitical.

† *A genus doubtful whether it belongs to the present order.*

35 Mounoi irted: the 2 ou upper par t of the tube, and

, 3-celled ; cells 1 -seeded.

frit 1.

ARt;[1]! (this tribe contains plants agreeing with the genus *Argyreia*, in having a baccate pericarp.) Choisy, in mem. soc. phys. genev. 6. p. 407. Embryo cotyledonous. Carpels cqn:! ined into a single ovarium. Pericarp baccate, indehiscent.

i. Rrvi A (this genus is dedicated by Choisy, to his friend Auguste de la Rive, a physician of Geneva.) Choisy, in mem. soc. phys. gen. 6. p. 407.—Convólvulus, Ipomœ'a, and Lettsomia, species of authors.

LIN. SYST. *Pentándria, Monogynia.* Sepals 5. Corolla tubular or tin el-shaped, showy. Style 1; stigma capitate or lamcHifbrni, 2-Jol d. Ovarium 4-celled, 4-ovulate. Capsule baccate.—Twining, suffruticose, very showy plants, the flowers of which exceed in size all other convolvulaceous plants.

1 I! TILLAEFÒLIA (Choisy, l. c. p. 407.) leaves cordate-rounal-isli ; p> *A* uncles usually 1-flowered, rarely 2-4-flowered ; sepals ovate-rou ndish, very blunt, equal ; corolla inflato-cylindrical, Philippine **Islands,** banks < of the Ganges, &c; also of the Isle of **Frai** ce, Cape of Good Hope. The same plant is said also to be found in **America, as in St. Doming** o, St. Vincent, and Peru. Convólvulus tiliaefòlius, De r. in Ijfiti dict. 3. p. 544. Ipomœ'a tilli folia, Ræm. et Schultes, syst. 4. p. 229. Ipomœ'a Gangética, Sw it, l)orr. brit. ed. 2. p. 283. 1; Roth. ex Rœm. et Schultes, syst. 4. p. 229. Convólvulus Gangéticus, Roxb. fl. ind. 2. p. 46. Convólvulus spectábilis, Brit. mus. Conv. grandiflòrus, Brit. mus. Lettsòmia microcályx, Wight. Convólvulus leucántha, and Ipomœ'a salicifólia, Herb. madr. Conv. marginàtus, Hamilt. herb. Ipomœ'a baccífera, Russell, herb. Stem dov ny or smoothish. Young branches vill. us. Leaves obtuse or acuminated, downy beneath, while young rather ton entose. Corolla tubular, 2-3 inches long, whil s silky • the angles. Sepals reniform, emarginate, increasing in size wit i the fruit] and covering it at all times, ex Roxb. Lobes of stigma i round.

Tilia-leaved Rivea. Fl. May, Aug. Clt. 1812. Shrub tw.

2 R. HYPOCRATERIFÒRMIS (Choisy, l. c. p. 408.) leaves cordate-rou ndish ; peduncles 1-flowered, sometimes axillary and solitary, sometimes disposed in a sptcate mam at the tops of the bra ;icbes; > epals ovate, obtuse, unequal ; limb of corolla salver-Bhaped; tul very narrow. Native of the East In. lies, in forests, over the southern parts of the Carnatic and Tanjore country, Trincomala, and Travancore. Convólvulus hypocrateriformis, Desr. in Lam. dict. 3. p. 561. Conv. candicans, Rœm. et Schultes, syst. 4. p. 302, but not of Roth. Lettsòmia uniflòra, Roxb. fl. ind. 2. p. 85. Ipomœ'a candicans, Koxb. herb. Argyrèia uniflora, Sweet, hort. brit. p. 289. Stem dov ny or villous. Leaves obtuse, rarely white and villous beneath. Peduncles villous, furnished with 2 bractras at or near

the top. Corolla pure white, 3-4 inches long; tube very long, and limb large. Lobes of stigma linear-oblong.

Salver-shaped-flowered Rivea. Fl.? Cli. 1817. Shrub tw.

3 R. PATA'TA (Choisy, l. c. p. 409. t. 3.) leaves orbicularly cordate, or reniform; peduncles elongated, spicately panicled or umbellate; sepals ovate-lanceolate, blantish: corolla tubular, very narrow. ♄. ◠. S. Native of the East Indies, as of Carnatic, Nipaul, Coromandel, Mungger, &c. Convólvulus candicans, Roxb. nov. spec. p. 106. Roem. et Schultes, syst. 4. p. 273, 790. Lettsomia ornàta, Roxb. fl. ind. 2. p. 86. Argyrèia ornàta, Sweet, hort. brit. p. 289. Conv. ornàtus, Roxb. mss. Wall. cat. no. 1369. Conv. tarita, Wall. cat. no. 2253. Stem white; branches silky. Leaves clothed with cinereous tomentum beneath, large. Bractæas villous. Corolla 3 inches long, purple. Berry cherry-shaped. Lobes of stigma linear-oblong. According to Roxb. l. c., the flowers are large, and pure white.

Adorned Rivea. Fl.? Cli. 1824. Shrub tw.

4 R. PUNA-NÒX (Choisy, l. c.) leaves cordate-roundish, or altogether roundish, sometimes villous beneath; peduncles shorter than the petioles, commonly 3-flowered; sepals ovate-cordate, obtuse; corolla very wide. ♄. ◠. S. Native of Bengal, in the forests of Midnapore. Lettsomia Bùm-nòx, Roxb. fl. ind. 2. p. 84. Argyrèia bùm-nòx, Sweet, hort. brit. p. 289. Clove-scented creeper, Asiat. res. 4. p. 237. Young branches hairy. Leaves acuminated or obtuse, sometimes emarginate; petioles villous. Peduncles 1-3-flowered. Corolla white, fragrant; lobes of stigma capitate. Berry 1-celled, 1-4-seeded. The flowers of this species are large, and pure white, expanding at sun-set, and perfuming the air to a considerable distance, with a fragrance resembling that of the finest cloves: in fact, it is the prince of convolvulaceous plants.

Broad-eight Rivea, or Midnapore Creeper. Fl. July, Oct. Cli. 1798. Shrub tw.

5 R.? HIRSU'TA (Choisy, l. c. p. 410.) leaves lanceolate, acuminated, glabrous above, and silky beneath; peduncles many-flowered, longer than the petiole, but not so long as the leaves; sepals ovate-obtuse, tomentose outside; corolla campanulate. ♄. ◠. S. Native of Tavoy and Amherst. Convólvulus obsètus, Wall. cat. no. 1416. Branches strigosely tomentose, from adpressed white hairs. Flowers umbellate. Corolla showy, silky and hairy outside, 3 inches long. Stigma capitate, 2-lobed.

Covered Rivea. Shrub tw.

Cult. The species of *Rivea* are strong, growing, extensive, twining plants, bearing very large and very showy flowers. They require a great deal of room to flower them. They may be trained up the rafters, or upon trellis-work, in a stove. A rich, light soil, or a mixture of loam and peat, is the best for them; and cuttings strike root readily in sand or mould, under a hand-glass, if placed in heat.

II. MARIPA (the Caribbean name of the tree.) Aubl. guian. 1. p. 230. t. 91. Lam. ill. t. 110. Choisy, in mem. soc. phys. genev. 6. p. 411.—Ehrètia species, Lam. and Poir.

Lin. syst. *Pentándria, Monogýnia.* Sepals 5, coriaceous, imbricate. Corolla campanulate, 5-lobed at top. Stamens 5, equal in height to the tube of the corolla. Style 1; stigma capitate, simple, furrowed. Ovarium 2-celled; cells 2-ovulate. Fruit baccate, coriaceously woody, 1-celled by abortion, and 1-seeded. Albumen wanting.? Cotyledons thick, ovate. ?—Trees and shrubs, natives of Guiana. Branches scandent, tendrilled at top. Leaves alternate, smooth. Flowers white, disposed in loose or thick panicles; bracteas scale-formed at the peduncles, which are villous.

1 M. SCANDENS (Aubl. l. c.) scandent, cirrhiferous; leaves ovate, petiolate, acuminated, glabrous; panicles loose, bracteate; calyx villous; corolla spreading; style elongated. ♄. ◠. S. Native of Guiana, on the banks of the river Sinemari. Ehrètia cirrhòsa, Lam. dict. 1. p. 527. Ehrètia scándens, Poir. suppl. 2. p. 590. Segments of corolla short, ovate-roundish, obtuse, crenulated.

Climbing Maripa. Shrub tw.

2 M. CARI'CEA (Meyer. prim. res. p. 115.) arborcous, erect; leaves oblong, glabrous; panicle strict; limb of corolla erect, exceeding the style. ♄. S. Native of Guiana, about the river Essequibo.

Erect Maripa. Tree.

3 M. VILLÒSA (Spreng. syst. 1. p. 648.) stem suffruticose, erect; leaves sessile, roundish, acutish, villous, ciliated; panicles strict, bracteate. ♄. S. Native of Brazil.

Villous Maripa. Shrub erect.

Cult. For culture and propagation see *Rivea*, above.

III. ARGYREIA (from ἀργυρος, *argyros*, silvery; in reference to the silvery undersides of the leaves.) Lour. coch. 1. 134. Choisy, in mem. soc. phys. gen. 5. p. 411.—Lettsómia species, Roxb. and Wall.—Convólvulus and Ipomœ'a, species of authors.

Lin. syst. *Pentándria, Monogýnia.* Sepals 5. Corolla campanulate. Style 1; stigma capitate, 2-lobed. Ovarium 2-celled; cells bi-ovulate. Capsule baccate.—Extensive, twining shrubs, with a showy aspect, for the most part silvery, but sometimes silky and tomentose.

SECT. I. PTYXA'NTHUS (from πτυξ, *ptyx*, a plait; and ανθος, *anthos*, a flower; in reference to the plicate corolla.) Corolla nearly entire, with 5 plaits at top. Stamens included.

1 A. SPECIO'SA (Sweet, hort. brit. p. 289. Choisy, in mem. soc. phys. 6. p. 411.) tomentose; leaves large, cordate, acute, glabrous above, or rarely villous, thickly nerved beneath, and clothed with silky, silvery down; peduncles about equal in length to the petioles, umbellately capitate; bracteas acute, unequal; sepals ovate, very blunt. ♄. ◠. S. Native of the East Indies, in forests and hedges in Hindostan, Java, and the Isle of France. Convólvulus nervòsus, Burm. ind. 28. t. 10. f. 1. Conv. speciòsus, Lin. suppl. p. 127, exclusive of the country. Smith, icon. ined. 17. Ipomœ'a speciòsa, Pers. euch. 1. p. 183. Sims, bot. mag. 2446. Lettsòmia nervòsa, Roxb. fl. ind. 2. p. 78. Samòdra stòjam, Rheed, mal. 11. p. 125. t. 61. Leaves 8-12 inches long, and 3-4 broad, dark green above. Corolla nearly 2 inches long, of a deep rose-colour, hairy in the plicæ outside.

Showy Argyreia. Fl. July, Aug. Cli. 1818. Shrub tw.

2 A. BRACTEA'TA (Choisy, in mem. soc. phys. gen. 6. p. 412.) clothed with silky hairs; leaves oblong-roundish, acute at apex, glabrous above, and clothed with silky, rufescent down beneath; peduncles exceeding the petioles a little, cymose, many-flowered; bracteas lanceolate, compassing the cyme; sepals ovate-lanceolate or elliptic, acutish. ♄. ◠. S. Native of the East Indies. Convólvulus pomàceus? Roxb. ex Wall. cat. no. 1415. Ipomœ'a bracteàta, Heyne, herb. Leaves 2-3 inches long, and 1-2 broad, clothed with silky, rufescent down beneath, with ciliated edges; petioles, bracteæ, and outside of sepals, villous.

Bracteate-flowered Argyreia. Shrub tw.

3 A. LESCHENAU'LTII (Choisy, mem. soc. phys. gen. 6. p. 413.) clothed with cinereous, silky down; leaves ovate-elliptic, acutish, beset with strigose hairs above, and silky tomentum beneath; peduncles shorter than the leaves, cymose, many-flowered; bracteas ovate or linear, intermixed with the flowers; sepals ovate, blantish, glabrous. ♄. ◠. S. Native of Mysore, and the Neelgherry mountains. Convólvulus Choisyànus, Wall. cat. no. 2259. 1. no. 2. Stem fistular. Leaves nerved, 2-3 inches long,

and 1-2 broad. Petioles and peduncles clothed with hoary tomentum. Corolla 18 lines long, hairy outside. Sepals rather hairy outside, with scarious edges.

Leschenault's Argyreia. Shrub tw.

4 •A. roxburgia (Choisy, l. c. p. 413.) clothed with cinereous tomentum; leaves ovate-elliptic, obtuse, clothed with cinereous, velvety down on both surfaces, but especially beneath; peduncles exceeding the petioles a little, cymose, many-flowered; bracteas linear-lanceolate, adpressed to the flowers; sepals ovate-lanceolate, obtuse, rather villous. ♄. ◠. S. Native of Mysore. Lettsòmia pomàcea, Roxb. fl. ind. 2. p. 53. Ipomœ'a Zeylánica, Gœrtn. fruct. 2. p. 482. t. 175. f. 1. Convolvulus Kottlevi. Spreng. syst. 4. p. 61. Lettsòmia strigòsa. lloxb, fl. ind. 2. p. 60. Ipomœ'a strigòsa, Roth. Convólvulus capinátus, VafaJ, symb. 3. p. 28.? Convólvulus Choisyánus, Wall. cat. Leaves sometimes sub-emarginate at apex. Petioles and peduncles villous. Bracteas sometimes cuneated. Flowers large, rose-coloured. Berry 4-seeded, size of a cherry, yellow. Peduncles dichotomous, 3-7-flowered.

Apple-fruited Argyreia. Shrub tw.

5 A. Nitidissima (Choisy, l.) clothed with rufescent hairs; leaves cordate-orbicular, or oblong, acuminated, sinuated, beset with strigose hairs on both surfaces; peduncles exceeding the petioles, umbellately many-flowered; bracteas ovate or linear, intermixed with the flowers; sepals • ovate-elliptic, obtuse, hairy outside. ♄. ◠. S. fv'ative of > Neelgherry mountains. Stem fistular. Leaves 3-4 inches long, scabrous and green above. Corolla 2-3 inches long, campanulately funnel-shaped, rose-coloured. Very nearly allied to the preceding species.

Neelgherry Argyreia. Shrub tw. ib fcw.

6 A. roxburghiana (Choisy, I, c.p. 'tlJ-O glabrous; leavt cordately-orbicular, sliort-acuminatied; peduncles usually en ceeding the leaves, dichotomously cymose; flowers l tose, intennwod with linear-lanceolate bracteas; sepals small, ovate-roundisl;,very obtuse, villous. ♄. ◠. S. Native of the East Indies, at Goalpara and Colomba. Ipomœ'a Kleiniana, Roem. et Schultes, syst. 4. p. 789. Ipomœ'a bractoàta, Willd. herb. Convólvulus Malabaricus, Hamilt. herb. mnlr. Wall. cat. no. i, I 1 1 4. <-'• nv. fastigiatus, Roxb. ex Wali. cat. no. 2258. Tops of branchlets rather villous. Leaves paler beneath. Petioles sometimes rather :, IIOUS. Peduncles a foot long. Corolla tubularly campanulate, hairy outside; tube coarctate at the base.

Poplar-leaved Argyreia. Shrub tw.

7 A. populifolia (Sweet, Hort. brit. p. 289. Choisy, l. c. p. 415.) leaves ovate-oblong, or ovate-elliptic, entire, or pandurately sinuated, sometimes somewhat 3-lobed, smooth above, but clothed with silvery, silky down beneath; peduncles exceeding the petioles, corymbosely many-flowered; bracteas none; sepals ovate, obtuse, clothed with hoary tomentum. *h* • '. S. Native of the East Indies Lettsòmia splèndens, Roxb. fl. ind. 2. p. 7^ Convolvulus splèndens, Horn. hort. hafn. suppl. p. 133. Ipomœ'a splèndens, Sims, bot. mag. t. 2628. Conv. splèndidus, Hamilt. herb. Sr.m clothed with hoary villi. Leave scuminated, 6 inches long; petioles hoary. Corolla tubularly campanulate, 1½ inch long, rather villous outside, pale red. Berry scarlet, size of a large pea.

Splendid Argyreia. Fl.Noy. Clt. 1820. Shrub tw.

8 A. splendens (Choisy, l. c. p. 415.) tomentose; leaves lanceolate, long-acuminated, glabrous and dark green above, but clothed with silvery tomentum beneath; peduncles not exceeding the petioles, brachiately and loosely many-flowered; bracteas almost wanting; sepals ovate, very obtuse, equal, villous. ♄. ◠. S. Native of the East Indies, at Quilon. Convólvulus fulgens, Wall. cat. no. 1394. Conv. argènteus, Heyne, herb. Leaves nerved beneath, 3-4 inches long, 2-15-lines broad. Pedicels villous. Corolla tubular, 1½ inch long, glabrous.

Fulgent Argyreia. Shrub twining.

9 A. fulgida (Choisy, l. c. p. 416.) smoothish; leaves ovate-oblong, acute and mucronate at the apex, glabrous above, clothed with cinereous down beneath; peduncles very short, shorter than the petioles, 3-4-flowered; sepals ovate-orbicular, very blunt, villous. ♄. ◠. S. Native of the East Indies, between Yandaboo and Paghanaew, on the road to Petaval Wellé. Convólvulus pállidus, Wall. cat. no. 1418. Branches clothed with cinereous, white wool at top. Corolla tubular, glabrous, hardly 5-8 lines long. Fruit black, acute, 2-celled.

Pale Argyreia. Shrub tw.

10 A. cuneata (Ker. bot. reg. 661.) smoothish; leaves obovate-cuneated emarginate, glabrous above, but beset with short, crowded hairs beneath, hardly petiolate; peduncles shorter than the leaves, 3-6-flowered; bracteas linear, very acute; sepals ovate, obtuse, equal, villous. ♄. ◠. S. Native of the East Indies. Convólvulus cuneiformis, Buch. drawc. mys. pl. Ipomœ'a atrosanguinea, Sims, bot. mag. 2170. Lettsòmia cuneata, Roxb. fl. ind. 2. p. 81. Conv. cuneàtus, and Conv. cymòsus, Herb. madr. Stem clothed with powdery down at top. Petioles villous. Peduncles and pedicels downy. Corolla large, of a beautiful deep bright purple colour. Berry smooth, yellowish outside.

Cuneate-leaved Argyreia. Fl. July, Aug. Clt. 1822. Shrub tw.

11 A. elliptica (Choisy, in mem. soc. phys. gen. p. 417.) smoothish or downy; leaves ovate or obovate-elliptic, usually villous; peduncles sometimes exceeding the leaves; flowers in loose, corymbose panicles; bracteas small, linear, caducous; sepals equal, very blunt. ♄. ◠. S. Native of the East Indies, as of Mysore, Ceylon, Tsoug Dong, and Lower Nipaul. Convólvulus ellipticus, Spreng. syst. 1. p. 615. Ipomœ'a elliptica, Roth. nov. spec. 113. Roem. et Schultes, syst. 4. p. 248. Convolv. laurifòlius, lioxb. (!. ind. 2. p. 50. and 573. Ipomœ'a lawrifolia, Sweet, hort. <rt. *brh.* p. 288. Convolv. pedunculàris, Wall. cat. no. 1117. Br nches and peduncles downy or villous. Bracteas and calys vtll ous. Corolla tubularly campanulate, an inch long, of a rose- colour. I Berry round, 4-seeded.

Elliptic]* roaved Argyreia. Shrub twining.

12 A. adnata (Choisy, l. c. p. 418.) stem downy; leaves roandish-cordi te, short-acuminated, glabrous above, rarely beset witli short ha rs, and clothed with silvery, silky down beneath; peduncle: stiff, about equal in length to the petioles; flowers loosely umbellate; bracteas lanceolate or linear, intermixed with the flowers; sepals lanceolate: exterior ones larger, with revolute margins, villous outside. ♄. ◠. S. Native of Silhet, and Chittagong; and in woods about Calcutta. Lettsòmia argèntea, Roxb. fl. ind. 2. p. 72. Convolv. argènteus, Herb. madr. Leaves 3-4 inches long, and the same broad. Bracteas silky. Flowers many, large, of a beautiful rich pink colour, glabrous, except the outside of the plicæ, which is villous. Berry 4-seeded.

Silvery Argyreia. Shrub tw.

13 A. venusta (Choisy, l. c. p. 419.) altogether like the preceding, except the leaves, which are not silky beneath, but clothed with wool-like down. ♄. ◠. S. Native of the East Indies, as of Goalpara, Rangoon, Pegu, Ava, Prome, Segaen. Convolv. Malabáricus, Wall. cat. no. 1414. Lettsòmia argèntea, Roxb., from Rangoon. Berry glabrous, black in the dried state, 4-seeded. Sepals stiff, glabrous, and bluntish.

Beautiful Argyreia. Shrub tw.

14 A. Roxburghii (Choisy, l. c. p. 419.) very nearly allied to the two preceding species; but the leaves are clothed with cinereous villi on both surfaces, but particularly beneath. ♄. ◠. S. Native of the East Indies, in woods and hedges. Ipomœ'a multiflòra, Roxb. fl. ind. 2. p. 59. Ipomœ'a Burmánica, Roem. mss. ex Wall. Ipomœ'a Roxburghii, Sweet, hort. brit. p. 288. Ipomœ'a amœna, Blum. bijdr. 718. Convólvulus Roxburghii, Wall. cat. no. 1415. Stems clothed with cinereous

villi. Bracteas and sepals villous outside. Corolla 2 inches long, rose-coloured; inside of the tube a bright red.

Hurlbergh's Argyreia. Fl. June, Aug. Clr. 1816. Shrub tw.

15 A. MALABÁRICA (Choisy, l. c. p. 420.) stem downy; leaves roundish-cordate, acute, glabrous, or furnished with a few scattered hairs on both surfaces; peduncles about equal to, or exceeding the leaves, many-flowered at the apex; sepals lanceolate, acute, exterior ones larger, and clothed with hoary villi, with revolute edges. ♄. ◠. S. Native of Coromandel, Malabar, Mysore, Cochinchina, Java. Convólvulus Malabáricus, Lin. spec. 221. Willd. spec. 1. p. 847. Ipomœ'a Malabárica, Roem. et Schultes, syst. 4. p. 235. Kamo-Kalengu, Rheed. mal. 11. p. 105. t. 51. Petioles villous. Leaves paler beneath, 3-4 inches long, and the same in breadth. Peduncles trifid, villous. Flowers rather small; the bottom of the bell deep purple; throat pink, with the edges paler, almost white, and slightly 10-lobed. Desrousseaux and Blum. say, that the peduncles are 1-3-flowered; the flowers cream-coloured, with a purple bottom.

Malabar Argyreia. Fl. Ju. Aug. Clr. 1822. Shrub tw.

16 A. AMŒNA (Choisy, l. c.) leaves ovate-roundish, somewhat cordate at the base, short-acuminated at the apex, clothed with woolly tomentum on both surfaces while young, but when old nearly glabrous; peduncles very short, umbellately many-flowered; bracteas linear-lanceolate, villous; sepals equal, linear-lanceolate, hairy outside. ♄. ◠. S. Native of Nipaul. Convólvulus amœnus, Wall. cat. no. 1420. Stem fistular, villously tomentose while young. Leaves 6 inches long, and about the same in breadth. Umbels 4-6-flowered. Corolla 2½ inches long, downy, glabrous.

Large-leaved Argyreia. Shrub twining.

17 A. WALLICHII (Choisy, l. c. 421.) leaves ovate or lanceolate, hardly cordate at the base, acuminated at the apex, glabrous and wrinkled above, nerved and clothed with white tomentum beneath; peduncles almost wanting, many-flowered; bracteas permanent, linear-lanceolate, rather villous; sepals linear-lanceolate; exterior ones the longest. ♄. ◠. S. Native of the Burman Empire, on mount Taoung Dong. Convólvulus erythrocárpus, Wall. cat. no. 1413. Petioles villous, 4-6 inches long. Leaves length of petioles. Flowers 3-4 in a fascicle, nearly sessile. Berry red.

Wallich's Argyreia. Shrub twining.

18 A. *l.* LANCIOLÁTA (Choisy, l. c.) clothed with cinereous, silky down; leaves linear-lanceolate, acute, glabrous above, and blackish, clothed with silky, silvery down beneath; flowers solitary, nearly sessile; sepals ovate-lanceolate, acute, clothed with silky hairs outside. ♄. ◠. S. Native of Martaban and Tavoy, in the East Indies. Convólvulus argyrophýllus, Wall. cat. no. 1393. Leaves 2½ inches long, and 3-5 lines broad. Corolla tubularly campanulate, an inch long, purple, hairy outside.

Lanceolate-leaved Argyreia. Shrub twining.

19 A. *l.* MOLLIS (Choisy, l. c.) stem glabrous, or hardly downy; leaves elliptic-lanceolate, hairy above, and blackish, but clothed with silvery-silky down beneath; peduncles equal in length to the petioles, many-flowered; flowers umbellate; bracteas involucrating the flowers, ovate-obtuse; sepals ovate-oblong, obtuse, hairy outside. ♄. ◠. S. Native of the Prince of Wales Island. Convólvulus mollis, Burm. ind. 44. t. 17. Convolv. sericeus, Lin. mant. p. 43. Convolv. gracilis, Sal. prod. 124. *f.* Ipomœ'a sericea, Blum. bijdr. p. 720. Lettsómia hispida, Hook. mss. Leaves 2-3 inches long. Peduncles hoary, 3-6-flowered. Corolla 2 inches long, purple, beset with long white hairs outside. Berry red. *Convólvulus Kátion*, and *C. Khasiana*, Herb. mss. *par.* is probably referrible to this species.

Soft Argyreia. Fl. *f.* Clr. *f.* Shrub tw.

20 A. MITIS (Choisy, l. c. p. 422.) clothed with silvery-silky villi; leaves ovate-elliptic, acute, silky on both surfaces, blackish above, and silvery beneath; peduncles very short, 2-3-flowered, but usually 1-flowered; bracteas small, linear-lanceolate; sepals acute, outer ones the longest. ♄. ◠. S. Native of the East Indies and Philippine Islands. Convólvulus nitidus, Desr. in Lam. dict. 2. p. 344. Leaves 3 inches long, and 2 broad, sometimes furnished with fascicles of smaller ones in the axils of the older ones. Petioles 1-2 inches long. Corolla inflated, tubular, 2 inches long, contracted at the base, clothed with silky hairs outside; limb spreading a little.

Shining Argyreia. Shrub twining.

21 A. GERRARDÍNA (Choisy, l. c. p. 423.) clothed with silvery down; leaves ovate-cordate, quite glabrous above, clothed with adpressed down beneath; peduncles shorter than the leaves, commonly 3-flowered; sepals clothed with silky-silvery down: outer ones ovate-orbicular; inner ones smaller, ovate-oblong. ♄. ◠. S. Native of the islands of Timor and Java. Ipomœ'a púlchra, Blum. bijdr. p. 716. Leaves acute, cordate at the base, 3-5 inches long, and 1-3 broad. Corolla tubularly funnel-shaped, fine red, silky outside; limb obtuse, 5-lobed.

Gerrard's Argyreia. Shrub twining.

22 A. CAPITÁTA (Choisy, l. c.) clothed with strigose hairs; leaves cordate-ovate, acuminated, hairy on both surfaces; hairs glandular at the base; peduncles exceeding the petiole; flowers capitate; bracteas ovate-lanceolate, involucrate, hairy, as well as the sepals, which are linear-lanceolate. ♄. ◠. S. Native of Silhet, Goalpara, Tavoy, Madras, &c. Convólvulus capitiflórus, Poir. ency. suppl. 3. p. 469. Convolv. capitátus, Vahl, symb. 3. p. 29. Ipomœ'a capitáta, Roem. et Schultes, syst. 4. p. 238. Lettsómia strigósa, Roxb. fl. ind. 2. p. 80. Ipomœ'a trichótoma, Blum. bijdr. p. 717. Convólvulus strigósus, Roxb. herb. Leaves 2-5 inches long, and 1-3 broad. Corolla 1-2 inches long, rose-coloured or purple, hairy outside. Berry red, 4-seeded, round.

Var. β, *conférta* (Choisy, l. c. p. 424.) peduncles very short, crowded on the tops of the branches, forming long, hairy spikes; bracteas and sepals smaller than in the species. ♄. ◠. S. Native of the Burman empire, on mount Taong Dong. Convólvulus hirsutíssimus, Wall. cat. no. 1400.

Capitate Argyreia. Fl. July, Aug. Clr. 1822. Shrub tw.

23 A. BARBIGÉRA (Choisy, l. c. p. 424.) clothed with adpressed hairs; leaves cordate, acuminated; clothed with strigose hairs on both surfaces, but particularly beneath; peduncles exceeding the petioles, stiff, many-flowered; flowers capitate; bracteas ovate, very blunt, surrounding the pedicels and flowers; sepals like the bracteas, but more strigose. ♄. ◠. S. Native of the Burman empire, at Prome. Convólvulus barbiger, Wall. cat. no. 1404. Lettsómia strigósa, Roxb. hort. beng., but hardly of fl. ind. Hairs on the petioles and peduncles spreading. Corolla purple, hairy outside. Leaves 2-3 inches long, and 1-2 broad.

Beard-bearing Argyreia. Shrub twining.

Sect. II. SEMIARGYREIA (from σεμι, *semi*, to cut; and ἀργος, *argos*, a flower; the corolla is 5-cleft.) Corolla 5-cleft, or 5-parted at the apex. Stamens exserted.

24 A. CETÓSA (Choisy, l. c. p. 425.) clothed with adpressed hairs; leaves cordate-ovate, or cordate-roundish, acuminated, quite glabrous above, and beset with adpressed strigæ beneath; peduncles exceeding the petioles, stiff, corymbosely many-flowered; bracteas compassing the flowers and pedicels, semiorbicular, very obtuse; sepals very strigose outside; ovate, orbicular, obtuse. ♄. ◠. S. Native of Sukamuur and Lower Nipaul, as well as of the island of Timor. Ipomœ'a strigósa, Roth. nov. spec. p. 113. Roem. et Schultes, syst. 4. p. 242. Lettsómia setósa, Roxb. fl. ind. 2. p. 80. Convólvulus strigósus, Spreng. syst. 1. p. 600. Convólvulus setósus, Roxb.

mss. Convolv. multiloruS, H, vne, herb. Conv. confértus, Ham. herb. Leaves 2-3 inches long, and 1 to 2½ broad; the older leaves sometimes 6 inches long, and as much broad. Corolla (i-'J in) pmk-ccionml, ^iothi •• with strigose hairs outside; lobes acute. Berry pea-formed, red. Flowers lessile on the branches of ti e peduncle.

Bristly Argyreia. Fl. July, Aug. Clt. 1818. *Shrub* tw.

23 A. HIRSUTISSIMA (Choisy, I c. p 426.) downy; iravt»s roundish, hardly-cordate, obtuse, furnished with a few hairs above, tomentose beneath; peduncles stiff, exceeding the petioles, immediately corymbose; bracteas ovate or ovate-roundish; sepals unequal: outer ones the largest, ovate-roundish, very blunt; inner ones shorter and narrower; corolla small. ½. ☉. S. Native of the Burman Empire, on Mount Taong Dong. Convólvulus rubicúndus, Wall. cat. tuj. i I 05. Leaves rather silvery beneath, an inch *U* g, and as much broad *I-* Pedui cles tomentose. Corolla 4-5 lines long, glabrous. ; jlky outside; lol es acute. Flowers disposed loosely.

Reddish-flowered Argyreia. Shrub twining.

26 A. ROSEOTÒSA (Choisy, I. <:.) clothed with down: louvres *QV.u* , obtuse at the base, blantish at the apex, and mucronulate, smoothish above, but clothed with cinereous tomentum beneath; peduncles very sh irt, capita** y many-flowered; bracteas ovate or ovate-orbicular, or ovate-lanceolate, repand; sepals linear-lanceolate: outer ones the largest. ½. ☉. S. Nati vc of Coiiviii Leaves '2 long, and ! to 1 *h* br«a< d J tube glabrous; limb acute, silky out :ide.

Var. β, cordata (Choisy, 1. c. }i. 487.) leaves dilated ai the base, and cordate, wi•!i a ratlier deep, vtry b unt recess. *h*-S. Native on the b iiks of the Irawadi , and Lower Nipaul. Convólvulus β cordàtus, Wall. HISS. Conv. vestitus, Wall. cat. !!<>. 1411. Berry pea-sha •'d.

Tomentose Argyreia. Shrub twining.

27 A. ARGENTEA (Choisy. i. c, p. 427.) clotiic(\ with hoary tomentum; leaves ovate-cordate, glabrous above. but doii ed with hoary t<; mentum beneath; pe incles exceeding the pt'Uo les a little; many-flowered; flowers capitate; bracteas involucrat ovate-orbicular, hoary; sepals ovate, ob *a»6*; corolla small. '; - S. Native of Coromandel, Orissa, Ceylon, Mysore, Taong Dong, Ava, &c. Lettsòmia aggregàta, *[loxb, il.* iod, 2, p. 76. Convolvulus Orixénsis, Rottler, and Klein, mss. Conv. canéscens-?, li;^th. nov. spec. t>. 107. Hu ni. et Schultes, •; sr. +. p. 274.? Conv. Heyni?, Spreng. syst. •;. 1. p, 0'19. Ipomœa !tnbricata, Roth, rtov. spec- p. 11>. I*!em et Schultes, syst- '• »• 249. Conv. iinbrkatus, Spreng syst. 1. p. $13; Conv. aggregatus, Bot. gard. Conv. canéscens, Spreng. Le;-.ves obtus• at top, soon times sub-emarginate, 2-3 inchei !'• ng, and about the same in breadth. Corolla can Lpanulate, IKW!: longer than the calyx, rod •, iobes acitEr, villons <J• outside, emarginate, ex Wall.

Aggregate-flowerttl Argyreia. Shrub not tw.

28 A. CYMOSA (Sweet, hort. brit. p. 289. Choisy, l. c. p. 428.) clotlied with pruinose down; leave a roun<Hsh*cord ate, or reoi-Jbrs ly-cordate, obtuse, terminated by a very short mucrone, glabrous on both surfaces, or clothed v\ ith pruinose down; peduncles eq il in lon^ili to tli leaves, as also exceeding them, leafy at top, and cymosely many-flowered; bracteas ovate-roun tish, obtns<, plicately recurved; outer sepals like the bracteas; inner sepals ovate-linear; corolla showy. Native of Malabar, on the mountains. Lettsòmia cymòsa, Roxb. fl. ind. 2. p. 82. Stems compressed. Leaves green, 1-2 inches long, and about the same in breadth. Corolla tubularly v funnel-shaped, villous outside, pale pink. Berry yello ded.

Cymose-flowered Argyreia. Ch. 1825. Shrub twining.

29 A. ACUTA (Lour. coch. p. 135.) frutescent; leaves ovate, subcordate, mucronate, clothed with silvery-silky down beneath, glabrous above; flowers numerous, disposed in loose, terminal panicles; bracteas oblong, obtuse, clothed with hoary, silky down outside; outer sepals largest, ovate, bluntish: all clothed with hoary tomentuni - outside; corolla white, showy. ½. ☉. S. Native of China. Argyrèia festiva, Wall. pl. asiat. rar. 1. p. 68. t. 76. Leaves 4-5 inches long, and 3 to 3½ broad. Panicle corymbos Corolla an inch long, campanulate, much higher than the caiyx; lol es lanceolate, obtuse, hairy, outside. Berry red.

Acute Argyreia. Shrub tw.

30 A. CUNEATA (Lour. coch. p. 134. Choisy, l. c. p. 429.) frutescen• r; leaves ovate, abt use, glabrous above, but clothed with silky down beneath; flowers disposed in loose, panicled Cory mbs; bracteas linear-lanceolate; flowers adpressed; sepals oblong-linear, outer ones the largest. ½. ☉. S. Native of Cochinchina, in hedges. Stem clothed with velvety down. Leaves 2-4 inches tong, and ! -g broad, sometimes mucronulate. Covolla « hite. Berry red.

Blunt-leaved Argyreia. Shrub twining.

vtlly known.

81 A. AKBOKSTA (f.onr. coch. p. l.^io. (Choisy, l. c. p. 430.) arl:. reous; leaves ovate, acute, wrinkled, entire, glabrous, re- (lex ed; racemes terminal; sepals inflated, red; corolla with a longish, filiform tube, and roundish segments. ½. G. Native of Cochinchina, in woods. Stem 8 feet high, with spreading branches. Corolla white or yellow. Berry 4-celled, 1-seeded.

Arborescent Argyreia. Shrub 8 feet.

('uit. *Argyreia* is a most splendid ge of plants, well worth the cultivator's care. The greater number of the species are robus[1], extensive twiner- or climbers, usually requiri more space to run than can well be spared for that purpose in any stove or hothou before they will flower; some of them, however, us *A. ennefólia*, being dwarfer plants, produce their elegant b)osi»oms in abundance. All the species grow well in ricli lighl soil, or a mixture of peat, loam, and sand; and cuttings root readily if planted in sand or mould, with a hand-glass placed over them, in a tiltk bottom !n.:;u.

IV. BLINK WO' RT HIA (named *U* , \w. *r* Mr. IMink - worth, who collected oume rous specimens of plants, around Rangoon, and transmitted them to Dr. Wallich.) Choisy, in mem. soc. phys. genev. 6, p. 450. t. 4.

Lin. BYSti *Pentándria, Monogynia.* Bracteas 3, forming an involucrum, and as if it were another calyx. Sepals 5. Corolla short, cylindrically urceolate. Style 1; stigma capitately 2-lobed. Berry 1-seeded.—A shrub, allied to *Argyreia*; but is distinguished from it, in the involucrum, corolla, and habit.

1 B. LYCIOIDES (Choisy, l. c.) stem terete, villous: leaves linear, obtuse, mucronulate, on very short petioles, glabrous above, and rather silky beneath; peduncles short, 1-flowered; sepals ovate-orbicu ☉. ! S. Native on the banks of the Irawaddy, &c. Convólvulus lycioides, Wall. cat. no. 1390. Leaves 6-9 lines long, and 1-3 broad. Corolla a little longer than the calyx, 5-toothed at apex, blackish in the dried state, and •; labrous. Berry girded by the calyx.

Lycium-like Blinkwortliia. Shrub tw.!

Cult. For culture and propagation see *Argyrèia*, above.

V. HUMBETRTI A (probably named after some individual of the name of Humbert.) Lam. dict. 2. p. 356, ill. t. 103. Choisy, conv. in. mem. soc. phys. gen. 6. p. 451.—Endlicher, Gmel. syst. veg. 1. p. 339. Juss. gen. p. 133.—Thouinia, Smith,

icon. ined. 1. p. 7. t. 7. Smithia, Gmel. syst. 1. p. 309.—Edrach, Flacourt, hist. stud. p. 137. t. 100.

Lin. syst. *Pentándria, Monogýnia.* Calyx of 5 sepals. Corolla 5-cleft. Stamens exserted, deflexed. Ovarium one; stigma hollow, emarginate. Capsule baccate, woody, 2-celled; cells 2-seeded.—A tall tree, native of Madagascar. Branchlets terete. Leaves obovate-lanceolate, quite entire, emarginate. Pedunicles 1-flowered, axillary, on the tops of the branches, shorter than the leaves, furnished with 2 little teeth in the middle of each. Flowers large, similar to those of other Convolvulaceous plants.

1 H. MADAGASCARIE'NSIS (Lam. dict. 2. p. 357.) ½. S. Native of Madagascar. Rudrachium *Madagascariense*, Juss. et Gmel. syst. 1. p. 339, exclusive of the syn. of Broce. Pers. ench. 1. p. 176. Thouinia spectábilis, Smith, icon. ined. 1. p. 7. t. 7. Smithia Thouinia, Gmel. syst. 1. p. 389. Humbértia arvitérnis, Commers.

Madagascar Humbertia. Tree tall.

Cult. For culture and propagation see *Argyréia*, p. 247.

VI. MOORCRO'FTIA (named after William Moorcroft, a gentleman in the service of the East India Company, who travelled in Nipaul, and in the neighbouring countries to the north.) Choisy, conv. in mem. soc. phys. gen. 6. p. 431.—Convólvulus species, Wall. Perhaps this genus is not distinct from *Erycíbe*.

Lin. syst. *Pentándria, Monogýnia.* Calyx of 5 sepals. Corolla unknown. Style one. Berry 1-seeded, 1-celled by abortion, very rarely 2-celled.—*M. Pinangiana*, from the baccate fruit, is nearly allied to *Argyréia*; but the habit and inflorescence are quite distinct.

1 M. ADPRE'SSA (Choisy, l. c.) stem hairy; leaves ovate or lanceolate, hairy on both surfaces; peduncles brachiately corymbose, exceeding the petioles a little, 5-8-flowered; sepals linear, recurved at apex. ½. S. Native of Penang. Convólvulus adpressus, Wall. cat. no. 1424. Leaves obtuse or acutish, 2-4 inches long, and 1-2 broad, pale beneath. Flowers hairy. Berry usually 1-celled, 1-seeded.

Adpressed Moorcroftia. Shrub.

2 M. PINANGIA'NA (Choisy, l. c. p. 432.) stem glabrous; leaves ovate-lanceolate, acuminated, quite glabrous on both surfaces; peduncles slender, much exceeding the petioles, loosely 4-8-flowered; sepals cuneate-ovate, stiff, small. ½. S. Native of Penang. Convólvulus Pinangiánus, Wall. cat. no. 1422. Leaves 2-3 inches long, and 1½ to 2 broad, whitish beneath the nerves, sometimes furnished with a few adpressed hairs. Outer sepals and corolla hairy outside. Berry 1-celled, 1-seeded.

Pinang Moorcroftia. Shrub *tw.*

Cult. For culture and propagation see *Argyréia*, p. 257.

Tribe II.

CONVOLVULEÆ (so called, because the genera contained in the section agree with *Convólulus* in the characters indicated below.) Choisy, in mem. soc. phys. gen. 6. p. 433. Embryo cotyledonous. Carpella combined into a single ovarium. Pericarp capsular, dehiscent.

VII. QUAMOCLIT (from *κωμος*, *kômos*, a kidney bean; and *κλιτος*, *klitos*, dwarf; because it resembles the kidney bean in its climbing stems, but is less tall.) Tourn. inst. 116. Moench. meth. Choisy, in mem. soc. phys. gen. 6. p. 435.—Convólvulus and Ipomœ'a, species of authors.—Calóa, Cav. icon. 5. p. 5. t. 426.—Mærostémma, Pers. ench. 1. p. 185.—Exogónium, Moc. et Sesse, ined.—Mina and Mercedia, La Lav. et Lexar.

Lin. syst. *Pentándria, Monogýnia.* Calyx of 5 sepals, which are usually mucronate on the back under the apices. Corolla tubularly cylindrical. Stamens exserted. Style one; stigma capitate, 2-lobed. Ovarium 4-celled; cells 1-seeded.—Twining herbs, mostly natives of America.

1 Q. PHŒNICEA (Choisy, in mem. soc. phys. gen. 6. p. 435.) leaves cordately reniform, with angularly toothed margins, sometimes 3-lobed; lobes acute, with dentately sinuated edges, glabrous on both surfaces; peduncles many-flowered, loosely spicate. ⊙. ◠. S. Native of the southern parts of the Coromandel Coast, Moluccas, &c. Ipomœ'a phœnicea, Roxb. Wall. fl. ind. 2. p. 92. Convólvulus phœniceus, Spreng. syst. 1. p. 596. Ipomœ'a angularis, Willd. act. acad. N. C. horol. 4. p. 197. Convólvulus angulátus, herb. Ham. Ipomœ'a coccinea. Andr. bot. rep. t. 449. Plant glabrous. Leaves paler beneath. Sepals awned. Flowers remote, of a beautiful bright crimson colour; tube 2 inches long. This is a very gaudy plant; no painter can do justice to the brightness of its flowers.

Crimson Quamoclit. Fl. June, Sept. Clt. 1806. Pl. tw.

2 Q. ANGULA'TA; leaves cordate, angular, somewhat 3-lobed, glabrous on both surfaces: upper ones entire, mucronate; peduncles many-flowered, racemose, usually dichotomous. ⊙. ◠. S. Native of the Isle of France and Bourbon. Ipomœ'a angulata, Lam. ill. no. 2116. Poir. dict. 6. p. 12. Ipomœ'a dentata, Willd. herb. Leaves large. Calycine segments narrow, acute. Corolla scarlet, with a long tube; lobes of limb ovate. Capsule 3-celled.

Angular-leaved Quamoclit. Pl. tw.

3 Q. RUIZIA'NA; leaves cordately sagittate, acuminated, and acute; peduncles usually 2-flowered. ⊙. ◠. S. Native of Peru, in elevated, stony places, about Lima. Ipomœ'a angulata, Ort. dec. 7. p. 8. Ruiz. et Pav. fl. per. 2. p. 11. t. 150. f. b. Ipomœ'a dubia, Roem. et Schultes, syst. 4. p. 216. Lea as entire; segments of calyx unequal, somewhat tubercled. Peduncles 1-3-5-flowered; bracteas ovate, dilated at top. Tube of corolla long, slender, of a reddish copper colour; limb short, spreading, scarlet, with revolute edges. Capsule 3-4-celled. Perhaps a variety of *Q. coccinea*.

Ruiz's Quamoclit. Pl. tw.

4 Q. COCCI'NEA; leaves cordate, acuminated, angular at the base; peduncles 3-6-flowered; calyxes warted, awned. ⊙. ◠. H. Native of St. Domingo, New Spain; and of Carolina, at the Mississippi. Ipomœ'a coccinea, Lin. hort. upsa. p. 39. spec. p. 163. Michx. fl. bor. amer. 1. p. 140. Curt. bot. mag. t. 221. St. Hil. 50. t. 6. Ipomœ'a stylósa, Comm. rar. t. 81. Conv. coccineus, Spreng. syst. 1. p. 599.—Plum. icon. 89. t. 103. Plant nearly glabrous. Leaves 3-4 inches long, and 2 broad. Tube of corolla long; limb small, pale scarlet. Capsule 3-4-celled.

Var. β, pubéscens (Cham. et Schlecht. in Linnæa, 5. p. 116.) leaves hastately-cordate, never 3-lobed; hind lobes angularly-toothed at the base, down dense, soft, adpressed. ⊙. ◠. H. Native of Mexico, near Hacienda de la Laguna.

Scarlet-flowered Quamoclit. Fl. June, Sept. Clt. 1718. Pl. tw.

5 Q. LUTE'OLA; leaves cordate, acuminated, rather angular, glabrous; peduncles at first dichotomous, then racemose. ⊙. ◠. H. Native of Guatimala. Ipomœ'a luteola, Jacq. icon. rar. 1. t. 53. coll. 2. p. 366. Willd. enum. 1. p. 207. Ipomœ'a coccinea, fl. Willd. spec. 1. p. 880. Conv. luteolus, Spreng. syst. 1. p. 599. Sepals lanceolate-linear. Corolla of an orange yellow colour; limb acute, short. Perhaps only a variety of *Q. coccinea*.

Yellow-flowered Quamoclit. Fl. Ju. Sept. Clt. 1759. Pl. twining.

6 Q. TRICA'RPEA; leaves cordate, bluntly acuminated, glabrous; flowers solitary; calyx rather hairy, bracteas; corolla

tubular; stigmas globose. ⊙. [1] r*. S. N;Hi ve of Cuba. Ipomœa leucántha, Desv. herb. ex Ham. prod. p. 25. Corolla white. Genitals exserted.

White-flowered Quamoclit. PI. twin! g.

7 Q. SERÓTINA; leaves cordate, acuminated, angular at the base; peduncles thickened, 3-flowered. ⊙. • .'"\ S. K inlry unknown. Ipomœa serótina, Roem. et Schultes, syst. 4. p. 2 15, Plant glabrous. Leaves 2^ inci es long, and 2 broad. Sepals obtuse, unequal. Said to be nearly allied to *Q. luteola.* C;»i- volvulus serotinus, D. C, icon, t. *%7.* ex. *}>;•: . syst. 1, j>. 59 r:

Late Qu tmocHt. Fl. Janfr, Sept. C!t, 182*. PL rw.

8 i:. HEDERIFOLIA; leaves cordate, 5-tobed, • ; peduncles racemose, many-flowered. ⊙. ^. S. Native of West Indies, Ipomœa hederifolia, Lin. spec. p. 2 ec. 1. p. 885. • Conv. ; vst. !. p. 594.—Pli rm. t. *i).i.* f, 2. -'I CorujLa olaceoas, cylikM

Ivy-leaved Quamoclit. Fl. July. Cit. *V* 73. Pl. tw.

9 Q. . VITIFÓLIA; leaves cordate, 3-lobed, toothed at the base, glabrous; peduncles bifid, umbelliferous; sepals acute; tube of corolla widened above: limb obtuse, 5-cleft. ⊙. ^. S. Na of South America. Calbóa vitifólia, Cav. icon. 5. p. 51. t. 476. Macrustèma vitifólia, Pers. ench. 1. p. 185. Convólvulus Neei, Spreng. syst. I. p. 593. Lobes of leaves acuminated: mi fUlc one contracted at the base. Co •olla yetlo wish outside, purp isls- red hisxiijc, an i«c'!i long.

Vine-leaved Quamoclit. Pi twining.

10 (i. TinfcixuA; li '(i»s, itrterme- te, *\aU:Tu'* ones semicordate; peduncles 3-flowe .Lt.tr ⊙. ^. S. Native of Souiiv America, Ipomœa trilóba, Lin. spec. p. 229. Mill. dict. no. 6. Willd. spec. 1. p. 854. Convólvulus trilobus, Desr. in Lam. dict. 3. p. 564.—Knip nt. 7. no. 37. Stem angular. Corol a cylindrical, violaceous. Ca >se.

Three-lobed-leaved Quamoclit. Fl. Ju. July. CU, 1752. PI. i w.

11 Q. K USTACHIA'NA; leaves cordate, 3-lobed, glabrous; peduncles 2-flowered. L-ed. G- ^- S- Naii>. e of the Island of St. Eustache, among Opu r»(is*5 and of Mfcxit:o, on bills, between Panas and Vera Crux. Ipomœa Eustachiana, Roem. et Schultes, syst. 4. p. 2 :, Ja'.'q. 36. Vittm. sum rii. 1, p. 4'tO. Corolla decji j>i;rj)le, funnel- shaped; segments ..uiits sltor[1], acute.

Eustache Quamoclit. PI. tw.

1)^ Q. iiASri;;h!•..'!; leaves hastately trifid, glabrous: intermt:- diai: segment lanceolfttte, i^rgs lateral ones angular; pedun- cles axillary, ttiany-flowtied, *i(..rs.* S, Nat; ,L!er. ta, 11, B. *ft* Kunt;, nov. gen. s, 3. p • i11. li: ome's angularia, Willd. inss. Ip. Huml •• ltiana, Roem. et Schultes, syst. 4. p. 789. Conv. hastigerus, Spreng. syst. I. p. 6 5. Stem angularly striated. Leaves 2 inches long, cordate: lateral segments triangular. Peduncles dichoto- mous, 6 -7-fiowered . yd. Corolla flesh-coloured. Capsule 3-ce lied.

Halberl-kearbig Quamoelit. Fl, May, **July**. Clt. '.82i. 1*l. tw.

IS {. !NEA; glabrous; leaves cordately •• lobed or hastate, peduncles lo ager tlian tbe leaves, i ymosely trie Oto- mous, ex Ker; 3-flowered, ex Vahl. ½ • '[r]. S. Native of rite Islat id of Santa Crux, [pi [nea, VaW, symb. r. bot. n icus, Sprei Hind lol slarly Coralk crcc nch long, narrow, davatulj tubular, compressed; limb oblately globose, with a contracted, 5-toothed mouth. Stamens ascending, much exserted. Stigma papillosely granular.

ig-flowered Quamoclit. Fl. Feb. Nov. Clt. 1812.

Shrub tw,

14 Q. LOXENSIS; leaves hastately 3-lobed, glabrous: inter- mediate lobe large, oblong: lateral ones quite entire; peduncles axillary, many-flowered; tube of corolla very long. ⊙. ^. S. Native of Cuba, near Havannah. Ipomœa longiflóra, H. B. et Kunth, nov. gen. 3. p. in Stems angular. Leaves cordate; lateral segments triangular. Sepals oblong, obtuse, awned. Corolla white; tube 3 inches long.

Long-flowered Quamoclit. Fl. May, July. Clt. 1803. Pl. tw.

15 Q. HASTATA; leaves sagittately hastate, glabrous; pe- duncles 2-flowered. ⊙. ^. S. Native of Java. Ipomœa hasta- ta, '.•. maiit. p, 204. Willd. spec. 1. p. 854. Ipomœa saguti folia, Burm. ind. 50. t. 18. f. 2. Conv. Javánicus, Garc. I-Jtnd lobes of It aves acuminated. Corolla yellow, tubularly funnel-sh ed, an i ch long; iim}> si art, flattish, with ovate, acute lobes.

Hastate ;eav(id {Juainodit. Pi. tw,

16 Q. CHOLULE'NSIS; leaves roundish-ovate, acuminately CUSpi: ate, deeply cordate, downy above, glabrous beneath; pe- duncles terminal and axillary, 3-flowered; calyx glabrous. ⊙. ^. S. Native of New Spain, near the city of Cholula. Ip. Cholu- lénsis, H. B. et Kuntil, nov. gen. amer. 3. p. 112. Convólvulus Cholulénsis, Spreng. syst. r.. *I.* p, 59[). Stem somewhat trigonal. FJoweni size - of those of *Q. coccinea,* scarlet.

VholuUt Quaraoclit. I l. tw.

17 Q. jiicnoTOMA; Itaves-: atcd, glabroiis; pant omous; c calyx glabrous. ⊙. ^. S. Nativ • i-anada, at tlic tnouth of the river Sinu, in humid places. Ipon o's dichótoma, H. B. et Kunth, nov. gen. 3. p. 112. Stems noarly terete. Pedicels and bracteas downy. Sepals linear, acuminated. Corolla tubularly funnel-shaped, scarlet.

Dichotomous-panicled Quamoclit. Pi. twining.

18 Q- M'INA • stems [Jabrofis, erete; leaves roughish, and rather villous below, ntv glabrous above, cordate, 3-lobed; pe d uncles long, bearing twin, sccwnd r cemes, each bearing 7-9- J1 iiowers, c. alyx fleshy, with oblung, keeled segments, which art mtitv. ate. ⊙. ? ¼. ? ^. S. Native of Mexico. Mina lobata, La Lave, et **Lexirza, nov,** veg. mex. fasc. 1. p. 3. Co- rolla tubular, curved, d iiited^at • he base, red at top, tVi e rest yellowish red, fading to yellowish white: limb narrow, 5-tooth- ed; I eth roundish, mucronate; tube 5-angled. Stamens in- serted in the mouth of the tube. Ovari;;. girded by a fleshy glanc

Mina's Quamoclit. PI. *tw.*

It) *Q.* i. SANGUINEA; stems terete, scabrous; leaves some- what hastately 3-lobed, deeply cordate, glabrous; peduncles longer than the petioles; flowers disposed in racemose fascicles; sepals furnished with a small fleshy horn at the top of each; }imb of ct rolla expliciite. 1J, ^. "• Native of Mexico, at St. Jose dri Co rral. M orenòa grandiflòra La Lave, et Lexarza, nov. veg. mex. fasc. 1. p. 17. Corolla scarlet, with a narrow curved tube and a wide limb, 2 inches long. Stamens a little exserted. The leaves of the specimens of this plant we have seen are angularly cordate, acuminated, and sometimes 3-lobed; the lobes and auricles acuminated.

Great-flowered Quamoclit. Fl. Year. Clt., 1820. Pl. tw.

20 Q. GRONÒVII; stems terete; leaves on long petioles, gla- brous, hastate: middle lobe lanceolate, acuminated: lateral ones protracted into acute angles in front, which are prolonged, angular, and truncate behind; peduncles elongated: flowers some •what fascicled; sepals rounded, equal; corolla with

globose limb. ♃. ⊙. S. Native of Mexico, at St. Jose del Cotral. Morenin globosa, Ic Lave et Lexarza, nov. veg. mex. fasc. 1. p. 5. Corollas scarlet.

Oblique-flowered Quamoclit. Fl. Year. Clt. 1827. Pl. tw.

♃ Q. OBLIQUA; glabrous; leaves palmate; segments 5-7, lanceolate, obtuse; peduncles 2-3-flowered. ⊙. ♃. S. Native of tropical America. Ipomœa digitata, Lin. spec. p. 162. Mill. dict. no. 8. Willd. spec. 1. p. 882. Convv. digitatus, Spreng. syst. 1. p. 592. Quamoclit, foliis digitatis, flore coccineo, Plum. spec. 3. icon. 92. f. 1. Corolla funnel-shaped or tubular, fine purple or scarlet. Stigma globose, obsoletely 5-lobed. Capsule globose, 3-celled; cells 1-seeded.

Digitate-leaved Quamoclit. Fl. Aug. Oct. Clt. ? Pl. tw.

♃ Q. VITIFOLIA (Choisy, in mem. soc. gen. 6. p. 434.) leaves pinnatifid, even to the middle nerve; segments linear, parallel, acute; peduncles 1-flowered; sepals ovate-lanceolate. ⊙. ♃. S. Native of various parts of the East Indies; Isle of France; and North and South America. Ipomœa Quamoclit, Lin. spec. 237. Curt. bot. mag. t. 244. Lam. ill. t. 104. f. 1. Convolvulus pinnatus, Lam. dict. 2. p. 507. Convv. Quamoclit, Spreng. syst. 1. p. 591. Convv. pennatifolius, Sal. prod. p. 124. Flos cardinalis, Rumph. amb. 5. p. 421. t. 155. f. 2. Tsiuria-Cranti, Rheed. mal. 11. p. 123. t. 60. Camalata, Asiat. res. 4. p. 256.—Sabb. hort. 1. t. 315. Plant glabrous. Sepals acute. Corolla scarlet, an inch long; tube narrow; limb acute. Capsule usually 4-celled. The American plant is said to have the peduncles generally 2-flowered.

Var. β. albiflora; flowers white.

Common Quamoclit. Fl. July, Sept. Clt. 1629. Pl. tw.

Cult. The most of the species of *Quamoclit* are beautiful half hardy annual plants. They should be reared on a hot bed; and about the end of May they may be planted out in an open border, in a warm, sheltered situation, where they will flower freely, and ripen their seed. Some of the more tender kinds may be grown in pots, in the greenhouse, during summer. The perennial herbaceous and shrubby kinds should be treated in the manner recommended for *Ipomœa*, p. 262.

VIII. LEPTOCALLIS (from λεπτος, *leptos*, slender; and καλλος, *kallos*, beauty; the plants are slender, and very pretty.) Ipomœa species of Cav.

Lin. syst. Pentándria, Monogýnia. Calyx 5-parted. Corolla tubularly funnel-shaped, narrow. Stamens inclosed. Style 1; stigma globose, 2-lobed. Ovarium 4-celled? 4-valved; cells 1-seeded? Capsule roundish. Seeds angular.—Small erect plants, with quinate or ternate leaves, and flowers resembling those of *Quamoclit vulgaris* in shape; except that the stamens are inclosed.

1 L. QUINATA; glabrous; leaves quinate; leaflets linear; peduncles axillary, 1-flowered. ♃. G. Native of Mexico. Ipomœa muricata, Cav. icon. 4. p. 52. t. 378. f. 2. Ipomœa urmata, Roem. et Schultes, syst. 4. p. 214. Stems filiform, erect. Peduncles furnished with 2 scale-formed bracteæ under the calyx. Calyx laciniated?, with ovate, acuminated segments. Corolla of a reddish-violet colour, tubular, an inch long; segments of the limb ovate, acuminated. Filaments villous at the base.

Quinate-leaved Leptocallis. Pl. 1 to 1½ foot.

2 L. TERNATA; glabrous; leaves ternate; leaflets linear; peduncles axillary, 1-flowered. ♃. G. Native of Mexico, about Acapulco. Ipomœa muricata, Cav. icon. 6. p. 52. t. 378. f. 1. Stems filiform, erect. Calycine segments acuminated. Corolla tubular, purplish-violet, with ovate, obtuse segments. Stamens villous at the base.

Ternate-leaved Leptocallis. Pl. 1 to 1½ foot.

Cult. The species of *Leptocallis* are very elegant, slender, upright plants, with flowers similar to those of *Quamoclit*. They will do well in a mixture of loam, peat, and sand, or any rich light soil; and cuttings of them will readily strike under a hand-glass, in a little bottom heat.

IX. BATATAS (Batatas is Malay according to Rumphius, Mexican according to Nieremberg.) Rumph. amb. 5. p. 367. t. 130. Choisy, in mem. soc. phys. gen. 6. p. 424.—Ipomœa and Convólvulus species of authors.

Lin. syst. Pentándria, Monogýnia. Calyx of 5 sepals. Corolla campanulate. Stamens inclosed. Style one; stigma capitate, 2-lobed. Ovarium 4-celled; cells 1-seeded. Capsule 4-celled, or only 3-celled by abortion.—Creeping or twining herbs.

1 B. EDULIS (Choisy, in mem. soc. phys. gen. 6. p. 435.) stem creeping, rarely twining; leaves variable, usually angular, also lobed; peduncles equal in length to the petioles, or exceeding them, 3-4-flowered; sepals acuminately mucronate, rarely subtruncate, outer ones a little shorter. ♃. S. Native of the East Indies, and now cultivated every where within the tropics. Convólvulus Batátas, Michx. fl. bor. amer. 1. p. 138. Lin. amœn. acad. 6. p. 138. Roxb. in Wall. fl. ind. 2. p. 69. Ipomœa Batátas, Lam. dict. 6. p. 14, exclusive of the syn. of Feuille. Convólvulus Pudicus Orientális, &c. Moris. hist. 2. sect. 1. t. 3. f. 4. Convólvulus esculéntus, &c. Catesb. car. 2. p. 69. t. 60. Ipomœa Catesbæi, Meyer, prim. esseq. p. 115. Convv. esculéntus, Sal. prod. p. 123. Spreng. syst. 1. p. 607. Convv. edúlis, Thunb. jap. p. 84. Batátas, Rumph. amb. 5. p. 367. t. 130. Kappa-Kalénga, Rheed. mal. 7. p. 83. t. 50. Root tuberous, edible. Stems prostrate. Leaves cordate. Corolla an inch long, glabrous, white outside, and purple inside. The red-rooted sort is in general cultivated all over the warmer parts of Asia, and very deservedly esteemed one of the most palatable and nutritious roots; the white-rooted sort is more generally cultivated in other parts.

The Spanish or Sweet Potatoe is a native of both Indies, and was cultivated by Gerarde, in 1597. He calls the roots potatoes, potades, or potatoes, and says they are by some named skirrets of Peru. They flourished in his garden till winter, when they perished and rotted. Batatas were then sold at the exchange in London, and are still annually imported into England from Spain and Portugal. They were, in 1815, the common potatoes of our old English writers, the now common potatoe, *Solanum tuberosum*, Lin., being then little known. The tubers of the Batatas are sweet, tepid, and nourishing. They are very commonly cultivated in all tropical climates, where they eat not only the roots, but the young leaves and tender shoots, boiled. There are several varieties, differing in the size, figure, colour, and taste of the roots, as well as the form, hairiness, and smoothness of the leaves, and colour of the flowers. In warm climates this plant is cultivated in the same manner as we do the potatoe, but requires much more room, for the trailing stalks extend 4 or 5 feet every way, sending out large tubers, 40 or 50 to a plant. In the national garden at Paris, the plants are raised on a hot-bed, and, about the middle of May, transplanted into the open ground, where they are earthed up, and otherwise treated like the potatoe. In warm seasons they produce a tolerable crop. M. Thouin considers it a much lighter food than the potatoe, and equally nourishing. In England, Miller observes, the roots must be planted on a hot bed in spring; and if the plants are kept covered in bad weather with glasses, they will produce flowers, and many small tubers, from the joints; but if they are exposed to the open air, they seldom make much progress.

Batatas, or Sweet or Spanish Potatoe. Fl. ? Clt. 1797. Pl. tw.

IB.
>s palmate, 5-7-tleft : lob
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Guinea; Cayenne, Mara • banks of the Orinoco, in
America, Conv. pi s, Lin. spec. 2-2S. tichuro. pi, uu.-
•p. 94. Roxb. fl. .i panical&U, R, Br,
prod, p, 4-8G. K«:f. boL, reg iut notofBurm. Ipomos
iuana.Jacq. coll. 4. p. 316. hort. scl ^08. Cony. :„
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Beaur. ft d. ow. 2. p. 75. t. 105. Convolvw-
los roseus, LI, 15. et Kuntii, nov. gen. amer. S. :
vliitk, round, in tin; Gutoi
fnchea long, and as much broad. Corolla *ht^e,* purp)
elled, but sometimes 3-celled by al ^nitui.
iumislicd wiia long hairs at top, which are bent in within the

Pankkd-Bovieiei Batatas, Fl. June, Sept. Ck. 1799. PL twining.

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Puir.
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Root tuberous, ftesliy. Out'.:-
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atas. Ft. July, Oct. Ck 1817. PL tw.
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aroua, tumip-formt;^. Petioles and middle
. Peduncles o-6^flow(?red. Limb ofcorolli
duiatfd.
/,nr • Batatas. Fl. Jijly, Oct. Clt. 1817. Pl. tw.
0 B tera whii
purplish, *i£.r\i*. X;itiv, of Guinea, from Senegal to the
Line, &c. Ipomoea Senegalensis, Lam. ill. 1. p. 464. no. 2113.
Poir. diet. G. p. 1 • Calyx short; sepals ovate, • with white,
membranous edges. Corollas large. Root tuberous. Very
like *B. paniculata*, and probably only a variety of it.
Senegal Batatas. Fl. July, Aug. Clt. 1823. Pl. tw.

7 B. Pariiis; hairy; leaves quinately palmate, cordate; lobes lanceolate, entire; peduncles 1-flowered; corolla funnel-shaped, purplish. ^. ^ S. Native of Peru, upon the hills of
r I iir where it is called *Papiria*. Ipomoea Papirin, Ruiz. et Pav. fl. per. 2. p. 11. t. 126. f. a. Pers. ench.]. p.
Conv. Papirin, Spreng. syst. 1. p. 592. Root large, drastic, globose or oblong. Stems numerous, filiform. Bractese subulate. Sepals subcordate. Corollas large.
Papirin Batatas. Pl. tw.
peduncles 1-fiY.
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rolls v.iii:;>!<-, ns iti *B. Papirin.* 8
9 5
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IUS, Valil, syinb. 3. p. ;J^ Will
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the Islu oTFrii' diet. 1. c,
Ve Batat«. Fl. July, Aug. Clt, 'i HiO.
11)' n mem. sac. phyi
• hairy; j<
leaves, loose, tliehotomous; corolla white, or cream-coloured.
, S(Native of the East Indies, Guin Islands of Bourbon and France; South America, as in St. Domii go, St. Thomas, Martinico, &c.; as well as of the Sandwich and Friendly Islands. Convolvulus pentaphyllus. Roy, lugdh. p. 429. Lin. amoen. acad. 8. p. 252. spec. 223. Schum. pl. guin. p. 97. Conv. aphyllus, Vivian., ann. bot 1. p. 93. Ipomoea pentaphylla, Jactj. coll, ". t), -.-. 4. p. 11. t. 323. t> nv. hirsutus, Roxb. fl. ind. 2. p. 63. Conv. in: ultus, Wight. ill. ind. bot p. 17. t. 7 Conv. tenuifolius, Ham. Iwrb.—Vlam amer. t. 91. f. 2. Tut> > whole plant is clothed with long, yell w hairs, which rise from black glands. outer sepals lanceolate, acute. Corolla exceeding the calyx a littk, white t« cream-coloured. Capsule covered by the calyx. Seeds glabrous.
Fine-leaved Batatas. Fl. Aug. Sept. 1 lt. 1739. Pl. tw.
12 B. cissoides (Choisy, l. c. p. 457.) hairy; leaves quinate; leaflets ovate, acutish, toothed, somewhat mucronate; peduncles 2-3-flowered, equal in length to the leaves; sepals ovate, acuminated, hispid at the base; corolla wh S. Native of the East Indies, id tropic al America. Convolvulus cissoides, Vahl. ecl. 2. . 15. Lam. ill. p. 402. no. 2103. C »:iv, calycious, H. 13. et Kiuitli, nov gen. amer. 3. p. 109. Conv. trichosporus, Wall. cat. no. 1423. Conv. digitatus, Ham. berh. Stem scabrous from black dots. Leaflets petiolate. Common petioles downy. Corolla veiny, a little longer than the calyx. Capsule girded by the calyx. Seeds glabrous.
Var. β; all parts of the plant larger. ^. ^. S. Native of

Cayenne, Cuba, Brazil, banks of the Orinoco. Convólvulus riparius, H. B. et Kunth, nov. gen. 3. p. 109. Conv. Orinocénsis, Willd. herb. ex Roem. et Schultes, syst. 4. p. 293.

Cavanilles' Batatas. Pl. tw.

13 B. CAVANILLÉSII; glabrous; leaves quinate; leaflets ovate, entire, unequal; peduncles 1-3-flowered; corolla of a pale whitish red. ♃. ◠. S. Native country unknown. Ipomœa Cavanillesii, Roem. et Schultes, syst. 4. p. 214. Ipomœa pentaphýlla, Cav. icon. 2. p. 29. t. 256. Pers. euch. 1. p. 185. Ip. Cavanillesii, Roem. et Schultes, syst. 4. p. 214. Convólvulus Cavanillesii, Spreng. syst. 1. p. 590. Stems filiform. Sepals ovate, coriaceous, the 2 outer ones rough from dots. Lobes of corolla obtuse, crenulated.

Cavanilles's Batatas. Fl. Aug. Sept. Clt. 1815. Pl. tw.

14 B. TERNÁTA; glabrous; leaves ternate; leaflets petiolate, ovate, repandly crenated; peduncles axillary, 1-flowered; corolla dirty white, with the rays cream coloured; calyx clammy; sepals obovate, obtuse, inflated. ♃. ◠. S. Native of Brazil. Ipomœa ternata, Jacq. hort. schœnbr. 1. p. 16. t. 37. Poir. suppl. 4. p. 622. Conv. ternátus, Spreng. syst. 1. p. 590. Root tuberous, large. Peduncles purplish. Lobes of corolla bearded. Stamens exserted.

Ternate-leaved Batatas. Fl. July, Aug. Clt. 1824. Pl. tw.

15 B. HASTÁTA; glabrous; leaves sagittate, truncate behind, on long petioles; peduncles 2-flowered, length of leaves; sepals ovate, acute. ♃. ◠. S. Native of Mexico, in corn fields. Ipomœa glaucifólia, Lin. spec. 229. Willd. spec. 1. p. 864. Convólvulus glaucifólius, Spreng. syst. 1. p. 604.—Dill. elth. 105. t. 87. f. 101. Corolla small, purplish or flesh-coloured; with an inflated tube, and ovate, acute segments. Capsule 3-4-celled; cells 1-seeded.

Glaucous-leaved Batatas. Fl. May, July. Clt. 1732. Pl. tw.

16 B. *Loureiri*: stems procumbent; leaves cordate, palmate, on long petioles; corolla purple. ♃. ◠. S. Native of Cochinchina. Ipomœa tuberósa, Lour. coch. p. 138. Tubers oblong, edible, as in *B. edúlis*, to which they are much like in size, taste, and form.

Loureiro's Batatas. Pl. procumbent.

Cult. The species of *Batatas* are strong, free growing plants, of easy culture, only requiring plenty of room to spread. They are well adapted for trellis-work, or to run up pillars in stoves. They are all tuberous rooted plants; and, therefore, require to be kept dry when in a dormant state. Light rich soil answers them best. Young cuttings strike root readily under a hand-glass, in heat. They are all very showy when in blossom.

X. PHARBITIS (meaning unknown to us.) Choisy in mem. soc. phys. gen. 6. p. 438.—Convólvulus and Ipomœa species of authors.—Convolvulàceæ, Mœnch. meth. 432.

Lin. syst. *Pentándria Monogýnia.* Calyx of 5 sepals. Corolla campanulate, or campanulately funnel-shaped. Style one; stigma capitately granulate. Ovarium 3, rarely 4-celled; cells 2-seeded.—The species of this genus are readily distinguished from other convolvulaceous plants. They are mostly climbing American herbs, usually beset with retrograde hairs.

§ 1. *Leaves cordate, entire.*

1 P. HISPÍDA (Choisy in mem. soc. phys. 6. p. 438.) leaves cordate, acuminated, entire; auricles diverging; peduncles usually exceeding the leaves, 3-5-flowered, somewhat umbellate; sepals ovate-lanceolate, acute. ☉. ◠. H. Native of South America, Sandwich Islands, and probably cultivated in the East Indies. Convólvulus purpúreus, Lin. spec. p. 219. Herb. pict. t. 7. f. 2. Curt. bot. mag. t. 113. 1005. and 1652. H. B. et Kunth, nov. gen. amer. 3. p. 104. Ipomœa purpúrea, Lam. ill. no. 2139. Ipomœa hispida, Zucc. cent. obs. no. 56. Ipomœa Zuccheni, Roem. et Schultes, syst. 4. p. 240. Ipomœa glandulífera, Ruiz. et Pav. fl. per 2. p. 12. t. 121. f. a. Ipomœa intermédia, Schultes, obs. no. 226. p. 57. Ip. Schaltesii, Schultes, syst. 4. p. 780. Conv. mutábilis, Sel. prod. 123. Convolvuloides leucospérma, and Conv. purpúreus, Mœnch. meth. p. 452. Conv. glandulífer, Spreng. syst. 1. p. 599. Ipomœa discolor, Spreng. mss. ex Schultes, obs. Conv. eriocáulos? Willd. mss. in Roem. et Schultes, syst. 4. p. 201.—Dill. elth. 97. t. 82. f. 94. ibid. p. 100. t. 84. f. 97. Stem beset with retrograde hairs. Pedicels usually drooping or twisted. Sepals hispid, particularly so at the base; inner ones smoothish. Capsule glabrous, 3-celled. Seeds brown, roundish.—This species varies much in the colour of the flowers; white, purple, violet, and mixed with these colours.

Hispid Pharbitis. Fl. June, Sept. Clt. 1629. Pl. tw.

2 P. NIVÉA (Choisy, l. c. p. 439.) leaves entire, cordately acuminated, clothed with greyish down; peduncles exceeding the petioles from 2 to many-flowered; sepals cuneate-lanceolate, very acute, downy. ☉. ◠. H. Native of Mariaane Island; Sandwich Islands; Norfolk Island; New South Wales, at Endeavour river. Convólvulus multiflórus, herb. Smith. mss. Stem beset with retrograde soft hairs. Petioles villous. Bracteas narrow, villous. Corolla tubularly campanulate, 2-3 inches long, purple.

Var. β; down on the plant longer, of a rusty, silky colour.

Island Pharbitis. Pl. tw.

3 P. BARBÍGERA; stem downy; leaves cordate, acuminated, entire, hairy on both surfaces; hind lobes rounded; peduncles 1-flowered, shorter than the petioles, bibracteate near the calyx; sepals acuminated, spreadingly reflexed at apex, and densely bearded at the base. ☉. ◠. H. Native of North America. Ipomœa barbígera, Sweet. fl. gard. t. 86. Corolla campanulately funnel-shaped, 5-lobed, slightly crenulated; limb of a bright azure blue; tube pale, or nearly white. Stigma capitate, hardly lobed. Capsule smooth, 3-celled; cells 2-seeded. Seeds black, roughish, downy.

Beard-bearing Pharbitis. Fl. July, Oct. Pl. tw.

§ 2. *Leaves 3-5-lobed.*

4 P. NIL. (Choisy, l. c.) hairy; leaves cordate, 3-lobed; intermediate lobe dilated at the base, and not contracted; peduncles 2-3-flowered, commonly exceeding the petioles; sepals ovate-lanceolate, hispid at the base. ☉. ◠. H. Native everywhere within the tropics, both in America, Africa, and Asia. Convólvulus Nil, Lin. spec. 219. Ipomœa Nil, Roth. cat. bot. 1. p. 36. Ipomœa cærúlea, Kœn. mss. Roxb. fl. ind. 2. p. 91. Ker, bot. reg. 276. Convólvulus hederáceus, Lin. spec. p. 219. Ipomœa hepaticifólia, Hayne, herb. Conv. hederáceus, pilosus, and purpúreus, Herb. madr. Conv. Caldónia, and Conv. Sucbédes, Ham. herb. Conv. hepaticifólius, Russ. herb.—There are several varieties of this species, particularly the following. Flowers blue. Gerarde says this plant is called by the Arabians Nil; *of* Serapio Hab al Nil; and in Syria, the inhabitants call it Hasmisem; and the Italians Campana azzurra. Plant hairy.

Var. β. *Ipomœa cærúlea* (Roxb. fl. ind. edit. Wall. 2. p. 90.) This differs from the species, in the leaves being never lobed, and in the plant being perennial. Flowers of a beautiful lively pale blue.

Var. γ. *Conv. Catésbæi* (Forst. prod. no. 77.) The leaves of this variety are described as entire, downy. ☉. ◠. H. Native of the Island of Tanna, in the Pacific.

Nil Pharbitis. Fl. July, Sept. Clt. 1597. Pl. tw.

5 P. HEDERA'CEA (Choisy, 1. c. p. 440.) leaves cordate, *3-5-*robed; middle lobe ovate, acuminated, and coarctate at the base; peduncles very short, usually 1-flowered, shorter than the petioles; sepals lanceolate-linear, dilated at the base, and hispid from yellow bristles. ©. ^\ H. Native of North America, and New Holland; and of the province of Caraccas, near La Victoria; also of Mexico, near Jalapa. Ip. hederàcea, Lin. syst. 15. p. 207. Jacq. coll. 1. p. 124. icon. rar. t. *36.* R. Br. prod. p. 485. Ker. bot. reg. t. 85.—Dill. elth. t.80. f. 91. ? Plant pilose. Corolla deep blue. Stem beset with retrograde hairs. Leaves clothed with strigose down.

Ivy-like Pharbitis. Fl. Aug. Oct. Clt. 1729. PI. tw.

6 P. VA'RIA; leaves cordate, entire, and 3-5-lobed; peduncles erect, 1-flowered; sepals spreading at apex, bearded on the back, the 3 outer ones cordate-lanceolate; root fusiform. *%.1 r>i*. S. Native country unknown. Ipomce'a vària, Roth, cat. *2.* p. 17. Convolvuloides pildsus, Moench meth. 452. Convólvulus pubéscens, Willd. enum. 1. p. 203. Poir. suppl. 3. p. 463. Ipomce'a tuberdsa, Hortul. Stem beset with retrograde white pili. Corolla bluish-violet, like those of *P. barbdta.*

VariousAeaved Pharbitis. Fl. May, Oct. Clt. 1816. PI. tw.

7 P. PU'RSIIII; hairy; leaves cordate, 3-lobed, acuminated: lateral lobes small: middle lobe large, dilated at the base; peduncles short, 1-2-flowered; bracteas subulate; calyxes very villous, long, acuminated. ©. ^\ H. Native of Virginia and Carolina, near gardens, and in hedges on river sides. Conv. Nil, Michx. fl. amer. bor. 1. p. 139. Sims, bot. mag. t. 188, but not of Lin. Ipomce'a Nil, Pursh, fl. amer. sept. 1. p. 146.—Dill. elth. t. 80. f. 91. Flowers beautiful pale blue, only open early in the morning, from which it has been called Morning-glory.

. *Pursh's* Pharbitis. Fl. July, Sept. Clt. 1597. PI. tw.

8 P. SCA'BRIDA; leaves cordate, somewhat 5-lobed, and are as well as the stem, scabrous from hairs: peduncles usually 1-flowered; sepals beset with strigose hairs. ©. ^\ H. Native country unknown. Ipomce'a scàbrida, Roem. et Schultes, syst. 4. p. 223. Ipomoe'a scàbra, Schultes, obs. bot. p. 238. Said to be intermediate between *Ipomafa hederdcea* and *Ipomcèa triloba.* Corolla white.

Scabrous Pharbitis. PI. tw.

9 P. FORSKOZ'LI; leaves 5-lobed, scabrous on both surfaces, as well as the calyxes; peduncles solitary, 1-flowered. ©. *r*. H. Native of Arabia, at Hadie. Ipomoe'a scàbra, Forsk. aegypt. p. 44. Flowers blue. Bracteas linear. Stigma capitate. Said to be nearly allied to *P. hederdcea,*

ForskoeVs Pharbitis. PI. tw.

10 P. CUSPIDA'TA; leaves cordate, 3-lobed; lobes cuspidate; peduncles 1-flowered; sepals linear, very hairy at the base. ©. *rs%* H. Native of Peru, in stony places. Ipomoe'a cuspidàta, Ruiz, et Pav. fl. per. 2. p. 13. t. 119. f. a. Poir. diet. 6. p. 20. Conv. Peruviànus, Spreng. syst. 1. p. 593. Leaves on long|petioles. Lateral lobes of leaves short. Peduncles shorter than the petiofes. Bracteas subulate. Corolla funnel-shaped, purplish; limb spreading, nearly entire. Stamens exserted. Stigma 3-lobed.

Cuspidate-leaved Pharbitis. Fl. June, July. Clt. 1732. PI. tw.

11 P. BARBA^TA; leaves cordate, 3-lobed; peduncles 1-flowered, twisted; calyx bearded; sepals and bracteas revolutely spreading at the apex. 0. ^. H. Native of Virginia and Carolina, from whence the seeds were sent to Dillenius. Ipomce'a barbàta, Roth. cat. 1. p. 27. Pers. ench. 1. p. 184. Ipomoe'a hederàcea, Ker. bot. reg. t. 85, but not of Lin.—Dill, elth. t. 80. f. 92. Calyx beset with elevated warts. Capsule 3-celled, cells 2-seeded.

2?earcfo/-calyxed Pharbitis. Fl. Aug. Oct. Clt. 1729. PI. tw.

12 P. DILLE^NU; hairy; leaves cordate, entire, and 3-lobed; flowers solitary, almost sessile; calyxes oblong, pilose. ©. ^\ H. Native of ^Ethiopia. IpomoeVDillènii, Roem. et Schultes, syst. 4. p. 227. Conv. Dillènii, Desr. in Lam. diet. *3.* p. 544. —Dill. elth. 97. t. 81. f. 93. Stem beset with long hairs, as well as the petioles. Leaves rather villous. Corolla beautiful blue, with a white bottom, and a spreading, nearly entire limb.

Dillenius's Pharbitis. Fl. June, July. Clt. ? PI. tw.

13 P. SCA'BRA; leaves cordate, 3-lobed; peduncles 3-flowered, longer than the petioles; calyx tubercled; fruit nutant, ©. ^\ H. Native country unknown. Ipomce'a scàbra, Gmel. syst. Cav. descr.p. 101. Stem filiform. Flowers white. Capsule small, 3-celled.

Scabrous Pharbitis. Fl. June, Nov. Clt. 1823. PL tw.

14 P. VILLÓSA; very villous; leaves cordate, 3-lobed; lobes acuminated: lateral ones excavated outside: intermediate *one* elongated, attenuated at the base; peduncles 3-flowered, involucrated. ©. ^\ H. Native of Peru, in groves, and on the edges of fields. Ipomce'a villósa, Ruiz, et Pav. fl. per. 2. p. 12. t. 121. f. 1. Poir. diet. 6. p. 20. Conv. Ruizii, Spreng. syst. 1. p. 594. Corolla funnel-shaped, purplish, glabrous, with an entire, large, revolute limb. Stamens villous at the base. Stigma capitate, granular, 3-lobed.

Villous Pharbitis. PI. twining.

15 P. PUNCTA'TA; pilose; leaves cordate, entire, or 3-lobed; peduncles usually 3-flowered; calyx beset with long hairs and black tubercles; sepals acute, unequal. ©. *rs*. H. Native of India, Asia, Africa, and America. Ipomoe'a punctàta, Pers. ench. 1. p. 184. Conv. hederàceus, Lin. spec. 219. WiJld. spec. 1. p. 851.—Dill. eth. 99. t. 83. f. 96. Stems dark red. Corolla of a purplish-violet colour, middle sized; limb spreading, nearly entire.

Dotted-caiyxed Pharbitis. Fl. July, Nov. Clt. ? PI. tw.

Cult. Pharbitis is a genus of very showy, tender, annual, twining plants. They should be reared in a hot-bed; and when the plants are of sufficient size, they should be planted into other pots, and afterwards shifted from size to size of pots as they grow; and some of them may be tried in the open ground, in a warm sheltered situation. A light, rich soil, or a mixture of loam and decayed leaves suits them best.

XL CALONY'CTION (from *KCLXOQ, kalos,* beautiful; and rv£, *nyx,* night; the flowers are large and showy, and expand at night.) Choisy in mem. soc. phys. gen. 6. p. 441. Convólvulus and Ipomce'a species of authors.—Bóna nóx, Rafin.

LIN. SYST. *Pentándria, Monogýnia.* Sepals 5. Corolla very showy, funnel-shaped. Stamens exserted. Style one; stigma capitate, 2-lobed. Ovarium 2-celled, or somewhat 4-celled, from the rudiment of a dissepiment, 4-ovulate. Pedicels fleshy. —'Twining showy herbs, bearing flowers resembling those of *Datura.* Peduncles axillary, usually 1-flowered.

1 C. SPECIÓSUM (Choisy, 1. c.); sepals unequal, awned. *$* ,'r>. S. Native of most parts of America within the tropic. Ipo* mce'a bona-nóx. Lin. spec. p. 228. Sims, bot. mag. t 752. Pursh. fl. amer. 1. p. 145. Cav. icon. 3. p. 52. t. 300. Jacq. schoenbr. 1. p. 16. t. *36.* Argyrèia bona nóx. Sweet, hort. brit. p. 289. Conv. bona-nóx. Spreng. syst. 1. p. 600.—Sloane jam. p. *55.* hist. 1. p. 151. t. 96. f. 1.—Plukn. aim. 115. t. 276. f. 3. Leaves cordate, entire, acuminated, or hastately 3-5-lobed; peduncles racemose, 3-5-flowered. Corolla with a long cylindrical yellowish tube, and a white spreading limb; lobes rounded, mucronate.

Showy Calonyction. Fl. July, Oct. Clt. 1773. PI. tw.

2 C. ROXBU'RGHII; sepals unequal, awned; leaves cordate, entire, rarely Iobed, glabrous. *$* . ^. S. Native of the East Indies. Ipomce'a grandiflóra, Roxb. fl. ind. 2. p. *87.* but not of Lin. Ipomoc'a longiflóra, Wild. enum. 1. p. 207. Mundaválli, Rheed. mal. 11. p. 103. t. 50. Asiat. res. 4. p, 257.

Conv. muricàtus, Hasc. herb. Stem hardly prickly. Peduncles clavate, 2-4-flowered. Flowers very large, pure white, the border being from 4-6 inches in diameter, delightfully but faintly fragrant, opening at sun-set and drooping at day-light; tube very long, cylindrical.

Roxburgh's Calonyction. Fl. July, Oct. Clt. 1799.

3 C. ROXBU'RGII; sepals equal, long, acuminated; leaves cordate, acuminated, entire. ⊙. ◠. S. Native of Persia and the East Indies. Ipomœ'a muricàta, Jacq. schœnbr. 3. p. 40. t. 323. Roxb. fl. ind. 2. p. 59. Convólvulus muricàtus, Lin. mant. p. 44. Willd. enum. 1. p. 204. Ipomœ'a turbinàta, Lagasc. gen. et spec. nov. diegn. p. 10, no. 139. C. speciósum, var. β. muricàtum, Choisy, l. c.) I. bóna-nóx. β. purpurascens, Ker. bot. rep. 293. Stem and peduncles muricated from prickles. Flowers large, pale bluish-purple; lobes mucronate, tube widening a little towards the mouth, hairy inside, ex Roxb. Peduncles 2-3-flowered.

Muricated Calonyction. Fl. July, Oct. Clt. 1777. Pl. tw.

4 C. HEDERACE'UM (Bernh. bort. elfort, ex Link. enum. 1. p. 200. under *Ipomœ'a*) stem muricated; leaves cordate, acuminated, glabrous, 7-nerved; peduncles shorter than the petioles; sepals acuminated. ♄. ◠. S. Native country unknown. Corolla purple. Very like *C. muricàtum*, but smaller, and the leaves are 7-nerved instead of 9-nerved.

False-muricated Calonyction. Fl. July, Oct. Clt. 1820. Shrub tw.

5 C. A'STERUM (Choisy, l. c. p. 442.) sepals unequal, short-acuminated. ♂. ◠. S. Native of Silhet. Ctmvfilvii Jus ; Is H r, Wall. cat. no. 1388. Stem beset with red reflexed, spiny tubercles, particularly on the older branches. Leaves cordate, acuminated; hind lobes sometimes roundish-obtuse, and sometimes angularly toothed. Peduncles 1-flowered. Sepals adpressed to the base of the calyx. Corolla tubularly funnel-shaped, 3-6 inches long. Capsule glabrous, size of a cherry. Seeds angular, downy, especially on the angles.

Rough-stemmed Calonyction. Pl. tw.

6 C. TRACHOSPE'RMUM (Choisy, l. c.) sepals unequal, obtuse. ♃. ◠. S. Native of Java. Jpofncea tt chospe rana, BImit. bijdr. p. 710. Stem quite glabrous. Leaves hastatelj 3-5-lobed; middle lobe elliptic-oblong, attenuated :it both ends, very acute; lateral ones acute it itjit'X, ami L'liiica ted at the base. as nlsso b: d, quite glabrous. Peduncles 1-flowered. Sepals ovate; inner ones rarely mucronate at apex, Corolla tubular, much longer than the calyx, white.?

Hairy-seeded Calonyction. Pl. tw.

7 C. SMAXIFRÒXUS (Choisy, l. c.) sepals equal, acute. ♃. ◠. S. Native of the West Indies. Convólvulus grandiflorus, Lin. suppl. p. 136. Desr. in Lam. dic 3. And. bot. rep. t. 463, Convólvulus latifòrus, Desr. in Lam. dict. 3. p. 561. Ipomœ'a latifòra, Roem. et Schultes, syst. 4. p. 240. —Plum. cat. 1. mss. vol. 2. p. 52.—Tourn. p. 83. Leaves large, glabrous, cordate, acuminated. Corolla snow-white, with a long, cylindrical greenish tube; limb 5 inches in diameter, expanding at night, and fading at day-light. According to Roem. et Schultes, l. c. the 2 outer sepals are longer, and acute, and the 3 inner obtuse.

Great-flowered Calonyction. Fl. Aug. Oct. Clt.? Pl. tw.

8 C. FITZ'RITES; glabrous; peduncles winged, 2-flowered; pedicels clavate, divaricate; sepals large, elliptic-oblong, obtuse. ♂.? ◠. S. Native of Huayaquil. Leaves cordate, acuminated; auricles rounded. Peduncles longer than the leaves. Corolla downy, (v. s. in herb. Ruiz. et Pav.)

Winged-peduncled Calonyction. Pl. tw.

9 C. CLAVA'TUM; sepals wide, mucronate, nearly equal, membranous; stem and petioles pilose; leaves glabrous. ♂.? ◠. S. Native of Huayaquil. Convólvulus clavàtus, Ruiz. et Pav.

10 C. JACQUI'NII; sepals unequal, obtuse; leaves cordate, acute. ♄. ◠. S. Native of Martinico, on the banks of rivers. Convólvulus grandiflòrus, Jacq. vind. 3. p. 39. t. 69. Plant glabrous. Leaves large, cordate. Peduncles 1-flowered. Corolla pure white; tube widening to the top. brown, rather woolly.

Jacquin's Calonyction. Shrub tw.

Cult. The species of *Calonyction* are among the largest flowering convolvulaceous plants. A light rich soil is the best for them, or a mixture of loam, peat, and sand. They should be reared on a hot-bed, and when of sufficient size they should be planted in separate pots, and shifted from size to size as they grow. They succeed best when trained up trellis-work, or rafters in stoves.

XII. EXOGONIUM (from *ex*, *exo*, outwardly; and *γωνια*, *gonia*, an angle; in reference to the exserted stamens.) Choisy in mem. soc. phys. gen. 6. p. 445. but not of Moench and Sesse.—Convólvulus and Ipomœ'a species of authors.

Lin. syst. *Pentándria*, *Monogynia*. Calyx of 5 sepals. Corolla middle-sized, tubular. Stamens exserted. Style one; stigma capitate, 2-lobed. Ovarium 2-celled; cells 2-ovulate. —Climbing plants, natives of America.

1 E. BRACTEA'TUM (Choisy, l. c.) glabrous; leaves cordate; racemes elongated, many-flowered; flowers bracteate; bracteas large, cordately reniform, coloured. ♄. ◠. S. Native of New Spain, near La Vent a di Acaguisotla, at the altitude of 5000 hexapods. Ipomœ'a bractoàta, Cav. ic. 5. p. 51. t. 477. Ipomœ'a spicàta, H. B. et Kunth, nov. gen. 3. p. 112. Convolvulus obovallàtus, Sprengel syst. 1. p. 593 Ipomœ'a cinera, Willd. Branches angular, white, glabrous. Flowers pedicellate, distinct, reflexed. Corollas tubularly funnel-shaped, glabrous, yellowish-outside and purplish-red inside; the limb in the plant described by Cav. is entire and reflexed, but in the plant described by Kunth, the limb is plicately 5-cleft, and the segments mucronate. Seeds oblong, black, downy.

Bracteate-flowered Exogonium. Shrub tw.

2 E. FILIFÒRME (Choisy, l. c.) leaves oblong-cordate, obtuse, mucronate; peduncles racemose, filiformly. ♄. ◠. S. Native of Martinico and the Antilles, in woods. Ipomœ'a filiformis, Jacq. amer. p. 27. t. 19. pict. p. 20. t. 26. Willd. spec. 1. p. 883. Convólvulus filiformis, Desr. in Lam. dict. 3. p. 555. Plant quite glabrous. Racemes loose-flowered. Flowers purple, copious. Calyx small, acute. Corolla with a very long tube, and obtuse segments. Filaments 5, exceeding the corolla, alternating with 5 sterile ones, which are much shorter.

Filiform Exogonium. Fl. Sept. Oct. Clt. 1823. Sh. tw.

3 E. REPA'NDUM (Choisy, l. c.) leaves cordate, oblong, repand, acuminated; peduncles branched, cymose. ♄. ◠. S. Native of South America and Martinico. Ipomœ'a repánda, Jacq. amer. 28. t. 20. pict. t. 27. Sal. pat. t. 81. Convólvulus repándus, Desr. in Lam. dict. 3. p. 555. Plant quite glabrous. Stem terete. Lower leaves sometimes 3-lobed, all glaucous beneath. Peduncles length of leaves; partial ones often trichotomous. Flowers scarlet, 2 inches long. Calyx the same colour as the corolla, small, obtuse. Limb of corolla reflexed; segment narrow, obtuse.

Repand-leaved Exogonium. Fl. Feb. Nov. Clt. 1793, Shrub. tw.

Cult. All the species of this genus are elegant and singular. Light rich soil, or a mixture of loam and peat, or decayed leaves and loam suits them best. They are well adapted for

training up trellis-work, or pillars in stoves. Young cuttings strike root readily under a hand-glass, in heat.

XIII. LEPISTFMON (from *Xemg, lepis,* a scale ; and *(TTrfjjiijjy, stemon,* a stamen ; in reference to the stamens being furnished with 5 scales ; that is, one to each, which are arched over the ovarium.) Blum, bijdr. p. 722. Choisy, in mem. soc. phys. gen. 6. p. 443.—Convolvulus species of authors.

LIN. &YST. *Pentandria, Monogynia.* Calyx of 5 equal sepals. Corolla tubular, inflated at the base. Stamens 5, furnished each with a scale at the base, which is arched over the ovarium. Style one. Stigma capitate, 2-lobed. Ovarium 2-celled ; cells 1-seeded. Fruit capsular. — Climbing perennial herbaceous plants.

1 L. WALLICHII (Choisy, 1. c.) stem hairy; leaves cordate, acuminated : upper ones somewhat 3-lobed ; peduncles very short, umbellately many-flowered ; sepals oblong-lanceolate, acute. 1/. ^. S. Native of Silhet. Convolvulus ampullaceus, Vahl. mss. in herb. Juss. Conv. hispidus? Vahl. symb. 3. p. 29. Conv. binectariferus, Wall. in. Roxb. fl. ind. 2. p. 47. Conv. cephalanthus, Wall. cat. no. 1402. Leaves beset with adpressed hairs, pale beneath, 3-5 inches long, and nearly as much broad. Stem and petioles beset with spreading hairs. Sepals hairy outside. Corolla glabrous. Flowers rather small, pure white, 18 lines long, and the scales of the stamens acute and villous.

WallicKs Lepistemon. PI. tw.

2 L. FLAVE'SCENS (Blum, bijdr. p. 722.) plant pilose ; leaves cordate-ovate, quite entire, or 3-lobed; cymes pedunculate, axillary, dense-flowered, shorter than the petioles. %. ^\ S. Native of Java, among bushes on the mountains. Perhaps the same as the preceding species.

Yellowish Lepistemon. PL tw.

Cult. For culture and propagation see *Exogbnium* above.

XIV. IPOMG?A (from ii// i7roe, *ips ipos,* bind-weed; and *OJJLQIOC, omoios,* similar ; the genus is nearly allied to *Convolvulus,* or bind-weed.) Choisy in mem. soc. phys. gen. 6. p. 444.—Convolvulus and Ipomoea species of authors.

LIN. SYST. *Pentandria, Monogynia.* Calyx of *5* sepals. Corolla campanulate. Stamens inclosed. Style one; stigma 2-lobed : lobes capitate. Ovarium 2-celled ; cells 2-seeded. Capsule 2-celled ; cells 2-seeded.—Twining or creeping plants, usually natives within the tropics in both hemispheres.

SECT. I. ERPIPOMOZ'A (from tpTrw, *erpo,* to creep, and *Ipo-*nc£a;* the plants contained in this section creep along the ground.) Choisy, 1. c. Stems creeping.

1 I. RE'PTANS (Poir. diet, suppl. 3. p. 460.) stems smooth, striately furrowed, rooting below ; leaves sagittately-lanceolate : auricles acutish, sometimes entire and sometimes toothed; petioles glabrous; peduncles 1-5-flowered ; sepals ovate, acutish, or obtuse. %. S. Native of China; East Indies; Arabia, and Senegal. Convolvulus reptans, Lin. syst. veg. 171. spec. 225. Osb. itin. p. 196. Ipomoea reptans, /3. aquatica, Poir. diet. 6. p. 18. Ipomoea repens, Roth. nov. spec. p. 110. Convolvulus repens, Vahl. symb. 1. p. 17. Willd. spec. 1. p. 874. but not of Lin. Wall. fl. ind. 2. p. *68.*— Rumph. amb. 5. p. 419. t. 155. f. 1.—Rlieed. mal. 11. p. 107. t. *53.* Ipomsea sepiaria, Russ. herb. Conv. repens, Ham. herb. Conv. palustris, Ham. herb. Ipomoea aquatica, Forsk. descr. p. 44. There are varieties having from 1 *to* many-flowered peduncles ; the sepals acute or obtuse ; it is, therefore, not separated from **Ipomoea aquatica, Forsk.** (Conv. Adansonii, Desr.) but not of Blume.

Creeping Ipomoea. Fl. May, June. Clt. 1806. PI. creeping.

2 I. ACETOSJEFOLIA (Vahl. eclog. 1. p. 18.) glabrous; stems angular, creeping ; leaves oblong-lanceolate and hastate ; peduncles elongated, 1-flowered ; sepals oblong, glabrous; bracteas alternate, subulate. %. S. Native of tropical America, by the sea-side. Willd. spec. 1. p. 874. Conv. repens, Swartz. obs. p. 64. but not of Roth.—Plum. amer. 91. t. 105. Leaves 2 inches long, and a nail broad, obtuse, sometimes emarginate. Flowers white.

Sorrel-leaved Ipomoea. PI. creeping.

S I. PEVCA^PIUE (Sweet, hort. brit. 289.) leaves roundish, emarginate, or 2-lobed, veiny, thickish ; peduncles 1, or many-flowered ; sepals ovate-lanceolate, obtuse. %. S. Native of India; China; New Holland; Arabia; Island of Bourbon; Sandwich Islands ; and South America, in the sand, by the sea-side. Convolvulus pes-caprae, **Lin.** spec. 226. Wall, fl. ind. 2. p. 74. Conv. Brasiliensis, Lin. spec. 226. Willd. spec. 1.p. 877. Conv. maritimus, Desr. in Lam. diet. 3. p. 550. Conv. bilobatus, Wall. fl. ind. 2. p. 73. Conv. bauhiniaefolius, Sal. prod. 125. Ipomoe'a maritima, 11. Br. prod. 486. Ker, hot. *reg.* 319. IponWa orbicularis, Ell. sketch. 257. Ipomce'a Brasiliensis, Meyer, ess. 97. Ipomce' a biloba, Forsk, segypt. p. 44. Vittm. summ. 1. p. 440.—Rheed. mal. 11. p. 117. t. 57.—Herm. lugdb. 174. t. 175.—Rumph. amb. 5. p. 433. t. 159. f. 1. Leaves biglandular at the base, more or less 2-lobed. Peduncles 1-6-flowered. Flowers large, reddish-purple. Seeds downy.

GoatsfootAeaved Ipomoea. Fl. June, July. Ck. 1770. PI. creeping.

4 I. ROTUNDIFOLIA ; glabrous ; leaves roundish, retuse, mucronate; petioles shorter than the leaves; peduncles twice longer than the petioles, bifid, many-flowered. 1/ . S. Native of Guinea, in the sea-sand. Conv. rotundifolius, Sebum, pi. guin. p. 102. Root woody, creeping. Stems trailing, rooting, purplish. Petioles purplish, biglandular at top. Sepals ovate, obtuse, mucronate: outer ones rather wrinkled: inner ones twice the size, and somewhat diaphanous. Corolla campanulately funnel-shaped, purple ; limb flat, obsoletely 5-lobed. Filaments downy at the base. Seeds hairy. Allied to /. *pts-caprce.*

Round-leaved Ipomcea. PI. creeping.

5 I. LITTORALIS (Blum, bijdr. p. 713.) stems creeping; leaves roundish-cordate, emarginate, with a mucrone, a little angled, ciliated on the edges; peduncles 1-flowered; sepals cuspidate: outer ones shorter, erectly spreading. %. S. Native of Java and Nusakambanga, in the sand by the sea-shore. Corollas lilac, with a purplish bottom.

Sea-shore Ipomcea. PI. creeping.

6 I. RIPARIA; downy; stems prostrate, radicant ; leaver cordate, acute, on long petioles; umbels pedunculate, 4-5-flowered; calyx pilose. *I^.* S. Native of Guinea, on the banks of rivers. Corollas red.

River-side Ipomcea. PI. creeping.

7 I. CRASSIFOLIA (Cav. descrip. p. 100. Pers. ench. 1. p. 184.) stem decumbent, branched ; leaves reniform, emarginate, somewhat plicate ; peduncles axillary, usually 3-flowered, shorter than the petioles; *2* outer sepals fleshy, and shorter than the 3 inner. 1/. S. Native of Guayaquil. Nearly allied to *I.ph caprce.* Nerves of leaves white. Petioles biglandular at th base. Corollas white.

Thick-leaved Ipomoea. PI. creeping.

8 I. CARNOSA (R. Br. prod. p. 485.) plant prostrp'.e, glabrous,

leaves cordate, emarginate, fleshy, glaucous, hardly an inch long; peduncles 1-2-flowered; sepals equal. ♃. S. Native of New Holland, within the tropic. Convólvulus carnósus, Sprang. syst. 1. p. 609. Flowers not ?

Fig.-leaved Ipomœa. Pl. prostrate.

9 I. ficifólia (R. Br. prod. p. 486.) plant prostrate, rather villous; leaves subcordate, dentately cut: upper ones lanceolate; peduncles 1-flowered, glabrous, longer than the leaves; sepals equal, lanceolate, acuminated. ♃. S. Native of New Holland, within the tropic, by the sea-side. Convolvulus ficifolius, Sprang. syst. 1. p. 609.

Cut-leaved Ipomœa. Pl. prostrate.

10 I. cissoídes (R. Br. prod. p. 486.) plant creeping, tomentose; leaves nearly cordate, ovate-oblong, cut, rather silky; peduncles 1-2-flowered, villous, longer than the leaves; sepals glabrous, equal, oblong-lanceolate, acute. ♃. S. Native of New Holland, within the tropic. Convolvulus cissoides, Sprang. syst. 1. p. 609.

Gregan's Ipomœa. Pl. creeping.

11 I. spuria (Choisy in mem. soc. phys. gen. 6. p. 446.) stems creeping; leaves cordately reniform, glabrous, obtuse, mucronulate; peduncles usually not equalling the leaves in length; sepals ovate; outer ones shortest, and rugosely plicate. ♃. S. Native of Mysore and Malabar. Convólvulus rugósus, Roxb. in Willd. ann. act. berol. 4. p. 106. Roem. et Schultes, 4. p. 273, 303, and 790. Convol. flagelliformis, Wall. fl. ind. 2. p. 68. Conv. Beladámbo, Sprang. syst. 1. p. 608. Ipomœa repens, Lam. ill. no. 2134. Poir. dict. 6. p. 18. Ipomœa Beladámboe, Roem. et Schultes, syst. 4. p. 232. Conv. mollítus, Russ. herb. Beladámboe, Rheed mal. 11. p. 119. t. 58. Stems compressedly angular. Peduncles 3-8-flowered. Seeds black, glabrous. Flowers large, pure white.

Wrinkled Ipomœa. Pl. creeping.

12 I. sinuátifrons (Choisy, l. c.) creeping, glabrous; leaves reniform, with sinuately-toothed edges, emarginate; pedicels very short, 1-flowered, rarely 2-3-flowered; sepals small, ovate-roundish, ciliately jagged. ♃, S. Native of the East Indies; as of Bengal, Nopalry, Coromandel, and Island of Timor. Convólvulus reniformis, Wall. fl. ind. 2. p. 67. Conv. Gangéticus, Lin. amœn. acad. 4. p. 306. no. 121. Evólvulus emarginátus, Burm. fl. ind. 77. t. 20. f. 1. Evólvulus Gangéticus, Lin. spec. p. 391. Stem angular at top. Leaves 3-6 lines long. Corolla small, 5-cleft, yellow; lobes acute. Seeds glabrous, reddish.—In some soils this species is found of a dark purple or rusty colour.

Kidney-shaped leaved Ipomœa. Fl. Oct. Cl. 1825. Pl. creeping.

13 I. reniciófolia (Choisy, l. c. p. 447.) stems diffuse, hairy; leaves cordately reniform, obtuse at top, also emarginate, glabrous, with entire edges; peduncles axillary, solitary, twin or tern, 1-2-flowered; sepals linear-lanceolate, hairy. ☉. S. Native of Travancore. Convólvulus hirtus, Wall. cat. no. 2254. and probably of Lin. Stem diffusely creeping, beset with retrograde hairs, which rise from black glands. Leaves an inch long. Corolla tubular, exceeding the calyx, glabrous.

Dock-leaved Ipomœa. Pl. creeping.

14 I. incúrva; creeping; stems erect, carinatose; leaves broad, linear, emarginate, mucronate, subhastate: lobes linear, acute, curved in front; peduncles 1-flowered; sepals nearly equal, lanceolate. ♃. S. Native of Guinea. Conv. incúrvus, Schum. pl. guin. p. 92. Stem nearly a span high, with filiform creepers. Corolla white, larger than those of *C. arvénsis*; with a dark purple bottom, and a usually mucronate 5-cleft limb; lobes roundish. Capsule ovate-roundish, 4-valved, usually 1-seeded. Said to be related to *I. emarginata*, and *I. acetocæfolia*.

Incurved-leaved Ipomœa. Pl. creeping.

Sect. II. Orthomœa (from ὀρθος, *orthos*, straight; and *Ipomœa*; in reference to the species contained in this section being erect or diffuse, but never twining.)

* *Plants herbaceous.*

15 I. tridentáta (Roth. cat. 2. p. 19. Roem. arch. 3. p. 38.) stems diffuse, filiform; leaves sessile, oblong-linear, truncate at apex, and often tridentate, but auriculately toothed at the base; peduncles 1-flowered, exceeding the leaves; sepals ovate, awned. ☉. S. Native of the East Indies; at Pegu-new, Irrawaddi, Ceylon, &c. Convólvulus tridentátus, Lin. spec. ed. 1. p. 157. Wall. fl. ind. 2. p. 56. Conv. viscidus, Roxb. hort. beng. p. 14. Evólvulus tridentátus, Lin. spec. ed. 2. p. 392. Burm. ind. 77. t. 16. f. 3. Conv. Indicus, &c. Pluk. alm. 117. t. 276. f. 5. Conv. minor, &c. Pluk. mant. 117. t. 167. f. 5. Senders-Claudi, Rheed. mal. 11. p. 135. t. 65. Stem herbaceous, angular. Leaves hardly 3-4 lines broad, and an inch long, quite glabrous. Peduncles downy. Calyx whitish-yellow. Corollas small, yellow.

Tridentate-leaved Ipomœa. Fl. June, July. Cl. 1778. Pl. diffuse.

16 I. filicaulis (Blum. bijdr. p. 721.) stems diffuse, filiform; leaves linear, or linear-lanceolate, obtuse, mucronate, on short petioles, somewhat hastately denticulated at the base; peduncles 1-2-flowered, length of the leaves; sepals equal, ovate, or oblong, acuminated, acute. ☉. S. Native of the East Indies; as of Travancore, Ceylon, Penang, Rangoon, banks of the Irrawaddi, &c.; also of China, Japan, New Holland, Java, Timor; Africa, at the Cape of Good Hope, and in Guinea; and of America, in various parts. Convólvulus filicaúlis, Vahl. symb. 3. p. 24. Schum. pl. guin. p. 92. Conv. hastátus, Desr. in Lam. dict 3. p. 542. Conv. simplex, Pers. ench. 1. p. 178. Conv. médium, Lour. coch. p. 106. edit. Willd. 1. p. 130. Ait. hort. kew. 1. p. 328. Wall. fl. ind. 2. p. 56. but not of Lin. Conv. filiformis, Thunb. fl. cap. 2. p. 10. Conv. denticulatus, Desr. in Lam. dict. 3. p. 540. Sprang. syst. 1. p. 603. Conv. angustifólius, Desr. in Lam. dict 3. p. 547. Vahl. symb. 3. p. 25. Conv. Japónicus, Thunb. jap. p. 88.? Vahl. symb. 3. p. 25. Ipomœa denticulata, R. Br. prod. 1. p. 485. Ker. bot. reg. 317. I. angustifólia, Jacq. coll. 2. p. 367. icon. rar. t. 317. I. Japónica, Roem. et Schultes, syst. 4. p. 215.? Pers. ench. 1. p. 184. Tela-Neli, Rheed. mal. 11. p. 113. t. 55. Conv. linifólius, Wall. cat. no. 1289. Stem branched, angular. Leaves sometimes 2-3 lines broad, sometimes very narrow; hind lobes generally toothed. Pedicels elevate. Corolla pale yellow, or yellow. Seeds glabrous.

Var. β, (Schum. pl. guin. p. 92.) leaves narrow-linear; teeth of auricles subcutaneous. ☉. S. Native of Guinea.

Thread-stemmed Ipomœa. Fl. July, Aug. Cl. 1778. Pl. 1 foot, diffuse.

17 I. Chapperóni (R. Br. in Denh. append. p. 35.) glabrous, creeping; leaves sagittate, having the hind lobes entire, and acute; peduncles 1-flowered. ♃. F. Native of Bornou.

Chapperon's Ipomœa. Pl. creeping.

18 I. sidæfólia; glabrous, erectish; leaves linear-hastate, sessile, having the hind lobes bidentate; peduncles 1-flowered; stem furrowed. ♃. S. Native of Guinea, in fields; common among grass. Stem furrowed. Flowers small, yellow. Nearly allied to *I. filicaúlis*, and probably only a variety of it.

Sidastaic-leaved Ipomœa. Pl. ½ foot, nearly erect.

19 I. Arvensis; branched, glabrous, twiggy; leaves scale-formed; peduncles 2-flowered, spicate; sepals lanceolate, ob-

long, acuminated: the 2 outer ones rather the smallest. ♃. S. Native on the sandy banks of the Orinoco, near the cataract of Atures. Convólvulus Aturénsis, H. B. et Kunth, nov. gen. amer. 3. p. 96. Stem dichotomously branched; branches terete. Corolla white, glabrous, 3 times longer than the calyx. Capsule globose, covered by tin? i

Attire Ipjmnea. Fl. March. Pl. 1½ foot.

29 i. *c A* PILL-•ta; stem is near)-. simple, erect; leaves sessile, many-parted; segments capillary, glabrous; flowers axillary, solitary, pedunculate, longer than the leaves; calyx smoothish; sepals ovate, acute, concave, rugose on the back, unequal. ♃. S. Native of New Granada, in the temperate regions, betwixt Villa San Miguel and the river Putes, at the altitude of 800 hexapods. Convólvulus capillifolius, H. If, et Kunth, nov. gen. 3. p. 97. Root tuberous, milky, turnip-formed. Plant smoothish. Corollas funnel-shaped, purple, glabrous. Perhaps a species of *Leptocóllis*.

Capillary-leaved Ipomœa. Pl. l foot.

21 I. SERI'CEA (R. Br. prod. p. 487.) tomentose; stem flexuous at the apex; leaves lanceolate, acute, quite entire, obtuse at the base; peduncles usually 2-flowered; sepals ovate, acuminated. ♃.? S. Native of New Holland, within the tropic, on the sea shore. I. diántha, Roem. et Schultes, syst. 4. p. 254. Conv. flexuósus, Spreng. syst. 1. p. 612.

Two-flowered Ipomœa. Pl. erect.

22 I. ERE'CTA (R. Br. l. c.) tomentose, erect; leaves oblong-linear, obtuse, quite entire; peduncles usually *I-HOY,* ered; sepals acute; capsule G-valve<I. %• S. Native of New Holland, within the tropic, on the sea shore. Conv. erectus, Spreng. syst. 1. p. 612.

Erect Ipomœa. Pl. erect.

23 I. HETERO annual, asce smoothish; leave ire, obtuse, ndtng, times pinnatifid at the base, a ; peduncles 1-flowered, very short; sepals iid toothed at to] acuminated. ☉. S. Native of New Holland, with ropic, on the sea shore. Ipomœa polymórpha, Roem. et Schultes, syst. 4. 254. Convólvulus Brównii, Spreng. syst. 1. p. 6

Variable-leaved Ipomœa. Pl. ascending. 12.

24 I. COMPE'CTA; stems prostrate, diffuse; leaves cordate-sagittate, lanceolate, entire, acute; petioles scabrous; flowers nearly sessile, axillary, crowded; calyx hairy. ☉. S. Native of Guinea, common in fields. Corollas white.

Crowded-flowered Ipomœa. Pl. prostrate.

25 I. RUPE'STRIS; roots creeping; stem 3 inches high; leaves linear-lanceolate, or lanceolate, obtuse, thick, entire, glabrous, petiolate; peduncles terminal and axillary, elongated, 1-flowered. ♃. S. Native of Sierra Leone, and along the coast of Guinea, on the sea shore. Corollas large, pale red. J. Hamilton of *Calystégia soldanélla*.

Hit ible Ipomœa. Pl. ¼ foot.

26 I. OVALIFO'LIA (Choisy, l. c. p. 449.) stem erect or prostrate, suffruticose; leaves ovate-oblong, acute at the base, obtuse at the apex, and emarginate, on short petioles; peduncles 3-7-flowered; sepals unequal. ♄. S. Native of the East Indies and Sandwich Islands. Convólvulus ovalifolius, Vahl, eclog. 2. p. 16. Hook. et Arn. in Beech. voy. pt. bot. p. 90. [p. microphylla, Roth. nov. spec. p. 112. Conv. parvifolius, Spreng. syst. 1. p. 611.? Stems terete. Leaves an inch long, and 6 lines broad. Peduncles twice as long as the petioles. The 3 exterior sepals ovate, bluntish; the 2 interior smaller, linear, acute. Corolla glabrous.

Var. β, glábra (Choisy, l. c.) stem, leaves, calyxes, and peduncles, quite glabrous.

Var. β, pubéscens (Choisy, l. c.) *M* parts of ih< plw are ciliated with long hairs. ♄. S. Native of the Sandwich Islands, Guinea, and Angola.

Var. γ, tomentósa (Choisy, l. c.) every part of the plant of a yellow colour, from intricate, simple, adpressed hairs. ♄. S. Native of the Sandwich Islands, Guinea, and Angola.

Oval-leaved Ipomœa. Shrub erect.

* * *Shrubby or arborescent plants.*

27 I. ARBORE'SCENS; arborescent; leaves ovate-cordate, acute, clothed with hoary tomentum on both surfaces; peduncles many-flowered; calyx clothed with white wool outside; sepals oblong, obtuse, concave, unequal; outer ones the broadest; seeds woolly on the angles. ♄. S. Native of Mexico, on the western declivities of the mountains betwixt Acapulcia and Chilpancingo, at the altitude of 600 hexapods, where it is called *Guasanguate*. Convólvulus arboréscens, Willd. enum. 1. p. 204. Lactescent. Pedicels tomentose. Corolla glabrous, white, purple inside at the throat.

Arborescent Ipomœa. Tree large.

28 I. MACRA'NTHA; arborescent; leaves oblong-lanceolate, acuminated, rounded at the base, glabrous; flowers axillary, solitary, pedunculate; calyx clothed with white wool; sepals unequal, oblong, rounded at apex, concave; outer ones broadest. ♄. S. Native of Mexico, near Guanaxuato and Santa Rosa, at the altitude of 1100 feet. Convólvulus macránthus, H. B. et Kunth, nov. gen. 3. p. 95. Branches angular, clothed with white tomentum while young, as well as the peduncles. Corolla white, woolly outside.

Large-flowered Ipomœa. Tree.

29 I. SERPYLLIFO'LIA; leaves ovate-lanceolate, rounded at the apex, rather downy; axillary peduncles 1-flowered; terminal ones 2-flowered, exceeding the leaves; calyx smoothish; sepals ovate, acuminately-mucronate, rather concave, nearly equal, with incumbent edges. ♄. S. Native of New Spain, in temperate places, near Moran and Regla, at an altitude of 1950 hexapods, Convólvulus serpyllifólius, H. B. et Kunth, nov. gen. 3. p. 95. Bark corky. Stems tufted, procumbent, slender, nearly terete, glabrous; branchlets downy. Leaves 2 lines long. Flowers white, about the size of those of *Convolvulus majalis*, glabrous. Habit of *Evólvulus nummulárius*.

Wild Thyme-leaved Ipomœa. Shrub procumbent.

30 I. SUBERA'RIA; shrubby; leaves lanceolate-oblong, retuse at the apex, and mucronate, downy; peduncles axillary, usually 3-flowered, twice shorter than the leaves; calyx glabrous; sepals roundish, acute; the 2 outer ones rather the shortest. ♄. S. Native of Cuba, among rubbish near Havannah. Convólvulus ruderárius, H. B. et Kunth, nov. gen. 3. p. 96. Shrub [>rostrau-; brand) terete, downy when young. Leaves 2-3 lines long. Flowers a little larger than those of *I. serpyllifólia*. Corolla 3 times longer than the calyx.

Rubbish Ipomœa. Shrub prostrate.

31 I. FLORIBU'NDA; shrubby, clothed with hoary tomentum; leaves ovate-oblong, acuminately-mucronate, cordate; corymbs axillary, pedunculate, shorter than the leaves; calyx clothed with woolly tomentum; sepals oblong, bluntish, concave; the 3 outer ones the largest. ♄. S. Native on the banks of the river Amazon, on hills near Tomepen. Convólvulus floribúndus, H. B. et Kunth, nov. gen. 3. p. 96. t. 210. Shrub much branched; branches terete. Leaves on long petioles, 2 inches long. Corolla 4 times longer than the calyx, obsoletely 5-lobed, glabrous, blue, size of those of *Pálkia rósea*.

Bundle-flowered Ipomœa. Shrub 3-4 feet.

32 I. SUA'VIS (Cav. icon. 3. p. 26. t. 250.) sufl'ruticose; leaves

ovate, or oblong-lanceolate, sinuately-toothed, smoothish; flowers axillary, solitary, pedunculate, longer than the leaves; calyx glabrous, sepals unequal, linear, obtuse. ♄. S. Native of Mexico, near Guanaxuato. Convólvulus sibiri, H. B. et Kunth, nov. gen. amer. 3. p. 96. Corr. firmus, Spreng. syst. 1. p. 618. Corolla campanulate, pale violet, with a whitish tube and rounded segments.

Standing Ipomœa. Shrub erect.

53 I. PARVIFO'LIA (R. Br. l. c.) tomentose, suffruticose, erectish; leaves quite entire, oblong, blunt, pannosely tomentose; peduncles 1-flowered; sepals acuminated; the 2 inner ones one half smaller than the outer ones. ♄. S. Native of New Holland, within the tropic, on the sea shore. Convólvulus pannifer, Spreng. syst. 1. p. 612.

Chick-leaved Ipomœa. Shrub erect.

54 I. FILIFO'LIA (Hook. et Arn. in Beech. voy. pt. bot. p. 35. under *Convólvulus*) shrubby, much branched, diffuse; leaves very narrow-linear, terete; flowers axillary, solitary, on short peduncles; corolla campanulate. ♄. G. Native of Chili, at Coquimbo. Calyx 5-cleft; with linear teeth on the segments. Corolla blue, an inch broad.

Thread-leaved Ipomœa. Shrub diffuse.

Sect. III. STEROPHOPHO'RA (from *στροφεω*, *strophéo*, to turn or twist; and *Ipomœa*); in reference to the twining stems of the species). Choisy, in mem. soc. phys. gen. 6. p. 450. Stems twining.

§ 1. *Leaves entire, undivided, usually cordate. Capsules generally large. Anthers usually twisted.*

* *Stems angular or winged.*

55 I. TURPE'THUM (R. Br. prod. p. 485.) stems angular, glabrous, or a little downy; leaves cordate-ovate, acuminated, sometimes entire, sometimes angularly sinuated, or crenated; peduncles thick, 1-4-flowered, bracteate at apex; outer sepals the largest, ovate-roundish. ♃. ◌. S. Native of the East Indies, on the banks of the Hoogly and Ganges; New Holland; Timor; Otaheite; Friendly and Marianne Islands, &c. Ker. bot. reg. 279. Roth. nov. spec. p. 111. Convólvulus Turpéthum, Lin. spec. p. 221. Blackw. t. 397. Sims, bot. mag. t. 2003. Wall. fl. ind. 2. p. 57. Hook. bot. misc. 3. p. 297. Wight, ill. suppl. t. 86. Conv. Gaudichaúdii and Ríedlei, Choisy, mss.—Herm. hyðb. 177. t. 178. and 179. Conv. velutinus, Wall. cat. no. 1371.—Pluck. alm. t. 105. Root thick, purgative. Leaves nearly glabrous or downy. Corolla campanulate, twice longer than the calyx, white, size of those of *Calystégia sépium*. Capsule shaggy, size of a nut. The bark of the roots is employed by the natives of the East Indies as a purgative, which they use fresh rubbed up with milk. About 6 inches in length of the root they reckon a dose. Cattle do not eat the plant. The root being free from nauseous taste and smell, gives it a decided superiority over jalap, for which it might be substituted. *Turpéthum* is derived from its Arabic name *Turbéd*.

Turpéthum Ipomœa. Fl. March, June. Clt. 1752. Plant twining.

56 I. A'SPERA (Roem. et Schultes, syst. 4. p. 231.) stem 4-winged; leaves cordate-oblong, somewhat sagittate or ovate, mucronulate at apex; peduncles 2-3-flowered, bracteate at apex; sepals unequal: 2 outer ovate, villous outside: the 3 inner smaller, oblong. ♃. ◌. S. Native of Bengal, Ceylon, Java, &c. Convólvulus áspera, Lin. mant. p. 45. Vahl, symb. 3. p. 31. Peduncles and pedicels villous. Capsule large.

Two-edged-stemmed Ipomœa. Pl. tw.

57 I. TRIQUE'TRA (Roem. et Schultes, syst. 4. p. 231.) stem downy, triquetrous: leaves cordate, acute, rather villous: peduncles 2-3-flowered, bracteate; outer sepals bractea-formed, ovate, acute, mucronate: inner ones shorter, and rounded at the apex. ♃. ◌. S. Native of the Islands of Santa Cruz, St. Thomas, &c. Conv. triquetra, Vahl. symb. 3. p. 30. Willd. spec. 1. p. 838. Lateral pedicels 2-flowered, middle one 1-flowered. Bracteas ovate, coloured, downy.

Triquetrous-stemmed Ipomœa. Pl. tw.

58 I. HAMILTO'NII; stems a little winged; leaves scattered, recurved, petiolate, cordate-ovate, acuminated, veiny, concave; pedunicles usually 1-flowered, at first terete, afterwards 4-winged, and at length 3-angled; bracteas sessile, lanceolate, acuminated, a little coloured, nearly opposite; flowers large, yellow. ♃. ◌. S. Native of Tobago, near the town of Scarborough. Conv. alàtus, Hamilt. prod. p. 24. This species is said to come nearest *I. fascya*, and *Conv. fúnis*.

Hamilton's Ipomœa. Pl. tw.

* * *Stems terete.*

59 I. CAMPANULA'TA (Lin. spec. 228. Lour. coch. p. 112.) leaves cordate, acute; peduncles many-flowered, spicately branched; sepals equal, ovate-orbicular, glabrous. ♃. ◌. S. Native of the East Indies, Timor, Cochin-china, &c. Convólvulus campanulátus, Spreng. syst. 1. p. 608. Addámboe, Rheed. mal. 11. p. 115. t. 56. Stem reddish, glabrous, terete, densely branched, fistular. Leaves glabrous, reticulated with red-feathered nerves, 4-6 inches long, and 1-3 broad. Corolla large, yellow, ex Lour. Capsule large, globose, glabrous. Seeds clothed with silky villi.

Campanulate-flowered Ipomœa. Fl. Aug. Sept. Clt. 1800. Pl. tw.

60 I. SULPHU'REA; glabrous?; leaves cordately-sagittate, entire; peduncles 2-flowered, much longer than the petioles; sepals glabrous, obtuse, adpressed; filaments villous at the base; anthers twisted into a spire. ♃. ◌. S. Native of Mexico, on walls at St. Jose de Corral. Convólvulus sulphúreus, La Lave, et Lexarza, nov. veg. mex. fasc. 1. p. 17. Calyx yellowish. Corolla sulphur-coloured, campanulate, with a 5-plicate limb: each plica composed of 2 roundish crenatures. Capsule round, velvety, black.

Sulphur-coloured-flowered Ipomœa. Fl. Feb. Pl. tw.

61 I. PENTAPHY'LLA (Choisy, in mem. soc. phys. gen. 6. p. 451.) leaves sometimes saggittately-lanceolate, acute, with sinuated edges; sometimes linear, and sometimes ovate; sometimes ovate-lanceolate; often hardly cordate; sometimes obtuse at the apex, and mucronulate; peduncles 1-4-flowered, bracteate, sometimes numerous, approximate, appearing like a 5-flowered pedúncle; sepals ovate-orbicular; corolla 5-cleft. ♃. ◌. S. Native of the East Indies; at Prome; and Gorukpur; as well as of Timor. Convólvulus crispátulus, Wall. cat. no. 1403. Conv. reticulátus, Ham. herb. Stems terete, glabrous, branched. Leaves reticulately veined, 2-3 inches long, glabrous. Corolla 3 times longer than the calyx, deeply divided, silky outside, red.—This is a very variable plant in the leaves. Capsule large, size of a nut.

Petaled Ipomœa. Pl. tw.

62 I. BUPALINA (Choisy, in mem. soc. phys. gen. 6. p. 452.) leaves cordately sagittate, glabrous; peduncles many-flowered; corolla yellow, campanulate. ♃. ◌. S. Native of Cochinchina, in woods. Convólvulus bufalínus, Lour. coch. p. 109. ed. Willd. 1 p. 134. Stem woody, scandent, glabrous. Corolla large, campanulate. Capsule large, 2-celled, 2-seeded. Anthers filiform, spirally twisted.

Buffalo's Ipomcea. Shrub tw.

43 I. PELTA'TA (Choisy, 1. c. 6. p, 452.) leaves peltate ; peduncles long, many-flowered ; sepals ovate-elliptic, obtuse ; corolla yellow, campanulate. T?. ^. S. Native of Java, Amboyna, Society Islands, and Bourbon. Convolvulus peltatus, Lin. spec. p. 221. Forst. prod. p. 78. Ipomoe'a nymphiaefblia, Blum, bijdr. p. 719.—Rumph. amb. 5. p. 428. t. 157. Stem terete, black, glabrous. Leaves glabrous, 3-4 inches long, entire, furnished with rufous hairs in the axils of the petioles. Peduncles branched at the apex ; flowers spioate, on short pedicels. Corolla large, inflated. Anthers woolly. Stigma large. Capsule large.

Peltate-leaved Ipomcea. Shrub tw.

§ 2. *Leaves cordate, entire. Capsules and sepals middle-sized. Flowers capitately aggregate.*

44 I. PILEA'TA (Wall. fl. ind. 2. p. 94.) leaves cordate, acuminated ; peduncles hardly equal in length to the petioles; flowers 3-6, sessile, in a boat-shaped, perfoliate, involucrum ; bracteas obovate, hairy ; sepals rather unequal. ©. ^\ S. Native of the East Indies, China, &c. Convolvulus pileatus, Roxb. ex Wall. cat. no. 1376. Spreng. syst. 4. p. 61. Ipoince'a peltata, Heyne, herb. Stems villous, slender. Leaves lj inch long, often glabrous, but sometimes downy. Petioles and peduncles villous. Corolla rose-coloured, funnel-shaped. Seeds glabrous. Nearly allied to /. *involucrata.*

Cap Ipomoea. PI. tw.

45 I. INVOLUCRA'TA (Beauv. fl. d. ow. 2. p. 52. t. 89.) plant downy ; leaves cordate, quite entire, acutish : hind lobes rounded ; peduncles many-flowered : flowers surrounded by 2 large involucrum-formed perfoliate bracteas. ©. ^\ S. Native of Guinea, among bushes. Conv. involucratus, Spj^eng. syst. 1. p. 600. Pedicels short, unequal. Corolla large, red.

Involucrate-fiowered Ipomoea. Fl. Aug. Oct. Clt. 1822. PI. tw.

4(> I. PERFOLIA'TA ; leaves cordate, villously tomentose, having the hind lobes roundish and subacuminated ; flowers capitate, involucrated by one perfoliate leaf; sepals downy : the 3 outer ones lanceolate, and the 2 inner ones setaceous at the apices. 1/. ? ©. ? ^\ S. Native of Africa, at Aquapim. Conv. perfoliatus, Schum. pi. guin. p. 89. Stem filiform, pilose. Peduncles covered with retrograde villi. Corolla campanulate, plicate, red, with villous angles ; lobes of the limb emarginate. Stigmas villous.

Perfoliate Ipomoea. PI. tw.

47 I. BREVIFLO'RA (Meyer, prim, esseq. p. 100.) glabrous ; leaves sagittately-cordate ; peduncles shorter than the petioles ; flowers subumbellate, involucrated ; outer sepals plicately wrinkled, mucronate. ©. *rs*. S. Native about Essequibo, in humid plantations. Stems angular, scabrous from scattered rigid hairs. Corolla large, purple.

Short-flowered Ipomcea. PI. tw.

48 I. CAPITELLA'TA (Choisy, 1. c. p. 457.) stem pilose; leaves cordate, acuminated, pilose ; peduncles equal in length to the petioles ; bracteas unequal, obtuse, ovate-linear; flowers aggregate, umbellate; sepals linear-lanceolate, very acute. ©. ^. S. Native of the East Indies, at Mungger, &c. Ipomce'a tamnifolia, Burm. ind. p. 50. but not of Lin. Conv. capitellatus, Ham. herb, ex Wall. cat. no. 2250. Hairs on the stem glandular at the base. Peduncles hairy. Corolla violaceous, tubularly campanulate, villous outside. Seeds glabrous.

Headed-flowered Ipomcea. PI. tw.

49 1. TRICHOCE'PHALA ; stem and peduncles pilose ; leaves cordate, acuminated, sometimes a little angular ; heads of flowers involucrated by bracteas, 2 of which are larger than the others ; flowers crowded, sessile ; calycine segments linear, acute, ciliated with long fuscous hairs. %. ^. S. Native of Guayaquil, *(v. s.* in herb. Ruiz, et Pav.)

Hairy-headed Ipomcea. PL tw.

50 I. GUINEE'NSIS ; leaves cordate, acuminated, with a few scattered hairs above, but clothed with rusty hairs beneath on the veins ; petioles, peduncles, and calyx, hairy. 7/. ? ©. ? ^\ S. Native of Guinea. Conv. Guineensis, Schum. pi. guin. p. 90. Stems herbaceous, pilose. Flowers crowded into heads, which are involucrated by leaves. Peduncles length of leaves. Corollas blue, size of those of *Lysimachia, nummularia.* Lobes of stigma thick, recurved. Capsule size of a pea. Seeds naked. Said to he allied to /. *cilidtus.* Perhaps a species of *Jacquemontca.*

Guinea Ipomcea. PI. tw.

51 I. TAMNIFOLIA (Lin. spec. ed. 1. p. 885.) plant pilose; leaves cordate, acuminated ; peduncles axillary ; flowers aggregate, on the tops of the peduncles ; bracteas linear, hairy, involucrating ; sepals linear, subulate. ©. ^\ S. Native of Carolina, in hedges ; and on the banks of the Mississippi. Pursh. fl. amer. 1. p. 146. Conv. tamnifolius, Spreng. syst. 1. p. 602.—Dill. elth. p. 428. t. 318. f. 410. Corollas small, tubular, blue ; segments of the limb roundish, spreading ; capsule glabrous.

Tamnus-leaved Ipomce'a. Fl. July. Clt. 1732. PI. tw.

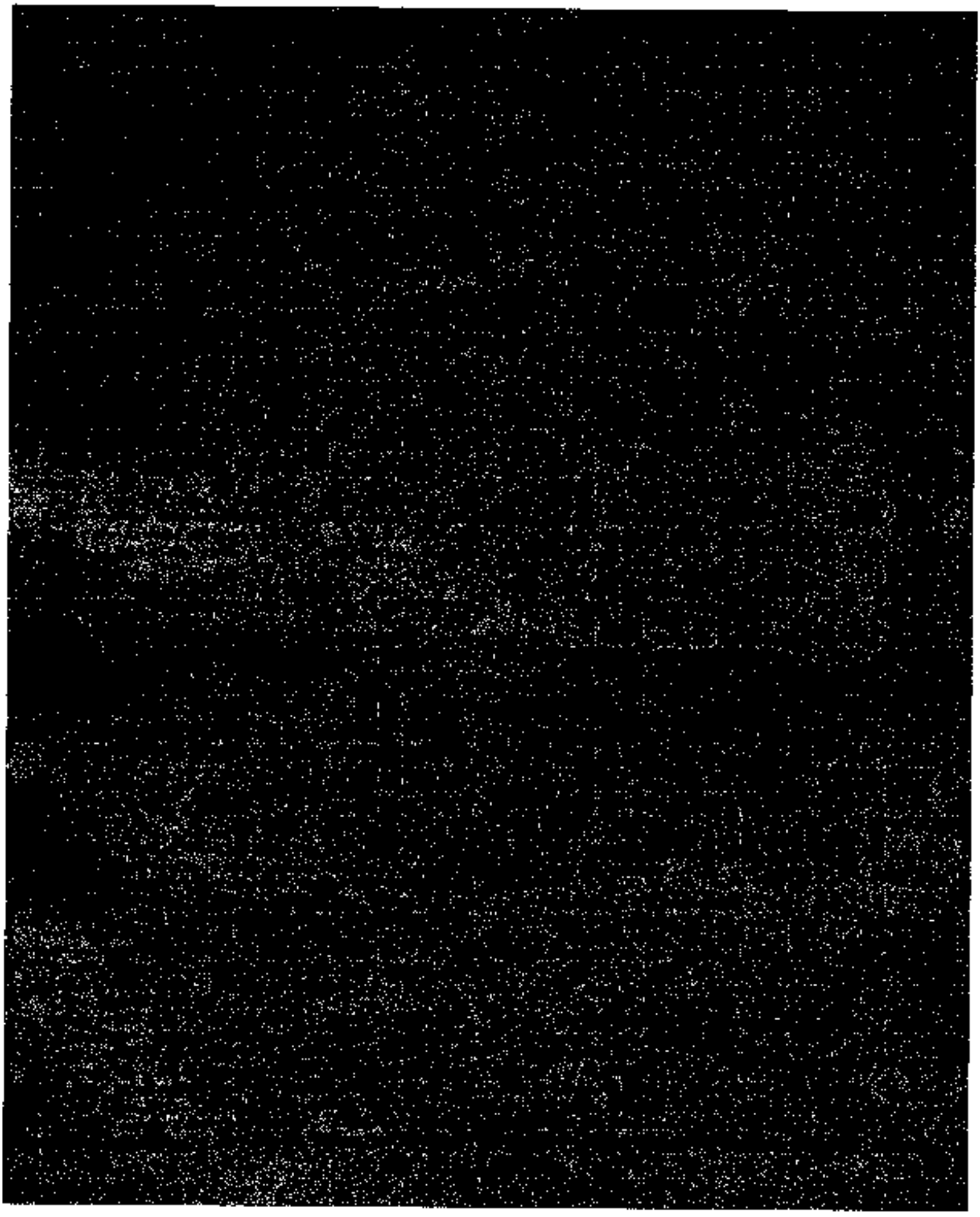
52 I. ATROPURPU'REA (Choisy, 1. c. p. 457.) stem hispid; leaves cordate, acuminated, hispid, very acute, petiolate ; peduncles thick, hardly half an inch long; bracteas 9-12, unequal, lanceolate, acute ; flowers capitate ; sepals lanceolate, very acute, hairy. ©. ^\ S. Native of Nipaul. Convolvulus atropurpureus, Wall. fl. ind. 2. p. 54. asiat. rar. 1. p. 38. t. 43. Ipomce'a sphaerocephala, D. Don. prod. fl. nep. p. 98. Hairs on the stem retrograde. Corolla oval, hispid before expansion, at length tubularly campanulate, 18 lines long, dark purple.

Dark-purple-fiowere& Ipomcea. PI. tw.

53 I. SESSILIFLO'RA (Roth. nov. spec. p. 117, Rcem. et Schultes, syst. 4. p. 243) stem beset with retrograde bristles ; leaves cordate, ovate-lanceolate, or sagittate ; flowers axillary, sometimes only 1-3 together, but sometimes 4-12 together, almost sessile, or on very short pedicels ; sepals acuminately subulate; corollas small; capsule usually villous. ©. ^. S. Native of the East Indies, in several parts ; as of Nipaul, Madras, Bengal, &c.; Coromandel, Tranquebar ; and of the Cape Verd Islands. Convolvulus sessiliflorus, Spreng. syst. 1. p. 599. Conv. hispidus, Vahl. symb. 3. p. 29. Conv. sphserocephalus, Wall. fl. ind. 2. p. *53.* Conv. tamnifolius, Klein, in Rcem. et Schultes, syst. 4. p. 301. Ipomce'a sphaerocephala, Sweet, hort. brit. p. 288. but not of I). Don. Conv. curtana, Ham. herb. Conv. cynanchifoliu*, Wall. cat. no. 1399. Conv. hirtus, Wight, herb. Conv. patulus, Ham. herb. Leaves 1-3 inches long, entire, or sinuated on the edges. Flowers small, rose-coloured. There is also a variety of this with white flowers, in round sessile heads.

Sessile-flowered Ipomcea. Fl. Aug. Oct. Clt. 1816. Plant twining.

54 I. BARBA'TA (Choisy, 1. c. p. 458.) stem very pilose; leaves ovate-oblong, acute, entire, woolly beneath, rounded at the base; flowers axillary, 7-9 together in a capitate fascicle, which is involucrated by very long, linear, incurved bracteas. J? . ^\ S. Native of the East Indies; at Rangoon, in Pegu, Donabew; and on the banks of the Irawaddi. Convoh ulus barbatus, Wall. pi. rar. asiat. 2. p. 45. t. 155. cat. no. 1391. Stem beset with rusty silky hairs. Leaves 5-12 inches long, furnished with long hairs above, which are glandular at the



Native of Java, in the province of Tangor, on the Parang mountains, among bushes. Said to be allied to *I. tuberosa*. Corolla with a white limb and green rays.

Prickly Ipomœa. H. July. 1 tw.

68 I. MELANOSTICTA; downy; leaves roundish-ovate, deeply cordate, with an acutish recess, and very blunt lobes, which are acutish or mucronate at the apex, downy, and dotted with black beneath; peduncles 1-flowered, shorter than the petioles; sepals nearly equal, suborbicular, obtuse, mutic. ♃. ? ☾. S. Native of the Island of St. Thomas. Conv. melanostictus, Schlecht, in Linnæa. 6. p. 737. Corolla large, with a funnel-shaped Limb and ciliated margins.

Black-dotted-leaved Ipomœa. PI. tw.

69 I. TUBA; leaves petiolate, broad-ovate, acuminated, deeply cordate; hind lobes obtuse; peduncles bractless, 1-flowered; sepals nearly equal, obtuse, mucronulate; corolla large, with a long cylindrical tube, and a funnel-shaped limb. ♄. ? ☾. S. Native of the Island of St. Thomas. Conv. tuba, Schiccln. in Linnæa. 6. p. 735. Stigmas orbicular. Seeds villous.

Tube-flowered Ipomœa. Pl. tw.

70 I. LUTEOLA (R. Br.]. c.) glabrous; leaves cordate, acuminated, quite entire, hard] an inch long; peduncles usually 1-flowered; sepals acute; corolla yellow. ♃. ? ☾. S. Native of New Holland, within the tropic, on the sea shore. Convolvulus brownii, Roem. et Schultes, syst. 4. p. 252.

Yellowish-flowered Ipomœa. Pl. tw.

71 I. ARBUTA (R. Br. 1. c. p. 485.) glabrous; leaves cordate, acutish, having the recess at the base closed; peduncles 1-flowered hartlly equalling the petioles in length; sepals equal, oval, obtuse. ~4 • ? ☾. S. Native of New Holland, within the tropic. Conv. abruptus, Spreng. syst. 1. p. 5 Duaea. P), tw.

Abr: ^ pe-leaved Ipomœa.

72 I. Scnii': smooth; stem triangular; leaves cordate, acuminated; peduncles 1-flowered, shorter than the leaves; calyx bractless, ovate. ☉. ". H. Native of Siberia. Pers. ench. 1. p. 185. Conv. Sibiricus, Lin. mant. p. 203. Conv. rupestris, Pal), itin. 3. p. 7i;;. t. k.? Leaves hardly repand. Stipulas small, running down the stem. Corolla white, or very pale red, with a yellow bottom, campanulate, one-half smaller than those of *Conv. arvensis*.

Siberian Ipomœa. V\ July, Aug. Clt. 1779. Pl. tw.

73 I. CURASSA'VICA (Roem. et Schultes, syst. 4. p. 237.) brous; stems angular; leaves roundish-cordate, thickish, nerveil and pale beneath, rather repuand; peduncles !-flowered, thickened, bractless, shorter than the lower leaves, and longer than the superior ones; calyx subtuberculed; sepals ovate, adpressed. 1{. ' *. S. Native of Curassoa. Corolla white, verging to a cream-colour, smaller than those of *Conv. arvensis*. Capsule glabrous.

Curassoa Ipomœa. PI. tw.

74 I. ATA'TA • l(. l!r. prod, p. 484.) glabrous; leaves cordate, acuminated, entire; petioles margined; peduncles tenagonal, 1-flowered, winged on the angles; bracteas caducous. 1/.? ☾. S. Native of New Holland, within the tropic, on the sea allOI e. Conv. alatus, Spreng. syst. St. I. p. •'96.

Winged-peduncled Ipomœa. Pl. tw.

hastately and sagittately cordate or hastate, or sagittate.

75 I GRA'CIUS (B. Br. 1. c.) glabrous; leaves hastate-, biglandular beneath at the base, acute at both ends; peduncles 1-flowered; sepals wrinkled, acute, 3 times shorter than the corolla; seeds bearded at the umbilicus. ♃. ? ☾. S. Native of New Holland, within the tropic, on the sea shore. I v. gracilis, Spreng. syst. 1. p. 604. -There are varieties of this plant with pilose stems, and having the hind lobes of leaves bluntish.

Slender Ipomœa. PI. tiv.

76 i PLEBE'IA (R. Br. l. c.) downy; leaves hastately cordate, acuminated, entire: liiud lobes rounded; peduncles 1-flowered, shorter than the petioles, bibracteate near the base: sepals equal, acuminated, pilose; capsule glabrous; seeds woolly. ♃. ? ☾. S. Native of New Holland, within the tropic. Conv. plebeius, Spreng. syst. 1. p. 604.

Plebeian Ipomœa. Pl. tw.

77] SAGITTATÒLIA (Ker. "iiit. reg. 457.) glabrous; leaves (vl)lonfi sagittate, the hind recess very deep, and the bin; lobes somewhat acuminated; peduncles 1-flowered; sepals roundish-oval; corolla campanulately funnel-shaped. 1/. . 1 . Native from Virginia to Carolina, in wet situations, among bushes. Convolvulus sagittæfolius, Michx. fl. bor. amer. 1. p. 138. Pursh. fl. 1. p. 144. Conv. speciosus, Walt. fl. car. p. 93. Conv. formosus, Gmel. syst. 1., p. 3! .—Catesb. car. 1. t. 33. Flowers large, of a beautiful rose-colour.

Arrow-leaved Ipomœa. Fl. *Jr.* ne, Sept. Clt. 1819. Plant twining.

78 I. SEPTÒRA (Blum. bijdr. p. 714.) leaves cordate, or subhastately cordate, acuminated, entire, downy above, and rather villous beneath; peduncles 1-2-flowered, equal in length to the petioles; sepals linear-lanceolate, acuminated, setigerous; stem covered with retrograde hairs. ***it.*** ^. S. Native of Java, among bushes on the mountains. Flowers purplish. Perhaps a species of *Pharbitis*.

Bristly Ipomœa. Fl. Year. Pl. tw.

79 I. JALAPA (Schiede et Deppe, mss.) glabrous; stems angular; leaves membranous, perfectly glabrous, and even on both surfaces, cordate-sagittate, acuminated; hind lobes rounded, obtuse, quite entire; peduncles 2-flowered, longer than the petioles; sepals lanceolate, obtuse, rather unequal; tube of corolla long, narrow, twice as long as the limb, which is nearly entire and spreading. ♃. ☾. S. Native of Mexico, in the woods of Chiconquaco, from whence it is brought to Vera Cruz by the inhabitants of Jalapa. The plant is called *Purga* and *Larchachas* in Mexico. Convolvulus Jálapa, Houst. mss. in Miller, dict. ed. 8. IH>. 31. Lin. mant. 1. p. 43, but not of others. Ipot Wn Purga, Wenderoth. Ipomœa Schiedeana. /tif e. Stems purplish., Le.i\ i s often purplish beneath. Corolla long, tubular; tube ventricose above, constricted a little at'tlir tlirtfat; with a flat limb, and exserted genitals. Anthers oblong, emarginate at both ends. The leaves are said to be variable in shape by Miller, who reared some plants from seeds sent by Houston, in 1733, in the Apothecaries' Garden at Chelsea. The peduncles generally bear 2 flowers, one of the flowers always much earlier than the other. Houston and Miller seem to be the only authors who knew the plant which produces the true Jalap of the shops; as the plant generally described, cultivated, and known as such, is a very distinct species, and appears to be only a purple-flowered variety of *Ipomœa* wider-. rhiza of Michx. This plant is found principally in the neighbour! ood of Jalapa or Xalapa, hence the name. It abounds also on the eastern slope of the Cordillera of Anahuac; and in the same latitude is procured the *Vasilla* and *Sarsaparilla*. From 200,000 to 300,000 lbs. are annually exported from Vera Cruz. Although the root forms a well-known and valuable cathartic, which is perhaps more generally employed than any other of vegetable origin, it was not until lately that the genus to which it belongs was accurately ascertained. In its wild state, the plant delights in a dry sandy soil. The dried root of jalap is imported in thin, transverse slices, and in round masses; it is solid, hard, and heavy, of a dark grey colour. It has a sickly smell, and a sweetish, subacid, nauseous taste. Powdered it is

of a pale yellow brown colour. Jalap, when dear, is often adulterated with scammony, gamboge, bryony root, &c. Jalap is an active purgative, which can always be relied upon, and would be administered much more often were it not for the disagreeable effects produced by it, as nausea and griping. It is, notwithstanding, a safe medicine, and, combined with other purgatives, has been proved by Dr. Hamilton to be of eminent use in typhus, scarlatina, cynanche maligna, marasmus, chorea, and neuralgia. Added to the supertartrate of potass, it is called compound powder of jalap; and much good has been effected by a judicious and persevering use of this preparation in dropsical cases. The alcoholic extract, when good, is a more active preparation than the former, exerting its effects in doses of 10 or 12 grains. Jalap is best given in substance, in doses from 10 grains to half a drachm, combined with a drop or two of any essential oil. Mr. Hume, of Long-Acre, is said to have discovered a vegeto-alkaline principle in jalap, and proposes to call it jalapine.

Jalap Ipomœa. Fl.? Cl. 1755. Shrub tw.

* * *Peduncles many-flowered, umbellately-racemose, umbellate, corymbose, &c.*

80 I. SUPERBA (Choisy, l. c. p. 459.) glabrous; leaves cordate-ovate, or roundish-acuminated, smooth; peduncles many-flowered, leafy, umbellately racemose, equalling the petioles in length, or exceeding them; outer sepals shorter, all with white scarious edges; corolla whitish-yellow. ♄. ☾. S. Native of the Caribbee Islands, Mexico, and Ceylon. Also gathered in the gardens of Teneriffe, Cumana, and Calcutta; but is probably only indigenous to Ceylon. Conv. Domingénsis, Desr. in Lam. dict. 3. p. 554. Conv. sidæfólius, H. B. et Kunth, nov. gen. 3. p. 99. Conv. multifóres, H. B. et Kunth, l. c. p. 100. Conv. (Ipomœa) Zeylánica, Moon, ex Wall. cat. no. 1379. Conv. laricadlis, Willd. herb. ex Roem. et Schultes, syst. 4. p. 305. Conv. polifórus, Willd. l. c. p. 302.—Sloane, jam. 1. p. 133. t. 87. f. 2.—Young branches rather downy. Leaves rarely rather downy, 2-3 inches long, and 1-2 broad. Bracteas small, linear, ciliated, or glabrous. Corolla campanulate, glabrous, white, with a yellow bottom, and marked with 5 black spots. Capsule surrounded by a membrane at the base. Seeds downy, rufous. There are varieties of this having the flowers more or less numerous, the leaves glabrous or downy, and the sepals more or less unequal.

Sida-leaved Ipomœa. Shrub tw.

81 I. STAPHYLÆA (Roem. et Schultes, syst. 4. p. 249.) plant suffruticose, glabrous; leaves ovate-oblong, rather cordate, acute, glabrous; flowers racemosely panicled; sepals equal, very blunt, ovate-roundish; corolla tubularly cylindrical. ♃. ☾. S. Native of the East Indies, as of Coromandel, Penang, Pondicherry. Ipomœa racemósa, Roth. nov. spec. p. 113. but not of Poir. Conv. Maisbáricus, Wall. fl. ind. 2. p. 49. but not of Lin. Conv. racemósus, Rottler and other authors; but not of Spreng. Willd. in Roem. et Schultes, syst. 4. p. 302. Conv. Klémii, Spreng. syst. 1. p. 606. 4. p. 61. Conv. máximus, Hamilt. herb. Conv. polyánthus, Wall. cat. no. 1378. Branchlets rough, blackish. Leaves 3 inches long and 2½ broad. Racemes 2-3 inches long, many-flowered. Corolla 6-12 lines long, rose-coloured. Seeds woolly.

Staphylæa Ipomœa. Shrub tw.

82 I. CALLOSIBBA (Choisy, l. c. p. 461.) glabrous; leaves ovate-lanceolate, undulate, deeply cordate at the base; peduncles axillary, shorter than the leaves, cymosely corymbose; sepals carinated, ovate, obtuse, surrounding the fruit. ♃. ☾. S. Native of the East Indies. Conv. caliginósus, Roem. mss. in R. Br. herb. Stem blackish. Leaves 3 inches long and 1½ broad. Corolla glabrous, longer than the calyx. Seeds brown, silky.

Obscure Ipomœa. Pl. tw.

83 I. CYMOSA (Roem. et Schultes, syst. 4. p. 262. but not of Meyer. Choisy, l. c. p. 461.) stem ferox; leaves ovate-cordate, acute at the apex, also acuminated, elongated, blackish above; peduncles axillary, bifidly many-flowered, short; sepals obovate, obtuse, rarely acutish, darkish yellow; the exterior ones usually the shortest. ♃. ☾. S. Native of the East Indies, almost everywhere. Conv. cymósus, Desr. in Lam. dict. 4. p. 556. Conv. bífidus, β. Vahl. symb. 2. p. 37. Conv. lævis minor, Rumph. amb. 5. p. 431. t. 158. Conv. blándus, Wall. fl. ind. 2. p. 50. t. 70. Ipomœa bífida, Roth. nov. spec. p. 113. Ip. corymbósa, Roth. l. c. p. 100. Ip. Heynei, Roem. et Schultes, syst. 4. p. 257. Ip. blanda, Sweet, hort. brit. p. 288. Conv. Latiúsla, Ham. herb. Conv. multiflórus, Wall. mss. Stem blackish. Leaves 1-3 inches long, and 6-18 lines broad, glabrous. Corolla campanulately funnel-shaped, pure white, an inch long, glabrous; lobes bearded at top. Seeds rufous, hairy.

Var. β. *pilósa* (Choisy, l. c. p. 462.) plant hairy, or downy. ♃. ☾. S. Native of the East Indies. Conv. cymósus, β. Desr. in Lam. dict. 3. p. 556. Conv. bífidus, Vahl. symb. 2. p. 38. Conv. Rothii, Spreng. syst. 1. p. 606. Conv. lævis mas. Rumph. amb. 5. p. 431. Conv. pentagónus, Roxb. fl. ind. 2. p. 72. Ipomœa bífida, Roem. et Schultes, syst. 4. p. 241. Ip. Rothii, Roem. et Schultes, syst. 4. p. 257. Ip. cymósa, Roth. nov. spec. p. 114. Blum. cat. hort. bait. p. 50. Conv. blándus, β. pubéscens, Roxb. Conv. blándus, β. major, Wall. mss. Seeds hairy.

Var. γ. *sagittáto-angulósa* (Choisy, l. c. p. 463.) leaves sagittate, angular. ♃. ☾. S. Native of Java. Ip. radicans, Blum. bijdr. p. 712.? Leaves form of those of var. β.

Var. δ, *cúltа* (Choisy, l. c.) stem rather downy; leaves cordate-ovate; peduncles 8-12-flowered; corolla glabrous; all parts of the plant more elongated. ♃. ☾. S. This is a cultivated variety.

Cymose-flowered Ipomœa. Fl. July, Aug. Cl. 1820. Pl. tw.

84 I. VELUTINA (R. Br. l. c.) tomentose; leaves cordate, obtuse, entire, soft, having the recess at the base, rather truncate; peduncles many-flowered; sepals glabrous, obtuse. ♃.? ☾. S. Native of New Holland, within the tropic, on the sea shore. Conv. velutínus, Spreng. syst. 1. p. 601.

Velvety Ipomœa. Pl. tw.

85 I. CONGESTA (R. Br. l. c.) tomentose; leaves cordate, acuminated, entire, soft; peduncles many-flowered; pedicels crowded; sepals ending in subulate awns; inner ones smaller. ♃.? ☾. S. Native of New Holland, within the tropic, on the sea shore. Conv. congéstus, Spreng. syst. 1. p. 601.

Crowded-flowered Ipomœa. Pl. tw.

86 I. UNCIOLATA (R. Br. l. c.) tomentose; leaves cordate, rather reniform, entire; cymes many-flowered, nearly sessile; sepals equal, pilose, orbicular, obtuse; tube of corolla urceolate, subovate. ♃. ☾. S. Native of New Holland, within the tropic. Conv. urceolátus, Spreng. syst. 1. p. 601.

Urceolate-flowered Ipomœa. Pl. tw.

87 I. DUMETÓRUM (Willd. rel. ex Roem. et Schultes, syst. 4. p. 289.) glabrous; leaves ovate, much acuminated, cordate, having the basal lobes angularly toothed, and divergent; peduncles axillary, dichotomous, 5-flowered, shorter than the leaves; sepals ovate, acutish, glabrous, wrinkled, nearly equal. ☉. ☾. S. Native of New Granada, on the Andes of Quito. Conv. dumetórum, H. B. et Kunth, nov. gen. 3. p. 101. Stem angularly striated. Pedicels rather rough. Capsule globose, glabrous.

Bush Ipomœa. Pl. tw.

88 I. ALTISSIMA (Bertero, rnss.) arboreous ; leaves cordate-oblong, mucronate, clothed with silky villi beneath ; peduncles terminal, twin; bracteas remote, and are, as well as the calyxes, coloured, obtuse, and mucronate. J?. S. Native of Hispaniola. Convolvulus altissimus, Spreng. syst. 1. p. 613. This and the following species ought probably to have followed /. *stans,* no. 32, p. 267, from their upright habit.

Tallest Ipomoea. Tree.

89 1. PAREIRJEFOLIA ; shrubby ; leaves ovate, truncate at the base, acuminated, quite entire, hoary beneath, and reticulated with veins ; peduncles cymose, 4-flowered ; sepals obtuse ; tube of corolla elongated. J? . S. Native of New Granada. Convolvulus pareiraefdlius, Spreng. syst. 1. p. 613.

Pareira-leaved Ipomcea. Shrub.

90 I. CA'NDICANS ; glabrous ; leaves cordate, acuminated, rather downy beneath ; peduncles many flowered, bractless; outer sepals nerved, obtuse. 1/. ? ^. H. Native of North America? Conv. candicans, Sol. mss. ex Sims, bot. mag. t. 1603. Corolla large, white, with a purple throat; lobes rounded, plicae mucronate.

Whitish Ipomcea. Fl. June, Aug. Clt. 1776. PI. tw.

91 I. RUBENS (Choisy, 1. c. p. 463.) stem downy ; leaves cordate, acuminated, usually glabrous above, but clothed with grey down beneath ; peduncles stiff, much exceeding the petioles, umbellately many-flowered ; sepals ovate, acuminated, or lanceolate, mucronate, equal; corolla showy, purple. 1/.^. S. Native of the East Indies, as of Silhet, Gualpara, Pirgum, &c. Conv. rubens, Wall. cat. no. 1421. Conv. bifidus, Ham. herb. Conv. Gualpara, Ham. herb. Leaves 2-3 inches long, and nearly as broad at the base. Umbels 5-8-flowered. Corolla campanulately tubulnr, 15 lines long, red, glabrous.

Far. /j, *lanata* (Choisy, 1. c.) leaves roundish-cordate, short-acuminated, clothed with woolly tomentum on both surfaces, but especially beneath; stem villous. %. ^\ S. Conv. glandulosus, Ham. ex Wall. cat. no. 2252.

***Reddish-flowered* Ipomoea. PI. tw.**

92 I. SEI'IA'RIA (Konig. mss. ex Wall. fl. ind. 2. p. 90.) stem alternately glabrous and villous from loose hairs ; leaves cordate-oblong ; peduncles many-flowered; sepals oblong-ovate, acute, or obtuse ; corolla showy, tubularly funnel-shaped. %. ? ^. S. Native of the East Indies, everywhere ; Timor, China, and Java. Ip. striata, Pers. ench. 1. p. 183. Roth. nov. spec. p. 111. Conv. maximus, Vahl, symb. 3. p. *26.* Lin. suppl. p. 137. Wall. fl. ind. 2. p. 4(J.? Conv. marginatus, Desr. in Lam. diet. 3. p. 558. Conv. striatus, Vahl. symb. 3. p. 28. Conv. hastatus, Heyne, herb. Conv. incrass&tus, Wall. cat. no. 1386. 1. and 2. Tiru-tali, Rheed. mal. 11. p. 109. t. 53.—This species differs from the preceding in the peduncles being always many-flowered, and in the corolla being longer. Corollas large, of a beautiful rose-colour; white, with a brown bottom, ex Vahl.

Far. /3, *sagittata* (Choisy, .1. c. p. 465.) leaves sagittate, also somewhat 3-lobed. %. ^\ S. Native of the East Indies. Ipomce'a sphserica, Roxb.

Hedge Ipomcea. Fl. May, June. Clt. 1817. PL tw.

OS I. CITMANE'NSIS ; plant clothed with rusty tomentum ; leaves ovate, cordate, acuminated; peduncles few-flowered, about equal in length to the leaves : the 3 outer sepals large, ovate, acute : the 2 inner lanceolate-oblong, acuminated. %. ^\ S. Native of America, in the province of Cumana, in shady places of Laguna, Chica, and Golfo de Cariaco. Conv. Cumanensis, H. B. et Kunth, nov. gen. amer. 3. p. 99. Stems terete. Leaves \\ inch long and 1 broad. Peduncles 3-4~flowered. Corolla campanulateJy funnel-shaped, blue, glabrous. Nearly **allied to *Conv. nodifldrus,* Lam.**

Cumana Ipomoea. Shrub tw.

94 I. CANE'SCENS ; plant clothed with canescent tomentum ; leaves ovate, cordate, acuminated; peduncles many-flowered, about equal in length to the leaves ; sepals downy: 3 outer ones large, ovate, acuminated : the 2 inner ones lanceolate, acuminately subulate. J? . °. S. Native of America, between Carthagena and Mount La Papa, in hot sandy places. Conv. canescens, H. B. et Kunth, nov. gen. 3. p. 99. Leaves 1 inch long and 8-9 lines broad, clothed with hoary tomentum beneath. Flowers nearly sessile, in capitate heads. Corolla campanulate, 5-plicate, longer than the calyx, pale blue.—This and /. *Cumanensis* might form a distinct genus, from the form of the calyx, according to Kunth, 1. c. This and the following species ought probably to have been placed under § 2. p.269. from their capitate or umbellate inflorescence.

Canescent Ipomcea. Shrub tw.

95 I. SAGITTIFER ; plant smoothish ; leaves oblong-lanceolate, acuminated, deeply cordate-sagittate at the base, glabrous, except on the veins beneath, which are downy : hind lobes roundish, diverging ; umbels pedunculate, one half shorter than the leaves ; sepals glabrous, roundish, nearly equal. %. rs. S. Native of Cuba, near Havannah, in moist places. Conv. sagittifer, H. B. et Kunth, nov. gen. amer. 3. p. 100. Conv. Caracasanus, Schlecht, in Rcem. et Schultes, syst. 4. p. 301. Conv. Havanensis, Willd. herb. Leaves 3 inches long. Umbels 6-7-flowered. Corolla yellow, ex Bonpl. glabrous. Capsule glabrous.

Arrow-bearing Ipomoea. PL tw.

96 I. BOGOTE'NSIS ; stem branched, angular, clothed with canescent villi and retrograde hairs ; leaves ovate, deeply cordate, acuminated, beset with silky strigae abov*, and hoary tomentum beneath ; peduncles many-flowered, shorter than the leaves ; sepals vilky, hispid, oblong-lanceolate, subulately-acuminated, nearly equal. ^ . ? ^\ S. Native of New Granada, on high plains, near Santa Fe de Bogota, at the altitude of 1370 hexapods. Conv. Bogotensis, H. B. et Kunth, nov. gen. 3. p. 104. Leaves 2 inches long ; hind lobes approximate. Peduncles and pedicels villous. Corolla purple, downy outside, towards the apex, twice longer than the calyx.—Perhaps a species of *Pharbitis.* Capsule glabrous.

Bogota Ipomoea. Shrub tw.

97 I. ABUTILOIDES; branches terete, hoary from down; leaves roundish-ovate, cordate, acuminated, glabrous above, but clothed with hoary tomentum beneath ; corymbs axillary, trichotomous, longer than* the leaves ; sepals oblong, obtuse, smoothish. fj . r>. S. Native of Quito, near Guayaquil, on the shores of the Pacific. Conv. abutiloides, H. B. et Kunth, nov. gen. amer. *3.* p. 106. Leaves 3 inches long; hind lobes diverging. Petioles biglandular at apex. Peduncles add pedicels downy. Corolla funnel-shaped, violaceous, size of those of *Calystegia sepium,* downy outside; lobes of limb emarginate. Capsule 1-celled, 1-seeded, crowned by the base of the style, and girded by the calyx.

Abut'don-likc Ipomcea. Shrub tw.

98 I. CA'RNEA (Jacq. amer. p. 26. t. 18. pict. t. 25.) leaves roundish-cordate, glabrous ; peduncles many-flowered ; corollas emarginate ; sepals small, roundish. 1/. rs. S. Native of America, near Carthagena, where it is called *Campanifla.* Willd. spec. 1. p. 883. Conv. carneus, Spreng. syst. 1. p. 602, All parts of plant glabrous. Leaves obtuse, mucronate, or acuminated. Peduncles subracemose. Corolla pale red, 3 inches long. Capsule tetragonal, 4-celled. Seeds black.

***Flesh-coloured-flowered* Ipomcea. PL tw.**

99 I. VIOLA'CEA (Lin. spec. 1. p. 229.) leaves cordate; flowers crowded : corolla undivided. ©. /r>. S. Native of South America. Conv. violaceus, Spreng. syst. 1.p. 599. Quamoclit foliis *amplissimis* cordiformibus, Plum, spec. *3.* icon. *93.* f. I.—Sloan, jam. p. *55.* hist. 1. p. 155. t. 98. f. 1. Flowers large, purple. Conv. I'ndicus, Mill. diet. *no. 5.* ?

Violaceous-flowered Ipomœa. Fl. Aug. Sept. Clt. 1792. Pl. tw.

100 I. CONVOLVULÁCEA (Roth. nov. spec. p. 220.) leaves cordate; peduncles umbellate; stem creeping. ♃. ◠. S. Native of tropical America, Lin.; St. Domingo, and the East Indies, Heyne. Conv. corymbósus, Lin. spec. p. 225. Desr. in Lam. dict. 2. p. 455.—Plum. ed. Burm. t. 89. f. 2. mss. vol. 2. t. 50. Leaves like those of *Calystegia sépium*, 2-3 inches long, thin. Corolla white, spreading; star of limb of 5 white rays. Capsule carbonate, 1-celled, 2-3-seeded. Seeds roundish, brown.

Var. β; petioles stipulate at the base. ♃. ◠. S. Native of Cayenne, Bonpl.

Corymbose-flowered Ipomœa. Fl. Aug. Sept. Clt. 1828. Pl. creeping.

101 I. LAMI'NA (Blum. bijdr. p. 718.) leaves roundish-cordate, acuminated, quite entire, very soft on both surfaces; peduncles elongated, cymosely many-flowered; sepals lanceolate, acuminated, spreading: outer ones the largest. ♃. ◠. S. Native of the Moluccas. Corolla purple.

Pleasant Ipomœa. Fl. Nov. Pl. tw.

102 I. SUAVEOLÉNS (Roem. et Schultes, syst. 4. p. 256.) leaves cordate, glabrous; peduncles many-flowered; seeds rusty, silky. ☉. ♃. ◠. S. Native of Jamaica. Conv. multiflórus, Mill. dict. no. 15.—Plukn. phyt. t. 167. f. 1. Stems slender. Flowers racemose, on long peduncles. Corolla purple. Capsule trigonal, 3-celled; cells 1-seeded.—Perhaps a species of *Batatas*.

Many-flowered Ipomœa. Fl. June, July. Clt. ? Pl. tw.

103 I. *reticulata* (Cav. icon. 3. p. 5. t. 208) glabrous; leaves cordate, acuminated; flowers axillary, subumbellate; peduncles thicker than the stem; calyx fleshy, pentagonal; sepals keeled. ☉. ◠. S. Native country unknown. Conv. venústus, Spreng. syst. 1. p. 600. Calyx of a dark violet colour. Corolla with a 5-lobed, crenulated blue limb and a whitish tube, having the [illegible] angles spotted with red.

Three-colored-flowered Ipomœa. Fl. tw.

104 I. OSYRE'NSIS (Roth. nov. spec. p. 220. Roem. et Schultes, syst. 4. p. 259.) shrubby; leaves cordate-ovate, ab- tuse, undivided, glabrous above, but clothed with dense, silky tomentum beneath; flowers subcapitate, almost sessile, mixed with oblong-lanceolate bracteas; corolla oblong-campanulate, strigose outside; stem tomentose. ♄. ? ◠. ? S. Native of the East Indies, in Osyre, where it is called *Mala-Eridaliga*. Conv. Osyrénsis, Heyne. Stigma capitate, dilynous, tuberculed.

Osyre Ipomœa. Shrub twining.

105 I. RACEMÓSA (Poir. suppl. 4. p. 624.) stem terete, grey, downy; leaves ovate-cordate, obtuse, coriaceous, downy beneath; flowers racemosely panicled; peduncles hispid; bracteas downy, concave, lanceolate, involving the calyx and exceeding it; sepals lanceolate, acuminated, glabrous. ♄. ◠. S. Native of St. Domingo. Conv. racemósus, Spreng. syst. 1. p. 600. Leaves 2 inches long, clothed with white silky down beneath. Peduncles beset with numerous short hairs. Corolla white, with a think cylindrical tube, twice as long as the bracteas; limb short of 5 acute lobes.

Racemose-flowered Ipomœa. Shrub tw.

106 I. PSARIFÓLIA (Roem. et Schultes, syst. 4. p. 240.) plant clothed with rusty tomentum; stem terete; leaves ovate-cordate, acute; peduncles axillary, 4-flowered; sepals unequal: the 3 outer cordate, acuminated, and the 2 inner shorter and lanceolate. ♄. ◠. S. Native of South America. Conv. ferrugíneus, Vahl, eclog. 1. p. 17. Willd. spec. 1. p. 858. Petioles length of leaves. Leaves linear above. Peduncles length of petioles. Corolla unguicular, blue. Stigma thickened, ex Vahl.

Rusty Ipomœa. Shrub tw.

107 I. HETEROPHY'LLA; twining, rather downy; leaves lanceolately 3-lobed; lobes acute, entire; peduncles many-flowered; sepals equal, oblong, acute. ♃. ◠. S. Native of Guinea. Conv. diversifólius, Schum. pl. guin. p. 54. but not of Choisy. Stigma filiform, hairy. Leaves glaucous, as well as downy beneath. Peduncles naked, usually 2-flowered. Corolla campanulately funnel-shaped, size of *C. sepium*, white, with a violaceous throat; limb obsolutely 5-lobed. Seeds tuberculate.

Various-leaved Ipomœa. Pl. tw.

108 I. VENTRICÓSA (Bert. in Coll. hort. rip. p. 37. under *Convólvulus*) glabrous; leaves broad-cordate, acuminated, quite entire, glabrous; peduncles generally 4-flowered, bracteate; calyxes acute, coriaceous, ventricose. ☉. ◠. S. Native of Guadaloupe, in gardens; but originally introduced from the Island of St. Bartholomew. Corolla large, white, funnel-shaped, glabrous.

Ventricose-calyxed Ipomœa. Pl. twining.

109 I. HOOKE'RI; glabrous; leaves on long petioles, deeply cordate, acuminated; peduncles 3-4-flowered, thickened, and somewhat racemose; sepals small, erect, adpressed, linear-subulate, margined with white; corolla large, funnel-shaped, with a very short tube, and a 5-angled limb; having the angles mucronate. ♄. ◠. S. Native of Mexico, in the province of Guaxaxaca. Ipomœa túbro-cærúlea, Hook. bot. mag. t. 3097. Corolla white in the bud, with the limb of a rich lake-red, which when the flower is fully expanded, becomes of a fine purplish blue. Filaments hairy. Stigma capitate, 2-lobed. This is probably a species of *Rivea*.

Hooker's Ipomœa. Fl. July, Aug. Clt. 1830. Shrub tw.

* * * *Peduncles generally 3-flowered.*

110 I. OBSCU'RA (Ker. bot. reg. t. 239. Roem. et Schultes, syst. 4. p. 256.) stem herbaceous, interruptedly glabrous, and villous from hairs; leaves cordate, acuminated, glabrous; peduncles exceeding the petioles, 1-3-flowered; pedicels thickened, bracteate; sepals oblong-ovate, sometimes obtuse, sometimes acuminated. ☉. ◠. S. Native of the East Indies, everywhere. Ip. sinuatifólia, Burm. ind. p. 49. Ip. insúlana, Blum. bijdr. p. 716. Conv. obscúrus, Lin. spec. p. 220. Burm. ind. 44. Wall. fl. ind. 2. p. 52. Conv. gemíllus, Vahl, symb. 3. p. 27.—Dill. elth. 88. t. 83. f. 95. Conv. trigónus, Hum. herb. Ip. gemélla, Roth. nov. spec. 240. Bracteas lanceolate, acute, glabrous; calyx glabrous. Corolla campanulate, glabrous, 3-4 times longer than the calyx, yellow, with a purple throat; lobes emarginate. Seeds downy.

Var. β, glábra (Choisy, l. c. p. 464.) stem glabrous; pedicels equal; seeds sometimes clothed with grey down, and sometimes glabrous. ☉. ◠. S.

Obscure Ipomœa. Fl. June, Aug. Clt. 1752. Pl. tw.

111 I. TRIA'NGULA (Roem. et Schultes, syst. 4. p. 243.) glabrous; leaves cordate-lanceolate, attenuated, glabrous, obtuse; peduncles 3-flowered, shorter than the leaves; sepals obtuse. ☉. ? ◠. S. Native of the East Indies. Conv. triflórus, Vahl, symb. 3. p. 30. Leaves 2 inches long, rounded and mucronate at apex; hind lobes obtuse, very rarely angular. Pedicels bracteless, angular. Corolla 3 times longer than the calyx; lobes plane at apex.

Three-flowered Ipomœa. Pl. tw.

112 I. TRIFIDA (Forsk. egypt. p. 44.) glabrous; leaves cordate, acuminated, glabrous; peduncles axillary, 3-flowered. ☉. ◠. S. Native of Arabia, in Hadje. Gmel. syst. p. 342. Vitex. annua. l. p. 440. Corolla pale yellow; limb undivided, an inch in diameter.

Three-flowered Ipomœa. Pl. tw.

113 I. WEIMARNÆ (Roem. et Schultes, syst. 4. p. 243.)

pilose; leaves cordate, acute; peduncles axillary, usually 3-flowered, shorter than the leaves. ☉. ◠. S. Native of Bengal. I. Schultèsii, Wenm. in litt. Leaves ciliated. Sepals equal, 3 outer ones sagittately cordate, the 2 inner ones linear. Corolla small, white; segments ovate, acute. Capsule 3, rarely 4-seeded. Seeds clothed with brown hairs.

Wiesmann's Ipomœa. Pl. tw.

114 I. GLAUCESCE'NS; glabrous; leaves ovate, cordately hastate, glabrous, glaucescent beneath, having the hind lobes diverging; peduncles axillary, 2-3-flowered, shorter than the leaves; sepals oblong, obtuse, mucronulate under the apex, wrinkled, glabrous, nearly equal. ☉. ◠. S. Native of Quito, near Chillo, at the altitude of 1850 hexapods. Conv. glaucéscens, H. B. et Kunth, nov. gen. 3. p. 101. Stem angular. Leaves 2 inches long. Corolla funnel-shaped, glabrous, of a violaceous purple colour, size of those of *Conv. arvénsis*.

Glaucescent Ipomœa. Pl. tw.

115 I. MEYE'RI; leaves cordate, acuminated, smoothish; peduncles very short, 2-flowered; sepals linear-lanceolate, cuspidate, parted to the base, hairy. ♃. ◠. S. Native country unknown. Convólvulus Meyèri, Spreng. syst. 1. p. 597. Conv. cuspidátus, Willd. herb.

Meyer's Ipomœa. Pl. tw.

116 I. TRICHOCA'LYX; leaves cordate, acutely acuminated, mucronate, smoothish, somewhat ciliated; stem, petioles, and peduncles hairy; peduncles short, 3-flowered; calyx hairy; sepals ovate-acute, or ovate-lanceolate, acuminated.—Native of Guinea. Conv. trichocàlyx, Schum. pl. guin. p. 91. Stems herbaceous, hairy or glabrous. Lateral pedicels bracteate; middle one naked. Corolla like that of *C. arvénsis*, cream-coloured, with a purple bottom. Capsule globose. Seeds clothed with black tomentum. Limb of corolla flat, with 5 small incisures.—Nearly allied to *I. gemélla*.

Hairy-calyxed Ipomœa. Pl. tw,

117 I. ERIOCA'LYX (R. Br. l. c.) downy; leaves cordate, lanceolate, acuminated, entire; peduncles 2-3-flowered, very short; sepals acuminated, and are, as well as the capsules, pilose. ♃. ◠. S. Native of New Holland, within the tropic, on the sea shore. Conv. eriocárpus, Spreng. syst. 1. p. 598.

Woolly-fruited Ipomœa. Pl. tw.

118 I. PARASI'TICA; stem muricated with prickles; leaves roundish, deeply cordate, acuminated, downy on the veins on both surfaces, ciliated; peduncles 3-flowered, shorter than the leaves; sepals ovate-oblong, mucronate, smoothish, nearly equal. ♃. ◠. S. Native near Carnecas. Conv. parasíticus, H. B. et Kunth, nov. gen. amer. 3. p. 103. Conv. circumàtus, Willd. rel. ex Rœm. et Schultes, syst. 4. p. 302. Stems angular, beset with retrograde hairs and deciduous prickles. Leaves 2 inches long; hind lobes approximate. Peduncles and pedicels downy. Corolla funnel-shaped, much longer than the calyx, blue, covered with adpressed down towards the base. Seeds angular. Capsule glabrous. Perhaps a species of *Pharbítis*.

Parasitical Ipomœa. Pl. tw.

119 I. SCITU'LA; stem angular, beset with retrograde strigæ; leaves roundish-ovate, deeply cordate, acuminated, beset with strigose hairs beneath, ciliated; peduncles usually 3-flowered, twice as long as the leaves; sepals oblong, scutish, hispid, nearly equal. ♃. ◠. S. Native of New Spain, betwixt Aguasarca and the burning mount Jorullo, at the altitude of 550 hexapods. Conv. supérbus, H. B. et Kunth, nov. gen. amer. 3. p. 103. Conv. sanguíneus, Willd. rel. ex Rœm. et Schultes, syst. 4. p. 302. Leaves 2 inches long, beset with adpressed scattered hairs above; hind lobes approximate. Peduncles and pedicels beset with retrograde bristles. Corollas funnel-shaped, purple, downy outside, 3 lines longer than those of *I. purpúrea*. Perhaps a species of *Pharbítis*.

Superb Ipomœa. Pl. tw.

120 I. MÓLLIS; stem compressed, roughish; leaves roundish-ovate, cordate, acuminated, strigose above, and clothed with soft down beneath; peduncles 3-flowered, shorter than the leaves; sepals rather downy, oblong-lanceolate, subulately acuminated, nearly equal. ♃. ◠. S. Native of New Andalusia, near Cumanacoa. Conv. móllis, H. B. et Kunth, nov. gen. amer. 3. p. 104. Conv. cynanchifólius, Willd. rel. ex Rœm. et Schultes, syst. 4. p. 301. Leaves hardly 3 inches long; hind lobes diverging. Peduncles and pedicels rather downy. Corolla violaceous, downy outside. Perhaps a species of *Pharbítis*.

Soft Ipomœa. Shrub tw.

121 I. PETIOLA'RIS; stem angularly furrowed, muricated with prickles; leaves roundish-cordate, deeply cordate, acuminated, glabrous, on long petioles; peduncles 3-flowered, shorter than the leaves; sepals oblong, subulately-acuminated, glabrous, nearly equal. A. ◠. S. Native of Mexico, on the burning mount Jorullo, near the volcano, at the altitude of 600 hexapods. Conv. petiolàris, H. B. et Kunth, nov. gen. amer. 3. p. 105. Plant glabrous. Leaves 4 inches long; hind lobes approximate. Petioles 5 inches long. Corolla funnel-shaped, violaceous, glabrous.

Long-petioled Ipomœa. Pl. tw.

122 I. SILA'CEA (Flora, bijdr. p. 716.) leaves cordate, acuminated, with a mucrone, downy above, soft beneath; peduncles 2-3-flowered, about equal in length to the petioles; sepals acute, downy. ♃. ◠. S. Native of Java, about Batavia, in grassy bogs. Flowers lilac. Said to be allied to *I. gemélla*, Roth.

Lilac-flowered Ipomœa. Fl. Year. Pl. tw.

123 I. BATATI'LLA; branches terete, clothed with hoary tomentum; leaves ovate, obsoletely cordate, acuminated, downy above, but clothed with hoary tomentum beneath; peduncles terminal? and axillary, usually 3-flowered, shorter than the leaves; sepals roundish obtuse, downy; the 3 outer ones rather the smallest; seeds comose. ♄. ◠. S. Native near Carnaca, Carnecas, and in the valleys of Aragua, where it is called by the natives *Batatilla*. Conv. Batatilla, H. B. et Kunth, nov. gen. amer. 3. p. 106. Leaves 2 inches long. Petioles biglandular at apex. Corollas funnel-shaped, downy outside, of a violaceous rose-colour; lobes of limb emarginate. Capsule glabrous, 4-celled? 4-valved? Cells 1-seeded. Seeds size of the nuts of *Córylus nùcula*, black, trigonal.

Batatilla Ipomœa. Shrub tw. 6 feet high.

124 I. VERTICILLA'TA (Forsk. descr. p. 44.) decumbent, hairy; leaves cordate, blantish, with a short mucrone, the veins beset with a few hairs above in the young state; pedicels axillary, tern, from all the axils, reflexed, 1-flowered, angular; sepals ovate, acute, hispid, glabrous in the old state, but ciliated. ♃. ◠. S. Native of Arabia Felix. Vahl, symb. 3. p. 35. Willd. spec. 1. p. 883. Convólvulus Forskoèlii, Spreng. syst. 1. p. 599. Peduncles bracteate. Capsule size of a pea, glabrous. Seeds clothed with silky tomentum.

Whorled-flowered Ipomœa. Pl. decumbent.

§ 4. *Leaves cordate at the base, often 3-lobed, with toothed or repand edges; sometimes varying in the same plant, with entire, angular, or toothed edges. Flowers not crowded into heads. Capsules and sepals middle-sized.*

125 I. ACUTA'NGULA (Ruiz. et Pav. fl. per. 2. p. 11. t. 119. f. b.) leaves sagittately triangular, having the angles toothed behind, peduncles 3-5-flowered, length of leaves; stems terete. ☉. ◠. S. Native of Peru, in the woods of Chinchao and Pozuzo. Leaves on long petioles. Bracteas subulate at the divisions of the peduncle. Corolla funnel-shaped, scarlet; limb middle-sized, with a lobed margin. Perhaps a species of *Quamoclit*.

Acute angled-leaved Ipomœa. Pl. tw.

126 I. HEXAGONIFOLIA; leaves oblong, acute, sagittately cordate, sinuately repand towards the base, clothed with silky tomentum on both surfaces, hoary; peduncles axillary, 2-flowered, longer than the leaves; sepals ovate, acuminated, downy, nearly equal. ♃. ◯. S. Native near Truxillo, on the shores of the Pacific. Conv. Hermánniæ, Lher. stirp. nov. fasc. 4. p. 67. t. 33. Roiz. et Pav. fl. per. 2. p. 10. **ii, a** et Kunth, nov. gen. 3. p. 93. Willd. spec. 1. p. 862.

Hermann's Ipomœa. Pl. tw.

127 I. STIPULACEA (Sweet, hort. brit. p. 280. Choisy, in mem. soc. phys. gen. 6. p. 466.) smooth; leaves cordate-sagittate; auricles usually repand, glabrous; petioles bistipulate at the base; peduncles 2-6-flowered, equal in length to the petioles; sepals ovate, equal, concave. ♃. ◯. S. Native of Chittagong. Conv. stipulàceus, Wall. fl. ind. 2. p. 71. Stems teretc, creeping at base, and twining at apex. Leaves 2-3 inches long. Stipulas recurved, acute. Peduncles and pedicels elavate. Corollas showy, white, with obcordate lobes. Capsule globose. Seeds clothed with olive-coloured wool.

Stipulaceous Ipomœa. Fl. Aug. Sept. Clt. 1805. Pl. tw.

128 I. PURPURASCENS; glabrous; leaves ovate-oblong, much acuminated, hastately cordate, angularly toothed at the base; peduncles axillary, 1-flowered, longer than the leaves; sepals oblong, obtuse, glabrous, nearly equal. ☉. ◯. S. Native of Peru. Conv. pulchéllus, H. B. et Kunth, nov. gen 3. p. 161. Conv. paucifloras, Willd. rel. ex Roem. et Schultes, syst. 4. p. 802. Stems rather angular. Hind lobes of leaves diverging. Corolla funnel-shaped, glabrous, purple, size of those of *Conv. arvensis*. Capsule globose, glabrous.

Neat Ipomœa. Pl. tw.

129 I. SCITULA; hairy; leaves roundish-ovate, acuminated, deeply cordate, angularly toothed; peduncles 1-flowered, propped each by a cordate bractea or leaf: sepals oblong, acutely acuminated, glabrous: outer ones rather the smallest. ♃. ◯. G. Native of Mexico, on the lofty mount Jorullo, at the elevation of 480 hexapods. Conv. scitulus, H. B. et Kunth, nov. gen. 3. p. 163. Peduncles distant, solitary, on the axils of the upper leaves or bracteas. Corolla funnel-shaped, size of those of *Calystegia sepium*, glabrous, purple. Stigmas granular.

Propped Ipomœa. Pl. tw.

130 I. FASTIGIATA (Sweet, hort. brit. p. 288.) glabrous; leaves cordate, acuminated and marronulate, entire, sinuated, fiddle-shaped, or 3-lobed; peduncles exceeding the petioles, 3-12-flowered, cymose; sepals lanceolate, mucronately awned; outer ones the shortest. ♃. ◯. S. Native of the West India Islands, Guiana, and Bengal. I. platanifòlia, Roem. et Schultes, syst. 4. p. 220, exclusive of the syn. of Plukn. Ip. cymòsa, Meyer, ess. p. 99, but not of Roth. Conv. fastigiàtus, Wall. fl. ind. 2. p. 48. Conv. platanifòlius, Vahl, symb. 3. p. 26. Conv. Bonariénsis, Spreng. syst. 1. p. 600.—Feuill. per. 3. p. 16. t. 1. Stems terete. Stolons long, creeping along the earth. Leaves 2-3 inches long. Corolla showy, purple, glabrous. Capsule smooth. Seeds glabrous. Leaves, like the young branches, often tinged with purple, particularly the margins, veins, and nerves.

Var. β, stem angular; peduncles elongated, few or many-flowered; sepals short, or long-awned; also the leaves and veins are downy.

Fastigiate Ipomœa. Fl. Jo. Aug. Clt. 1816. Pl. tw.

131 I. PARTICELLATA (Choisy, in mem. soc. phys. 6. p. 467.) glabrous; leaves cordately hastate, quite glabrous: auricles obtuse, and laterally undentate; peduncles 1-flowered, shorter than the petioles; sepals ovate, obtuse, sometimes mucronulate. ♃. ◯. S. Native of the island of Rawak, and the Society Islands, &c. Conv. denticulàtus, Desr. in Lam. dict. 3. p. 549. Conv. lævigàtus, R. Br. herb. Stems terete. Leaves obtuse, mucronulate, 1-2 inches long. Corolla 1¼ inch long, glabrous, with a hardly spreading limb. This species varies with many-flowered peduncles, and in the auricles being rounded.

Denticulated-leaved Ipomœa. Pl. tw.

132 I. PENTAPHYLLA; glabrous; leaves cordate, entire, and 3-lobed, acuminated; peduncles many-flowered, shorter than the petioles; sepals ovate, acute, somewhat foliaceous; limb of corolla 5-lobed. ☉. ◯. S. Native of St. Vincent. Convólvulus pedibándus, Lindl. in bot. reg. t. 299. Corolla of a fine rose-colour; tube subcylindrical, inflated.

Blunt Ipomœa. Fl. Aug. Sept. Clt. 1822. Pl. tw.

133 I. MONTEVIDENSIS; leaves hastate, lanceolate, smoothish; auricles divaricate, emarginately angular; peduncles 2-flowered, exceeding the petioles; sepals scarious. ♃. ? ◯. S. Native of Monte Video. Convólvulus Montevidénsis, Spreng. syst. 1. p. 604.

Monte-Video Ipomœa. Pl. tw.

134 I. DEPPEANA; downy; leaves sagittate at the base, sinuately toothed on the margins, mucronate; peduncles 1-flowered, twice as long as the leaves, bibracteate near the apex; bracteas linear, obtuse; sepals unequal, obtuse. ♃. ? ◯. S. Native of Mexico. Conv. sinuàtus, N. B. in herb. Lamb. Flowers large, purple.

Deppe's leaved Ipomœa. *W.* tviirm g.

135 I. MARIANNENSIS (Choisy, l. c. p. 468.) glabrous; leaves cordate, acuminated, sometimes entire, sometimes 3-lobed and trifid: intermediate lobe dilated at the base; peduncles 3-4-flowered, exceeding the petioles; sepals lanceolate, very acute, ciliately hairy. ♃. ◯. S. Native of the Marianne Islands. Auricles of leaves entire or lobed. Corolla tubular, hardly 3 times longer than the calyx, glabrous. Capsule pilose. Root tuberous. Nearly allied to *I. trilòba*.

Marianne Island Ipomœa. Pl. tw.

136 I. PILOSA (Sweet, hort. brit. p. 289. Choisy, l. c.) hairy; leaves broadly cordate, entire, or a little 3-lobed, clothed with white wool beneath; peduncles exceeding the petioles, cymosely many-flowered; sepals linear, hairy. ☉. ◯. S. Native of Mysore, Bengal, at Patorghata. Conv. pilosus, Wall. fl. ind. 2. p. 55. Roxb. in act. n. e. berol. 4. p. 199. Conv. álbicans, Wall. no. 1401. Stems terete. Bracteas oblong-lanceolate. Corolla tubular, hardly twice as long as the calyx, glabrous, rose-coloured, or pink, expanding an inch. Capsule globose, glabrous. Seeds villous on the angles.

Pilose Ipomœa. Fl. July, Oct. Clt. 1815. Pl. tw.

137 I. ARBOREA (Hort. ex Lindl. bot. reg. 1794.) villous; leaves cordate-roundish, 3-lobed: lobes acute; peduncles many-flowered, longer than the petioles, having the bracteas and sepals diverging and acuminated; corolla campanulate, with a thickened tube; stamens glandular at the base. ♃. ◯. S. Native country unknown. Flowers densely aggregate. Bracteas length of sepals: sepals longer than the tube of the corolla. Corolla middle-sized, violaceous: lobes acute.

Miss's Ipomœa. Fl. April. Oct. Clt.? Pl. tw.

138 I. OCHRACEA (Roth, nov. spec. p. 110. Choisy, l. c. p. 469.) plant clothed with grey down; leaves cordate, acuminated, entire, or somewhat 3-lobed, clothed with grey villi beneath; peduncles much exceeding the petioles, loose, generally 2-flowered, sometimes dichotomously many-flowered; sepals coriaceous, obtuse, with sub-lacerated edges; corolla striated. ☉. ◯. S. Native of Tranquebar, Java, Manilla, banks of the Irawaddi, &c. Conv. gracilis, Burm. ind. 46. t. 21. f. 1. Conv. affinis, Wall. cat. no. 1383. Conv. subangulàris, Hunt. herb. Stem terete, villous, or smoothish. Leaves 1½ inch long, and 1¼ broad, glabrous, green on the upper surface, except the middle nerve. Corolla twice longer than the calyx, marked with converging black stripes; lobes acute, spreading.

TYvin-flowered Ipomoea. PI. tw.

139 I. CHRYSEIDES (Ker. bot. reg. t. 270.) stem twisted ; leaves oblong-cordate, subhastate, entire, or often angular, also 3-lobed, acuminated, glabrous; peduncles stiff, exceeding the petioles, 2-7-flowered ; sepals coriaceous, rayed with green, ovate refuse, mucronulate; corolla small, yellow. %. ^\ S. Native of the East Indies, as of Silhet, banks of the Irawaddi, Soaddi, Goalpara, Segaen, Coromandel, Bengal; China, and Timor. *IL.J.* dentata, Willd. herb, ex Roem. et Schultes, syst. 4. p. 789. ex Klein. Conv. chryseides, Spreng. syst. 1. p. 598. Conv. dentatus, Vahl, symb. 3. p. 25. Wall. fl. ind. 2. p. 62. cat. no. 1349. Conv. luteolus, Wight, herb. Conv. flavus, Ham. herb. Stem terete and striated, glabrous, downy at the insertion of the leaves. Leaves 12-24 lines long ; laterallobes dentately serrated. Petioles warted. Capsule 4-angled, glabro-s. P·eds red, downy, under a lens.

fi?\r. fj, tern villous ; hairs straight, much crowded at the base* of the petioles, as well as on the middle nerves of the leaves.

Golden-flowered Ipomcea. Fl. Ju. Oct. Clt. 1817. PI. tw.

140 I. WIGHTII (Choisy, in mem. soc. phys. gen. 6. p. 470.) villous; leaves cordate, acuminated: lower ones oblong, with sinuately toothed edges; younger ones 3-lobcd; all woolly and rusty above, and clothed with white tomentum beneath ; peduncles exceeding the petioles, 2-5-flowered ; sepals oblong-linear, awned, very acute, hairy. %. *rs*. S. Native of the Nellighery mountains. Conv. Wightii, Wall.pl. rar. asiat. 2. p. *55.* t. 171. Conv. gossypinus, Wall. cat. no. 1407. Conv. lanuginosus, Heyne, herb. Stem terete, beset with retrograde hairs, as well as the petioles. Leaves 1-3 inches long, and 1-2 broad. Bracteas like the sepals, but larger. Corolla campanulate, rose-coloured, glabrous. Capsule downy. Seeds glabrous. Nearly allied to *Ip. tricolor,* Desr.

Wight's Ipomoea. PI. tw.

141 I. SAGITTATA (Poir. diet. 4. p. 17.) glabrous ; leaves cordately sagittate; peduncles 1-flowered, shorter than the leaves, rarely 2-flowered ; sepals linear-elliptic, obtuse. *If.*. rN. S. Native on the banks of lakes, about the Calle, and the bastions of France, in Barbarv, ex Poiret; abundant about Castellon, in Valentia, in humid places, ex Cav. Poir, voy. in barb. 2. p. 122. edit. germ. 2. p. 160. t. 3. Lam. ill. t. 104. f. 2. Cav. icon. 2. p. 4. t. 107. descr. p. 98. Desf. fl. atl. 1. p. 177. Conv. Wheleri, Vahl, symb. 2. p. *SG.* Willd. spec. 1. p. 845, exclusive of the syn. of Plukn. aim. p. 113. t. 85. f. 3. Conv. Valentinus, Hort.—Tourn. inst. p. 82. Lower leaves cordate, 3 inches long, and 1 inch broad. Corolla large, of a reddish purple colour. Capsule globose. Seeds brown, angular.

***Sagittate-leaved* Ipomcea. PI. tw.**

142 I. LACUNOSA (Lin. spec. ed. 3d. 228.) glabrous ; leaves cordate, acuminated, angular at the base : lower ones obscurely repand; peduncles short, generally 1-flowered; calyx pilose; sepals lanceolate, acute, ciliated ; corolla tubular, short. 3/ ,*rs*. H. Native of Virginia, Carolina, and Florida; rather abundant on the banks of the Arkansas, ex Nutt. in amcr. phil. trans, n. s. *5.* p. 195. Michx. fl. bor. amervl. p. 140. Pursh, fl. amer. 1. p. 145. Conv. lacunosus, Spreng. syst. 1. p. 597.—Dill. elth. p. 103. t. 87. f. 102. Nearly allied to *Ip. coccinea;* but the peduncles are 1 or 2-flowered ; the corollas with a thicker wh!te tube; and purplish rim, not scarlet, ex Lin., and in the Arkansas plant white, ex Nutt., short, and somewhat campanulate. Nearly allied to /. *triloba,* ex Michx. Lobes of corolla, which is tubular, nearly straight, ending in small setaceous mucrones. Capsule globose, rather hairy.

Zacwnose-leaved Ipomcea. Fl. July, Aug. Clt. 1G40. PI. twining.

143 I. ARISTOLOCHIEFOLIA ; glabrous ; leaves ovate, much acuminated, having the hind lobes dentately angular and diverging ; peduncles 3-flowered, shorter than the leaves; sepals ovate-oblong, acute, glabrous, wrinkled at the base, nearly equal ; capsules ovate-conical. 1/. *rs*. G. Native of Caraccas, and La Venta de la Cumbre, in rather cold places. Conv. aristolochisefolius, H. B. et Kunth, nov. gen. amer. 3. p. 102. Stem angularly striated, rather scabrous ; branchlets downy. Leaves glabrous, but when young downy above, 2 inches long. Corolla funnel-shaped, glabrous, with a white tube, and a violaceous limb. Capsule glabrous.

***Aristolochia-leaved* Ipomcea. PI. tw.**

144 I. PANDURATA (Ker. bot. reg. 588.) downy ; leaves broad-cordate, entire or lobed, panduriform ; peduncles long ; flowers in fascicles ; sepals glabrous, mutic ; corolla tubularly-campanulate. 1(..rN. H. Native from Canada to Carolina, in sandy fields, and among bushes. Convolvulus panduratus, Michx. fl. bor. amer. 1. p. 138. Pursh, fl. I. p. 144. —Dill, elth. t. 85. f. 99. Root thick, turnip-formed. Corollas white. There is a variety of this, with double flowers, cultivated in the gardens of America, which is a singular circumstance among Convolvulaceous plants. The roots grow to an enormous size, sometimes as thick as a man's thigh, and more than 2 feet long. Taken in place of jalap, it has the same effect, only in a less degree. A variety, with entire leaves, is very common on the banks of the Arkansas, ex Nutt.

Fiddles ha pedAeaved Ipomcea. Fl. Ju. Sept. Clt. J *732.* Pl.tw.

145 I. SETIFERA (Poir. ency. 6. p. 17.) branches villous ; leaves cordately auriculate, glabrous ; peduncles usually 2-flowered ; sepals large, ovate-oblong, glabrous, ending each in a bristle. 0. ? ^. S. Native of Guiana. Conv. setifer, Spreng. syst. 1. p. 597. Plant glabrous. Auricles of leaves rounded. Corolla large, campanulate, purplish or reddish.

***Bristle-bearing* Ipomcea. PI. tw.**

146 I. MACRORHIZA; downy; leaves cordate, entire or lobed, plicately wrinkled, rather tomentose beneath; peduncles 1-3-flowered ; sepals oval, mutic ; corolla campanulate, 5-lobed ; seeds woolly; root very thick. %.^. G. Native of Georgia and Florida, near the sea-shore. Ip. Jalapa, Pursh, fl. amer. sept. 1. p. 146. Ker. bot. reg. t. 342. Conv. macrorhiza, Michx. fl. amer. bor. 1. p. 141. "Pers. ench. 1. p. 184. Poir. diet. 0. p. 17. I. Michauxii, Sweet, hort. brit. p. 288. Flowers very large, white. This is the Jalap of North America.

Far. /3, rubra; stem tubercular ; peduncles many-flowered ; sepals ovate, obtuse, downy ; filaments tomentose at the base ; F? . *n**. S. Native of Mexico, about Vera Cruz, &c. Conv. Jalapa, Lam. ill. t. 104. f. 2. Pers. ench. 1. p. 179. Woodv. med. bot. p. 59, with a figure. Plenk, off. t. 94. Desf. ann. mus. 2. p. 126. t. 40-41. Sims, bot. mag. 1572. I. Jalapa, Sweet, hort. brit. p. 288. Conv, Jalapa, *ft,* rosea, Ker. bot. reg. t. 621. Root very large, white inside, milky, fleshy, form of a turnip. Stems villous at top. Corolla having the tube violaceous inside, and lilac or pale red outside : lirhb purple. Stigma depressed, 2-lobed.

Large-rooted Ipomoea. Fl. Aug. Oct. Clt. 1815. PI. tw.

147 I. OwARiE/Nsis(Beauv. fl. d'ow. 2. p. 41. t. 82.) stems, peduncles, petioles, and calyxes, beset with stiff hairs ; flowers axillary, umbellate ; leaves cordate, toothed, sublobate, beset with stiff hairs; sepals ovate, acuminated. *If.*. '**. S. Native of Guinea, about the town of Waree. Poir. suppl. 4. p. 634. Conv. Owariensis, Spreng. syst. 1. p. 594. Leaves on long petioles: lobes roundish. Pedicels simple, 1-flowered, unequal, crowded together. Corolla small, campanulate, red; lobes short, obtuse.

Waree Ipomcea. PI. twining.

148 I. CATHARTICA (Poir. suppl. 3. p. *6S3.)* glabrous; leaves cordate, 3-lobed, acuminated ; peduncles generally 1-flowered ;

tube of corolla sub-cylindrical, inflated.—Native of St. Domingo, in humid places. Convv. Africánus, Nicols. hist. nat. st. doming. p. 260. Stem twining, but sometimes rooting along the ground. Leaves large, on long petioles; lobes unequal. Corolla an inch long, pale green; limb large, 5-lobed, with 5 lanceolate rays beneath. Stamens unequal, shorter than the corolla.

Cathartic Ipomœa. Pl. tw.

149 I. ev'ata (Cham. et Schlecht. in Linnæa, 5. p. 118.) shrubby; smoothish; leaves variable, cordate, hastately cordate, ovate, and 3-lobed, with the sides angular, toothed and entire, finely acuminated, hairy beneath on the nerves and veins, and at the insertion of the petioles, with a few hairs above in the young state; cymes on very long peduncles, 2-3 times dichotomous, with elongated branches; sepals ovate-orbicular, obtuse, with a long weak dorsal mucrone. ♄. ◠. S. Native of Mexico, in woods, near Jalapa; also among bushes, near San Andres. Corolla somewhat salver-shaped, scarlet; tube an inch long; limb expanded, an inch and a half. Leaves 4 inches long. Cymes a foot or more long. Perhaps a species of *Quamoclit*.

Rope Ipomœa. Shrub tw.

150 I. funi'ta (Macfadyen, in Hook. bot. misc. 2. p. 116.) stems roundish, hairy; leaves cordate, 3-lobed, acuminated, hairy; petioles hairy: hairs proceeding from purplish glands, as in the stems; peduncles twice as long as the leaves, 6-flowered, hairy; bracteas as long as the pedicels, linear-subulate, hairy; calyx hairy: the hairs proceeding from roundish glands; sepals linear-lanceolate; stigma papillose, somewhat 3-lobed. ⊙. ? ◠. S. Native of Jamaica.

Dotted Ipomœa. Pl. twining.

151 I. Portoricénsis; leaves deeply cordate, somewhat 3-lobed, glabrous: lateral ones very short; peduncles usually 3-flowered, shorter than the leaves; sepals lanceolate; tube of corolla inflated. ♃. ? ◠. S. Native of Porto Rico. Convólvulus Portoricensis, Spreng. syst. 1. p. 595.

Porto Rico Ipomœa. Pl. twining.

152 I. Jamaicénsis; leaves deeply cordate, 3-lobed, sinuated, villous beneath, canescent; peduncles 1-flowered, shorter than the leaves, and are, as well as the sepals, which are lanceolate, glabrous. ♃. ? ◠. S. Native of Jamaica. Convólvulus Jamaicensis, Spreng. syst. 1. p. 595.

Jamaica Ipomœa. Pl. twining.

153 I. Rudólphi (Roem. et Schultes, syst. 4. p. 222.) leaves cordate and 3-lobed; peduncles 2-flowered; bracteas and bracteoles lanceolate; the 3 outer sepals the largest. ⊙. ? ◠. S. Native of St. Domingo. Ip. bracteáta, Ledeb. dec. pl. doming. no. 4; but not of Cav. nor Roem. et Schultes.

Rudolphi's Ipomœa. Pl. tw.

154 I. sinuá'tissima (Ker, bot. reg. t. 39.) downy; leaves cordate, entire or 3-lobed, acuminated, beset with adpressed hairs above, roughish tomentose beneath; flowers numerous, cymosely aggregate on the tops of the peduncles; cymes generally aggregate; calyx close, villous, nearly equal, loose above. ♄. ◠. S. Native of South America. Conv. mutábilis, Spreng. syst. 1. p. 592. Root and stems purple. Corolla large blue; limb campanulate; lobes roundish, cleft at apex. Stamens bearded at the base. Stigma granulately globose. Perhaps a species of *Pharbitis*. Nearly allied to *I. coagĕta*, R. Br. prod. 1. p. 485. which is probably Conv. multiflórus, Banks, herb.

Changeable-flowered Ipomœa. Pl. 3 May, Sept. Clt. 1812. Shrub tw.

155 I. bracteá'ta (Roem. et Schultes, syst. 4. p. 227.) stem a little hairy at top; leaves glabrous, cordate, nearly entire, and 3-lobed, hastate, attenuated; peduncles 1-flowered, length of petioles; outer sepals form of bracteas. ⊙. ◠. S. Native of the East Indies. Conv. bracteátus, Vahl, symb. 3. p. 23. Willd. spec. 1. p. 850. Nearly allied to *I. platanifólia*. Leaves 2 inches long, intermediate lobe lanceolate, attenuated, entire; lateral ones broader, rounded upwards, entire, or retusely somewhat lobed outside. Bracteas 2, opposite under the calyx, lanceolate, acute. Calyx downy. Corolla villous outside, silky; limb 5-lobed.

Bracteate-flowered Ipomœa. Pl. tw.

156 I. acumina'ta (Roem. et Schultes, syst. 4. p. 228.) stem beset with a few adpressed hairs; leaves glabrous, cordate, entire and 3-lobed, acuminated; peduncles elongated, many-flowered, glabrous; sepals lanceolate, attenuated, glabrous; inner ones shorter. ⊙. ? ◠. S. Native of the Island of Santa Cruz. Conv. acuminátus, Vahl, symb. 3. p. 26. Willd. spec. 1. p. 851. Leaves 4 inches long; lateral lobes lanceolate; intermediate one ovate, attenuated. Corollas large, campanulate, purple, with a pale bottom, and 5 lanceolate, excurrent, paler rays at the margins; stigma capitate.

Acuminated-leaved Ipomœa. Pl. tw.

157 I. trachoca'rpa (Ell. S. car. 2. p. 260.) plant smoothish; leaves deeply 3-lobed or entire; peduncles usually 2-flowered; sepals oval-lanceolate, pilose; corollas short; capsule globose, hairy. ⊙. ◠. H. Native of Carolina, in hedges. Conv. Carolinus, Michx. fl. amer. bor. 1. p. 139. Desr. in Lam. dict. 3. p. 563. Ip. communis, Roem. et Schultes, syst. 4. p. 228. Conv. trichocárpus, Spreng. syst. 1. p. 592. Ipomœa Carolina, Pursh, fl. amer. sept. 1. p. 145.—Dill. elth. p. 100. t. 84. f. 98. Bracteas subulate. Corolla large, pale purple.

Hairy-fruited Ipomœa. Pl. July, Aug. Clt. 1732. Pl. tw.

158 I. tomentósa (R. Br. l. c.) leaves cordate, undivided or 3-lobed, acute; petioles biglandular beneath at the apex; peduncles 1-3-flowered, thickened in the fruit-bearing state; sepals somewhat unequal, obtuse, mutic; corollas very long. ♃. ◠. S. Native of New Holland, within the tropic. Ip. macrántha, Roem. et Schultes, syst. 4. p. 251. Conv. longiflórus, Spreng. syst. 1. p. 595.

Long-flowered Ipomœa. Pl. tw.

§ 3. *Leaves palmately, digitately, or pedately lobed; rarely trifid, or 3-lobed. Flowers not in heads. Capsules and sepals middle-sized.*

* *Peduncles 1-3-flowered.*

159 I. Cóccinea (Roth, nov. spec. p. 110. Choisy, in mem. soc. phys. gen. 6. p. 471.) plant herbaceous, smooth; leaves palmate or pedate; leaflets serrated, glabrous; petioles compressed, stipulaceous at the base; peduncles 1-2-flowered, exceeding the petioles; sepals rugosely muricate, glabrous. ⊙. ◠. S. Native of Senegal, East Indies, and Cuba. Ip. Brunónii, Pers. cat. nov. no. 150. Ip. verrucósa, Ort. dec. p. 10. ? Ip. dissécta, Heyne, herb. Conv. Cóccicus, Lin. mant. p. 559. Wall. fl. ind. 2. p. 62. Conv. stipulátus, Desr. in Lam. dict. 3. p. 546. Conv. dissectus, Wall. cat. no. 1351. Stem angular, prostrate, rather long. Leaves palmate or pedate; outer lobes the shortest, and usually bifid: middle ones ovate-lanceolate, acute. Sepals ovate-oblong. Corolla white, tubular, 4-5 lines long, glabrous; lobes acute. Seeds glabrous.

Coptic Ipomœa. Pl. prostrate.

160 I. pentaba'ccum (Choisy, in mem. soc. phys. gen. 6. p. 471.) herbaceous; leaves quinate; leaflets linear-lanceolate or linear, petiolulate, entire, glabrous, obtuse; peduncles exceeding the petioles, 1-2-flowered; sepals glabrous, ovate, obtuse, unequal; outer ones the shortest. ⊙. ◠. S. Native of the East Indies, as on Mount Tsong-Ding, near Ava. Conv. pentadáctylis, Wall. cat. no. 1367. Conv. tenuifólius, Vahl, symb. 3. p. 33. Stem terete. Leaves decreasing in size to the tops of the stems. Corolla tubularly campanulate, glabrous, with the limb hardly spreading. Capsule and seeds glabrous.

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Var. β; stem and petioles clothed with long, « haires; leaves a little larger.

Five-fingered-leaved Ipomœa. PL tw.

161 I. H<»k. b leaflets I quite enure, wttb undulated margins; peduncles abou as long as the petioles, bearing dichotomous cymes of flowers; sepals imbricate, obtuse, equal; corolla funnel-shap *d. %.* -nr. the East Indies. Corolla of a deep, rich, and glossy rose col Stig.a capitate, 2-lobed, hairy. 1'ilamen *m* a hairy scale or gland, which is vaulted beneath. Leaflets generally 5, rarely 6-7. Perhaps a species of *Batatas*, or a new genus from the vaulted scale at the base of each filament.

Horsfall's Ipomœa. Fl. Dec. Jan. Clt. 1853. Pl. tw.

162 I. (Beauv. fl. d'ow. 2. p. 69. i. 101.) stem angular; leaves palmately 9-lobed: lobes unequal; peduncles 3-flowered; corollas purple. ☿. ◠. S. Native of Guinea, at Chama. irly allied to *I* Porsk, but is without any digitate itipulas. Corolla vml. the mbe narrow at I swollen at top.

Nine-lobed-le red Ipotnoea. PI. twin

163 I. I'ULCHE'LI.A (Rotli, nov, spec. p. 115.) herbaceous, glabrous; leaves quinate; leaflets sometimes entire, sometimes bifid: all elliptic- ovate, peti cles about equal in length to ie petioles, 1-2-flow glabrous: inner on villous. %, ◠. S. Native o\ r. 4. p. r '!.fl. ind. 2. p. 66. Conv. digitàtus, Roxb. ex Wall, c --53. Conv. dasyspérmus, Spreng. Wi it, herb. fonv. veno Madr. herb. Stem terete. Petioles tubercled. Corolla an inch long, funnel-shaped, small, pa ie (ittik, with the bottoi of the bell deepe- colnureil, I apsule glabrous. This is a beauttfal deli; ate, though extensive plant, I:i:l tiDCommonly ii terestin g on account of its slender, pendulous, spiral peduncles, wi tli theii pretty :iall pink (lowers, atai ding erect on their thickened curved spexes.

Pretty Ipomœa. PI. LW.

164 I. (Roem. et Schultes, syst. 4. p. 208. Clioisy, 1, c. p. 474.) stem glabrous, verm •• J ; leai es quinate; lobes lanceolate, mucronate, entire: outer ones often bifid; petio ius stipul Hov. ered, longer than the leaves; sepals obtuse, unequal, ovate-oblunj;. with mcmbrai coloured, *2* inche-. convex siile, ex Wall. ")/. r*. S. Native i I and of t! • tlie i'rn- \va, mr. coch. Willd. I. p. 138. Co tube culatus, Desr. ia Lara. diet. *3.* p. 515. H. B.et Kunth, nov. gen. 3. p. 108. Conv. digitàtus. Wall. fl. iml. 2. p. C5, Uoem. et Schulti s, syst. 4. p. 303. Flowers purjdc, size[1] of those of J8" nearly allied IU *[jiomce'a Cairica.*

Tubercled-stemmed Ipomœa. Fl. Ju. Sept. Clt. < 316. Pk twining.

165 !, AIIPEI ; plabrou except the petio >*Jns,* which are glandularly downy; leaves quinate; leaflets lanceolate, serrated, cuspi lait;; p€ lunctes 1-3-flowered, shorter than the leaves; sepals ovate, obtuse, mutic, each furnished with a dorsal mucrone; outer ones rather the shortest. ☿. ◠. S. Native of Mexico, near Vera Cruz, among bushes. Conv. ampelopsifolius Schlecht. in Linnea, 5. p. 118.

Ampelopsis-leaved Ipomœa. Pl. twining.

166 I. (Mart. reise. bras. ex Liimeca. 5. p. 40.) glabrous; stems winged; leaves pedately 5-parted; segments broad-lanceolate, acuminated, quite entire, or repandly toothed: pedicels solitary or twin, winged; capsule compressed, globose, circumcised. *11.* ^. S Native of Brazil. Conv. operculàtus. Gomes. mem. *cor* resp. acad. lish. 1812. p. 27. icone.

Operculate-capsuled Ipomœa. Pl.

107 I. (Jacq. eclog. 1. p. 132. t. 89.) herbaceous, simmti. leaves tripartite; segments trifid: the larger ones pinnately 5-lobed, with the lower lobes bifid, all glabrous; ptduiicles l-,')-flov orter than the petioles; sepals ovate, obn: e, unequal, and as if they were cordately spurred at the base before flowering: outer ones the shortest. ☺. ◠. S. Native of the East Indies, China, New Holland. Ip. tuberculàta, Ker. liot. reg. t. 86, but not of Roem. et Schultes. Conv. dasyspérmus, Spreng. syst. 1. p. 591. Conv. pedàtus, Roxb. fl. ind. 2. p. 6S. SrJpolas small, filiform, peilai e. Flowers in profution, i>reity la rge, of a bright sulphur colour. Pedicels elavate. Seeds pilose on the ribs. "Leaves pedately tripinnate. Calyx warted," ex Roxb, &c.

Thick-seeded Ipomœa. Fl. Aug. Sept. Clt. 1815. Fl. tw.

168 I. (R. Br. prod. p. 487.) glabrous; leaves palmate, 7-parted; segments linear, dentately pinnatifid: middle segment elongated; peduncles 1-2-flowered; calyx half the length of the corolla; sepals ovate, with crested nerves. ☺. ◠. G. Native on the shores of New Holland, within the tropic. Corolla white, 1 inc 11 long, n little longer than the calyx.

D'wect, , Ipomoeu Fl. Ju. Sept. Clt. 1815. Pl. tuining.

1G9 1. SIMATA (Ortog. dec. 7. p. 84.) stem, petioles, and pcfdunclea very pilo*; leaves glabrous, deeply 7-parted; segments sinuatcd or pinnatilii!; peduncles 1-flowered, longer than the leaves; sepals oval, glabrous, acute, nearly equal; corollas campanulate. *1<* ◠. H. Native of Georgia and Florida, on calcareous hills; and of Cuba, near Havannah, and Regla, in cultivated places. Ip. dis eta, Pur r. sept. \. p. 145. Conv. dissèctus, Lin. mant. p. 204. Michx. fl. bor. amer. I. p. ! 59. Jacq. obs. 2. p t. E. 1*8. 1] ct. vind. t. 159. Corollas white. with a r< ddish throat.

Sinuated-le \fed Ipotnoea. Ft. Jui. , Sept. Clt. 1815. Pl. twining.

170 I. (Roem. et Schultes, syst. 4. p. 268.) glabrous; leaves palmately 5-lobed: lobes finely serrulated, obtuse; axils of leaves hairy; peduncles length of petioles, bracteate; sepals obtuse, glabrous. ☿.? ◠. S. Native of the Island of Santa Cruz. Conv. quinquélobus, Vahl, symb. 3. p. 32. Willd. spec. 1. p. 863. Nearly allied to *I. Cairica* and *Ip. stipulàta,* but differs, in the leaves being smaller, and the peduncles 1-flowered, &c. Lateral lobes of leaves narrower, mucronate. Stipulas 2, small. Corolla subcampanulate, glabrous, purple.

Five-lobed-leaved Ipomœa. Pl. tw.

171 I. (R. Br. prod. p. 486.) glabrous; stems trailing or creeping; leaves quinately digitate; leaflets lanceolate, mucronulate, with entire edges: outer leaflets undivided or bifid; peduncles 1-3-flowered; sepals nearly equal, obtuse, 3 times shorter than the corolla, ♄. G. Native of New Holland, within the tropic; and in New South Wales, about Port Jackson; as well as of New Caledonia and the Island of Tanna. Conv. mucronàtus, Forst. prod. no. 79. Conv. pédulus, Spreng. syst. 1. p. 590. "Lobes of leaves ciliated, mucronate; peduncles 1-flowered." Forst.

Pendulous-flowered Ipomœa. Fl. May, Oct. Clt. 1805. Pl. trailing.

179 I. PINNATÍFIDA: glabrous: leaves pinnately 7-cleft: segments lanceolate, acuminated, almost quite entire; peduncles 1-3-flowered, longer than the leaves: sepals roundish-concave, nearly equal, glabrous. ♃. ◠. S. Native of Cuba, between Havannah and Regla. Conv. pinnatifidus, H. B. et Kunth, nov. gen. 3. p. 108. Stem angularly striated. Leaves ovate in circumference, 2 inches long. Leaflets sometimes furnished with one or two teeth, or quite entire: intermediate one large, and the lateral ones becoming gradually smaller. Corolla downy outside.

Pinnatifid-leaved Ipomœa. Pl. tw.

180 I. TRÍFIDA: downy: leaves cordate, trifid: segments quite entire: peduncles 2-3-flowered, longer than the leaves: sepals glabrous, ovate-oblong, mucronate: outer ones rather the smallest. ♃. ◠. S. Native on the banks of the Orinoco, between Carichana and San Borja, in woods. Conv. trifidus, H. B. et Kunth, nov. gen. amer. 3. p. 107. Conv. hepaticifolius, Willd. rel. ex Rœm. et Schultes, syst. 4. p. 302. Leaves 1½ inch long: middle segment oblong, acuminated, mucronate: lateral ones a little shorter, diverging somewhat triangular, having the superior angle acuminated, and the lower one rounded. Corolla funnel-shaped, purple, glabrous, size of those of *Ip. pavonina*. Perhaps a species of *Pharbitis*.

Trifid Ipomœa. Pl. tw.

174 I. QUINÁTA (R. Br. prod. p. 486.) glabrous: leaves quinately digitate: leaflets lanceolate, quite entire, mucronulate: peduncles 1-flowered: sepals obtuse, the inner 2 twice the length of the outer 3, about equal to the middle of the corolla in length. ♃. ◠. S. Native of New Holland, within the tropic, on the sea shore. Very nearly allied to *I. biloba*. Convólvulus quinátus, Spreng. syst. 1. p. 599.

Quinate-leaved Ipomœa. Pl. tw.

175 I. TRIXANTHA: twining or prostrate, glabrous: leaves digitately 3-parted: segments narrow, pinnatifid, serrated: stipulas palmate: peduncles 1-flowered, bibracteate in the middle, simple, twice as long as the petioles: sepals oblong, acute, scabrous: stigma capitate, 3-lobed. ♃. ◠. S. Native of Guinea. I. dissecta, Willd. spec. 1. p. 850. phyt. 1. p. 5. no. 10. t. 2. f. 5. Conv. Thonningii, Schum. pl. guin. p. 95. Stems angular. Corolla campanulately funnel-shaped, white. Capsule hidden by a calyx, divided by a thin membrane into 3 cells; cells 1-seeded. Seeds tuberculose. Said to be allied to *I. Cóptaxa* and *I. laciniáta*. Perhaps a species of *Batátas*.

Thonning's Ipomœa. Pl. twining.

176 I. HISPANIÓLA: leaves quinately digitate, glabrous: leaflets lanceolate, serrated, cuspidate: peduncles 1-flowered, exceeding the leaves: sepals obtuse, glabrous. ♃. ◠. S. Native of Hispaniola. Convólvulus Hispaniólæ, Spreng. syst. 1. p. 599. Stems hairy.

Hispaniola Ipomœa. Pl. twining.

177 I. HIRSÚTA (R. Br. l. c.) plant beset with spreading hairs: leaves quinately digitate: leaflets oblong-lanceolate: peduncles generally 1-flowered: calyx glabrous: sepals obtuse, the 2 inner a little longer than the outer 3. ♃.? ◠. S. Native of New Holland, on the sea-shore, within the tropic. Conv. Brównii, Spreng. syst. 1. p. 599.

Hairy Ipomœa. Pl. tw.

178 I. HYBRIDÉLLA (R. Br. l. c. p. 487.) glabrous; leaves palmately 7-parted: segments linear, dentately pinnatifid: intermediate one elongated, and nearly entire: peduncles 1-3-flowered: calyx about equal in height to ½ of the corolla, which is one inch and more long: sepals oblong, wrinkled on the nerves. ♃. ◠. S. Native of New Holland, within the tropic. Conv. diversifólius, Spreng. syst. 1. p. 592.

Diverse-leaved Ipomœa. Pl. tw.

179 I. CAROLÍNA (Lin. spec. 227., but not of Pursh nor Michx.) glabrous?: leaves digitate: leaflets 5-7, lanceolate, attenuated at the base, petiolate: peduncles 1-flowered: calyx short. ♃. ◠. S. Native of the Bahama Islands. Willd. spec. 1. p. 860. Pers. euch. 1. p. 183. I. Caroliniana, Poir. dict. 6. p. 11.—Cat. carol. 2. p. 91. t. 91. Corolla funnel-shaped: tube green outside, and violet inside: limb purple: segments reflexed.

Carolina Ipomœa. Fl. July, Aug. Clt. 1732. Pl. tw.

* * *Peduncles many-flowered.*

180 I. PLATA'NI (Ker, bot. reg. t. 333.) branches, petioles, and peduncles beset with prickly tubercles: leaves palmate: lobes 7, cuneate-oblong, bluntish, with a short mucrone: outer ones the smallest: peduncles few-flowered, cymose at apex, a little longer than the petioles: sepals nearly orbicular. ♃. ◠. S. Native on the banks of the Plata. Conv. Platénsis, Spreng. syst. 1. p. 591. Root tuberous. Corollas pale purple, size of those of *Batátas paniculáta*. Stigma capitate, hardly lobed.

Plata Ipomœa. Fl. Ju. Sept. Clt. 1817. Pl. tw.

181 I. HETERÓA (Ker, bot. reg. t. 335.) branches, petioles, and peduncles hispid from bristles; leaves naked, cordate, 3-lobed: lobes dentately sinuated; peduncles robust, longer than the petioles, many-flowered, trichotomously cymose; sepals oblong. ♃. ◠. S. Native of Brasil. Conv. setósus, Spreng. syst. 1. p. 594. Root tuberous?. Corolla salver-shaped, purplish red, size of those of *Batátas paniculáta*. Stigma globose. Said to be nearly allied to *Ip. platanifólia*, and *Batátas edúlis*.

Bristly Ipomœa. Fl. Aug. Oct. Clt.? Pl. tw.

182 I. VESICULÓSA (Beauv. fl. d'ow. 2. p. 75. t. 106.) plant beset with numerous vesicles: leaves palmately 5-7-lobed: lobes unequal; peduncles 4-6-flowered: corollas purple. ♃. ◠. S. Native of Guinea, in the kingdom of Warre, in woods. Axils of the leaves woolly.

Vesicular Ipomœa. Pl. tw.

183 I. PALMA'TA (Forsk. descript. p. 45. Rœm. et Schultes, syst. 4. p. 207.) glabrous: leaves palmate: leaflets 5, serrulated, outer ones lobed: stipulas foliaceous, palmate: axils woolly: peduncles longer than the leaves, dichotomously corymbose: sepals glabrous, ovate, obtuse. ♃. ◠. G. Native of Egypt, Guinea, also of the Sandwich Islands. Conv. Cairícus, Lamarck. 222. Vahl, symb. 1. p. 15. Willd. spec. 1. p. 862. Sims, bot. mag. 602. Conv. Ægyptius, Berl. ægypt. p. 79. t. 74. Ip. Cairica, Sweet, hort. brit. p. 287.—Barrel. icon. t. 50. Corolla campanulate, purple. Seeds woolly.

Palmate-leaved Ipomœa. Fl. Ju. Sept. Clt. 1680. Pl. tw.

184 I. PES-TIGRÍDIS (Lin. fl. zeyl. 79. spec. 230. Wall. fl. ind. 2. p. 93.) leaves palmate, 5, rarely 7-lobed: lobes ovate, entire, clothed with silky hairs: peduncles many-flowered, equal in length to the leaves: flowers aggregate: bracteas 6-8, surrounding the head of flowers, and longer than it. ☉. ◠. S. Native of the East Indies, as of Travancore, Sukanagur, banks of the Irawadi, Ceylon, Java, &c. Conv. pes-tigridis, Spreng. syst. 1. p. 633. Conv. bryoniæfólius, Sal. prod. p. 125. Convolvuloides palmátus, Moench. meth. 492.—Dill. elth. 420. t. 313. f. 411.—Rheed. mal. 11. p. 121. t. 59.—Knip. cent. 9. t. 53.—Herm. hgdb. 184. t. 187.—Act. hons. 2. p. 302. t. 29. f. g. Hairs on the stem furnished with glands at the base. Lobes of leaves acute, 1-2 inches long. Bracteas bluntish, hairy, ovate, linear. Sepals ovate, acuminated, hairy outside. Corolla hairy outside, funnel-shaped, purplish. Capsule glabrous. Seeds rather villous.

*Tiger*s-foot-\eaved* Ipomoea. Fl. Aug. Oct. Clt. 1732. PI. tw.

184 I. AGGREGA'TA (Poir. suppl. 4. p. *633.* Choisy, in mem. soc, phys. gen. 6. p. 455.) leaves palmate, 7-lobed, pilose ; peduncles long; flowers sessile, aggregate, surrounded by 10-12 ovate-oblong, unequal, pilose, involucra-formed bracteas. ^ • ^\ G. Native of Cochinchina. Convólvulus aggregátus, Lour, cocb. p. 109. Poir. suppl. *3.* p. 471. Stem very hairy, terete. Lobes of leaves acutish, ovate, entire. Sepals lanceolate, pilose. Corolla tubular, 5-cleft, large, white ; segments acute, hairy, closed.

Aggregate-flowered Ipomcea. Shrub tw.

185 I. VITIFÒLIA (Sweet, hort. brit. p. 289. Blum, bijdr. 709.) leaves cordate, palmately 5-cleft: lobes finely toothed ; peduncles many-flowered ; corolla orange yellow. J? . *rs.* S. Native of the East Indies, as of Silhet, Travancore, Malabar, &c. Conv. vitifòlius, Lin. mant. p. 203. Burm. ind. 45. t. 18. f. 1. Wall. fl. ind. 2. p. 61. Conv. angulàris, Roxb. herb. Stems terete, downy, or with a few villi. Leaves lobed to the middle, variously pilose; lobes unequal, irregularly crenate-toothed. Sepals ovate-lanceolate, blackish. Capsules large, and are, as well as the black seeds, glabrous.

Vine-leaved Ipomcea. Fl. June, Sept. Clt. 1820. Shrub twining.

186 I. ANGULA'RIS (Choisy, in mem. soc. phys. gen. 6. p. 454.) leaves cordate, 5-lobed : lobes short, entire, acute ; peduncles 3, many-flowered ; corolla orange-yellow. *V^ . rs.* S. Native of Java. Conv. angulàris, Lin. mant. 203. Burm. ind. 46. t. 19. f. 2. Hardly more than a variety of /. *vitifòlia.* Capsule large.

Angular-leaved Ipomcea. Shrub twining.

187 I. TUBERÒSA (Lin. hort. ups. p. 39. spec. 227.) glabrous ; leaves palmately 7-parted : lobes elliptic-lanceolate, entire ; peduncles dichotomous ; sepals equal, an inch long. 1(,. ^\ S. Native of tropical America, Madras, Islands of Bourbon, France, Ceylon, &c. Jacq. amer. p. 37. Ker, bot. reg. 768, but not of Lour. Conv. tuberòsus, Spreng. syst. 1. p. 591.—Sloane, jam. *56.* hist. 1. p. 152. t. 96. f. 2. Stems terete. Lobes of leaves acute, 1-3 inches long. Petioles 3 inches long. Flowers solitary, and pedicellate in the forks, and spicate along the branches of the peduncle. Sepals ovate, obtuse. Corolla 2 inches long, tubularly campanulate, yellow. Capsule large. Seeds large, black.

Far. ft. uniflbra (Choisy, in mem. soc. phys. gen. 6. p. 45*S.)* peduncles 1-flowered ; sepals acutish. 1/,^. S. Native of South America. Convólvulus gossypifòlius, H. B. et Kunth, nov. gen. amer. 3. p. 107. Conv. macrocàrpus, Spreng. syst. 1.p. 592.

Tuberous-rooted Ipomcea. Fl. Aug. Oct. Clt. 1731. Shrub twining.

188 I. HEPATICIFÒLIA (Lin. spec. 230. Burm. ind. 50. t. 20. f. 2.) very hairy ; leaves 3-lobed : lobes very blunt; peduncles equal in length to the petioles ; flowers capitate, involucrated ; bracteas ovate-unear. ©. ^. S. Native of Ceylon and China. Convólvulus hepaticifòlius, Spreng. syst. 1. p. 594. Stems simple. Leaves deeply lobed ; lobes sometimes entire, subemarginate, ovate ; middle one coarctate at the base, more than an inch long. Corolla purplish.

Hepatica-leaved Ipomcea. Fl. Aug. Sept. Clt. 1759. PI. twining.

189 I. PEDA'TA ; glabrous; leaves pedately 3-5-cleft: lobes lanceolate, obtuse, mucronate ; peduncles cymose ; sepals rounded : inner ones the largest. *h* • ^. S, Native of Guayaquil. Flowers purple, funnel-shaped, (v. ?. in herb. Ruiz, et Pav.)

Pedate-\ei\\ed Ipomce'a. Shrub twining.

190 I. PARVIFLÒRA (Vahl, symb. 3. p. 34.) glabrous ; leaves cordate, palmately 5-lobed ; umbels axillary, pedunculate ; calyx and capsules hairy ; sepals ovate, mucronate, length of capsule. 0. ^. S. Native of the Island of Santa Cruz. Willd. spec. 1. p. 885. Pers. ench. 1. p. 185. Conv. Sloànei, Spreng. syst. 1. p. 593.—Sloane, jam. p. *55.* hist. 1. p. 153. t. 97. f. 1. Ip. trîloba and I. sanguinea of some gardens. Nearly allied to /. *triloba,* but differs in being glabrous, not hairy ; stem triangular, from decurrent lines. Leaves 1\ inch long ; lobes lanceolate, obtuse, mucronate : outer ones gibbous at the base, outside. Pedicels muricated. Flowers small, purplish.

Small-flowered Ipomcea. Fl. July, Oct. Clt. 1822. PL tw.

191 I. UMBELLA'TA (Lin. spec. 227.) glabrous; leaves digitate ; leaflets 7, nearly equal, lanceolate, entire, acuminated ; peduncles very short, sub-umbellate. 1/. *rs.* S. Native of tropical America. Poir. diet. 6. p. 10. Conv. septenàta, Spreng. 1. p. 591.—Plum. spec. 3.—Burm. amer. p. 81. t. 92. f. 2. Tourn. inst. p. 116. Flowers scarlet. Stamens exserted. Capsule glabrous, oblong, acuminated, 3-celled. Perhaps a species of *Qudmoclit.*

Umbellate-flowered Ipomcea. Fl. June, July. Clt. 1739. PL tw.

192 I.? CLAU'SA (Rudolph, ex Led. dec. pi. dom. no. 5) leaves ternate or quinate ; peduncles dichotomous, many-flowered ; corollas tubular, closed. 1;. ? °. S. Native of St. Domingo.

Closed-flowered Ipomcea. PL tw.

§ 6. *Leaves entire at both ends, never cordate. Flowers not crowded into heads. Capsules and sepals middle-sized.*

193 I. BUCHANÀNI (Choisy, in mem. soc. phys. 6. p. 474.) glabrous ; leaves linear-lanceolate, acuminated, on short petioles, entire: peduncles \ an inch long, 1-3-flowered; sepals ovate, glabrous. ©. ? *rs.* S. Native of Bengal. Ip. salicifòlia, Roxb. "in Wall. fl. ind. 2. p. 88. Stem terete. Leaves 3-8 inches long. Corolla white, with a cylindrical tube, 1| inch long, and an obscurely divided limb. Cells of capsule 3-seeded, ex Wall.

Buchanan's Ipomcea. FL May, July. Clt. 1816. PL tw.

194 I. LINIFÒLIA (Blum, bijdr. p. 721.) plant rather pilose; leaves linear, quite entire, blunt at both ends, mucronulate, sometimes somewhat hastate at the base; peduncles axillary, about equal in length to the leaves, few-flowered ; sepals obtuse, glabrous. ©.? ^. S. Native of the Moluccas.

Flax-leaved Ipomcea. PL tw.

195 I. PIIILIPPE'NSIS (Choisy, in mem. soc. phys. gen. 6. p. 475.) glabrous ; leaves linear, mucronulate, glabrous, on short petioles, entire; peduncles terete, 1-flowered, about \ an inch long; sepals ovate, rather mucronulate: outer ones a little smaller. *%.1 rs.* S. Native of the Philippines, and China, near Wangoo. Stem terete, filiform. Leaves 1-2 inches long, and 1-2 lines broad; petioles ciliated. Peduncles glabrous, bibracteate. Corolla unopen, a little larger- than the calyx. Capsule pea-formed, glabrous.

Philippine Ipomcea. PL tw.

196 I. GRAMÎNEA (R. Br. prod. p. 414.) glabrous; leaves long-linear, mucronate, quite entire ; peduncles 1-flowered ; sepals obtuse ; corollas very long. *%.?* ^\ S. Native of New Holland, within the tropic, on the shore. Conv. gramineus, Spreng. syst. 1. p. 607.

Grassy-leaved Ipomcea. jPL tw.

197 I. REINWARDTIA^NA (Blum, bijdr. p. 720.) leaves elliptic-oblong, acuminated, rounded at the base, entire, smooth above, and downy beneath ; peduncles few-flowered, shorter than the petioles; sepals bluntish, clothed with silky villi: outer ones

the largest. ♃. ? ◠. S. Native of Timor. Convólvulus ovátus, Reinwardt, mss. in Blume.

Reinwardt's Ipomœa. Pl. twining.

198 I. LANCEOLA'TA; downy: leaves lanceolate, entire, obtuse: peduncles 1-flowered; bracteæ large, forming an involucrum to the flower.—Native of Sierra Leone, in humid places.

Lanceolate-leaved Ipomœa. Pl. twining.

199 I. OPPOSITIFO'LIA (Roem. et Schultes, syst. 4. p. 247.) glabrous; leaves ovate-oblong, very blunt, emarginate, mucronate, glabrous; peduncles many-flowered, bifid, usually shorter than the leaves; sepals ovate, rusty, equal. ♃. ? ◠. S. Native of the Island of Santa Cruz. Convolvulus quinquepartitus, Vahl, eclog. 2. p. 14. Convolvulus ovalifolius, West, beskr. st. cruz. p. 271. Very nearly allied to *Conv. parviflorus*, Lam., the *Conv. microdactylus*, Roem. et Schultes. Stem and branches rather canescent. Corolla campanulate, glabrous, deeply 5-cleft.

Five parted-flowered Ipomœa. Pl. tw.

200 I. NE'VIS'ENSIS; stems herbaceous; leaves scattered on longish petioles, attenuated, acute, rounded at the base; peduncles axillary, solitary, 3-5-flowered, twice longer than the leaves; flowers middle-sized, pale blue. ♃. ◠. S. Native of the Island of Nevis, among bushes, where it is called the *Jumber vine*. Conv. Nevisianus, Hans. prod. p. 24. Allied to *Conv. verticillatus*, and *C. sagittatus*. Perhaps a species of *Jacquemontia*.

Nevis Ipomœa. Pl. twining.

201 I. SECU'NDA; leaves ovate-lanceolate, silky beneath, on short petioles; racemes secund, crowded, lateral and terminal, panicled. ♃. ◠. S. Native of Sierra Leone, on the mountains, very common. Flowers small, white.

Secund-flowered Ipomœa. Pl. twining.

202 I. AXILLA'RIS (Roem. et Schultes, syst. 4. p. 247.) stem decumbent; leaves oblong, emarginate, lobed or entire at the base; peduncles 1-flowered, twin or solitary, length of petioles; sepals oblong, equal; corolla tubular. ♃. ◠. S. Native of the Azores, and Island of Santa Cruz. Conv. arvensius, Vahl, symb. 1. p. 18. and 3. p. 22. Willd. spec. 1. p. 862. Habit of *Conv. Imperati*, but smoother, the leaves more crowded, and the tube of the corolla gradually widened upwards, 1½ inch long.

Sand Ipomœa. Pl. tw.

203 I. MATAXOCA'RPA; leaves oblong, glabrous, rather coriaceous, mucronate; peduncles 2-flowered, shorter than the leaves; sepals ovate; capsule cylindrical, silky. ♃. ? ◠. S. Native of New Granada, Bertero. Convólvulus mataxocárpus, Spreng. syst. 1. p. 606.

Heavy-fruited Ipomœa. Pl. twining.

204 I. TACHNA'EA; leaves oblong-lanceolate, mucronate, densely woolly on both surfaces; racemes axillary, imbricate, leafy. ♃. ? ◠. S. Native of Hispaniola. Convólvulus lachnæ'us, Spreng. syst. 1. p. 606.

Woolly Ipomœa. Pl. twining.

205 I. PTEROCA'RPA; leaves petiolate, oblong-lanceolate, acuminated, mucronate, attenuated at the base; peduncles 2-flowered; calycine segments ovulate-ovate, acuminated, running into the pedicels. ☉. ◠. S. Native of Guadaloupe. Conv. pterocárpus, Bert. ex Coll. hort. rip. 37. Corolla middle-sized, white. Stamens bearded at the base.

Wing-fruited Ipomœa. Pl. twining.

† *Doubtful, or hardly known species.*

206 I. MACRO'PHA (Choisy, in mem. soc. phys. gen. 6. p. 475.) leaves cordate, repand, acuminated; peduncles 2-3 flowered; tubers of roots aggregate. ♃. ◠. G. Native of Cochinchina, in fields, and Australasian Islands. Conv. macrophyllus, Lour. coch. p. 104. Conv. chrysorhizus, Forst. pl. esc. ins. p. 55. ? Batátas macrophylla, Rumph. amb. 5. t. 131. Stems slender. Leaves glabrous. Flowers lateral, white, campanulate. Tubers pale brown, hairy, ovate-oblong, white inside, edible, and more esteemed than the sweet potatoe.

Nipplet Ipomœa. Pl. tw.

207 I. KAMTSCHA'TICA (Choisy, l. c.) stem decumbent, radicant, striated, glabrous; leaves cordate-ovate, acute, entire, 7-nerved, glabrous, pale beneath, a hand long; petioles length of leaves. ♃. G. Native of Japan, where it is called *Kanami Kadsura* by the natives. Convolvulus in plantis obscuris, Thunb. jap. p. 330.

Kadsura Ipomœa. Pl. creeping.

208 I. PANDURIFO'RMIS (Choisy, l. c. p. 476.) leaves cordate, entire, fiddle-shaped, acuminated; flowers shining, yellow; peduncles long, generally 2-flowered; calyx and fruit smooth. ♃. ◠. G. Native of Cochinchina, in hedges. Conv. panduratus, Lour. coch. p. 107. but not of Linn.

Fiddle-shaped-leaved Ipomœa. Pl. tw.

209 I. CONCAVA'TA (Gaud. in ind. sem. hort. Bocc. 1825. p. 7.) stem compressed; leaves cordate-ovate, entire; peduncles 1-flowered, shorter than the leaves. ☉. ? ◠. S. Native of the East Indies. Plant villous.

Compressed-stemmed Ipomœa. Pl. tw.

210 I. CUSPIDA'TA (D. Don, prod. fl. nep. p. 98.) leaves cordate, quite entire, cuspidate, downy: hind lobes rounded: peduncles many-flowered, exceeding the leaves; sepals linear, acute, pilose: corolla rose-coloured; style very short. ☉. ◠. G. Native of Nipaul.

Cuspidate-leaved Ipomœa. Pl. tw.

211 I. ARBORESCE'NS (Roem. et Schultes, syst. 4. p. 248.) arborescent; leaves lanceolate, acuminated, glabrous, villous on the nerves beneath; peduncles generally 3-flowered; calyx clothed with silky tomentum. ♄. S. Native country unknown. Stem angularly furrowed, downy. Leaves ½ foot long, and hardly 2 inches broad. Corolla white. Perhaps the same as *I. arborescens*, Kunth. Peduncles terminal.

Mauritius-like Ipomœa. Tree.

212 I. SCABRA (Roem. et Schultes, syst. 4. p. 301, under *Convolvulus*,) twining; glabrous; leaves auriculately-hastate: hind-lobes rounded, obtuse, emarginate; peduncles 1-flowered.—Native of Porto Rico.

Eared-leaved Ipomœa. Pl. twining.

213 I. HEDERA'CEA (Roem. et Schultes, l. c. p. 303, under *Convolvulus*,) twining; leaves digitate, quinate, entire, acuminated, rather pilose; stems, peduncles, and calyxes hairy. ♃. ◠. S. Native in shady places, about Comana.

Grape Ipomœa. Pl. twining.

214 I. RHOMBEA (Roem. et Schultes, l. c. p. 302. under *Convolvulus*,) stems creeping, twining a little; leaves oblong, obtuse, mucronate; flowers axillary, racemose. ♃. ◠. S. Native about Havannah, among rubbish.

Lozy Ipomœa. Pl. creeping.

215 I. DENTICULA'TA (Roem. et Schultes, syst. 4. p. 303, under *Convolvulus*,) stem erect; leaves elliptic, denticulated, silky beneath; flowers axillary, sessile.—Native of America, Vahl.

Denticulated-leaved Ipomœa. Pl. erect.

216 I. SCA'BRA (Willd. rel. ex Roem. et Schultes, syst. 4. p. 789.) hairy, scabrous; leaves cordate, 3-lobed; peduncles 2-flowered. ☉. ◠. S. Native country unknown.

Scabrous Ipomœa. Pl. twining.

217 I. BAHI'ENSIS (Willd. l. c.) leaves cordately-hastate, acuminated, glabrous; peduncles 2-flowered; sepals membranous, blunt, glabrous; seeds woolly.—Native of Brazil, Hoffmannsegge. Conv. Bahiénsis, Spreng. syst. 1. p. 598. Ipomœa crenopétala, Bertero.

Bahia Ipomœa. Pl. twining.

218 I. TUBULO'SA (Willd. l. c.) leaves cordate, acuminated:

peduncles 1-flowered; tube of corolla cylindrical, elongated; limb undivided; bottom of stem, and underside of leaves, as well as the peduncles, muricated.—Native of tropical America. Perhaps a species of *Quamoclit*.

Tubular-flowered Ipomœa. PI. twining.

219 I. SIMPLEX (Thumb. prod. p. 36.) leaves lanceolate, entire; flowers solitary. ½. ◠. G. Native of the Cape of Good Hope. Conv. simplex, Spreng. syst. 1. p. 607.

Simple Ipomœa. Shrub twining.

Species only known by name.

1 I. hispidula, Ledeb. in hort. Dorpat. 1822. p. 11.—2 I. superba, Ledeb. l. c.—3 I. Simensis, Fisch. cat. hort. gor. p. 28.

Cult. All the species of *Ipomœa* are very showy when in blossom, and much admired. The shrubby and perennial herbaceous kinds require the same treatment as that recommended for *Exogonium*, see p. 264; and the annual species as those of *Pharbitis*, see p. 263.

XV. JACQUEMO'NTIA (named by Choisy, after Victor Jacquemont, who lately travelled in the East Indies in search of objects of natural history, where he died.) Choisy, in mem. soc. phys. gen. 6. p. 476.—Convólvulus and Ipomœa species of authors.

Lin. syst. *Pentándria, Monogýnia.* Calyx of 5 sepals. Corolla campanulate. Style one; stigmas 2, ovate, flattened. Ovarium 2-celled, 4-ovulate. Capsule 2-celled. Had.—Herbs or sub-shrubs, natives of South America.

1 J. CERULE'A (Choisy, l. c.) plant prostrate, rather creeping; leaves ovate, emarginate, quite glabrous; peduncles equal in length to the petioles, twice trifid; pedicels 1-flowered. Native of Guinea. Convolvulus cærúleus, Schum. pl. guin. p. 101. Root simple. The 3 outer calycine segments roundish, the 2 inner small. Corolla campanulate, blue, entire. Stigmas thickish, entire, recurved. Seeds naked. Said to be allied to *Conv. malifólius*.

Blue-flowered Jacquemontia. Pl. prostrate.

2 J. AZU'REA (Choisy, l. c.) stem, petioles, nerves, and margins of leaves downy; leaves oblong-cordate; peduncles long, fasciculately many-flowered. ¼. ◠. S. Native of South America. Conv. azúreus, Rich. act. soc. hist. nat. par. p. 107. Desr. in Lam. dict. 3. p. 554. Stem rather villous at top. Leaves subsinuated, glaucescent beneath. Sepals acute. Corollas small, blue.

Azure-flowered Jacquemontia. Pl. tw.

3 J. CAPITA'TA; pilose; leaves cordate, entire, acute; peduncles hardly longer than the petioles; flowers capitate, involucrated; sepals narrow, lanceolate. ☉. ◠. S. Native of Senegal. Conv. capitátus, Desr. in Lam. dict. 3. p. 554. Leaves 2 inches long, length of petioles. Peduncles bearing each a dense villous head of involucrated sessile flowers. Bracteas 6-7, unequal, length of calyxes.

Capitate-flowered Jacquemontia. Pl. tw.

4 J. MICRA'NTHA; leaves cordate-oblong, mucronate, rather downy; peduncles many-flowered, corymbose, short, somewhat verticillate. ¼. ◠. S. Native of St. Domingo, on rocks, among rocks. Conv. micránthus, Desr. in Lam. dict. 3. p. 556. Pers. ench. 1. p. 177.—Burm. amer. p. 85. t. 94. f. 2.—Plum. mss. 2. t. 62. Stems slender. Leaves bluntish, mucronate. Corollas small, campanulate, purplish, deeply 5-cleft, ex Desr. l. c. Capsule 4-celled; seeds fulvous, angular, ex Desr. l. c.

Small-flowered Jacquemontia. Pl. tw.

5 J. SORDIDA; rather tomentose; leaves ovate or subcordate; peduncles bifid, many-flowered, shorter than the leaves. ½. ◠. S. Native of the Island of Santa Cruz. Conv. sordidus, Desr. in Lam. dict. 3. p. 557. Vahl, eclog. 2. p. 14. Pers. ench. 1. p. 177. Conv. albiflórus West, herb. over. st. croix. p. 271. Leaves hoary beneath, with a short acumen. Peduncles divided above the middle into many short branches; bracteas subulate. Sepals scarious on the edges, equal, oblong, pale rusty, rather villous. Corollas white, campanulate; limb 5-cleft, crenulated. Corymbs 12-20-flowered.

Neat-flowered Jacquemontia. Shrub tw.

6 J. PANICULATA; glabrous; leaves ovate-cordate, acuminated, rather repand; peduncles umbellately 5-flowered; flowers nearly sessile; calyxes ciliated. ½. ◠. S. Native of tropical America? Conv. paniculatus, Jacq. coll. 4. p. 210. icon. rar. 2. t. 316. Willd. spec. 1. p. 867. Stem terete, glabrous. Leaves rather villous on the edges while young. Bracteas lanceolate, acuminated. Outer sepals larger, drawn out into a point, with reflexed sides; inner ones lanceolate, acuminated. Corolla campanulate, blue, with a paler star; lobes of limb roundish, acuminated. Lobes of stigma oblong.

Fire-flowered Jacquemontia. Shrub tw.

Cult. All the species are free flowerers, and of easy culture, requiring only common care. The annual species should be treated in the manner recommended for the species of *Pharbitis*, see p. 263; the twining, shrubby species should be treated in the manner recommended for *Calonyction*, see p. 265.

XVI. CONVOLVULUS (from *convolvo*, to entwine; twining habit of most of the species.) Choisy, in mem. soc. phys. gen. 6. p. 477.—Convólvulus species of authors.

Lin. syst. *Pentándria, Monogýnia.* Calyx of 5 sepals. Corolla campanulate. Style 1; stigmas 2, linear-cylindrical, often revolute. Ovarium 2-celled, 4-ovulate. Capsule 2-celled. —Herbs or sub-shrubs.

SECT. I. ORTHOCAU'LOS (from ὀρθος, *orthos*, straight; and καυλος, *kaulos*, a stem; in reference to the stems being straight, never twining.) Stems erect or prostrate.

5 l. *Leaves entire, ovate-oblong, spatulate, lanceolate, or linear.*

* *Shrubby or herbaceous perennial plants. Peduncles* 1-2-3-6-*flowered.*

1 C. PERRICAU'LIS (Choisy, in mem. soc. phys. gen. 6. p. 477.) stems suffruticose, villous, many rising from the same root; leaves linear, dilated at apex, sessile, much crowded at the base; flowers 2-3 together, axillary, nearly sessile; sepals linear, acuminated, acute. ½. Native of the East Indies, at Buxar, Hurdwar, Bhaugulpur, and Vikram, on mountains in the south of Hindostan. Evólvulus ferrugíneus, Wall. cat. no. 1316. Conv. spicæfólius, Ham. herb. Stems simple. Leaves bluntish, villous or ciliated. Flowers rising from the base to the top of the stem, forming a spike. Corolla glabrous, twice longer than the calyx. Every part of the plant is hairy.

Hoary-stemmed Bind-weed. Pl. ½ foot.

2 C. MICROPHY'LLUS (Sieb. ex Spreng. syst. 1. p. 611.) stem branched, suffruticose at the base; leaves linear, sessile, villous, as well as the branches, which are twiggy; peduncles 1-flowered, about equal in length to the leaves; sepals acute. ½. H. Native of Egypt.

Small-leaved Bind-weed. Shrub small.

3 C. ERINA'CEUS (Ledeb. in litt. ex Meyer. verz. pflanz. p. 105.) plant silky, stems much branched, shrubby at the base; branches and branchlets very long and spreading; leaves linear; caudine ones elongated; those of the branches and branchlets minute; peduncles solitary, generally 1-flowered, about equal in length to the bracteas; flowers; sepals elliptic, silky, as well as the 5-cleft corolla. ½. H. Native of Caucasus, in the loose sand

towards the Caspian sea, and Gallipoli, near the Karavanserai Enrek.

Evanescent Bind-weed. Shrub dwarf.

4 C. LANA'TUS (Willd. herb. ex Spreng. syst. 1. p. 610.) stems decumbent, branched, woolly; leaves linear, elongated, attenuated at the base, nearly naked; peduncles elongated, 1-flowered; sepals acute, and are, as well as the corollas, woolly outside. ♃. H. Native of North America.

Woolly-flowered Bind-weed. Pl. decumbent.

5 C. HOUTTEA'NUS (Choisy, l. c.) stem simple, biennial; leaves linear, acute, almost sessile, clothed with rusty hairs on both surfaces; peduncles 3-flowered, at first short, but at length elongated; sepals ovate, acuminated, very acute; outer ones rather the longest, hairy; corolla very small. ♃. ? G. Native of Madura. *Retzia pilosa*, Roxb. herb. ex Wall. cat. no. 6689. Stems very leafy the first year, clothed with rusty hairs, as well as the peduncles, branchlets, and leaves. Corolla tubular, clothed with rusty hairs outside: the apex, ending in 5 taper points. Ovarium glabrous. Nearly allied to *Conv. fasciatus*.

Bottler's Bind-weed. Pl. ½ foot.

6 C. LINEA'TUS (Lin. spec. p. 224.) root creeping; floriferous stems erect, simple, corymbose at top; leaves lanceolate, petiolate, acute, silky, villous, lined; peduncles 1-2-flowered, shorter than the leaves; sepals rather foliaceous, silky; corolla hairy outside. ♃. H. Native of Spain, Italy, by the Mediterranean Sea, and of Greece. Sibth. et Smith. fl. græc. t. 139. Conv. spicatus, Desr. in Lam. dict. 1. p. 549.—Mor. hist. 2. p. 17. sect. 1. t. 4. f. 2. bad.—Barrel. icon. t. 317.—Triumf. obs. 91. t. 90. f. 2.—Tourn. cor. p. 1. Leaves narrowed at the base. Peduncles bibracteate. Flowers pale reddish purple.

Lined-leaved Bind-weed. Fl. June, July. Clt. 1714. Pl. ½ to ¾ foot.

7 C. BETA'CEUS (Spreng. syst. 1. p. 610. Lad. fl. alt. 1. p. 226.) leaves spatolate, running into the petioles, silky, lined; peduncles very short, mostly 2-flowered; sepals ovate, acute; stem suffruticose. ♄. H. Native of Siberia, in sandy places, at the river Bekuni, near Lokzaesk; and of Podolia. Conv. lineatus, Bieb. fl. casc. 1. p. 146. Ross. enum. pl. volh. p. 43. no. 1552.

Beaver's Bind-weed. Shrub small, ½ to ¾ foot.

8 C. GERA'RII (Roem. et Schultes. syst. 4. p. 294.) root creeping; stem villous, weak; branches very short; leaves lanceolate, dilated and obtuse, silky; peduncles axillary and terminal, 2-flowered, shorter than the leaves; sepals small, ovate, acute, silky; corolla villous outside. ♃. H. Native of Spain, and the south of France. Ger. prov. p. 317. no. 3. Conv. lineatus, Desr. in Lam. dict. 3. p. 535, exclusive of the synonymes. D. C. fl. fr. no. 2750. Conv. Cneorum β, Gouan, hort. monsp. p. 94.—Barrel. icon. t. 311.—Munting. p. 29. t. 110.—Tourn. inst. p. 84. Stems rather angular. Lower leaves approximate. Calyx with 2 small bracteas under it. Corolla middle sized, a little spreading, rufescent.

Gerard's Bind-weed. Fl. June, July. Clt. ? Pl. ½ foot.

9 C. TATARICUS (Lois. not. p. 40. journ. de bot. 3. p. 264.) root creeping?; stems erect, simple; leaves lanceolate, downy; peduncles axillary and terminal, 1-2-flowered, about equal in length to the leaves; bracteas twin, longer than the calyx. ♃. H. Native of France, near Avignon. C. lineatus, β, Poir. suppl. 2. p. 474. D. C. fl. fr. suppl. p. 423. Very like *C. Cantabrica*, but differs in being clothed with short down, not silky, and the stems 8-10 inches, and more, high. It is also allied to *C. Cantabrica*, but the stems are not branched, as in that plant, and the peduncles are shorter. Corollas purple or white.

Intermediate Bind-weed. Pl. ½ foot.

10 C. SCOPA'RIUS (Ait. hort. kew. 1. p. 214.) stem shrubby; branches twiggy; leaves linear, rather pilose; peduncles generally 3-flowered; calyx silky; sepals ovate, acute. ♄. G. Native of Teneriffe, on the mountains near the town of Santa Cruz. Willd. spec. 1. p. 872. Vent. choix. t. 21. Habit of a species of *Spartium* or *Genista*. Stem erect, glabrous. Leaves short, remote. Racemes terminal, somewhat secund. Corolla white, hairy outside. Wood hard and white, with radiating stripes; and is, perhaps, according to Lin. the *Lignum Rhodium* of the shops. Capsule 1-celled, 1-seeded, dehiscing at the base.

Broom-like Bind-weed. Fl. Aug. Sept. Clt. 1733. Shrub.

11 C. FRUTICOSUS (Willd. herb. ex Spreng. syst. 1. p. 610.) leaves oblong-subspatolate, obtuse, mucronulate, clothed with stellate down when young, as well as the branches; peduncles usually 4-flowered, shorter than the leaves; sepals glabrous, scurfish. ♄. F. Native country unknown.

Leafy Bind-weed. Pl. erect, suffruticose.

12 C. ARGYROPHYLLUS (Lin. suppl. 137.) shrubby, erect; leaves linear, canescent; peduncles axillary, erect, 1-flowered; sepals lanceolate, glabrous, hoary. ♄. G. Native of the Cape of Good Hope. Willd. spec. 1. p. 872. Habit of *C. althæoides*. Stem terete, reddish. Peduncles at the tops of the stems. Bracteas subulate, recurved. Corolla funnel-shaped, large, fulvous.

Evening-Primrose-like Bind-weed. Shrub erect.

13 C. HELIANTHEMIFOLIUS (Poir. dict. 2. p. 463.) shrubby, villous; leaves sessile, small, narrow-lanceolate, acute; flowers small, almost solitary; calyx villous; sepals lanceolate, acute. ♄. G. Native of America. Conv. minimus, Vitm. summ. pl. 1. p. 424. Gmel. syst. veg. 1. p. 341.—Plum. amer. mss. t. 6. f. 42.—Tourn. cor. 84. Plant densely clothed with cinereous down or villi. Stem divided from the base into many short, spreading branches. Peduncles filiform, villous, length of leaves. 1- rarely 2-flowered. Corolla blue.

Sun-rose-leaved Bind-weed. Shrub ½ foot.

14 C. HELIANTHEMIFOLIUS (Bieb. fl. taur. 1. p. 147. cent. pl. rost. t. 24.) the whole plant clothed with shining, silky hairs; leaves linear-lanceolate, blunt-ish; peduncles usually 1-flowered, longer than the leaves; sepals ovate, acute: the 3 outer ones inflately gibbous in the disk. ♃. H. Native of Tauria, on calcareous mountains, along with *C. cantabrica*. C. procumbens, Pall. ind. Bracteas linear, about equal in length to the calyx. Flowers a little larger than those of *C. Dorycnium*. Corolla milk-coloured, silky outside.

Silky Bind-weed. Fl. June, July. Clt. 1824. Pl. procumbent.

15 C. DORYCNIUM (Lin. spec. 224.) stem shrubby, dichotomously panicled; branches stiff; flowers sessile, solitary, terminating the branches lateral, and in the forks of the branches; leaves lanceolate, villous, sessile; sepals naked-ish, obtuse, mucronate. ♄. H. Native of the Levant; Candia, near Canea; and on road sides, about Corinth. Willd. spec. 1. p. 871. Desr. in Lam. dict. 3. p. 548. Sibth. et Smith. fl. græc. t. 201.—Tourn. inst. p. 84. Habit different from other species of *Convolvulus*. Corolla campanulate, spreading, villous outside, 3-4 times longer than the calyx, rose coloured.

Dorycnium-like Bind-weed. Fl. June, July. Clt. 1806. Shrub 1½ foot.

16 C. SUFFRUTICOSUS (Desf. atl. 1. p. 175. t. 48.) suffruticose, villous; stems ascending; leaves narrow-lanceolate, acuminated, peduncles 1-flowered, 3 times longer than the leaves; sepals villous, ovate-oblong, acute. ♃. H. Native of Atlas, near Tlemsen; and of Greece. Sibth. prod. fl. græc. 1. p. 135. This species differs from *C. Cantabrica*, in the stem being suffruticose; in the corolla being twice or thrice larger, beset with spreading, not adpressed hairs. Corolla pale red or white. Stems tufted. Bracteas setaceous.

Suffruticose Bind-weed. Shrub 1 foot.

17 C. CANTA'BRICA (Lin. spec. 223.) plant hirsut with spread-

ing hairs; stems branched, prostrate; leaves oblong-lanceolate, acute; sepals narrow, very villous; peduncles usually 2-3-flowered. ♃. H. Native of the south of Europe, north of Africa, and of Tauria. Willd. spec. 1. p. 808. Bieb. fl. taur. 1. p. 147. Smith, prod. fl. græc. 1. p. 135. Jacq. fl. austr. t. 230.—Mor. hist. 2. p. 17. sect. 1. t. 4. f. 5.—Tourn. inst. p. 82. and 84. This species is readily distinguished from *C. lineatus*, *C. pentilis*, and *C. holosericeus*, by the hairs being spreading, and by the narrow, very villous sepals. Corollas pale red.

Var. β, terrestris (Lin. spec. 224.) leaves linear, silky; peduncles generally 3-flowered; calyx hairy, mucronate. ♃. H. Conv. terrestris, Dalech. hist. 1429. Bauh. hist. 2. p. 100.

Var. γ; stem erect. ♃. H. Ait. hort. kew. ed. 2d. vol. 1. p. 336.

Cantabrian Bind-weed. Fl. Aug. Sept. Cult. 1650. Pl. ½ to 1 foot, prostrate.

18 C. PALLIDUS (Cav. icon. 6. p. 80. t. 600. f. 2.) stems slender, terete, erect, branched, pilose; leaves sessile, linear-lanceolate, hairy; flowers solitary, minute, rather tomentose; sepals ovate-lanceolate, villous. ♃? S. Native of Mexico, in the vicinity of Acapulco, in marshy places. Poir. suppl. 3. p. 465. Leaves an inch long, and a line broad. Peduncles bibracteate, racemose. Corolla yellow, rather tomentose outside, campanulate, 2 times longer than the calyx, ending in 5 obtuse lobes or crenæ.

Marsh Bind-weed. Pl. 1 foot.

19 C. PARVUS (Lin. amœn. acad. 2. p. 241.) tomentose; leaves oval, obtuse, on very short petioles; peduncles 1-flowered, length of leaves; sepals ovate; inner ones smaller. ♃. H. Native of Persia, on the shores of the Caspian Sea, and in the sand, by the Euxine Sea, near Cazar. Willd. spec. 1. p. 874. Bieb. fl. taur. 1. p. 148. —Gmel. sib. 3. p. 86. t. 7. Stems thickness of a writing-quill, terete. Stigmas linear, thickish. Corolla white.

Persian Bind-weed. Pl. 1 foot?

20 C. TRIFIDUS (Thunb. fl. jap. p. 85. Willd. spec. 1. p. 860.) stems filiform, glabrous, simple; leaves opposite, petiolate, ovate-oblong, glabrous, 3-nerved; peduncles very short, generally 1-flowered, seldom 2-flowered. ♃. H. Native of Japan. Leaves pale beneath. Sepals lanceolate-setaceous, glabrous, one-half the length of the corolla. Corolla purple. Stigmas capitate. A species of *Ipomœa*, or a distinct genus, with opposite leaves.

Three-nerved-leaved Bind-weed. Pl. ew. se erect.

21 C. AMMANII (Desr. in Lam. dict. 3. p. 549. Bunge, pl. chin. in mem. acad. petersb. 6. p. 46. Led. fl. alt. 1. p. 260.) plant clothed with silky hairs; stems procumbent; leaves linear, or oblong-linear; peduncles 1-flowered, length of leaves, spreading; bracteas equal in length to the calyxes; sepals ovate, acute. ♃. H. Native of Siberia, at the rivers Jenisea, Tschatysch, Kan, Uluguiun, and Tschuga, and throughout the Kergis-ean steppe, and at Lake Baikal: and of the north of China, in sterile, gravelly places. Willd. spec. 1. p. 870.—Amm. ruth. p. 5. no. 6.—Gmel. sib. 4. p. 93. no. 31. Peduncles furnished with 2 linear bracteas in the middle. Corolla marked by 5 silky lines outside, disposed in a stellate manner, white, with purple tips.

Ammann's Bind-weed. Pl. ¼ foot.

22 C. SERICEUS (Lin. suppl. 137. Willd. spec. 1. p. 871. Bunge, enum. pl. chin. in mem. acad. petersb. 6. p. 47.) shrubby; the whole plant hoar with white, glittering, silky hairs; leaves spatulate-lanceolate, or oblong, silky, sessile; peduncles elongated, 1-flowered; floriferous branches erectish, silky. ♄. H. Native of Siberia, on sandy hills; at the river Irtysch; and of the north of China. Conv. fruticosus, Pall. it. 2. p. 734. t. M. Stem branched at top; branches horizontal, stiff, terminated each by a small, erect, whitish flower. The rudiments of branchlets in the axils of the leaves, and branches are changed into spines. Plant somewhat flexile, hardly climbing. Limb of corolla 5-cleft.

Var. β; calyx quite glabrous. ♄. H. Native of Persia. Desr. in Lam. dict. 3. p. 549. Conv. spinosus, Burm. fl. ind. p. 47. t. 19. f. 4.

Spiny Bind-weed. Pl.

23 C. TRAGACANTHOIDES (Turcz. dec. p. 22. Clusiy, in mem. soc. phys. gen. 6. p. 478.) shrubby; stems diffuse, branched; branches spiny at length; leaves linear; flowers terminal, nearly sessile, bracteless; sepals ovate, abruptly acute, 3 times shorter than the corolla. ♄. H. Native of Mongolia, at Zorgeitaigoun. Nearly allied to the 2 preceding, but differs from the first in the branches being at length spinescent, in the flowers being larger, and in the form of the sepals; and from the second in the more dwarf habit, in the linear leaves, and in the flowers terminating the stems among the branches. Corolla purple.

Tragacanth-like Bind-weed. Shrub.

24 C. HYSTRIX (Vahl, symb. 1. p. 16. Willd. spec. 1. p. 871.) shrubby, much branched, stiff, diffuse; branchlets silky, spinescent; leaves sessile, oblong, silky; flowers sessile, usually solitary, rarely twin; calyx hairy; 2 outer sepals oblong, stiff, larger than the inner 3. ♄. G. Native of Arabia, at Dahki. Conv. spinosus, Forsk. cat. arab. p. 196. no. 101. Leaves small. Bracteas 2, at the base of the calyx, oblong, acutish, ruffened. Corolla small, hairy.

Porcupine Bind-weed. Shrub 1 foot.

* * *Flowers capitate, or umbellate. Shrubby or herbaceous perennial plants.*

25 C. CNEORUM (Lin. spec. 224.) stems shrubby, bramched; leaves lanceolate-obovate, clothed with silky tomentum; flowers capitate on short peduncles; bracteas, some of them, as large as the leaves, and are, as well as the calyxes, hairy. ♄. F. Native of Spain, Crete, and Syria, and the Island of Samos, on rocks. Smith. et Smith. fl. græc. t. 200. Curt. bot. mag. 459.—*C. argenteus*, Desr. in Lam. dict. 3 p. 552.—Tourn. inst. p. 84.—Mor. hist. 2. p. 11. sect. 1. t. 3. f. 1.—Barrel, icon. rar. 4. p. 670.—Bocc. mus. 2. p. 70. t. 70.—Dorycnium, Clus. hist. 2. p. 154. —Cneorum album folio argenteo molli, Bauh. pin. p. 468. Plant clothed with silky silvery down. Leaves sessile, attenuated at the base, mucronate. Corollas white or pale red, hairy outside.

Widow-Wail-like Bind-weed. Fl. May, Sept. Cult. 1640. Shrub 1-3 feet.

26 C. SAXATILIS (Vahl, symb. 3. p. 33.) very hairy; stems erect; leaves linear; flowers capitate; sepals acuminated. ♃. H. Native of Spain, on hills. France, Italy, Tauria. Bieb. fl. taur. 1. p. 146. Lapeyr. abr. p. 101. Conv. lanuginosus, Desr. in Lam. dict. 3. p. 551, exclusive of the syn. of Bocc. t. 70, and Barrel. t. 670. Conv. cneorum, Hablitz, taur. p. 147. Conv. pusillus, Pall. ind. taur.—Bocc. mus. t. 26. Tourn. inst. p. 84. Corolla white, purplish, and villous outside. Heads of flowers girded by 5 unequal leaves or bracteas. Stem clothed with white tomentum.

Var. β, humilior (Roem. et Schultes, syst. 4. p. 295.) Conv. lanuginosus, β, Desr. in Lam. dict. 3. p. 551. Conv. capitatus, Cav. icon. 2. p. 72. t. 189. descr. p. 97.—Tourn. cor. p. 4. Stem erect.

Var. γ; stems half a foot high, declinate. ♃. H. Conv. saxatilis, Bieb. fl. taur. 1. p. 147. Conv. Dorycnium, Pall. ind.

Stone Bind-weed. Fl. Ju. Aug. Cult. 1796. Pl. ½ foot.

27 C. LANATUS (Vahl, symb. 1. p. 16.) shrubby; old branches leafless, sterile, spinose, rather villous; leaves lanceolate, obtuse, tomentose; flowers capitate, involucrated; sepals ovate-lanceolate. ♄. F. Native of Lower Egypt, on Mount Sinai;

sual of Candia, on dry hills. Willd. spec. 1. p. 871. Sibth. et Smith. fl. græc. t. 207. C. cneorum, Forsk. æt. ægypt. p. 62. no. 100. C. sericeus, Burm. ind. p. 49. t. 12. f. 2. f.—Tourn. cor. 1. Flower-bearing branches simple from the base of the old ones, very hairy. Leaves sessile. Floral or involucral leaves 6, a little broader than the rest, very hairy. Pedunches axillary, shorter than the leaves, hairy. Corolla villous outside, white or reddish.

Woolly Bind-weed. Shrub 1-2 feet.

28 C. saxifragus (Sieb. pl. exst. ex Link. enum. 1. p. 201.) stem shrubby, branched; leaves oblong-lanceolate, blueish, nearly sessile, veiny, clothed with woolly villi; flowers in lateral, involucrated, sessile fascicles; bracteas ovate: sepals foliaceous, lanceolate. ♄. F. Native of Palestine.

Saxifrage-leaved Bind-weed. Fl. May. Sept. Cl. 1822. Pl.

29 C. cneorum (Desr. in Lam. dict. 2. p. 555.) plant clothed with rusty tomentum; stem frutescent, a little branched; leaves sessile, lanceolate, scattered on the branches; heads of flowers sessile, connexus, nearly sessile; flowers sessile, or on very short peduncls. ♄. H. Native of the Levant, about Damascus. Stem terete. Leaves furrowed from nerves an inch long. Flowers 5-6 in a head. Bracteas intermixed with the calyxes, and a little longer than them. Corolla rather villous outside, size of those of *C. cneorum*.

Second-leaved Bind-weed. Pl. ½ to 1 foot.

30 C. sericeus (Desr. in Lam. dict. 2. p. 555. exclusive of var. β.) shrubby, silky; leaves linear-lanceolate; flowers capitately umbellate, terminal, involucrated; sepals lanceolate. ♄. H. Native of the Levant. Doryenium, Pyrosp. Alp. exot. p. 75. This species is very nearly allied to *C. cneorum*; but it differs in the sepals being twice longer, and lanceolate. Leaves acutish, 1½ inch long, and 2-3 lines broad.

Olive-leaved Bind-weed. Shrub 1-2 feet.

31 C. tiliæfolius (Curt. bot. mag. 289.) erect, shrubby; leaves linear, acute, clothed with silky hairs; flowers terminal, umbellately panicled; calyx hairy. ♄. F. Native of Spain and South of France. Willd. spec. 1. p. 869. Convv. oleifolius, fl. Desr. in Lam. dict. 3. p. 558. D. C. fl. fr. suppl. no. 2702. Conv. Tournefortii, Sieb.—Tourn. cor. p. 1. Plant silvery. Flowers 3-6 together on long peduncles, girded by 2-4 bracteas, which are hardly longer than the calyxes. Corollas very pale red.

Linear-leaved Bind-weed. Fl. Jn. July. Cl. 1770. Shrub ½ to 1½ foot.

32 C. frutex (Vahl. eclog. 1. p. 18.) shrubby, erect; leaves linear, silky beneath; heads of flowers terminal, and in the forks of the branches; bracteas ovate, very hairy outside. ♄. F. Native of South America. Habit of *C. Cantabrica*. Branches filiform, glabrous at bottom, and tomentose above, bifid at apex. Superior leaves remote: lower ones crowded, glabrous above. Heads of flowers size of a filbert. Bracteas 5 times broader than the leaves, acuminated, glabrous inside. Flowers solitary in the axils of the bracteas.

Prostrate Bind-weed. Shrub erect.

33 C. humifusus (Lin. suppl. 136.) plant shrubby, prostrate, hoary; leaves linear-lanceolate, rather pilose; thyrse terminal, pyramidal, panicled; sepals ovate, concave, acute. ♄. G. Native of Teneriffe, on rocks. Jacq. coll. 1. p. 82. icon. rar. t. 34. Ait. hort. kew. 1. p. 224. Willd. spec. 1. p. 876. Very like *C. cneorum*. Leaves attenuated at the base. Peduncles branched, rising from the axils of the superior leaves, the whole forming a large, ovate, thyrsoid panicle. Flowers very numerous, small. Corolla pale red, or whitish, hairy outside.

Flowery Bind-weed. Fl. Aug. Sept. Cl. 1779. Shrub procumbent.

* * * *annual plants.*

34 C. hirsutissimus (Desr. in Lam. dict. 3. p. 551.) plant villous; axillary branches floriferous; leaves ovulate-lanceolate, sessile; peduncles elongated, many-flowered (few-flowered ex Willd.), hoarsely racemose. ☉. H. Native of the Levant. Willd. spec. 1. p. 870.—Tourn. cor. 1. Leaves and stems green, but pilose. Peduncles 4-6-flowered; bracteas small, lanceolate. Sepals ovate, acute, villous, twice longer than the corolla. Corolla small, campanulate. The Conv. ramosus, incanus, folio pilosello, Tour. cor. 61, is probably a syn. of this, and therefore Conv. *linariifolius*, Mill. dict. no. 28.

Pilosella-like Bind-weed. Pl. prostrate.

35 C. repandus (Lin. hort. cliff. p. 19.) stem declinate, terete, beset with small soft, white hairs; leaves ovate-lanceolate, or spatulate, hairy, ciliated; peduncles 1 flowered, bibracteate, longer than the leaves; sepals ovate-lanceolate, acute. ☉. H. Native of Sicily, Spain, Portugal; on the hills of Ajuda, near Lisbon; and of the North of Africa. Willd. spec. 1. p. 874. Link, fl. port. 1. p. 398. Curt. bot. mag. t. 27. St. Hil. 16. t. 3.—Kniph. cent. 3. no. 26.—Mor. hist. 2. p. 17. sect. 1. t. 4. f. 4. Corolla rather large, with a yellowish throat, a blue limb, the rest white. This is a very common annual in gardens. There is also a variety with almost white flowers.

Three-coloured-flowered Bind-weed. Fl. July, Sept. Cl. 1629. Pl. 1 foot.

36 C. Sibthorpianus (Pursh. fl. amer. sept. 2. p. 50.) trailing, downy; leaves elliptic, retuse at both ends, mucronate; flowers solitary, nearly sessile. ☉. H. Native of Carolina, Catesby. Nearly allied to *Conv. tricolor*.

Sherard's Bind-weed. Pl. trailing.

37 C. ramosissimus (Michx. fl. bor. amer. 1. p. 137.) plant trailing, downy; leaves lanceolate-oblong, linear or oblong, obtuse, mucronate, nearly sessile; peduncles 1-3-flowered, longer than the leaves; sepals ovate, acute; corolla short, campanulate, hairy outside. ☉. H. Native from Virginia to Georgia, in sandy woods. Pursh. fl. 1. p. 143. Flowers small, white. Capsule ovate, downy.

Var. α, *patens* (Desr. in Lam. dict. 2. p. 547. ill. 1. p. 453.) plant filiform, erectish; leaves linear, mucronate; peduncles spreading, longer than the leaves, usually 2 flowered. ☉. H. *C. æquinoctialis*, Walt. fl. carol. p. 94.

Var. β, *teretifolius* (Lam. ill. 1. p. 459. Pursh. fl. 1. p. 143.) twining; leaves oblong-elliptic, obtuse, mucronate, nearly sessile; peduncles longer than the leaves, usually 2-flowered. ☉. H. *C. humistratus*, Walt. fl. carol. p. 94. Pluk. alm. t. 166. f. 4.

Hairy-flowered Bind-weed. Pl. trailing.

38 C. pentapetaloides (Lin. syst. 3. p. 229.) plant prostrate, filiform; stems rather hairy at top; lower leaves petiolate, sagittate-lanceolate, obtuse, nearly naked, lined, ciliated: upper ones linear-cuneiform, sessile; peduncles short, 1-flowered, rather pilose. ☉. H. Native of Majorca, Calabria, and the Grecian Islands. Willd. spec. 1. p. 867. excludes the syn. of Jacq. Sibth et Smith, fl. græc. t. 127. *C. prostratus*, Forsk. descr. p. 202. Roth, beytr. 1. p. 121. abhandl. p. 11. ox. 10. t. 3. exclusive hot. 1. p. 292. p. 22.—Tourn. inst. p. 85. Herb very like *C. tricolor*, but smaller. Bracteas very small. Corolla form of that of *Conv. Cantabrica*, but 3 times smaller, bluish, with a yellow throat, and a semi 5-cleft limb.

Five-petalled-like-flowered Bind-weed. Fl. June, July. Cl. 1759. Pl. trailing.

39 C. hederaceus (Link, et Hoffm. fl. port. 1. p. 369.) stems angular, downy at top, ascending; leaves lanceolate, sessile, with a few scattered hairs; peduncles 1-flowered, longer than the leaves; calyx with a few scattered hairs; sepals oval,

acutish. ☉. H. Native of Portugal, in calcareous places about Coimbra. *C. tricolor*, β. *minor*, Brot. fl. lus. 1. p. 268. Leaves narrowed at the base. Bracteas obsolete. Corolla pale blue, with a yellowish bottom. Very nearly allied to *C. sicculus*, but differs in the corollas being smaller, paler, in the obsolete bracteas, and hairiness.

Small-flowered Bind-weed. Fl. June, July. Clt.? Pl. ½ to 1 foot.

40 C. **sylvestris** (Lehm. sem. hort. hamb. 1825. p. 17. pag. 1. p. 16.) stems nearly simple, straight, villous; lower leaves oblong-spatulate; superior ones lanceolate, spreadingly pilose; sepals unequal, foliaceous; bracteas shorter than the calyx; pedunicles 1-flowered, villous, shorter than the leaves. ☉. H. Native of Egypt. Calyx woolly. Corolla fennel-shaped, white; tube length of calyx; limb pale rose-coloured at the pleat. Capsule ovate, pilose at apex, length of calyx.

Straight Bind-weed. Fl. June, Aug. Clt. 1822. Pl. ¼ to ½ foot.

41 C. **undulatus** (Cav. icon. 3. p. 89. t. 277. f. 1. ann. descript. nat. 3. p. 17.) stems prostrate, erect, rather villous; leaves spatulate, obtuse, sessile, pilose; flowers axillary, solitary, sessile; sepals oblong-ovate, acute, villous. ☉. H. Native of Tunis, near Sfaks; in the Island of Cyprus; also near Tangier; Spain, about the canal near Madrid. *C. humilis*, Jacq. coll. 4. p. 209. t. 22. f. 2. *C. evolvuloides*, Desf. fl. atl. 1. p. 178. t. 49. Sibth. et Smith, fl. græc. t. 198. *C. edictus*, Roth, catalec. 1. p. 29. 2. p. 22. Pers. ench. 1. p. 180. Willd. enum. 1. p. 205. *C. dorycnioides*, Ortega. Stems reddish. Leaves villous, usually undulated, spatulate, ex Desf. Corolla longer than the calyx, with a red and white limb, and a yellow tube, ex Cav. blue, ex Desf. blue, with a white throat, ex Smith. Capsule villous.

Undulated-leaved Bind-weed. Fl. June, Oct. Clt. 1810. Pl. prostrate.

§ 2. *Leaves cordate. Annual plants.*

42 C. **Siculus** (Lin. spec. p. 223.) stems trailing; leaves cordate-ovate: superior ones acute, all hairy; peduncles 1-flowered, shorter than the leaves; bracteas lanceolate, below the calyx; sepals hairy, ovate, acute. ☉. H. Native of Sicily; Spain, in Valencia; Island of Hieria; Peloponnesus; Candia, in shady mountains; as well as of Mauritania and Teneriffe. Willd. spec. 1. p. 866. Lam. dict. 3. p. 740. Sibth. et Smith, fl. græc. t. 196. Ker. bot. reg. 445.—Pace etc. p. 89. t. 48.—Tourn. inst. 83. Stems filiform, angular, beset with adpressed hairs above, and spreading ones at bottom. Corolla small, blue, with a white throat. Stem twining a little.

Sicilian Bind-weed. Fl. June, Aug. Clt. 1640. Plant ½ to 1 foot.

43 C. **elegans** (Willd. enum. 1. p. 205.) leaves cordate-ovate, cuspidate; peduncles 1-2-flowered, longer than the leaves; bracteas linear-subulate, shorter than the pedicels; calyxes ciliated. ☉. H. Native of the Canaries. Ker. bot. reg. t. 408. *C. pseudo-Siculus*, Cav. descr. p. 97. Very like *Conv. Siculus*, but differs in the leaves being broader; in the bracteas not being close to the calyx. Corolla white, having the tube yellow inside. Stems twining a little.

Elongated-peduncled Bind-weed. Fl. July, Aug. Clt. 1813. Pl. 1 foot.

44 C. **ovalifolius** (Roem. et Schultes, syst. 4. p. 284.) stems decumbent, diffuse; leaves cordate, acuminated; peduncles secund, very long; flowers subumbellate; sepals equal, ovate, blunt. ☉. H. S. Native of Peru, on sandy hills; as between Santa Rosa and Yaso, in the valley of Canta. *C. secundus*, Ruiz. et Pav. fl. per. 2. p. 10. t. 117. f. 2. Poir. suppl. 3. p. 472. but not of Desr. in Lam. dict. Leaves petiolate, as long as broad, white beneath, acute or obtuse, with an emarginate point. Pedicels bracteate; bracteas small, subulate. Corolla rather large, blue. Stamens exserted. Stigmas flat.

Oval-leaved-flowered Bind-weed. Pl. decumbent.

45 C.? **sagittifolius** (Desr. in Lam. dict. 3. p. 541.) stem slender, twining a little; leaves cordate-sagittate, blunt behind; peduncles 1, rarely 3-flowered, bracteas, shorter than the petioles; outer sepals the broadest. ☉. H. Native country unknown. Pers. ench. 1. p. 180. Very similar to *C. Sicculus* at first sight; but the leaves and whole plant are larger, and beset with short white hairs. Corolla small, white. Stigmas 2, globular. Perhaps a species of *Ipomœa*.

Bracteas Bind-weed. Pl. trailing.

§ 3. *Leaves cordately lobed, or hastate. Annual and perennial plants.*

46 C. **batatas** (Vahl, symb. 1. p. 17.) glabrous, trailing creeping; leaves panduriform or entire, emarginate, cordate at the base; peduncles 1-flowered, length of leaves, sometimes twin; sepals ovate, obtuse, rather transparent. ♃. H. Native along the Mediterranean Sea; and of the kingdom of Naples and Mauritania. Willd. spec. 1. p. 896. *C. stolonifera*, Desr. in Lam. dict. 3. p. 538. Cyr. pl. rar. fasc. 1. p. 14. t. 8. *Ipomœa's stolonifera*, Poir. dict. 6. p. 20. *C. sinuatus*, Peragn. hist. bot. 2. p. 553.—Mor. hist. 2. sect. 1. p. 15. t. 7.—Barrel. obs. p. 35. icon. 856.—*Convolvulo Marino Imperati*, no. 671. p. 707. Leaves usually lobately palmate, ex Peragna. Peduncles bracteas small. Corolla large, campanulate, cream-coloured. Plant lactescent. Very like *Calystegia soldanella*.

Imperati's Bind-weed. Pl. creeping.

47 C.? **sagittifolius** (Thunb. prod. 35.) glabrous; stems filiform, prostrate; leaves lanceolate-sagittate: hind lobes acute, deflexed; peduncles 1-flowered, longer than the leaves.—Native of the Cape of Good Hope. Willd. spec. 1. p. 877. Sepals ovate, obtuse, concave, equal, glabrous. Corollas small, clothed with rusty villi outside.

Sagittate-leaved Bind-weed. Pl. trailing.

48 C.? **triflorus** (Mill. dict. no. 10. Willd. spec. 1. p. 873.) stem and petioles pilose; leaves cordate and subhastate, villous; peduncles many-flowered; pedicels naked; flowers alternate, pedicellate, having a small lanceolate bractea on each pedicel.—Native of the East Indies.

Hairy Bind-weed. Fl. June, Aug. Clt. 1806. Pl. twining.?

49 C. **Capensis** (Willd. spec. 1. p. 877.) stems ascending, glabrous; leaves linear, hastate at the base; lobes divaricate, small, glabrous, semibifid; peduncles 1-flowered, length of leaves; stems decumbent, villous; sepals ovate, acuminated, equal.—Native of the Cape of Good Hope. C. *hastatus*, Thunb. prod. p. 35. Corolla large, downy outside.

Cape Bind-weed. Pl. trailing.

50 C. **subzonatus** (Lin. suppl. p. 135.) procumbent, pilose; lower leaves cordate; superior ones repandly toothed at apex; flowers capitate, usually 3 in a head, surrounded by a 6-leaved involucrum. ☉. H. Native of India. Willd. spec. 1. p. 877. Corolla large.

Subhastate-leaved Bind-weed. Pl. procumbent.

51 C.? **edulis** (Thunb. jap. p. 84.) stem creeping, angular; leaves cordate, entire, or 3-lobed, glabrous. ♃. G. Native of Japan. Willd. spec. 1. p. 875. Tubers large, fleshy, as in *Batatas edulis*, or sweet potatoe, eatable, of a very pleasant flavour. Perhaps only a variety of *Batatas edulis*.

Edible-rooted Bind-weed. Pl. creeping.

§ 4. *Leaves pinnate, jagged, or palmate. Annual and perennial plants.*

52 C. PLATYCLADUS (Cav. icon. 5. p. 55. t. 482.) stems prostrate, villous; leaves pinnate: leaflets sessile, often 3-lobed at apex, connate at the base; racemes terminal; pedicels distant, 1-flowered; sepals villous, nearly linear. ⊙.? G. Native of Mexico, about Chalma. Poir. suppl. 2. p. 472. Corolla campanulate, twice longer than the calyx, scarlet, divided even to the middle, into roundish segments, lined with green. Stamens villous at the base, with red filaments and yellow anthers. Stigmas subulate. Capsule roundish, compressed, 2-celled, 2-valved, divided by a dissepiment. Seeds black, dotted, 2 or more in each cell, fixed to the dissepiment. Not. W. Not a new genus.

Broad-fronted Bind-weed. Pl. prostrate.

53 C. LACINIATUS (Desr. in Lam. dict. 3. p. 546. exclusive of β.) stems slender, prostrate; leaves finely jagged, sometimes pinnate; segments capillary, 2-3-cleft; peduncles longer than the leaves, 1-flowered, rarely 2-flowered; sepals ovate, obtuse, mucronate, rather scarious. ⊙.? G. Native near Rio Janeiro. Vahl. Symb. 1. p. 32. Convolvulus laciniatus, Linn. sp. 219. Willd. sp. 1. p. 846. Convolvulus fronte Virginiana, Plum. gen. 17. t. 17. Convolvulus Corolbi Vahl. Symb. 1. p. 32. Cav. icon. 3. p. 479. t. 2. Bracteas linear. Corolla campanulate, white, twice as long as the calyx. Seeds black, naked. Leaves similar to those of *Quamoclit vulgaris*, glabrous or silky from pili.

Jagged-leaved Bind-weed. Pl. prostrate.

54 C. LASIANTHUS (Cav. icon. 3. p. 53. t. 279. f. 1.) stems numerous, simple, prostrate, terete, tomentose; leaves palmately jagged, tomentose: segments 7, unequal: middle one largest, all pinnatifid; peduncles 1-flowered, longer than the leaves; sepals concave, coriaceous, scarious, ovate, acuminated, very hairy. ⊙.? G. Native of Chili, about Talcahuana. Poir. suppl. 2. p. 68. C. laciniatus, β, Lam. dict. 3. p. 546. Bracteas linear, acute. Corolla white, campanulate, nearly funnel-shaped, villous outside; segments of the limb obtuse, ending in a small bristle each. Capsule globose.

Woolly-flowered Bind-weed. Pl. prostrate.

55 C. SERICIFLORUS (Thunb. prod. p. 35.) leaves palmate; lobes 7, linear, entire; peduncles 1-flowered; stems decumbent. ♃. G. Native of the Cape of Good Hope. Willd. spec. 1. p. 877.

Mallow-leaved Bind-weed. Fl. June, Aug. Clt. 1822. Pl. dec.

56 C. CATESBÆUS (Michx. fl. bor. amer. 1. p. 135.) plant prostrate, glabrous: leaves thick, sinuately lobed; lobes roundish, obtuse: the middle lobe large and emarginate; peduncles 1-flowered; sepals oblong-oval; corolla short, campanulate. ♃. H. Native of Georgia and Florida, on the sandy beach. Pursh. fl. amer. sept. 1. p. 144. Pers. synth. 1. p. 88. Lower leaves sometimes not lobed, but repand. Calyx bracteless, ex Michx.

Blunt-lobed-leaved Bind-weed. Pl. prostrate.

57 C. LITTORALIS (Lin. spec. p. 227.) stems creeping; leaves large, oblong, lobately palmate, fleshy; peduncles 1-flowered, rarely 2-flowered, shorter than the leaves. ♃. S. Native of Crabe's Island, near Porto Rico, by the shore. Willd. spec. 1. p. 878. Desr. in Lam. dict. 3. p. 546. Plum. spec. 1, ed. Burm. amer. 90. t. 2.—Plum. icon. vol. 2. t. 3. Stems much branched. Petioles rather long. Corolla rather large, white, campanulate, with a spreading, somewhat fringed limb. Capsule clothed with white silky villi.

Sea-shore Bind-weed. Pl. creeping.

SECT. II. STROPHOCAULES (from στρεφω, *strephō*, to twist; and καυλος, *caulos*, a stem.) Stems twining.

§ 1. *Leaves sagittate or hastate, or cordately or sagittately hastate.*

58 C. ARVENSIS (Lin. spec. p. 218.) stems angular, striated; leaves sagittate, somewhat auricled; peduncles usually 1-flowered, bibracteate about the middle; sepals ovate-roundish; corolla white or rose-coloured. ♃. ♡. H. Native throughout Europe, in sandy fields, and by road sides; as well as of China, Cochinchina, some parts of the East Indies, and Persia; and of Virginia, in meadows; very common in Britain. Willd. spec. 1. p. 844. Pursh, fl. amer. sept. 1. p. 144. on the authority of Gronovius, fl. virg. p. 27. Smith, engl. bot. t. 315. Curt. lond. fasc. 2. t. 13. Oed. fl. dan. t. 459. Bull. herb. t. 269. Ore,. et Hayn. t. 24. Hayn. term. bot. t. 12. f. 1. a. Plenck, off. t- i 04, Cotiv, Chineri.sisj Kfi% bot, reg, I. 222. Conv. Malcolmi, Roxb. in Wall. fl. ind. 2. p. 55. Conv. Mahur. Ham. herb. Conv. divaricatus, Wall. cat. no. 1422. 1 and 2. Conv. hastatus, Dels'sie, *i'* Descr. aegypt. p. 55. C. prostratus, Schmidt, fl. bohem. *ik.* no, 135. Root creeping extensively under ground, difficult to extirpate, I-i • ves smoothish. Bracteas in the middle of die pe*!ancles, or m*ar their top Flowers sweet-scented.—There is a variety witli 2-flowered peduncles. Leaves varying in shape, obtuse or acute, having the hind lobes also acute, obtuse, or angular.

Var. α, erectus (Ledeb. fl. alt. 1. p. 224.) glabrous; stems erect, neither procumbent nor twining; leaves hastately-triangular: lobes acuminated, or 2-lobed; peduncles usually 2-flowered, bibracteate, about equal in length to the leaves; having one of the pedicels bracteate, and the other naked; sepals - *pah* mucronate. *11. H,* Native of Siberia, on the stony banks of the rivulet called Tingurink, and the river Katunga, to the north; but has not been observed elsewhere. Flowers rose-coloured or white, wit!; tin marginis reddish.

Var. β, subhirsutus (Led. l. c.) glabrous; stems twining; leaves sagittately i.rjangiijftr : hid lobes acute, 2-lobed at bottom; peduncles exceeding the leaves, mostly 2-flowered, bibracteate, having one (1 uncle ,: the pedicels naked; sepals roundish, mucronate. ♃. ♡. S. Native of Sib:: of mountains near Alexandrovsk.

Var. γ, vulgaris (Ledeb. l. c. p. 225.) plant rather villous; stems sometimes erect, sometimes prostrate or twining; leaves sagittate or hastate; lobes oblong; terminal one elongated, roundish, and mucronate at the apex; lateral ones somewhat 2-lobed, or somewhat serrated below; peduncles exceeding the leaves more or Ei ers, 1-3-flowered, bibracteate; pedicels bractless; sepals roundish, ciliated, hardly mucronate. ♃. ♡. H. Native of Siberia, frequent in fields.

Var. δ, angustatus (Ledeb. l. c.) stems twining; leaves hastate: lobes rounded at the apex: terminal one elongated, oblong, mucronate: lateral ones furnished with a straight stretched out angle; peduncles usually 1-flowered, longer than the leaves, bibracteate above the middle; sepals rounded at the apex, somewhat emarginate, sub-mucronate. ♃. ♡. H. Native of Siberia, in dry places; at the rivers Ulegamen and Katunga.

Var. ε, sagittifolius (Ledeb. l. c.) rather pilose; stems twining a little; leaves sagittate; lobes broad-lanceolate: terminal one mucronate; peduncles 1-flowered, bibracteate, equal in length to the leaves; sepals sub-mucronate. ♃. ♡. H. Native of Siberia, in dry places, very rare. C. sagittifolius, Fisch. hort. gorenk. 1810. p. 25.? Fisch. fl. caucas. suppl. 3. p. 137.—Gmel. sib. 4. p. 96. no. 54. t. 48. f. 1.

Corn Bind-weed. Fl. [illegible], Sept. Britain. Pl. tw.

59 C. SEPIUM (Lam. encyc. 1. p. 301.) leaves hastately sagittate: hind lobes emarginate or bicuspidate; peduncles axillary, 2-3-flowered; calycine segments ovate, acute. ♃. ♡. H.

Native country unknown. Stem quadrangular. Young leaves hoary; adult ones with a few adpressed hairs, as well as the calyx. Bracteas under the calyx. Corolla red.

Emarginate-lobed Bind-weed. Fl. June, Aug. Cl. 1817. Pl. tw.

60 C. EMARGINA'TUS (Fischer, ex Link, enum. p. 201.) leaves hastate; hind lobes bicuspidate; peduncles axillary, 1-flowered; calycine segments obtuse, emarginate, somewhat apiculated. ♃. ♈. H. Native of Dauria. Stem glabrous, quadrangular. Leaves with a lanceolate middle lobe, and recurved hind or lateral ones, scabrous on the margins. Peduncles longer than the leaves, bearing a linear bracteæ above the middle. Calyx glabrous. Corolla red.

Bicuspidate-lobed Bind-weed. Fl. June, July. Cl. 1818. Pl. tw.

61 C. ARVENSOI'DES (Desr. in Lam. dict. 3. p. 340. exclusive of the synonymes;) leaves linear-lanceate, acuminated, hind lobes entire; peduncles 2-flowered. ♃. ♈. S. Native of the Isle of France. Pers. euch. 1. p. 177. Nearly allied to *C. arvensis*, and probably only a variety of it; but differs from the common form of that species, in the leaves being narrower, more oblong, in the peduncles being 2-flowered, nearly the length of the leaves, and in the bracteas being nearer the calyx. Root creeping.

Auricled-leaved Bind-weed. Pl. tw.

62 C. CURASSA'VICUS (Retz. et Schultes, syst. 4. p. 238.) leaves ovate-hastate, rounded at the apex, somewhat emarginate; hind lobes obtuse. ♃. ♈. H. Native of Curaçoa. Nearly allied to some varieties of *C. arvensis*; but differs in the shorter petioles, broader leaves, shorter, thicker peduncles. Superior leaves smaller, and sessile. Probably only a variety of *C. arvensis*.

Curaçoa Bind-weed. Pl. tw.

63 C. TRIBLOBA'TUS (Vahl, eclog. amer. 2. p. 13.) leaves sagittate-oblong, acuminated, glabrous; hind lobes divaricate, acute, entire; peduncles 1-flowered, longer than the petioles; bracteas at the base of the peduncle; sepals lanceolate, acute. ♃. ♈. S. Native of Curaçoa. It differs from *C. arvensis*, to which it is nearly allied, in the hind lobes of the leaves being ovate, entire; in the bracteas being at the base of the peduncles; in the flowers being larger, &c. Corolla large, purple, campanulate.

Flesh-coloured-flowered Bind-weed. Pl. tw.

64 C. MECHOACA'NUS (Willd. enum. suppl. p. 23.) leaves ovate and lobed, hastate; peduncles thick, 1-flowered. ♃. ♈. S. Native of Brazil; and Mechoacan, in New Spain. Root thick, marked under the name of *Mechoacanna*. Conv. Mechoacan, Vent. cultiv. 1. p. 134. Conv. Jetuñca, Pis. bras. with a figure. Conv. Jutiaica, Gmel. 1. p. 289. with the following description; "Nearly allied to *C. sepium*. Root bifid, brown outside. Stem many-angled. Leaves cordate-cared, deep green, nerved beneath. Corolla white or pale red, purple inside. Seeds brown."

Mechoacan Bind-weed. Pl. tw.

65 C. ATRIPLICIFO'LIUS (Pers. suppl. 2. p. 467.) hairy; leaves on short petioles, sagittate, truncate behind; peduncles axillary, hairy, very long, forked at top, each fork bearing a flower; calyx villous; outer sepals the longest, lanceolate, acute, mucronate. ♃. ♈. H. Native of Syria. La Billardiere. Hairs on stems and peduncles rufescent. Peduncles furnished with 2 subulate bracteas at the fork, and 2 longer ones on each pedicel. Corolla white, twice as long as the calyx.

Atriplex-leaved Bind-weed. Pl. tw.

66 C. ACETOSELLIFO'LIUS (Desr. in Lam. dict. 3. p. 564.) mucronated; leaves hastately 3-lobed: lateral lobes roundish-angular; peduncles short, usually 2-flowered; sepals short, ovate, blunish. ♃. ♈. S. Native of the Isle of France. Conv. hepatifolius, Spreng. syst. 1. p. 604.

triloba, to which it is nearly allied in habit. Stems terete, and hoary, as well as the petioles and peduncles, rough from black acute tubercles. Leaves almost panduriform. Corolla small, campanulate, twice longer than the calyx.

Acetosella-leaved Bind-weed. Pl. tw.

67 C. ISACA'EUS (Vahl, symb. 3. p. 23.) clothed with silky tomentum; leaves lance-late-sagittate, obtuse, a little toothed at the base; peduncles 2-flowered, length of leaves; sepals ovate, acute: outer ones villous. ♃. ♈. S. Native of South America. Willd. spec. 1. p. 847. Stems terete. Petioles short. Leaves 1½ inch long; hind lobes rounded. The longest pedicel bibracteate in the middle. Bracteas setaceous. Corolla villous outside. Capsule glabrous, globose.

Hoary Bind-weed. Pl. tw.

68 C. HAMA'TUS (Forsk. descr. p. 203.) stem prone; leaves lanceolate-hastate; peduncles axillary, twin, 2-flowered; sepals acuminated, spreading at apex. ♃. ♈. H. Native of Egypt. Vahl, symb. 1. p. 15. Willd. spec. 1. p. 849. Conv. hastellus. Pour. suppl. 3. p. 467. Petioles one-half shorter than the leaves. Leaves 2 inches long, glabrous above and villous beneath, with rounded auricles, which are sometimes acuminate behind. Peduncles shorter than the petioles, villous.

Halbert-leaved Bind-weed. Pl. tw.

69 C. SCAMMO'NIA (Lin. spec. p. 218. Roy. lugdb. 427.) glabrous; stem angular; leaves cordate-sagittate, truncate behind; peduncles terete, generally 3-flowered, longer than the leaves; sepals loose, glabrous, ovate, repand, obtuse, with a reflexed point. ♃. ♈. H. Native of Syria, Mysia, Cappadocia, and of the Island of Rhodes, in hedges. Mill. fig. t. 102. Pluenk. ill. t. 92. Schk. et Sm. ab. d. grec. t. 192. Woodv. med. bot. 1. p. 19. t. 5. Sweet, fl. gard. n. s. 2. t. 178. Conv. Syriacus, and Scammonia Syriaca, Tourn. inst. 83.—Morr. hist. 2. p. 12. sect. 1. t. 2. f. 3.—Lob. icon. 620. f. 1. Corollas large, campanulate, cream-coloured, or very pale red. The roots of Scammony, which are very long and thick, when fresh contain a milky juice. This is obtained by removing the earth from the upper part of the roots, and cutting off the tops obliquely. The milky juice which flows out is collected in a small vessel sunk in the earth at the lower end of the cut. Each root furnishes only a few drachms; but the produce of several roots is added together, and dried in the sun. This is the true and unadulterated Scammony. It is light, of a dark grey colour, but becomes of a whitish yellow when touched with the wet finger. It is shining in its fracture, has a peculiar nauseous smell, and bitter, acrid taste, and forms, with water, a greenish milky fluid. In this state of purity it seldom reaches us, but is commonly mixed with the expressed juice of the root, and even of the stalks and leaves, and often with flour, sand, or earth. The best to be met with in the shops comes from Aleppo. It is light, spongy masses, having a heavy, disagreeable smell, and a shining ash-colour, verging to black, friable, and easily powdered; powder of a light grey, or whitish colour. An inferior sort is brought from Smyrna, in more compact, ponderous pieces, with less smell, not so friable, of a darker colour, not so resinous and full of sand and other impurities. This last is said to be the produce of *Periploca Scammonia*, and of the *Cynanchum Argel*. Resin is the principal constituent of Scammony. Sixteen ounces of good Aleppo Scammony give eleven ounces of resin, and three ounces and a half of watery extract. Scammony is an efficacious and powerful purgative. It may be given triturated with sugar, or with almonds, and becomes sufficiently safe and mild in its operation. It may be also given to strengthen other purgatives, in small quantities, as with powdered rhubarb, &c. The common dose of Scammony is from 3 to 10 grains; but when mixed with other purgatives, ½ to 1 grain is sufficient.

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on arid hills by the Black Sea, near Gursuph. C. Scammonia, Bieb. fl. cauc. 1. p. 145. Habit of *C. arvensis.* Bracteas subulate. Corollas size of those of *C. Scammbnia,* hairy, the plicae yellow outside, and the angles purplish.

Hairy Bind-weed. Fl. July, Aug. Clt. 1824. PL tw.

§.2. *Leaves cordate, lobed.*

85 C. FLAVUS (Willd. spec. 1. p. 852.) smoothish; leaves cordate, repandly sublobate ; peduncles much longer than the leaves : superior ones 3-flowered : lower ones bifid, many-flowered. %. rN. S. Native of the East Indies. Evolvulus hederaceus, Burm. ind. 77. t. 30. f. 2. Leaves acuminated, rather scabrous: superior ones obtuse. Lower peduncles bifid, with 3-flowered branches, and a flower in the fork, scabrous from tubercles. Corolla small, yellow.

YelIo?v-flowered Bind-weed. PL tw.

86 C. CALYSTEGIOIDKS (Choisy, in mem. soc. phys. gen. 6. p. 480.) quite glabrous; leaves cordate-hastate, 5-lobed ; middle lobe very long: lateral ones sometimes toothed; peduncles 1-flovvered, equal in length to the petioles ; outer sepals largest. %. °. G. Native of China. C. Scammonia, Lour. coch. p. 10G.? Stem terete, striated. Leaves 1-2 inches long. Middle lobe lanceolate, acute. Corolla campanulate, hardly an inch long.

Calystegïa-like Bind-weed. PL tw.

87 C. DICHROUS (Roem. et Schultes, syst. 4. p. 263.) hairy; stems terete ; leaves subcordate, 3-lobed, hoary beneath ; peduncles many-flowered, longer than the petioles; sepals narrow, acute. ©. ? r>. S. Native of Senegal. C. bicolor, Desr. in Lam. diet. 3. p. 564. Habit of a species of *Riibus.* Stem beset with blackish dots, and long stiff hairs. Lobes of leaves ovate, acute. Peduncles dichotomous. Bracteas twin, subulate at the forks. Corollas small.

Two-coloured Bind-weed. PL tw.

88 C. ANGULAVRIS (Lin. mant. 203.) stems downy; leaves villous, cordate, 5-angled, entire ; peduncles many-flowered, length of leaves; sepals pilose, acute. ©.? ^\ S. Native of Java. Willd. spec. 1. p. *853.* Burm. ind. 46. t. 19. f.,2. Leaves rather scabrous. Corolla campanulate, 3 times larger than the calyx, orange-coloured.

Angular-leaved Bind-weed. PL tw.

89 C. TOMENTOSUS (Lin. spec. 222.) stems terete, white, woolly; leaves cordate, deeply 3-lobed, clothed with white tomentum ; peduncles secund, many-flowered. ©. ? ^\ S. Native of Jamaica. Desr. in Lam. diet. 3. p. 564. Willd. spec. 1. p. 861.—Sloan, jam. p. *55.* hist. 1. p. 154. t. 98. f. 2.—Plukn. aim. 115. t. 167. f. 4. Corolla campanulate, purplish. Conv. tomentosus of Lour, is certainly distinct.

Tomenlose Bind-weed. PL tw.

90 C. VARIA'BILIS (Cham, et Schlecht. in Linnaea, 5. p. 116.) pilose ; leaves deeply-cordate, acuminated, entire, or angularly toothed at the base, or hastately 3-lobed, beset with adpressed hairs, especially beneath : but the hairs on the stems and peduncles are spreading; peduncles longer than the leaves, cymose, many-flowered, 2-7 ; pedicels short, nearly glabrous, muricated ; sepals *elliptic,* nearly glabrous, mucronately-acuminated: outer ones ciliated with long hairs, *%»?* ^. G. Native of Mexico, near Hacienda de la Laguna. Corolla large, rose-coloured, nearly 1^ inch in diameter.

Variable-leaved Bind-weed. PL tw.

91 C. TRILOBUS (Thunb. prod. p. 35.) leaves cordate, villous, 3-lobed; lobes ovate, acute; peduncles 1-flowered. *%*1* ^. G. Native of the Cape of Good Hope.

Three-lobed-lesLved Bind-weed. PL tw.

§. 3. *Leaves quinate, pedate, palmate, or jagged.*

92 C. ANGUSTISSIMUS (R. Br. prod. p. 482.) rather pilose; leaves cordate, tripartite ; lateral lobes bifid or trifid : the middle one the longest, narrow-linear, channelled ; peduncles 1-flowered ; sepals equal, oval, mucronulate; capsule nutant, 2-valved; seeds scabrous, i;.^. H. Native of Van Diemen's Land. Very nearly allied to *C. entbescens.*

Very warrow-lobed-leaved Bind-weed. PL tw.

93 C. ALTHJ£OIDES (Lin. spec. 222.) plant canescent, pilose ; lower leaves cordate, deeply crenated : superior ones pedatifid : middle lobe long, pinnatih'd; peduncles usually 1-flowered; sepals ovate, acute. % . ^\ H. Native of the South of Europe, North of Africa, Levant, Spain, &c. Willd. spec. 1. p. 862. Sibth. et Smith, fl. graec. t. 194. Tenor, fl. neapol. 1. p. 58. Wulf. in Jacq. coll. 1. p. 316. Desr. in Lam. diet. 3. p. 564. C. argyrseus, D. C. fl. fr. suppl. p. 423.—Barrel, icon. t. 312. —Tourn. inst. p. 85. Leaves shining, silvery. Peduncles longer than the leaves. Corolla pale red or lilac, large, spreading, entire.

Var. /3, humilis; plant more dwarf, greener, almost glabrous; leaves more divided; peduncles all 1-flowered. 2£. rs m H. Native of the South of France.

AlthceaAediwed Bind-weed. FL June, Sept. Clt. 1597. PL tw.

94 C. HASTA'TUS (Nutt. in amer. phil. trans, n. s. 5. p. 194.) leaves hastately pedate, silky: intermediate segment sub-lanceolate, much larger than the rest; peduncles mostly 2-flowered, much longer than the leaves; sepals downy, imbricate, oval, obtuse, tinged with purple. %. rx. H. Native on the high hills of the Red River, contiguous to the confluence of the Kiamesha. Stem downy. Leaves clothed with short hoary and silky down ; the first ones simply hastate; the rest palmate ; commonly producing on each side at base 2 lateral, reflexed-toothed, or entire lobes; the central one more than double their length, and twice their breadth. This species differs but little from *C. althceoldes.*

Hastate-leaved Bind-weed. PL tw.

i)5 C. ITA'LICUS (Room, et Schultes, syst. 4. p. *266.)* hairy; radical leaves cordate, wrinkled, repand-toothed, or lobed : cauline ones palmately cut; peduncles longer than the leaves, 2-3-flowered. %. ^\ H. Native of Naples and Italy, in hedges ; and of the North of Africa. Conv. hirsutus, Tenore, fl. neap, prod. p. 15. fl. neap. 1. p. 60. t. 15. syn. p. 34. C. althaeoides, D. C. fl. fr. no. 2747. suppl. 423. Plant less silky, and much greener than *C. althceoldes.* Flowers pale red.

Var. ft i leaves less hairy; peduncles generally 1-flowered. 3/. ^. H. Roem. et Schultes, syst. 4. p. 266.

Var. y ; plant more erect; leaves less divided, more hairy. V. ^. H. Room, et Schultes, L c.

Italian Bind-weed. FL July, Aug. Clt. 1820. PL tw.

96 C. TENUI'SSIMUS (Sibth, et Smith, fl. graec. t. 195.) leaves pedate, silky, shining: lobes linear, obtuse ; radical leaves cordate, crenated; peduncles 1-flowered. 2f. ^. H. Native *of* Candia, and about Athens, on the higher hills ; also of Zante. C. althaeoldes, 0, Lin. spec. 222. C. althseoides, Desr. in Lam. diet. 3. p. *565.* Conv. iEgypticus, VesL aegypt. *73.* t. 74. Conv. elegantissimus, Mill. diet. no. 22. C. althaeoides, Curt, bot. mag. 359.—Munting, p. 28. f. 137.—Tourn. inst. p. *85.* C. sericeus, Forsk. descr. p. 204. Flowers pale red or rose-colour. Very like *C. althcevides.*

Very slender Bind-weed. FL June, Oct. Clt. 1597. PL twining.

97 C. BRYONI^FOLIUS (Sims, bot. mag. t. 943.) downy; lower leaves cordate, obtuse, crenated, or toothed; upper leaves some-

what palmate, 3-lobed middle lobe long, toothed, or laciniated; peduncles long, 1-flowered, articulated; sepals ovate, acute. ♃. ○. G. Native of China. Plant rather hispid, green. Bracteas subulate. Corolla large, reddish purple.

Bryony-leaved Bind-weed. Fl. July, Aug. Clt. 1800. Pl. tw.

98 C. Falcata (Jacq. hort. schœnbr. 2. t. 198.) root perpendicular; stems numerous, much branched; leaves petiolate, ovate-cordate, deeply jagged, rather pilose on both surfaces; peduncles hairy, very long, 1-flowered; calyx villous; sepals ovate, concave, acute; outer ones broader. ♃. ○. G. Native of the Cape of Good Hope. Poir. suppl. 3. p. 462. Leaves 1-2 inches long. Bracteas lanceolate, acute. Corolla campanulate, with a short white tube, and a flat, 5-lobed pale flesh-coloured limb, rather hairy outside. Stigmas thick, cylindrical, obtuse.

Falkia Bind-weed. Pl. tw.

99 C. asteroides (Lam. ill. no. 2096.) hairy; leaves all deeply jagged, somewhat palmate; peduncles few-flowered, longer than the leaves. ♃. ○. G. Native of the Cape of Good Hope.

Aleea-leaved Bind-weed. Fl. July, Aug. Clt. 1823. Pl. twining.

100 C. Tuxen'sem (Burm. et Schultes, syst. 4. p. 268.) stems tomentose; cauline leaves palmately and lobately jagged, hairy; peduncles articulated, usually 1-flowered, length of leaves, or shorter; sepals lanceolate, acuminated. ♃. ○. G. Native of the Cape of Good Hope. Segments of leaves acute; middle one the longest, and sinuated.

Tuxenzy's Bind-weed. Pl. tw.

101 C. macrocarpus (Lin. spec. 222.) leaves palmately pedate, 5-p -flowered. ⊙

Martinico. Desr. in Lam. dict. 3. p. 544. Willd. spec. p. 864. C. frutescens, Mill. dict. no. 13. t. 56.—Plum. ed. Burm. amer. p. 80. t. 91. f. 1. Root thick, fleshy, turnip-for roed. Lobes of leaves entire, acute; the lateral ones not so deep. Peduncles articulated in the middle, winged. Sepals concave, roundish. Corolla large, purplish, having the margin sinuated. Capsule globose, angular, size of a walnut, inclosed in the calyx. Seeds round, black, villous, size of filberts.

Large-fruited Bind-weed. Fl. July, Aug. Clt. 1752. Pl. tw.

102 C. quinquefolius (Lin. syst. 170. spec. p. 166.) stem hispid; leaves digitate, glabrous; leaflets 5-toothed; peduncles smooth, 3-7-flowered. ⊙. ○. S. Native of tropical America. Desr. in Lam. dict. 3. p. 566. Willd. spec. 1. p. 865. Vahl. eclog. 2. p. 15. Plukn. alm. 116. t. 167. f. 6.—Plum. ed. Burm. t. 31. f. 2.—*Volubilis*, mas. 2. t. 55. therefore Conv. pentaphyllus, β, Lin. spec. 166. Willd. spec. 1. p. 806. (Conv. palmatus, Mill. dict. no. 8. Sepals oval-oblong. Corolla campanulate, white, 5-toothed.

Five-leaved Bind-weed. Fl. July, Aug. Clt. 1752. Pl. twining.

103 C. ola'nna (Aubl. guian. 1. p. 158. t. 63.) quid glabrous; leaves digitately quinate; leaflets petiolulate, attenuately acuminated, quite entire; peduncles branched, divaricate, many-flowered; sepals long, firm, smooth, acute. ♃. ○. S. Native of Cayenne. Willd. spec. 1. p. 856. Desr. in Lam. dict. 3. p. 566. Corolla white, with a long tube, and spreading limb, lobes of limb rounded. Lobes of stigma obtuse.

Glabrous Bind-weed. Fl. ? Clt. 1806. Pl. tw.

104 C. erecta'nna (Lin. dict. 3. p. 567.) glabrous; leaves digitate; leaflets generally 6, linear, very narrow; racemes small, somewhat secund in the forks of the branches, a little longer than the leaves; sepals obtuse; seeds very hairy. ♄. ○. S. Native of St. Domingo. Branches grey. Corolla cylindrical, purplish. Capsule ovate, smooth. Hairs on the seeds white, silky.

Woolly-seeded Bind-weed. Shrub tw.

105 C. macrocalyx (Poir. et Pav. fl. per. 2. p. 10. t. 118. f. a. Poir. suppl. 3. p. 471.) glabrous; leaves quinate; leaflets unequal, oblong-lanceolate, quite entire; peduncles very long, racemosely forked; sepals ovate-lanceolate. ♃. ○. G. Native of Peru, in groves. Bracteas of the pedicels subulate. Calyx large, purplish, spreading. Corolla white; having the tube length of the calyx, and the lobes of the limb hardly acute. Stamens exserted. Stigmas flat, ex scon.

Large-calyxed Bind-weed. Pl. tw.

106 C. Cumanensis (Poir. suppl. 3. p. 480.) downy; leaves deeply 5-parted; segments linear, unequal, diverging, acute; middle one long, rather undulated; the rest short, marked by the tooth; middle; peduncles 1-flowered, shorter than the leaves, bearing 2 small bracteas at apex; calyx villous. ⊙. ? ♃. ? ○. F. Native of Chili. Corolla campanulate, spreading, red; tube a little longer than the calyx; segments of the limb ovate, mucronate. Lobes of stigma conjugated. Seeds black. Capsule globose.

Chili Bind-weed. Pl. tw.

107 C. atocrolobus (Cham. et Schlecht, in Linnæa, 5. p. 117.) herbaceous, clothed with villous, stellate down, intermixed with short, black, glandular hairs; the hairs on the upper surface of the leaves 2-parted; leaves ternate; leaflets oblong-ovate, acuminated, acute; peduncles longer than the leaves, 3-7-flowered; sepals ovate, long-acuminated, acute. ⊙. ○. Native of Mexico, near Hacienda de la Laguna. Corolla small, half an inch long, slKirt, blue.

Aparagynum-like Bind-weed. Pl. tw.

108 C. hastatus (Willd. act. acn. nat. cur. 4. p. 196. Roem. et Schultes, syst. 4. p. 271.) glabrous; leaves digitate; leaflets 4, linear-lanceolate; lower ones bipartite; peduncles 1-flowered. Native of the East Indies.

Seven-leaved Bind-weed. Pl. tw.

§. 47. *Leaves cordate or subcordate, entire. Peduncles many-flowered.*

109 C. rumicula'rius (Vahl. eclog, 1. p. 13.) villous; leaves cordate, mucronate; peduncles many-flowered, longer than the leaves; sepals ovate; bracteas lanceolate. ⊙. ○. S. Native of South America. Stems terete. Leaves nearly like those of *Lysimachia nummularium*. The 3 outer sepals foliaceous, broadly ovate, acuminated, villous; the 2 inner ones smaller, oblong, acuminated. Corolla campanulate, entire.

Moneywort-leaved Bind-weed. Pl. tw.

110 C. ramosissima (Poir. suppl. 3. p. 468.) leaves cordate, quite entire; stem filiform; peduncles many-flowered, umbellately cymose; bracteas subulate. ⊙. ? ○. S. Native of Peru, towards Tarma. Conv. cymosus, Ruiz. et Pav. fl. per. 1. p. 9. t. 117. f. b. Pers. ench. 1. p. 178. Stem much branched. Hairs deciduous. Leaves on long petioles, acuminated, 2-3 inches long, shining above. Peduncles bifid, 5-17-flowered. Stamens exserted. Stigmas flat.

Much-branched Bind-weed. Pl. tw.

111 C. Canarien'sis (Mill. dict. no. 18. Lin. spec. p. 121.) stems terete, villous; leaves cordate-ovate, oblong, acute; peduncles many-flowered, longer than the petioles; calyx villous; segments acute. ♃. ○. G. Native of the Canary Islands. Desr. in Lam. dict. 3. p. 556. Willd. spec. 1. p. 838. Sims, bot. mag. t. 1226.—Comm. hort. 2. p. 101. t. 51.—Plukn. alm. 116. t. 335. f. 1. Leaves permanent, soft, white beneath.

Corolla middle-sized, purplish-violet, hairy outside, at length almost flat. Stigmas filiform.

Canary-Island Bind-weed. Fl. June, Sept. Clt. 1690. Shrub tw.

112 C. SUBGLOBOSUS ; stems villous; leaves cordate, acute, downy ; peduncles short, many-flowered, capitulate ; corolla subglobose, campanulate, connivent. 1/ . ^{ry}. G. Native of Cochinchina, in hedges. C. Canariensis, Lour. coch. p. 108. Flowers white.

Subglobose-flowered Bind-weed. Shrub tw.

113 C. VIOLA'CEUS (Vahl, symb. 3. p. 29.) stems, peduncles, and calyxes villous ; leaves smoothish, or a little hairy, ovate-cordate, acuminated ; peduncles elongated, bifid, many-flowered, 3-4 times longer than the leaves; the 2 outer sepals cordate: the third lanceolate: and the 2 interior ones glabrous, mucronate, much smaller than the outer ones. 0. ? ^{rs}. S. Native of the Island of Santa Cruz. Willd. spec. 1. p. 856. Leaves an inch long. Bracteas linear-lanceolate at the base of the pedicels. Corolla campanulate, violaceous, with 5 paler rays. Stigmas reflexed.

Fiofoceows-flowered Bind-weed. PI. tw.

114 C. TILIA'CEUS (Willd. enum. 1. p. 204.) glabrous; leaves cordate, acuminated : hind lobes divaricate ; peduncles axillary, racemosely corymbose, longer than the leaves ; sepals oblong-lanceolate, mucronate, glabrous. %. $^{r>}$. S. Native of Brazil. Leaves 2 inches long. Nearly allied to *Conv. acuminàtus,* but the leaves are never 3-lobed ; and the bracteas are wanting on the proper peduncles ; and the sepals are different.

Lime-tree-leaved Bind-weed. Fl. June, Aug. Clt. 1820. PI. tw.

115 C. MULTIVA'LVIS (R. Br. prod. p. 483.) leaves $_m$ ovate, acuminated, subcordate, entire, downy ; corymbs pedunculate ; sepals unequal, acute ; capsules erect, many-valved ; seeds roughish, with narrow margins. %* ^{r}~^{s}. S. Native of New Holland, within the tropic.

Far. a; leaves downy on both surfaces, hardly cordate ; capsule a little longer than the calyx.—Conv. corymbosus, Forst. prod, but not of Lin.

Var. /3; leaver smoothish, subcordate; capsule shorter than the sepals, which are acuminated.

Many-valved capsuled Bind-weed. PL tw.

116 C. CILIATUS (Vahl, eclog. 2. p. 13.) stems downy ; leaves cordate-ovate, acuminated, with subciliated, villous edges ; heads of flowers pedunculate, very hairy, involucrated. *fy* • $^{\circ\#}$ S. Native of Cayenne. C. villdsus, Pers. ench. 1. p. 177. no. 13. Poir. suppl. 3. p. 471. Habit of *C. Guianensis.* Leaves 2 inches long, glabrous above, rather villous beneath, of a shining yellow colour. Peduncles downy, twice longer than the petioles. The 2 outer bracteas large, ovate-lar.ceolate under the head of flowers, the rest lanceolate, length of calyx, all very hairy from rusty pili, as well as the subulate sepals.

Ciliated-leaved Bind-weed. Fl. June, Aug. Clt. 1820. Shrub tw.

117 C. CRINITIS (Desr. in Lam. diet. 3. p. 568.) leaves cordate, nearly naked ; heads of flowers very hairy, on long peduncles, involucrated : capsule smooth. 1/ . ^. S. Native country unknown.

Long-haired Bind-weed. PI. tw.

118 C. PARVIFLORUS (Vahl, symb. 3. * p. 29. Choisy, in mem. soc. phys. gen. 6. p. 480.) downy; leaves cordate-ovate, very acute, glabrous ; peduncles a little higher than the petioles, umbellately many-flowered ; sepals equal, ovate, very acute. ©. $^{/r>}$. G. Native of India, as in Ava, Prome, Dindygul, Dumraong, &c. ; also of the Islands of Java and Timor. Roxb. in Wall. fl. ind. 2. p. 51. Ipomce'a parviflora, Pers, ench. 1. p. 183. Ipomoe'a paniculata, Burm. ind. p. 50. t. 21. f. 3. Conv. quinquenervius, Ham. herb. C. olepiadeus, Wall. mss. Ipomce'a Timoriensis, Blum, bijdr. p. 711. ? Leaves hardly villous on the nerves beneath. Bracteas linear, villous. Corolla a little longer than the calyx, tubular, 5-lobed at apex, glabrous, blue: lobes acute, white. Capsule and seeds glabrous. Stigmas twisted, cylindrical.

Small-Jlowered Bind-weed. PI. tw.

119 C. VERTICILLATUS (Lin. spec. 220. H. B. et Kunth, nov. gen. amer. 3. p. 98.) leaves ovate-oblong, somewhat cordate, acuminately mucronate, smoothish above, and clothed witn canescent tomentum beneath ; corymbs dichotomous, axillary, nearly sessile, shorter than the leaves; sepals smoothish, roundish, obtuse, nearly equal. %. ^{Ok}. S. Native of tropical America ; as near Caraccas. Ipomoe'a verticillata, Lin. amoen. acad. 5. p. 394. Conv. spirvUis, Willd. rel. ex Roem. et Sehukes, syst. 4. p. 302.—Plum. icon. t. 94. f. 2. Flowers small, white. Stigmas terete, revolute.

Verticillate Bind-weed. PI. tw.

120 C. POLYA'NTHES (Cham, et Schlecht, in Linnaea, 5. p. 117.) shrubby ; stems terete, clothed with scattered, somewhat adpressed, short, white, stellate, 2-3-parted hairs; leaves oblong-ovate, cordate, long-acuminated, discoloured, sparingly pilose above, and clothed with short, dirty, yellow tomentum beneath ; peduncles many times dichotomous, downy, cymose : every branch furnished with a lanceolate, acute bractea; flowers fascicled; sepals unequal, broad-ovate, short-acuminated: outer ones the largest, and pilosely tomentose on the back and margins. Jj . ^{rs}. G. Native of Mexico, near Hacienda de La Lagunu. Leaves 3 inches long, and if broad. Corolla funnel-shaped, blue, 8 lines long. Perhaps the same as C. *violaceus,* Vahl.

Many-flowered Bind-weed. Shrub tw.

§. 5. *Leaves cordate or subcordate•, usually repand or crenated, rarely entire. Peduncles l-S-florvered.*

121 C. FARTNOSUS (Lin. mant. 2. p. 203.) branches terete, mealy; leaves cordate, acuminated, repand, wrinkled above, and veiny beneath, very blunt and emarginate behind ; peduncles longer than the leaves, 3-flowered. h_c . ^{rs}. G. Native of Madeira ; and of Mysia and Peloponnesus, in hedges frequent. Jacq. hort. vind. 1. t. 35. Sal. par. lond. t. 45. Petioles mealy. Stipulas hardly any. Calyx terete, close. Corolla small, thrice larger than the calyx, somewhat flesh-coloured, acute, 5-cleft.

Mealy Bind-weed. Fl. May, June. Clt. 1777. Shrub tw.

122 C. HERMA'NNUE (Lher. stirp. 4. p. *67.* t. *S3.)* tomentose, white ; leaves cordate-oblong, obtuse ; peduncles 2-flowered, longer than the petioles; sepals ovate, acuminated, downy, nearly equal ; limb of corolla acute. %. ^\ G. Native of Peru, in arid places. Ruiz, et Pav. fl. per. *2.* p. 10. Cav. desc. 98. Conv. crenatus, Jacq. coll. 2. p. 277. icon. rar. t. 315. Desr. in Lam. diet. 3. p. *558.* Leaves oblong-lanceolate, cordately sagittate at the base, obtuse, mucronate, crenately repand. Corolla small, white ; limb crenulated ; lobes acute.

Hermann's Bind-weed. Fl. Aug. Sept. Clt. 1799. PI. twining.

123 C. MASSONI (Dietr. gart. nachtr. 2. p. 377. Roem. et Schultes, syst. 4. p. 279.) leaves oblong, subcordate, acute; stems suffruticose, smooth; peduncles 3-flowered and many-flowered. *2 • ^- ^{G}- Native of Madeira. C. suflruticosus, Ait. hort. kew. ed. 2d. vol. 1. p. 330. Ker. bot. reg. 133. C. Dryandri, Spreng. syst. I. p. 597. Corollas pink.

Masson's Bind-weed. Fl. June, Sept. Clt. 1690. Shrub twining.

124 C. SUBEROSUS (Willd. enum. suppl. p. 10.) downy ; leaves cordate, acute, entire ; peduncles axillary, furnished with linear bracteas in the middle; sepals ovate, obtuse, a little reflexed,

glabrous, ciliated. ♄. G. Native country unknown. Corolla white, with 5 hairy purple lines outside.

Corky Buck-weed. Shrub tw.

125 C. suberosus (Willd. act. acad. nat. cur. berol. 4. p. 196.) leaves roundish-cordate, acuminated, pilose above; peduncles usually 2-flowered. ♃.? ◯. S. Native of the East Indies. Stems hairy.

Pilose Bind-weed. Pl. tw.

126 C. sericeus (Desr. in Lam. dict. 3. p. 558.) tomentose; leaves cordate-oblong, obtuse, crose; peduncles length of leaves, 2-flowered. ♃. ◯. G. Native of Monte Video. C. crenatus, β. Lam. ill. no. 2072. Perhaps only a var. of *C. Herniariæ*.

Rose-leaved Bind-weed. Pl. tw.

127 C. rutæfolius (Desr. in Lam. dict. 3. p. 559.) tomentose; leaves cordate, acute, angularly serrated, wrinkled, plicate; peduncles usually 2-flowered. ♃. ◯. G. Native of the Cape of Good Hope. This species is intermediate between *C. crenatus* and *C. erosus*. Stigmas elongated.

Plicate-leaved Bind-weed. Pl. tw.

128 C. Vahlii (Roem. et Schultes, syst. 4. p. 280.) clothed with rather silky tomentum; leaves cordate-oblong, very blunt, crenulated; peduncles 1-flowered, length of leaves; sepals nearly equal, oblong, acutish; 2 inner ones glabrous. ♃.? ◯. S. Native of Brazil. C. crenatus, Vahl, symb. 3. p. 31. Hind lobes of leaves straight, oblong, obtuse. Corolla one half longer than the calyx, silky, with 5 villous lines outside; lobes bearded at apex.

Vahl's Bindweed. Pl. tw.

129 C. auriculatus (Willd. spec. 1. p. 846.) glabrous, except the underside and edges of the leaves, which are finely pilose when examined by a lens; leaves oblong-lanceolate, acute, bluntly cordate; peduncles 1-flowered, length of the leaves; sepals ovate, acute, rather pilose. ♄. ◯. H. Native of Siberia. Bracteas setaceous, in the middle of the peduncle. Leaves 2 inches long. Corolla size of those of *Conv. tricolor*, violaceous, flat, 5-plicate; plicæ downy outside. It differs from *C. Sibiricus*, in the leaves not being acuminated, in the peduncles being 1-flowered, in the corollas being twice the size, and violaceous.

Rock Bindweed. Shrub tw.

130 C. fruticulosus (Desr. in Lam. dict. 3. p. 451.) glabrous; stems terete; leaves linear-lanceolate, sub-cordate at the base, on short petioles; floriferous branches very leafy; peduncles longer than the petioles, but hardly the length of the flowers. ♄. ◯. G. Native of the Canary Islands. Bracteas subulate, unequal. Calyx glabrous. Corolla small, with rather deep segments, and 5 purple stripes.

Shrubby Bindweed. Shrub tw.

§. 6. *Leaves ovate or oblong, sagittate or lanceolate or linear.*

131 C. cantabrica (Desr. in Lam. dict. 3. p. 544.) villous; leaves ovate, serrately sinuated; flowers solitary, nearly sessile; sepals ovate, acute. ♃. ◯. S. Native country unknown. Leaves hardly an inch long. Bracteas small, filiform. Corolla narrow, probably tubular.

Grass-leaf-like Bindweed. Pl. tw.

132 C. graminifolius (Desr. in Lam. dict. 3. p. 559.) stems filiform; leaves oblong-elliptic, obtuse, mucronate, nearly sessile, sometimes emarginate at the base; peduncles longer than the leaves. ♃.? ◯. H. Native of Carolina, Fraser. Willd. spec. 1. p. 861.—Pluken. alm. 114. t. 166. f. 4. Peduncles bearing 2 subulate bracteas at apex. Corolla small, campanulate.

Tender Bindweed. Pl. tw.

133 C. Hayanensis (Jacq. obs. 4. p. 34. t. 84. f. 3.) glabrous; leaves oblong, shining; peduncles 1-flowered, shorter than the flower. ♃.? ◯. S. Native of Cuba, about Havannah. Jacq. amer. pict. t. 204. Lam. ill. 462.—Vittm. summ. pl. 1. p. 435. Stem much branched. Leaves obtuse, quite entire. Corolla small, white; tube hardly longer than the calyx; limb erectish; segments long, acute, spreadingly reflexed. Anthers hastate.

Havannah Bindweed. Pl. tw.

134 C. Guianensis (Aubl. guian. 1. p. 156. t. 62.) branches terete, purplish, villous; leaves oblong, and are, as well as the calyxes, tomentose; peduncles elongated, villous; flowers capitate; sepals acute. ♃. ◯. S. Native of Cayenne and Guiana. Vahl, symb. 3. p. 28. Desr. in Lam. dict. 3. p. 554. Corolla small, white or bluish, la[illegible] the calyx: lobes acuminated. Stigmas reflexed.

Guiana Bind-weed. [illegible]/ June, Aug. Cl. 1820. T>i tw.

† *Doubtful species.*

1 C. [illegible]ta'xrnus (Gmel. spec. 1. p. 343.) leaves truncately rounded [illegible] base; peduncles generally 2-flowered.—Native of deserts, about Cairo. C, biflorws, Fo? [illegible]k. fl. aegypt. arab. p. 203. Delisl. descrip. aegypt. p. 55.

Two-flowered Bind-weed. Pl. tw.

2 C. [illegible]ROSAGITTATUS (Mill. dict. no. 20.) leaves cordate-sagittate; peduncles 1-flowered. ☉.? ◯ H. Native of the North of Africa. Convolvulus exoticus hederaceæ folio, flore magno albo, fundo purpureo, cat. hort. par. Peduncles long, slender.

Betony-leaved Bind- **ireed. PI, tw,.**

pedui • Americanus hi- 3 C. [illegible]nitus, foliis acuminato, flore amplo roseo. Houst. mss. Petioles and peduncles very long. Calyx deeply parted. Corolla large, rose coloured Seeds large, woolly.

[illegible]se-coloured-flowered Bind-weed. Pl. tw.

4. C. [illegible]ata'vus (Mill. dict. [illegible]1.) leaves ovate-oblong, glabrous; peduncles 1-flowered; calyx 10-parted. ☉. ◯. S. Native of Barbadoes. Stems slender. Flowers large, purple.

Glabrous ... **BinU-weed. PI. I w.**

5 C. [illegible]ARISTOLOCHIÆFOLIUS (Mill. dict. no. 9.) leaves hastately lanceolate; auricles rounded; peduncles many-flowered. ☉. ◯. S. Native of Carthagena. Flowers racemose, yellow. Capsule trigonal, 3-celled; cells 3-seeded. Perhaps a species of *Pharbitis*.

Aristolochia-leaved Bind-weed. Pl. tw.

6 C. cynosus (Thunb. ex Roem. et Schultes, syst. 4. p. 309.) stem creeping; leaves ovate-oblong, acute, mucronate, shining but fulvous and tomentose beneath; cymes sessile, terminal, many-flowered; sepals acute, silky. **2*. S. N** ative of Sierra Leone. Conv. Senegambiæ, Spreng. syst. 1. p. 610.

Cynosa-flowered Bind-weed. Pl. creeping.

7 C. [illegible]ERIOSTYLOSUS (Cav. icon. 3. **p. 34. t. I** 1.) leaves cordate, acuminated, rather villous; umbels pedunculate; calyx hairy; stigmas [illegible]iii, divaricate.—Native of the Philippines. Corolla campanulate, small, pale red: lobes acute. Capsule 4-valved, 2-celled; cells 2-seeded. Perhaps a species of *Ipomœa*, or a new genus.

Round-stigmaed Bind-weed. **PL** *(w*

† † *The 3 following names occur in appendix to Salt's Abyss. p. 475, but without defining.*

1 C. [illegible]. 2 C. [illegible]. 3 C. [illegible].

What are Conv. [illegible] **taa, Fdrsk, ilescrip, de** Tog, **also is** Conv. **i** [illegible]orskal'b, natives of Egypt.

Cult. The hardy species of this genus are mostly beautiful

plants when in blossom; common garden soil and a dry situation, suit them best. They are increased by dividing at the root, or by seed. For culture of the stove species, see *Ipomœa*, p. 285.

XVII. ANISEIA (from *aniseros*, aniseed, unequal; in reference to the sepals or segments of the calyx being unequal in size and shape.) Choisy, in mem. soc. phys. gen. 6. p. 481.—Convolvulus, Ipomœa, and Calystegia species of authors.

Lin. syst. *Pentándria*, *Monogynia*. Sepals 5, disposed in 3-3 series; the 2 exterior sepals the largest, and inserted lower down, and also running down the peduncle; the 3d or intermediate sepal, and the 2 interior ones smaller, and inserted higher upon the peduncle. Corolla campanulate. Style one. Stigma capitate, 2-lobed. Ovarium 2-celled, 4-ovulate. Capsule 2-celled; cells 2-seeded.—Creeping or diffuse herbs, rarely twining.

1 A. calycina (Choisy, l. c. p. 482.) stem pilose, twining; leaves oblong-cordate, acuminated, very acute, glabrous, petiolate; peduncles hardly the length of the petioles, 1-3-flowered; sepals with villous edges; exterior ones sagittate; corolla tubular. ♄. ☉. S. Native of the interior parts of India, as at Cawnpore, where it was collected by General Hardwicke. Conv. calycinus, Roxb. in Wall. fl. ind. 2. p. 51. Conv. Hardwickii, Spreng. syst. 4. p. 60. Stems terete. Leaves 1-2 inches long. Petioles pilose. Peduncles villous, furnished with small, acute bracteoles at the apex. Corolla white. Seeds villous, particularly on the angles.

Large-calyx Aniseia. Shrub twining.

2 A. Arnottiana; downy; leaves cordate-sagittate, acuminated; hind lobes obtuse; peduncles 3-4-flowered; calyx foliaceous, involucriform; bracteas lanceolate. ☉.? ☉. S. Native of Sierra Leone, in humid places. Corolla yellow, with a brown bottom, 5-lobed, with acute segments.

Affolter's Aniseia. Pl. twining.

3 A. affolteri (Choisy, l. c.) stems glabrous; leaves sessile, linear-lanceolate, hastately acuminated, auricled, toothed at the base; peduncles shorter than the leaves, 1-flowered, exterior sepals sagittately cordate. ☉. ☉. S. Native of the East Indies, Java, and Madagascar. Conv. médium, Lin. spec. 218, exclusive of the syn. of Rheed; but not of Wall. nor Willd. Desr. in Lam. dict. 3. p. 342. Conv. Javanénsis, Gaer. herb. ex Burm. fl. ind. p. 43. Stems and peduncles angular. Auricles of leaves stem-clasping. Leaves glabrous. Bracteas ovate, acuminated. Auricles of outer sepals rounded or toothed; the 2 inner sepals acute. Corolla yellow, a little longer than the calyx. What is *Conv. médium*, Lour.?

Intermediate Aniseia. Pl. twining.

4 A. venosa (Choisy, l. c. p. 483.) stem glabrous or pilose at the apex, prostrate; leaves oblong, on very short petioles, mucronate at the apex, glabrous; peduncles equal in length to the petioles, 1-flowered; outer sepals joined obliquely at the base. ♃. S. Native of the East Indies, as of Silhet, Malabar, and Goalpara; also of Java. Conv. uniflórus, Desr. in Lam. dict. 3. p. 344. Burm. ind. 47. t. 21. f. 2. Conv. emarginátus, Vahl, symb. 3. p. 23. Ipomœa uniflóra, Roem. et Schultes, syst. 4. p. 247. Conv. Rheedii, Wall. in fl. ind. 2. p. 70. Wight, ill. ind. bot. p. 17. t. 3. Conv. Bónitu, Ham. herb. Bon-tiru-Tali, Rheed, mal. 11. p. 111. t. 54. Stem terete, radicant. Leaves 1-2 inches long; lower ones sometimes emarginate. Peduncles nutant, beset with brown hairs, and usually furnished with 2 linear, villous bracteas at apex. Corolla white, exceeding the calyx a little, clothed with brown hairs outside. Capsule glabrous, but clothed with silky hairs inside.

One-flowered Aniseia. Pl. prostrate.

5 A. biflora (Choisy, l. c.) stem pilose; leaves cordate-oblong; peduncles twin, shorter than the petioles, outer sepals cordate-oblong. ☉. H. Native of China. Ipomœa biflora, Pers. ench. 1. p. 185. Conv. biflórus, Lin. spec. 168. but not of Forsk. Stems terete. Petioles pilose. Peduncles hairy, approximating nearly into one at the base. Corolla white, campanulate, small. Stigma purple.

Two-flowered Aniseia. Pl. erect or diffuse.

6 A. bifloroides (Choisy, l. c. p. 484.) stems elongated, downy; leaves oblong, attenuated at the apex, usually obtuse, entire at the base, or hardly cordate, on very short petioles; peduncles 1-flowered, exceeding the petioles; outer sepals oblong-lanceolate, acute; corolla long, tubularly funnel-shaped. ♃. G. Native of India, as of Gorackpur, Sukanagur, Kamaon, Mysore, &c. Conv. oblongus, Wall. cat. no. 1282. Conv. pánlis, and Conv. barlerioides, Ham. herb. Wall. cat. no. 2256. Stems beset with grey or yellow down. Root thick, twisted. Leaves often mucronate, 1-2 inches long, clothed with adpressed hairs on both surfaces. Peduncles and petioles downy. Calyx villously downy. Corolla with an entire plicate limb, smoothish, 2-3 times longer than the calyx.

Barleria-like Aniseia. Pl. diffuse.

7 A. salicifolia (Choisy, l. c. p. 482.) glabrous; leaves lanceolate, serrated, on short petioles; calyx angular. ♃. S. Native of St. Domingo. Conv. salicifolius, Desr. in Lam. dict. 3. p. 342. Leaves acute at both ends, 3-4 inches long. Peduncles 1-flowered, shorter than the leaves. Bracteas small, subulate, under the tops of the peduncles. Sepals large, acute at both ends.

Willow-leaved Aniseia. Pl. diffuse.

8 A. Martinicénsis (Choisy, l. c.) glabrous; stems terete, creeping; leaves elliptic; peduncles 1-flowered, longer than the leaves; the 3 outer sepals ovate, acute, very large, and very downy; the 2 inner ones much smaller, lanceolate, acuminated. Juv. 1. S. Native of Martinico, in shady, inundated places. Conv. Martinicénsis, Jacq. amer. p. 25. t. 17. pict. p. 19. t. 17. Willd. spec. 1. p. 878.—Loefl. itin. p. 331. Leaves 2 inches long. Bracteas small. Corolla white.

Martinico Aniseia. Pl. creeping.

Cult. Elegant plants when in blossom. See *Calystegia*, p. 264. for the culture of the perennial, herbaceous kinds; and *Pharbitis*, p. 265, for the annual species.

XVIII. POLYMERIA (from πολυς, *polys*, many; and μερος, *meros*, a part; in allusion to the stigma being divided into many parts.) R. Br. prod. p. 488. Choisy, in mem. soc. phys. gen. 6. p. 484.

Lin. syst. *Pentándria*, *Monogynia*. Calyx 5-parted. Corolla funnel-shaped, plicate. Style one; stigmas 4-6, acute. Ovarium 2-celled; cells 1-seeded. Capsule 2-4-valved, 1-celled, 1-2-seeded.—Diffuse or creeping, non-lactescent herbs, natives of Australia. Peduncles axillary, bi-bracteate. This genus differs from *Convólvulus*, in the greater number of stigmas, and the cells of the ovarium being only 1-seeded.

1 P. calycina (R. Br. prod. p. 488.) sepals unequal; outer ones cordate at the base; seeds glabrous. ♃. G. Native of New South Wales, and New Holland, within the tropic.

Var. α; leaves oblong, obtuse, smoothish. ♃. G. Native of New South Wales, about Port Jackson.

Var. β; leaves oblong-linear, clothed with very fine down. ♃. S. Native of New Holland, within the tropic.

Large-calyxed Polymeria. Pl. creeping.]

2 P. **ruiifla** (R. Br. l. c.) sepals equal; leaves cordate, somewhat emarginate; peduncles 1-flowered; seeds rather villous. ♄. S. Native of New Holland, within the tropic.

Var. α; leaves ovate, obtuse.

Var. β; leaves sub-hastate, linear.

Small Polymeria. Pl. creeping.

3 P. **quadrivalvis** (R. Br. l. c.) sepals equal; leaves cordate, obtuse, glabrous above, but downy on the veins beneath; peduncles 1-flowered; capsule 4-valved, 2-seeded; seeds tomentose. ♄. S. Native of New Holland, within the tropic.

Four-valved-fruited Polymeria. Pl. creeping.

4 P. **lanata** (R. Br. l. c.) sepals equal; leaves cordate, obtuse, mucronulate, woolly on both surfaces, as well as the seeds; peduncles 1-flowered. ♄. S. Native of New Holland, within the tropic.

Woolly Polymeria. Pl. creeping?.

5 P. **sericea** (R. Br. l. c.) sepals equal; leaves cordate-oblong, obtuse, mucronulate, smoothish above, and woolly beneath; peduncles 1-3-flowered. ♄. S. Native of New Holland, within the tropic.

Ambiguous Polymeria. Pl. creeping.

Cult. The species of *Polymeria* will grow in a mixture of sand and loam; and they are easily increased by separating the creeping, rooted shoots, or by cuttings.

XIX. CALYSTEGIA (*from* καλὺξ, *calyx*; and στεγω, *stego*, to cover; in reference to 2 large opposite bractes which inclose the flower.) R. Br. prod. p. 483. Choisy, in mem. soc. phys. gen. 6, p. 455.—*Convólvulus* species of Lin. and other authors. *Ess. char. Pentándria, Monogynia.* Calyx 5-parted, inclosed within 2 foliaceous bractеas. Corolla campanulate, 5-plicate. Style one; stigma 2-lobed; lobes terete or globose. Ovarium 2-celled; cells 2-ovulate. Capsule 1-celled from the shortness of the dissepiment.—Lactescent, glabrous, twining, or prostrate herbs. Peduncles solitary, 1-flowered.

1 C. **sepium** (R. Br. prod. p. 483.) leaves sagittate or cordate, very acute; hind lobes obtuse or truncate, entire; bractеas cordate, keeled, acute, longer than the calyx, but one half shorter than the corolla; peduncles tetragonal, exceeding the petioles; sepals acute. ♃. ***. H. Native throughout Europe, in hedges; also of Caucasus, and on the banks of the river St. Laurence; New South Wales, south coast of New Holland, and Van Diemen's Land. Very common in Britain. Conv. sépium, Lin. spec. 1. p. 218. Willd. spec. 1. p. 844. Œd. fl. dan. t. 453. Smith, engl. bot. t. 318. Curt. fl. lond. 1. t. 13. Stev. and Chirch. med. bot. 1. p. 11. t. 2.—Plenck. off. t. 91. Mayerhoffer, fl. mon. t. 27. Conv. Tuguriórum. Forst. prod. no. 75, if hardly distinct. Flowers white, sometimes tinged with red. Roots creeping much, and difficult to extirpate; and, like the roots of most perennial convolvulaceous plants, are purgative in a greater or less degree. A pill composed of one ounce and a half of the extract of the root or two drachms of aloes, and one drachm of ginger, acts with certainty and ease in doses of 10 grains, and might be substituted in most cases for the compound extract of colocynth, where economy is required. Haller affirms, that the expressed juice, if taken in the quantity of 20 or 30 grains, possesses the virtues of scammony: hence it is sometimes called German scammony, and is recommended by Dr. Mason Good, as a hydrogogue purgative in dropsies.

Var. β, incarnata; corollas pale red; white, with a red border, or beautiful crimson, as figured in bot. mag. no. 752. ♃. C. H. Native of North America, from Canada to Carolina, in hedges, and among bushes, sometimes trailing on the ground. Conv. rapens, Michx. fl. bor. amer. 1. p. 137. Lin. spec. ed. 1st. p. 153. ed. 2d. p. 223.—Gron. virg. p. 28.

Var. γ. maritima (Gouan. monsp. p. 27.) leaves narrower, more fleshy, nearly lanceolate.

Hedge Calystegia, or Common Bind-weed. Fl. Jn. Sept. Britain. Pl. tw.

2 C. **sibirica**; stems erect at bottom, smoothish, but twining at top, and rather villous; lower leaves mucronate, cordately sagittate: with the hind lobes roundish; superior leaves acuminated, hastate; peduncles erect, longer than the leaves; bractеas broad-cordate, acute, rather hairy, one half longer than the calyx; sepals ovate, acute. ♃. C. H. Native of Dahuria, in stony, mountainous places. Conv. sibiricus, Bunge, in Ledeb. fl. ross. alt. ill. t. 205. fl. alt. 1. p. 252. Root creeping. Corolla pale red, larger than that of *C. sepium*.

Somewhat-twining Calystegia. Pl. twining.

3 C. **pellita**; twining, villous; leaves ovate-oblong, mucronate, somewhat cordate at the base; peduncles about equal in length to the leaves; bractеas cordate, acute, villous, one half longer than the calyx; sepals elliptic, acuminated, ciliated, villous. ♃. *** H. Native of Siberia, near Irkutsk. Conv. pellitus, Led. fl. ross. alt. ill. t. 206. fl. alt. 1. p. 223. Hind lobes of leaves drawn out, rounded, and mucronate.

Clothed Calystegia. Pl. twining.

4 C. **vellerosa** (Ræm. et Schultes, syst. 4. p. 183.) leaves cordate-sagittate: hind lobes angularly truncate, approximate; peduncles nearly terete; bractеas ovate, obtuse or emarginate, concave, swollen, keeled, longer than the calyx; sepals obtuse. ♃. C. H. Native of Hungary, about Mehadia, near the hot baths of Hercules. Conv. sylvaticus, Willd. enum. 1. p. 209. Waldst. et Kit. pl. rar. hung. 3. p. 290. t. 261. Schultes, aust. fl. 2. ed. 1. p. 581. Very nearly allied to *C. sepium*. Corollas large, white.

Wild Calystegia. Fl. June, Sept. Cl. 1815. Pl. tw.

5 C. **Lucana**; leaves sagittate; hind lobes entire; peduncles tetragonal, longer than the leaves; bractеas ovate-oblong, acuminated, clasping the calyx; corolla with a long cylindrical tube. ♃. C. H. Native of Lucania, in woods. Convólvulus Lucánus, Tenore, fl. neap. prod. append. 5. 1826. Tube of corolla 2-3 inches long; limb white, red below. This species differs from *C. sepium* in the tube of the corolla being cylindrical, and twice as long, in the bractеas being concave, and clasping the calyx, not flat.

Lucania Calystegia. Pl. tw.

6 C. **Dahurica** (Sims, bot. mag. 2609, under *Convólvulus*); stems tomentose; leaves glabrous, oblong-cordate, having the margins and nerves on the under side tomentose; peduncles tetragonal, tomentose; bractеas broad-ovate, acute, longer than the calyx; sepals lanceolate, acute, the 2 outer ones broadest. ♃. C. H. Native of Dahuria. Corolla of a rosy purple colour. Roots creeping.

Dahurian Calystegia. Fl. July, Aug. Cl. 1826. Pl. tw.

7 C. **Catesbyæa** (Pursh, fl. amer. sept. 2. p. 729.) tomentose; leaves oblong-sagittate, acuminated; peduncles 1-flowered, shorter than the leaves; bractеas oval, obtuse, longer than the calyx. ♃. C. H. Native of Carolina. Conv. Catesbæi, Spreng. syst. 1. p. 603. Flowers large, purple.

Catesby's Calystegia. Pl. tw.

8 C. **paradoxa** (Pursh, fl. amer. sept. 2. p. 729.) trailing, tomentose; leaves oblong, cordately sagittate, acute; peduncles elongated, 1-flowered, longer than the leaves; bractеas linear, remote from the flower; calyxes naked, glabrous, acuminated. ♃. H. Native of Virginia or Carolina. Conv. paradoxus, Spreng. syst. 1. p. 608. Flowers large, white.

Paradoxical Calystegia. Pl. trailing.

9 C. soldanélla (*R. Br. prod. p. 483. in a note.*) trailing, glabrous; leaves rather fleshy, reniform, entire, or a little angular; peduncles angular; angles winged; bracteas large, ovate, blunt, mucronate, generally shorter than the calyx. ♃. H. Native of many parts of Europe, along the sea coast; and along the Euxine sea, in Tauria. Found in several places along the coast of Britain. Conv. soldanélla, Lin. spec. p. 220. Smith, engl. bot. t. 314. Reynaud, bot. t. 402. Pluenck, alb. t. 93. C. maritima, Lam. fl. fr. 2. p. 235.—Lob. icon. t. 602. f. 2. Flowers large, pale red, with 5 longitudinal, yellowish plicæ. Seeds angular. The sea bindweed abounds on sea-coasts, where the inhabitants gather the tender stalks, and pickle them. It is considered rather of a cathartic quality.

FIG. 50.



Soldanella-leaved Calystegia. Fl. June, July. Britain. Pl. trailing.

10 C. sepíum (*R. Br. prod. p. 483.*) trailing, glabrous; leaves sagittate, veiny, acute; hind lobes acutish, and a little toothed; bracteas obtuse, one half longer than the corolla; peduncles angular, shorter than the petioles; angles marginate, undulated. ♃. G. Native of New South Wales, about Port Jackson.

Marginate-peduncled Calystegia. Pl. trailing.

11 C. agrestis (*R. Br. l. c.*) prostrate, glabrous; leaves reniform, entire, rounded, thickish; peduncles nearly terete; bracteas cordate, length of calyx. ♃. P. Native of New South Wales, about Port Jackson; and of Chili, about Conception. Hook. et Arn. Beech. voy. pt. bot. p. 35. Sweet, fl. gard. 2. t. 181. Conv. reniformis, Spreng. syst. 1. p. 609. Very nearly allied to *C. soldanélla*, but differs in the peduncles being nearly terete, &c. Corolla pale red.

Reniform-leaved Calystegia. Fl. June, Aug. Clt. 1822. Pl. prostrate.

12 C. nepalénsis (*Wall. fl. ind. 2. p. 94.*) glabrous; stems angular; radical leaves ovate-sagittate, of the stem deeply 3-lobed; peduncles 1-flowered, angular; corolla hardly an inch long. ⊙. ◠. G. Native of Nipaul, Penang. Conv. Wallichianus, Spreng. syst. 1. p. 611. Corolla pale purple.

Ivy-like Calystegia. Pl. tw.

13 C. grandiflòra; glabrous; leaves cordate, acuminated, undivided; auricles rounded, entire on the angles; peduncles 1-flowered, angular, nearly as long as the leaves; bracteas cordate, acuminated, twice as long as the calyx. ♃. ◠. S. Native of Guayaquil. Convol. grandiflorus, Ruiz. et Pav. in herb. Lamb. Corolla large, purple.

Great-flowered Calystegia. Pl. twining.

14 C. tomentòsa (*Pursh, fl. amer. sept. 1. p. 143.*) erect, tomentose; leaves oblong-lanceolate, acuminated, cordate; hind lobes obtuse; peduncles 1-flowered, elongated; bracteas ovate, acute; scape lanceolate; stem floriferous below. ♃. H. Native from Canada to Virginia, on dry rocky hills. Conv. stans, Michx. fl. amer. bor. 1. p. 138. Flowers large, white.

Tomentose Calystegia. Fl. June, July. Clt. 1818. Pl. 1 foot.

15 C. sepiárum (*R. Br. prod. 483, in a note.*) Pursh, fl. amer. sept. 1. p. 143.) erect, downy; leaves subcordate-oval, obtuse; peduncles 1-flowered, shorter than the leaves; bracteas ovate, acute; stem floriferous above. ♃. H. Native from Pennsylvania to Carolina, on dry hills. Hook. Exot. fl. t. 97. Conv. spithamæus, Lin. spec. 222. Willd. spec. 1. p. 878. Flowers white, middle-sized.

Space Calystegia. Fl. July, Aug. Clt. 1796. Pl. ½ to 1 foot.

Cult. The species are elegant when in blossom, and are of the most easy culture. They will grow in any common garden soil, and are easily increased by pieces of the roots, or by seeds. The *C. soldanélla*, a native of the sea-shore, thrives best if watered with salted water now and then.

XX. SHUTERIA (named after Dr. Shuter, who collected many plants in the neighbourhood of Madras.) Choisy, in mem. soc. phys. gen. 6. p. 456.—Convólvulus, Ipomœa, and Calystegia, species of authors.

Lin. syst. *Pentándria, Monogynia.* Calyx of 5 unequal sepals. Corolla campanulate. Style one; stigma 2-lobed; lobes ovate, flattened. Capsule 1-celled, 4-seeded.—Herb twining.

1 S. sericea (Choisy, l. c. p. 456.) stem villous; leaves ovate-cordate, entire, or usually sinuately angular; peduncles usually 1-flowered, bracteate, exceeding the leaves; outer sepals large, involucrating the flower. ⊙. ◠. S. Native of the East Indies, as of Coromandel, Pegu, Ava, Nepaul, Courtall, Rangoon, Straits of Sunda, &c. Conv. bicolor, Roxb. hort. beng. p. 14. Vahl. symb. 3. p. 25. Sims, bot. mag. 2203. Wall. fl. ind. 2. p. 57. Ipomœa bicolor, Sweet, hort. brit. p. 287. Calystegia Keriàna, Sweet, hort. brit. p. 287. Conv. villosissimus, Lin. suppl. p. 135, ex Wall. Conv. involucratus, Ker. bot. reg. 518, but not of Beauv. Conv. bracteatus, and C. bicolor, Herb. madr. Conv. Malabar, and C. gracillus, Russ. herb. Leaves 1–3 inches long, glabrous, villous or hairy. Peduncles villous. Bracteas acuminated at both ends, downy, close to the flower. Outer sepals villous; inner ones linear lanceolate, glabrous, all remaining round the fruit at length. Corolla villous outside, yellow; bottom of the bell deep purple. Capsule hairy, 4-seeded, rarely 2–3-seeded by abortion.

Var. β. bracteata; peduncles shorter; leaves nearly entire, and hastately 3-lobed. ⊙. ◠. S. Conv. bracteatus, Vahl, symb. 3. p. 25. Ipomœa bracteata, Roem. et Schultes, syst. 4. p. 227.

Two-coloured-flowered Shuteria. Fl. Jn. Aug. Clt. 1818. Pl. tw.

Cult. This is a beautiful plant when in blossom. The seeds of it should be raised on a hot bed in spring; and the plants, when of sufficient size, should be planted into separate pots, and trained to sticks, and then placed in a stove or greenhouse, where they will blossom, and ripen their seed. A few plants may be tried out in the open border, in a warm, sheltered situation.

XXI. SKINNERIA (named in honour of Capt. Thomas Skinner, of the East India Company's Service, who lately visited the fountains of the rivers Jumna and Ganges, and Himalaya.) Choisy, in mem. soc. phys. gen. 6. p. 457.—Convólvulus species of authors.

Lin. syst. *Pentándria, Monogynia.* Calyx of 5 sepals. Corolla small, and as if it were urceolate. Style one; stigma capitate, 2-lobed. Ovarium 1-celled, 4-ovulate. Capsule 1-celled.—Tufted herbs.

1 S. cantònis (Choisy, l. c.) stems herbaceous, diffuse; leaves linear-lanceolate, entire, on short petioles; peduncles sometimes simple, sometimes loosely bracteate, many-flowered; sepals ovate, obtuse; corolla veiny, pale yellow. ♃. S. Native of the East Indies, as of Ganjam, Dinapore, Rungpore, Tavoy, &c. Conv. cæspitosus, Roxb. in Wall. fl. ind. 2. p. 70.

Coss. pratêns. Ham. herb. ex W. & A. prod. 1. 1557. Cocc. Bendaroo. Wall. cat. no. 1295. Stems glabrous or villous. Branches usually beset with reflexed hairs. Leaves glabrous, 2-3 inches long. Petioles generally hairy. Sepals glabrous. Corolla glabrous, yellowish, hardly plicate at apex. Capsule and seeds glabrous, rarely 2-3-seeded by abortion.

Twined Siamese Pl. diffuse.

Cult. For culture and propagation, see *Pharbitis*, p. 263.

XXII. PORA'NA (probably from *πορος, poros*, to extend from the rambling branches.) Burm. fl. ind. p. 51. t. 21. f. 1. Schreb. gen. no. 256.—Lam. ill. t. 186. Juss. gen. p. 420. ed. Usteri, p. 469. Dunetra, Sweet, fl. gard. t. 127.

Lin. syst. *Pentandria, Monogynia.* Calyx middle-sized, of 5 sepals, increasing wonderfully and unequally after florescence. Corolla campanulate, or tubularly funnel-shaped. Style one, [illegible] capitate. Ovarium 1-celled, 2-4-ovuled. Capsule usually 1-seeded.—Climbing herbs, [illegible]

Twining Poràna. Fl. [illegible] Clt. 1823. Shrub [illegible].

2 P. ACUMINA'TA (Blyenv. fl. d'ox. 1. p. 53. t. 19.) suffruticose, twining; leaves ovate, acuminated, glabrous; panicles dense-flowered; sepals ovate, obtuse, villous; corolla 5-parted, 2-3 times higher than the calyx. ♄. ◠. S. Native of Guinea, in the kingdom of Warre. Stem glabrous, smooth. Leaves 1½ inch long, and 1 broad. Panicles elongate(3, naked. [illegible] branched. Bracteas pressed to the calyx, small, acute, villous. Flowers small, white; lobes of corolla ovate, acute, veiny, ciliated, and villous inside. Stigmas slender, globose.

Acuminated-leaved Poràna. Shrub twining.

3 P. [illegible]A (Roxb. fl. ind. 2. p. 41. Co[illegible]ti, append. 3. p. 48. mem. act. tar. 23. p. 160.) plant herbaceous, twining; leaves cordate, acuminated, glabrous or downy; panicles loose-flowered; sepals lanceolate, villous, acute, after inflorescence becoming ovate, scarious, glabrous; corolla exceeding the calyx much. ☉. ◠. H. Native of Nipaul, Kamaon, and Silhet. P. dichotoma, Ham. mss. ex D. Don, prod. fl. nep. p. 92. P. cordifolia, Lesleb. mel. sum. hort. dorp. suppl. 1824. p. 6. Dunetra racemosa, Sweet, brit. fl. gard. t. 127. Stems terete or angular, glabrous, smooth or strigose. Leaves 3-4 inches long, with a wide recess at the base. Panicles composed of racemes, leafy. Flowers small, white. Corolla funnel-shaped, glabrous; segments of the limb ovate, acute.

FIG. 21.



Racemose-flowered Poràna. Fl. July, Nov. Clt. 181[illegible]: *ti* [illegible] existing.

4 P. PANICULA'TA (Roxb. corr. t. 235. fl. ind. 2. p. 39.) suffruticose, twining, clothed with hoary tomentum; leaves cordate, acuminated, glabrous above, and hoary beneath; panicles large, much branched; sepals linear-subulate, unequal after florescence, 3 of which are acute and scarious; corolla 5 times higher than the calyx. ♄. ◠. S. Native of India, as of Bengal, ruins of Gour, Ramajahl hills, Saharunpore, Hurdwar, Silhet, Kamaon, banks of the Irrawaddi, &c. P. tomentosa, Lesch. mss. Dunetra paniculàta, Sweet, hort. brit. p. 259. P. corìdata, Gour. Stems terete. Leaves 3 inches long, and 1½ broad. Panicles leafy. Bracteas at the base of the pedicels. Flowers very small, pure white. Corolla tubularly campanulate. Stigma capitate, 2-lobed. Capsule glabrous, compressed, containing only 1 seed, which fills the capsule.

Panicled-flowered Poràna. Fl. [illegible] Clt. 1823. Shrub [illegible] twining.

5 P. GRANDIFLORA (Wall. in Roxb. fl. ind. 2. p. 40.) plant herbaceous, twining; leaves cordate, acuminated, sinuate, scabrous above, and usually glabrous beneath; panicles loose-flowered; sepals linear-lanceolate, acute, increasing much after florescence; corolla more than an inch long. ☉. ◠. H. Native of the East Indies, as of Kamaoon, Silhetpoor mountains, Hutoordal, Nepaul, Chundigherry, &c. Stem angular, branched, glabrous, or hairy. Leaves 2-6 inches long, and 1-3 broad. Panicles racemose, axillary, hardly branched. Bracteas small, filiform. Sepals smoothish or ciliated. Corollas funnel-shaped, rose-coloured; limb 5-plicate, entire, glabrous. Capsule membranous, containing one ovate-spherical, glabrous seed.

Great-flowered Poràna. Pl. twining.

Cult. The shrubby species of *Porana* are well adapted for training on rafters or pillars, in a stove, or warm part of a greenhouse; a mixture of loam, peat, and sand, is the best soil for them; and cuttings will strike root readily in the same kind of soil, under a hand-glass. The annual species are hardy, and grow fast when [illegible]sowed in a sheltered situation, and soon make a good covering for a temporary arbour; or they may be trained on branches of trees; [illegible] are produced in great profusion in autumn.

XXIII. DUPERRE'YA (named in compliment to Louis Isidore Duperrey, an officer in the French navy, who collected many specimens of plants for Gaudichaud, during his hydrographic voyages.) Gaud. in Freyc. voy. pt. bot. p. 502. t. 80.

Lin. syst. *Pentandria, Monogynia.* Calyx 5-parted, propped by 2 smaller bracteæ, increasing much after florescence, membranous, reticulately-nerved, and spreading. Corolla somewhat funnel-shaped, plicately 5-lobed. Stamens inclosed. Ovarium 1-celled? Style exserted; stigma large, thick, trigonally cordiform. Capsule elliptic, indehiscent, membranous, 1-seeded. Seed fixed to the bottom of t[illegible] o *oA'i,* sessile, elliptic. Albumen mucilaginous.—A small shrub, with alternate leaves; axillary, solitary, pedicellate, bluish flowers, the whole forming a leafy racemo[illegible]

1 D. [illegible]ERICEA (Gaud. l. c.) [illegible].G. Native of New Holland, on the west coast, in Shark's Bay.

Silky Duperreya. Shrub small.

Cult. For culture and propagation, see *Bonamia*, p. [illegible]

XXIV. NEUROPE'LTIS (*νευρον, neuron*, a nerve [illegible] *πελτη, pelte*, a buckler; in reference to the nerved bracteas which props the fruit.) Wall. fl. ind. 2. p. 43. Choisy, in mem. soc. phys. gen. 6. p. 421.

Lin. syst. *Pentandria, Digynia.* Calyx of 5 permanent sepals. Corolla funnel-shaped, 5-parted, flat. Styles 2; stigmas fleshy, reniform. Capsule 1-seeded, large, dilated, membranous, propped by a floral leaf.—Weak, erect, spreading shrubs.

1 N. [illegible]ERVOSA (Wall. fl. ind. 2. p. 43.) woody; stem glaucous, racemose, dotted with white; leaves ovate, entire, approxi[illegible]

ovate, acute at both ends, petiolate, coriaceous; racemes axillary, erect; bracteas roundish, surrounding the capsule. ħ. S. Native of Penang, where it was collected by W. Jack. Young branches downy. Leaves numerous, 3-4 inches long, downy beneath. Racemes 4 or more from the same axil, 1-3 inches long.

Racemose-flowered Neuropeltis. Shrub.

2 N. RACEMOSA (Wall. cat. no. 1223. Choisy, l. c. p. 492.) woody; stem white, rugose, beset with white dots; leaves oblong-lanceolate, with revolute edges, but not coriaceous; bracteas ovate, surrounding the capsule, which is about the size of the fruit of *Tilia*. ħ. S. Native of the Burmann Empire, at Amherst. Leaves 3-4 inches long, glabrous on both surfaces. Racemes shorter than the leaves. This species is very nearly allied to the first; but differs, in the leaves being oblong-lanceolate, not ovate, coriaceous; in the bracteas surrounding the fruit being ovate, not roundish, and in the capsule being larger.

Ovate-bracteal Neuropeltis. Shrub.

Cult. For culture and propagation see *Bonamia*, p. 299.

XXV. PREVOSTEA (named after [illegible] Prevost, of Geneva.) Choisy, in mem. soc. phys. gen. 6. p. 492.—Calycobolus, Willd. —Dufourea, H. B. et Kunth, nov. gen. amer. 5. p. 115.—Dufourdiogia, Nees, et Mart. in nov. act. bonn. 11. p. 79.—Reinwardtia, Spreng. syst. 1. p. 598.

Lin. syst. *Pentandria, Digynia.* Calyx of 5 sepals, the 2 outer ones large, and involving the flower. Corolla funnel-shaped, with a plicate limb. Ovarium 2-celled; cells 2-seeded. Styles 2, or style one, deeply bipartite; stigmas capitate. Capsule 2-celled; cells 1-2-seeded.—Twining shrubs, natives of South America. Leaves entire. Peduncles many-flowered, axillary and terminal, panicled. Corollas white.

1 P. OVATA; leaves glabrous; peduncles axillary, many-flowered; outer sepals green. ħ. C. S. Native of the Missions of the Orinoco, on the banks of the Cassiquiares, near San Francisco Solano. Dufourea glabra, H. B. et Kunth, nov. gen. 3. p. 114. Reinwardtia glabra, Spreng. syst. 1. p. 863. Shrub much branched; branches erect. Leaves obovate, obtuse, mucronate, cordate at the base, 2½ inches long, full of pellucid dots. Corollas white.

Glabrous Prevostea. Shrub twining.

2 P. SERICEA; leaves silky beneath; panicles terminal; outer sepals coloured. ħ. C. S. Native of New Granada, near the town of Mariquita, at the altitude of 400 hexapods. Dufourea sericea, H. B. et Kunth, nov. gen. 3. p. 114. t. 214. Reinwardtia sericea, Spreng. l. c. Young branches clothed with silky down. Leaves ovate-elliptic, obtuse, mucronate, cordate at the base, glabrous above, but clothed with yellowish, silky down beneath, 3-4 inches long, and 2 broad, dotted. Corollas white.

Silky Prevostea. Shrub tw.

3 P. REYNARIA; villous; leaves cordate-ovate, acute, rather angular; peduncles 3-flowered, about equal in length to the leaves; sepals unequal, 3 outer ones larger, green. ħ. C. S. Native of Brazil. Dufourea heterandra, Mart. in nov. act. bonn. 11. p. 79. Convólvulus Mártii, Spreng. syst. 1. p. 593. Corolla blue. Style undivided. Perhaps Ipomœa Weinmanni, Rœm. et Schultes, is a species of *Prevostea*.

Variable-flowered Prevostea. Shrub twining.

Cult. For culture and propagation see *Ferdinandea*, p. 498.

XXVI. BREWERIA (named in memory of Samuel Brewer, who is much praised by Dillenius, in his Historia Muscorum.) R. Br. prod. 487. Choisy, in mem. soc. phys. gen. 6. p. 487.

Lin. syst. *Pentandria, Digynia.* Calyx of 5 equal sepals. Corolla funnel-shaped, or campanulate, plicate. Style one, bifid; stigmas 2, capitate. Capsule 2-celled, valvate; girded by the calyx, which is scarcely changed; cells 2-seeded.—Diffuse, non-herbaceous herbs. Leaves entire. Flowers axillary, nearly solitary. This genus is intermediate between *Ipomœa* and *Exogonium*. It differs from *Prevostea* chiefly in the calyx not being changed in the fruit-bearing state, and in habit. It differs also from *Bonamia*, by the same reason.

§ 1. *Leaves cordate at the base.*

1 B. ROXBURGII (Choisy, in mem. soc. phys. gen. 6. p. 493.) stem branched; branches rusty; leaves ovate-cordate, sub-acuminated, rusty; peduncles hardly equal in length to the petioles, 3-many-flowered; sepals ovate, acuminated or ovate-roundish, nearly equal. ħ. S. Native of the East Indies, as of Silhet, Penang, Amherst, Tavoy, Travancore, Coromandel, Silhet, &c. Convólvulus sericiflorus, Roxb. in Wall. fl. ind. 2. p. 47. Convolvulus ferrugineus, Herb. madr. Leaves 2-3 inches long, and 1½ broad. Peduncles and petioles downy. Outer sepals villous. Corollas villous, rufescent. Capsule glabrous, crowned by a tuft of hairs. Seeds black, angular, glabrous.

Roxburgh's Breweria. Shrub diffuse.

2 B. CORDATA (Blum. bijdr. p. 122.) plant tomentose; leaves cordate, acuminated, villous; peduncles umbellately 3-5-flowered at the apex; sepals acuminated, the 2 outer ones the largest. ħ. S. Native of Java, about Buitenzorg. Nearly allied to *B. pannosa*. Styles unequal.

Cordate-leaved Breweria. Pl. diffuse?

3 B. PANNOSA (R. Br. prod. p. 488.) tomentose; leaves ovate, sub-cordate, pannosely tomentose; sepals unequal; outer ones ovate, somewhat acuminated; styles unequal, combined at bottom. ħ. S. Native of New Holland, within the tropic.

Cloth-leaved Breweria. Pl. diffuse.

4 B. HYSSOPIA (R. Br. l. c.) pilose rather villous; leaves lanceolate, obtuse at the base, and somewhat cordate; styles unequal, combined at the base. ħ. S. Native of New Holland, within the tropic.

Intermediate Breweria. Pl. diffuse.

5 B. MADAGASCARIENSIS (Choisy, in mem. soc. phys. gen. 6. p. 493.) Native of Madagascar. Nothing more is known of this species to us, but the name.

Madagascar Breweria. Pl. diffuse.

§ 2. *Leaves ovate or linear, entire.*

6 B. ELEGANS (Choisy, l. c. p. 494.) stem branched, elongated; older leaves ovate-elliptic, obtuse, emarginate; younger ones narrower, almost linear; peduncles 1-3-flowered, straight, generally exceeding the younger leaves; sepals ovate-lanceolate, very acute; corolla showy, tubularly funnel-shaped. ħ. S. Native of the Burman Empire, at Prome. Convolvulus elegans, Wall. cat. no. 1222. Stems smoothish or downy. Leaves near 2 inches long, and hardly an inch broad, smoothish, and green above, but clothed with rusty down, particularly on the veins beneath. Peduncles, pedicels, and bracteas downy. Corolla 1½ inch long, downy on the tube outside.

Elegant Breweria. Pl. diffuse.

7 B. LINIFOLIA (R. Br. prod. 488.) plant villous; leaves lanceolate-linear, conplicate; styles equal, combined at the base. ħ. S. Native of New Holland, within the tropic.

Linear-leaved Breweria. Pl. diffuse.

8 B. LINIFOLIA (Spreng. syst. 1. p. 618.) leaves scattered, linear, smoothish; stem scabrous, simple; peduncles corymbose. ħ. S. Native of Monte Video, Sello.

Flax-leaved Breweria. Pl. erect.

9 B. CONVOLVULOIDES (Choisy, l. c.) stem suffruticose, branched; leaves ovate-lanceolate, sessile, small, glabrous; flowers solitary, axillary, on short peduncles; corolla small. ħ. S. Native of India? Root woody, yellow. Stems quite glabrous. Leaves

3 lines long, and hardly a line broad. Corolla funnel-shaped, twice longer than the calyx. Capsule glabrous ; cells 1-seeded by abortion.

Evolvulus-like Breweria. Shrub 1| foot.

10 B. BURCHE'LLII (Choisy, 1. c. p. 493.) Native of the Cape of Good Hope. Nothing is known to us of this plant, but the name.

BurchelVs Breweria. PI.

11 B. SFECTA'BILIS (Choisy, 1. c.) Native of Madagascar. Nothing is known to us of this plant but the name.

Showy Breweria. PI.

*Cult** For culture and propagation see *Bonamia,* below.

XXVII. BONA^XMIA (in honour of M. Bonami, author of a Flora of the environs of Nantes in 1782.) Pet. Th. veg. d'afr. 1. p. 17. t. 5. Rcem. et Schultes, syst. 4. p. xli. Choisy, in mem. soc. phys. gen. 6. p. 495.

LIN. SYST. *Pentdndria, Monogynia.* Calyx of 5 equal concave sepals. Corolla tubularly campanulate, 5-lobed. Stamens and style exserted. Style bifid ; stigmas capitate. Capsule 2-celled ; cells 2-seeded. Seeds arillate. A shrub, native of Madagascar.

1 B. MADAGASCARIE'NSIS (Pet. Th. veg. d'afr. fasc. 1. p. 17. t. 5. nov. gen. mad. no. 28. t. 5. Rcem. coll. p. 202.) leaves sinuated, ovate, acuminated, undulated, at length glabrous; corymbs panicled, terminal, dense ; calyx villous. J? • S. Native of Madagascar, at Foul-point. Shrub weak, elegant. Branches terete, pilose while young. Corollas white; segments of the limb ovate, acute. Arillus of seed pulpy, pale red.

Madagascar Bonamia. Shrub *5-6* feet.

Cult. This elegant shrub is worth cultivating in every collection of stove plants. A mixture of loam, peat, and sand, will answer it well, or any light rich soil; and cuttings will strike root readily under a hand-glass, in heat.

XXVIII. CRE'SSA (from Cressus, appertaining to the Isle of Crete, now Candia.) Lin. gen. no. 313. Juss. gen. p. 134. ed. Usteri, p. 150. Lam. ill. 183. f. 1. R. Br. prod. p. 490. Choisy, in mem. soc. phys gen. 6. p. 495.—Anthyllis, Alp. cent. 157. t. 156. Magn. char. 212.

LIN. SYST. *Pentdndria, Digynia.* Calyx 5-parted, or of *5* sepals. Corolla funnel-shaped, 5-cleft. Stamens exserted. Styles 2 ; stigmas capitate. Ovarium 2-celled ; cells 2-seeded. Capsule 2-celled, 1-4-seeded.—Dwarf, downy, branched herbs. Leaves scattered, crowded, quite entire. Flowers sub-spicate, solitary in the axils of the superior leaves, bi-bracteate.

1 C. I'NDICA (Retz. obs. 4. p. 24. Wall. cat. no. 2260.) diffuse ; leaves ovate, sessile, acute, crowded, obtuse at the base, clothed with cinereous or hoary down; flowers in the axils of the superior leaves, nearly sessile, forming a spike or head ; tops of corolla bearded. %. H. Native of the East Indies. Said to be hardly distinct from *C. Cretica,* of which, perhaps, it is only a variety.

Indian Cressa. PI. diffuse.

2 C. CRE'TICA (Lin. spec. 325.) stem usually diffuse ; leaves ovate, sessile, obtuse at the base, hairy, white; calyxes rather silky; flowers in the axils of the upper leaves, forming a head; corolla more or less bearded outside. 0. H. Native of the provinces of France, Italy, Candia. Willd. spec. 1. p 1320. D. C. fl. fr. no. 2753. Sibth. et Smith, fl. grsec. t. 256#. C humifûsa, Lam. diet. fl. fr. 2. p. 268. Lin. amcen. acatL 1' p 135. Anthyllis, Alp. cent. 157, t. 156.—Plukn. aim. 236. t. 43, f. 6. Branches hairy. Calycme segments ovate. Corolla white : segments obtuse, rufescent at top, inside. Capsule 1-seeded. Cretica Cressa. Fl. July, Sept. CIt. 1828. K. i foot.

3 C. AUSTRA'LIS (R. Br. prod. p. 490.) leaves lanceolate-elliptic, nearly sessile ; stem erect. ©. H. Native of New Holland, within the tropic. Corolla more or less bearded outside. Capsule 1-seeded

Southern Cressa. PI. \ foot.

4 C. TRUXILLE'NSIS (H. B. et Kunth, nov. gen. 3. p. *93.)* branches clothed with silky, hoary down ; stems elongated, procumbent; leaves sessile, oblong, bluntish; flowers in the axils of the upper leaves. %. S. Native of Peru, near Truxillo, among the sea sand. Calyx clothed with silky down ; sepals obovate, elliptic, obtuse, equal. Corolla white, hardly equal in height to the tube of the calyx; segments ovate, acute. Capsule 4?-seeded.

Truxillo Cressa. PL procumbent.

-f Doubtful species.

5 C. ARA'BICA (Forsk. segypt. 54. no. 81.) stem shrubby, diffuse, glabrous; leaves ovate-oblong, sessile, villous ; peduncles axillary, length of leaves.—Native of Egypt, in the Taas mountains. Lam. diet. *2.* p. 181. Leaves obtuse, mucronate, J an inch long. Sepals ovate-lanceolate, 3 times shorter than the corolla. Corolla campanulate ; limb 5-toothed. Styles 2, diverging; stigmas capitate.

Arabian Cressa. Shrub \ foot.

6 C. MULTIFLORA (Willd. rel. ex Rcem. et Schultes, syst. 6. p. 207.) corollas bearded ; capsule 4-seeded ; leaves oblong, hoary on both surfaces ; flowers subspicate.—Native of South America, Humb. et Bonpl.

Many-flowered Cressa. PL

7 C. SERICEA (Willd. 1. c.) leaves lanceolate, acute, hoary, silky beneath ; peduncles 1-flowered, axillary.—Native of South America. Humb. et Bonpl.

Silky Cressa. PL

8 C. ARENA'RIA (Willd. 1. c.) stem much branched, panicled ; leaves ovate-elliptic, hairy.—Native of South America. Humb. et Bonpl.

Sand Cressa. PL

Cult. For culture and propagation see *Evolvulus,* p. 302.

XXIX. EVO'LVULUS (from *evolvo,* to turn, in the same sense as *Convolvulus,* which this genus resembles in habit.) Linn. gen. no. 385. Juss. gen. p. 134. edit. Usteri, p. 149. R. Bri. prod. p. 489. Choisy, in mem. soc. phys. gen. p. 496.

LIN. SYST. *Pentdndria, Digynia.* Calyx 5-parted, or of 5 sepals. Corolla sub-rotate, campanulate or funnel-shaped, plicate. Styles 2, bifid; stigmas simple. Ovarium 2-cellecjfcf cells 2-seeded. Capsule 2-celled, valvate. — Non-lactescerM prostrate or creeping, rarely erect herbs. Leaves entire. *Ffe-*duncles axillary, 1-few-flowered ; pedicels bibracteate. *If he Cladostyles* of Humb. et Bonpl. differs from *Evolvulus,* in *jihe* valveless capsule, and number of ovula.

1 E. HIRSU TUS (Lam. diet. 3. p. *5S8.* ill. t. 216. f. 2. bu[t not of H. B. et Kunth.) procumbent; leaves ovate-oblong, ntearly sessile, distant, hairy from bristles on both surfaces; pedmncles 1-flowered, equal in length to the leaves, also exceeding jthem. 7/. S. Native of the East Indies, as of Pondicherry, K/amaon, south of Hindostan, &c. E. sericeus, Wall. cat. no. 131^. Corolla blue. ?

Hairy Evolvulus. PL procumbent.

2 E. ALSINOIDES (Lin. fl. zeyl. p. *76.* spec. p. 39#\) elongated, villous ; leaves ovate or oval, blunt at both endk, petiolate, glabrous above, and hairy beneath ; peduncles usually 1-9. flowered, 4-bracteate ; capsule deflexed. i;. S. Native) of th" East Indies, as at Pegamew, Mungger and Ceylon, Stnaits of Sunda; and of New Holland, within the tropic. Burm +'ey., t. 6. f.]., and 19 t. 9. Conv. alsinoides, Knip. cent, xi/no. 34k

Vistnu-Glandi, Rheed. mal. 11. p. 131. t. 64. Flowers blue. In Ceylon, this plant has the name of *Visnugarandi,* from the Malabar deity Visnu and Garandi, which signifies the dysentery. It is reputed to be a sovereign remedy in that disorder, ex Burm.

Chickweed-lilce Evolvulus. Fl. June, July. Clt. 1733. PI. procumbent.

3 E. VILLOSUS (Ruiz, et Pav. fl. per. *3.* p. 30. t. *235.* f. b.) diffuse, villous; branches ascending; lower leaves ovate-elliptic : uppermost floral ones minute; peduncles 1-2-flowered, longer than the leaves. 1£. S. Native of Peru, on sandy hills ; and of New Holland, within the tropic. R. Br. prod. p. 489. Nearly allied to *E. ahinoides.* Bracteas subulate. Corolla blue, spreading. Calyxes ciliated.

Far. β, *lanceoldlus* (Poir. diet. 3. p. 459.) leaves lanceolate, nearly glabrous ; peduncles 1-flowered, shorter than the leaves. %. S. Corolla pale blue, rather large.

J^V/bztf'Evolvulus. PI. procumbent.

4 E. NUMMULA'IUUS (Lin. spec. p. 391. Swartz, obs. p. 118.) stems branched, beset with short hairs, creeping, downy ; leaves roundish-oval, retuse or emarginate ; flowers solitary or 3 together, pedunculate, shorter than the leaves. 7/. S. Native of Jamaica and Barbadoes, in meadows; as well as on the banks of the Mississippi. Lam. diet. 3. p. 539. Jacq. amer. pict. t. 260. f. *23.* Conv. nummulàrius, Lin. spec. ed. 1st. 157.—Sloane, jam. hist. 1. p. 157. t. 99. f. *2.* Leaves hardly larger than those of *Anagdllis tenélla.* Calyx hairy. Corolla pale blue, but white, ex Swartz. Peduncles capillary, downy.

Money-rvort-leaved Evolvulus. Fl. Oct. Clt. 1816. PI. trailing.

5 E. VERONIC;EF6LIUS (H. B. et Kunth, nov. gen. amer. 3. p. 117. t. 215.) stems creeping, pilose ; leaves petiolate, nearly orbicular, somewhat retuse, cordate, smoothish ; peduncles 1-flowered, about equal in length to the leaves. *If..* S. Native of New Granada, in temperate places, near Guadua. Nearly allied to *E. nummulàrius.* Calycine segments oblong-lanceolate, acuminated, equal, with pilosely ciliated edges. Yourg leaves pilose on the nerves beneath. Peduncles pilose. Corolla pale blue; limb 5-toothed. Capsule 1-celled, 1-3-seeded.

Speedwell-leaved Evolvulus. PI. creeping.

6 E. LINIFÒLIUS (Lin. spec. 392. syst. 299. amcen. acad. 4. p. 306.) erect, villous ; leaves linear-lanceolate, nearly sessile ; peduncles 1-3-flowered, a little longer than the leaves ; styles 4, approximating by pairs. ©. S. Native of Jamaica, St. Thomas's; and New Holland, within the tropic. Lam. ill. t. 216. f. 1. Conv. linifolius, Kniph. cent. 11. no. 26.—Brown, jam. p. 152. t. 10. f. 2. Leaves canescent. Corolla rather tubular, blue, small.

Flax-leaved Evolvulus. Fl. Aug. Sept. Clt. 1782. PI. \ ft.

7 E. DECU'MBENS (R. Br. prod. p. 489.) plant prostrate, villous ; leaves linear-lanceolate, nearly sessile ; peduncles usually 1-flowered, a little longer than the leaves ; styles 2, bipartite. ©. ? S. Native of New Holland, within the tropic. Corollas blue ?

Decumbent Evolvulus. PI. decumbent.

8 E. JAVA'NICUS (Blum, bijdr. p. 724.) leaves linear-lanceolate, sessile, clothed with silky villi; peduncles 1-flowered, bibracteate, length of leaves; stems woody at bottom. %. S. Native of Java, on the top of Mount Gede.

Jàva Evolvulus. Fl. February. PI. trailing?

9 E. DE'BILIS (H. B. et Kunth, nov. gen. et spec. 3. p. 115.) stems elongated, filiform, procumbent, pilose ; leaves on short petioles, oblong, somewhat acuminated, silky from hairs on both surfaces ; peduncles usually 2-flowered, much exceeding the leaves. *11.* S. Native at the foot of the Andes, about Quindiu, near Ibague ; of Mexico, near Jalapa, and near Hacienda de la Laguna. E. filiformis, Willd. herb. Nearly allied to *E. linifòlius.* Root woody, creeping. Peduncles and pedicels clothed with silky down. Capsule 2-seeded. Corolla unknown.

Weak Evolvulus. PI. procumbent.

10 E. SERÍCEUS (Swartz, prod. p. *55.* fl. ind. occ. 1. p. *576.)* stems filiform, glabrous, or downy, procumbent; leaves lanceolate, sessile, silky beneath ; peduncles short, 1-flowered. ©. S. Native of Jamaica, in arid, sandy places; and of Mexico, near Jalapa. Brown, jam. p. 153. no. 3. t. 10. f. 3. Very like *E. linifòlius.* Leaves acutish, 3-nerved. Calyx silky outside ; segments lanceolate, acute, with recurved tops. Corolla white, with a short tube, and a 5-parted, spreading limb ; segments acute. Anthers blue. Capsule silky, 2-celled, many-seeded.

Silky Evolvulus. PI. procumbent.

11 E. AZÚREUS (Schum. pi. guin. p. 166.) pilose; leaves ovate-lanceolate, acute, silky beneath ; stems procumbent, filiform ; peduncles 1-flowered, with a bibracteate joint towards the flower; calyx villous, with lanceolate segments. 0. S. Native of Guinea. Corolla rotate, blue, size of those of *Anagdllis ccerùlea.* Capsule globose, glabrous, 1-celled, 4-seeded. Styles 4. Stigmas simple.

Azure-blue Evolvulus. PI. procumbent.

12 E. CUSPIDA'TUS (H. B. et Kunth, 1. c. p. 116.) stems procumbent, clothed with silky villi; leaves nearly sessile, oblong, cuspidately mucronate, clothed with silky villi on both surfaces, hoary ; flowers nearly sessile, shorter than the leaves. 2/. S. Native about the Orinoco, in sandy places near Angostura and Villa Farrera. Calyx clothed with silky villi; segments lanceolate, acuminately subulate, equal. Corolla unknown. Perhaps the same as the preceding.

Cuspidate-leaved Evolvulus. PI. procumbent.

13 E. COMMERSÒNII (Roem. et Schultes, syst. 6. p. 197.) stems slender, shrubby at bottom ; leaves small, linear-lanceolate, silky beneath : lower ones lanceolate-oval; flowers axillary, almost sessile, solitary. ©. ? S. Native of Monte Video. E. sericeus, Poir. diet. 3. p. *5S6.* Pers. ench. 1. p. 288. Flowers white.

Commcrson's Evolvulus. PI. procumbent.

14 E. INCA'NUS (Pers. ench. 1. p. 288. H. B. et Kunth, nov. gen. 3. p. 116.) stems tufted, diffuse, silky; leaves on short petioles, oblong-lanceolate, somewhat falcate, clothed with silky, silvery down on both surfaces; peduncles 1-flowered, equal in length to the leaves, or longer. J? . S. Native of Quito, among rubbish on the banks of the river Guallabamba. E. sericeus, Ruiz, et Pav. fl. per. 3. p. 30. t. *252.* f. 1. Calyx clothed with silvery, silky down ; segments lanceolate-subulate. Corollas blue. Capsule 1-4-seeded.

Hoary Evolvulus. PL procumbent.

15 E. ARGE'NTEUS (R. Br. prod. 489.) plant diffuse, hoary ; branches elongated, undivided; leaves lanceolate-ovate, nearly sessile, acute, silvery; peduncles 1-flowered, about equal in length to the leaves. ©. ? S. Native of New Holland, within the tropic, on the sea shore. Very nearly allied to *E. incdnus;* but the leaves of that species are broader, ovate, and petiolate.

Silvery Evolvulus. PI. diffuse.

16 E. HOLOSERICEUS (H. B. et Kunth, 1. c. p. 116.) procumbent; leaves sessile, oblong, acute, glabrous above, silvery and silky beneath; flowers axillary, sessile. J? . S. Native of New Granada, in fields; in La Culsta de Toluca; and near Ibague. Stem beset with silky hairs, as well as the calyx. Corolla blue.

Whole-silky Evolvulus. PI. procumbent.

17 E. ANGUSTI'SSIMUS (H. B. et Kunth, 1. c. p. 116.) stems rather procumbent, clothed with silky down ; leaves sessile, linear-lanceolate, acuminately cuspidate, glabrous above, and clothed with silky hairs beneath; flowers almost sessile, shorter than the leaves. %. S. Native along with *E. cuspiddtus.*

Calyx hairy; segments lanceolate, acuminated. Corolla pale blue. Ev. virgatus, Willd. rel. is probably the same.

Very narrow-leaved Evolvulus. Pl. procumbent.

18 E. Nuttallia'nus (Roem. et Schultes, syst. 6. p. 198.) erect; leaves linear-oblong, clothed with silky tomentum or hairs on both surfaces; peduncles short, 1-flowered. ♃. F. Native on the banks of the Missouri, and the high hills of Red River, near Kiamesha: also in Florida, and about the banks of the Platte; and of Mexico. E. argenteus, Pursh, fl. i. p. 187. Nutt. gen. amer. 1. p. 174. but not of R. Br. Flowers purple, coming out about the middle of the stem. Sepals partly linear, and acuminated.

Nuttall's Evolvulus. Fl. May, June. Clt. 1821. Pl. erect.

19 E. latifo'lius (Ker. bot. reg. 40 I.) suffruticose, villous, erect at bottom; branches diffuse; leaves nearly sessile, oblong-cordate, acuminated; fascicles of flowers nearly sessile, generally 3-flowered; sepals linear-lanceolate, pilosely ciliated. ♃. S. Native of Brazil. Corollas white, rotate. Styles 2, bipartite.

Broad-leaved Evolyulus. Fl. June, July. Clt. 1819. Pl. diffuse.

20 E. capita'tus (Nees et Mart, in act. bonn. 11. p. 80.) erect, hairy; leaves sessile, lanceolate; flowers capitate, terminal. ⊙. S. Native of Brazil, about Barra da Vaidas, in woods. Plant hoary. Leaves sessile, hoary beneath, 1½ inch long. Flowers in small villous heads, involucrated by 5-6 ovate-elliptic bracteas. Calycine segments unequal, villous. Corolla reddish, somewhat funnel-shaped, twice longer than the calyx; limb large, 5-angled, plicate, villous outside.

Capitate-flowered Evolvulus. Pl. 1 foot.

21 E. oligoca'rpus (Nees et Mart. in act. bonn. 11. p. SI.) procumbent, villous; leaves oblong, attenuated at the base; heads of flowers axillary and terminal, leafy. ♃. S. Native of Brazil, about Tamburil and Valos, among bushes. Leaves 6-9 lines long, on short petioles: lower ones obtuse: superior ones acutish. Heads of flowers sessile, mixed with oblong-lanceolate or lanceolate, villous bracteas. Calycine segments lanceolate, acuminated. Corolla somewhat funnel-shaped, blue; limb 5-lobed, dilated.

Glomerate-flowered Evolvulus. Shrub procumbent.

† *Doubtful species.*

22 E. arbuscu'lus (Poir. suppl. 3. p. 459. ? pi int hi spid; leaves small, almost sessile, ovate-lanceolate; flowers lateral and terminal, on short peduncles; stem shrubby, much branched, filiform. ♄. S. Native of St. Domingo. Leaves hairy. Calyx hardly pilose; segments acute. Corolla white, twice longer than the calyx.

Arbuscalous Evolvulus. Shrub.

23 E. Acapulce'nsis (Willd. rel. ex Kcetn. et Schultes, syst. 6. p. 199.) leaves lanceolate, villous, sessile; stem branched at the base; peduncles usually 2-flowered, length of leaves. ⊙. S. Native of Mexico, about Acapulco.

Acapulco Evolvulus. Pl. procumbent.

24 E. macrorhi'zus (Willd. rel. Qt. 1. c.) stem erect, branched; leaves ovate-oblong, mucronate, toraentose; corymbs axillary. ♄. S. Native of South America. Humb. et Bonpl.

Long-leaved Evolvulus. Shrub erect.

Cult. The species of *Evolvulus* are pretty little plants, of easy culture. They all do well in light sandy soil, or a mixture of sand and peat. They are all readily increased by seed, which ripen in abundance.

XXX. CLADOSTYLES (from κλαδος, *ktadoa, a* branch; and στυλος, *stylos*, a column; in reference to the [be branched styles.) Humb. et Bonpl. pl. aequin. 1. p. 202. t. 57. H. B. et Kunth, nov. gen. amer. 3. p. 118.

Lin. syst. *Pentandria, Digynia.* Calyx 5-parted. Corolla rotately-campanulate; limb 5-cleft. Styles 2, bipartite; stigmas simple. Capsule 1-celled, 1-seeded, not dehiscent.—An erect herb; with alternate, entire leaves, and terminal loose panicles of small yellow flowers.

1. C. panicula'ta (Humb. et Bonpl. l. c.) ⊙. S. Native of New Granada, near Turbaco. Stem branched, rather rough with adpressed, scattered hairs. Leaves sessile, lanceolate, acute, mucronate, narrowed at the base, beset with adpressed hairs on both surfaces, 1 inch long, and 3-4 lines broad. Flowers on long pedicels.

Panicled-flowered Cladostyles, Pl. 2 feet.

Cult. For culture and propagation see *Evolvulus*, above.

XXXI. WILSO'NIA (named in memory of John Wilson, author of a synopsis of British plants in Ray's method.) R. Ur. prod. p. 490. Clioisy, in mini, soc. phys. gen. C. p. 496.

Lin. syst. *Pentandria, Monogynia.* Calyx urceolate, pentagonal, 5-toothed. Corolla funnel-shaped, imbricate in aestivation. Style bifid; stigmas capitate. Ovarium small, 2-seeded.—An humble, prostrate, much branched, downy shrub. Leaves imbricated in 2 rows, small, thickish, sessile. Flowers axillary, sessile, solitary, bracteless.

1 W. rotundifolia (R. Br. l. c.) ♄. C. Native of New Holland, on the south coast.

Round-leaved Wilsonia. Shrub prostrate.

Cult. This is a singular and beautiful prostrate shrub, worth cultivating in every collection. A mixture of sand, loam, and peat, is the best soil for it; and it will be easily propagated by cuttings or by seeds.

Xsn III. DICHO'NDREÆ (this tribe contains plants agreeing with *Dichondra* in having distinct carpella.) Choisy, in mem. soc. phys, gen. C. p. 497. Embryo cotyledonous. Carpella distinct.

XXXII. DICHO'NDRA (from δις, *dis*, double; and χονδρος, *chondros*, a grain; in reference to the double capsule.) Forst. gen. p. 39. t. 20. Lam. ill. t. 183. R. Br. prod. 491.—Juss. gen. 129. ed. Usteri, p 144. H. B. et Kunth, nov. gen. 3. p. 119. —Sibthorpia spec. JJII!—Steripha, Gaert. fruct. 1. p. 81. t. 94. —Demnosia, Gaertn. vcg. iJS.—*Anonymos*, Walt. fl. cnr. 1. p. 110.

Lin. syst. *Pentandria, Digynia.* Calyx 6-parted. Corolla subrotate or campanulate; limb flat, 5-parted, Ovaria 2, 2-seeded. Styles 2, basilar; stigmas capitate or thick. Capsules 2, utricular, 1-seeded.—Humble, creeping, downy, nonlactescent herbs. Leaves cordate or reniform, petiolate. Pedicles axillary, 1-flowered, without bracteas.

1 D. repens (Forst, gen. p. 39. t. 20.) Leaves reniform or roundish-cordate, glabrous above and downy beneath; calyx exceeding the corolla a little. *I H.*. 1. Native of America, New Holland, Van Dieraen's Laud; and of the East Indies, on Mount Taong-Dong, Ava, &c. Lam. ill. t. 183. Rim Pav. fl. per. 3. p. 22. Sibthorpia evolvulacca, Lin. *I*; Steripha reniformis, Gaertn. fruct. 1. p. 81. t. 94. Leaves sometimes retuse or emarginate, ex R. Br.

Creeping Dichondra. Fl. July, Aug. Clt. 1803. Pl. cr.

2 D. sericea (Lamk. enum. 1. p. 249.) stems procumbent, hairy; leaves on long petioles, reniform, emarginate, repandly crenated, of the same colour on both surfaces, hairy; calyxes ciliated, hairy. ♃. F. Native of Pennsylvania.

Round-leaved Dichondra. Pl. trailing.

3 D. Carolinensis (Michx. fl. bor. amer. 1. p. 136.) leaves

reoiform, rounded not emarginate, the same colour on both surfaces, downy beneath; calyxes villous, closed. ♃. H. Native of South Carolina, by way-sides about Charlestown; and on the banks of the Mississippi, near New Orleans. Pursh, fl. 1. p. 187. D. rèpens, fl. Poir. suppl. 2. p. 470. D. rèpens, Nutt. in amer. phil. trans. n. s. 5. p. 195. Anonymos repens, Walt. fl. carol. 1. p. 110. Dematiòfila rèpens, Gmel. syst. veg. p. 458. Plant small, creeping. Flowers small, green.

Carolina Dichondra. Fl. June, Aug. Clt. 1812. Pl. creeping.

4 D. SERICEA (Swartz, fl. ind. occ. 1. p. 555. icon. t. 10.) leaves reniform, retuse at the apex, glabrous, or downy above silky and silvery beneath; calyx exceeding the corolla a little. ♃. F. Native of Jamaica, and near Santa Fe de Bogota; and of Mexico, about Jalapa. D. rèpens, β. sericea, Poir. suppl. 2. p. 470. This species comes very near *D. rèpens*; and only differs in the leaves being smaller, white, and silky beneath, not of the same colour on both surfaces.

Var. β; leaves reniform, emarginate, nerved and silky beneath. ♃. F. Native of Peru. D. rèpens, Ruiz. et Pav. fl. per. 3. p. 58. D. rèpens Peruviana, Poir. suppl. 2. p. 471.

Silky Dichondra. Fl. June, Aug. Clt. 1793. Pl. creeping.

5 D. ASARIFOLIA (Willd. hort. berol. 2. p. 81. t. 81. enum. 1. p. 297.) leaves broadly reniform, cuneated at the base, retuse at the apex, silky and silvery on both surfaces; corolla exceeding the calyx. ♃. F. Native of Mexico, near Guanaxuato and Zelaya; also near Honda. H. B. et Kunth, nov. gen. 3. p. 120.

Silvery-leaved Dichondra. Fl. June, Aug. Clt. 1818. Pl. procumbent.

† *Doubtful species.*

6 D. BARBATA (Willd. rel. ex Ruem. et Schultes, syst. 6. p. 289.) leaves reniform, repand, villous. ♃. F. Native of South America. Humb. et Bonpl.

Repand-leaved Dichondra. Fl. creeping.

7 D. CYMBALARIÆFÒLIA (Willd. rel. l. c.) leaves reniform, 7-lobed, downy beneath. ♃. F. Native of?

Cymbalaria-leaved Dichondra. Fl. creeping.

Cult. These are pretty little creeping plants, generally having the leaves silvery on the under sides. *D. rèpens, Carolinìana* and *retundifòlia* grow well in the seams between flat stones in front of a stove or green-house; and even the other species will do in a similar way through the summer. All grow well in pots in a mixture of peat, loam, and sand; and are easily increased by dividing their plants, which are all creeping

XXXIII. FALKIA (so named by Thunberg, in honour of John Peter Falck, a Swede, professor of botany at Pou Isburgh, and who accompanied Pallas in part of his travels in Siberia.) Thunb. nov. gen. 19. Lin. suppl. 30. Juss. gen. 132. Schreb. gen. no. 611. Convólvulus species, Thunb.

Lin. syst. *Pentándria, Tetragynia.* Calyx 5-parted. Corolla campanulate, crenated. Styles 4; stigmas globose. Ovaria 4, 1-seeded.—A small, suffruticose, glabrous plant.

1 F. RÉPENS (Lin. suppl. 111. Thunb. diss. nov. gen. t. p. 17.) ♄. F. Native of the Cape of Good Hope, on hills near Cape town. Convólvulus Falkia, Thunb. prodr. 1. p. 35. fl. cap. 1. p. 15. Andr. rep. t. 257. Stems brownish grey, decumbent, rooting; branches filiform. Leaves scattered, petiolate, cordate-ovate, obtuse, entire. Peduncles hardly longer than the leaves. Corollas red, with a paler throat.

Creeping Falkia. Fl. May, Aug. Clt. 1774. Pl. creeping.

Cult. *Falkia* is a pretty little plant, which grows freely in a mixture of loam and peat, or any light soil; and the plant is readily increased by division.

TRIBE IV. CUSCUTEÆ (this tribe only contains the genus *Cuscuta.*) Choisy, in mem. soc. phys. gen. 6. p. 497. Embryo without cotyledons. Plants parasitical.

XXXIV. CUSCUTA (According to Gelius, 1536, it is derived from the Arabic name Kechouth.) Tourn. 122. Lin. gen. no. 176. ed. Schreb. no. 227. Gaertn. fruct. 1. p. 257. t. 52. Juss. gen. 137. R. Br. prod. p. 491. H. B. et Kunth, nov. gen. amer. 3. p. 121. Choisy, in mem. soc. phys. gen. 6. p. 497.

Lin. syst. *Pentándria, Digynia.* Calyx 5, rarely 4-parted. Corolla urceolate or campanulate; limb 5, rarely 4-cleft, marcescent. Stamens usually furnished with a scale at the base of each, rarely naked. Styles 2, sometimes free, and sometimes combined; stigmas acute or capitate. Ovarium 2-celled; cells 2-seeded. Capsule 1-2-celled.—Leafless, twining, parasitical herbs. Flowers aggregate, subcapitate, spicate, umbellate, or corymbose, unibracteate. The seed does not split into lobes, but opens and puts forth a little spiral body, which is the embryo. The stalks twine contrary to the sun's apparent motion, sending out a number of little vesicles, which attach themselves to the bark of the supporting plant.

§ 1. *Species natives of Europe.*

1 C. EUROPÆA (Lin. spec. ed. 1. p. 180.) flowers aggregate, nearly sessile; corolla with a naked throat, 4-5-cleft; epipetalous scales none; stigmas acute, filiform. ⊙. H. Native of Europe and Caucasus, in hedges, usually on bushes and the loftier plants, as *Brambles, Bitter-sweet, Ferns, Thistles, Hemp, Hops*, also on *Flax, Nettles*, and *Grass*. In England, in Cambridgeshire; at Shipston upon Stone, Worcestershire. In Scotland, near Aberdeen, and at Musselburgh. Smith, engl. bot. t. 378. Dieb. fl. cane. 1. p. 113. Oed. fl. dan. t. 199. Pleuck. off. t. 70.—Hook fl. lond. 67. C. major, Bauh. pin. p. 209. 1). C. fl. fr. no. 2754. C. tetrándra, Moench. C. scándens, Brotero, fl. lus. p. 208. C. Epithymum, Thuill. fl. par. ed. 2. 1. p. 85. C. filiformis, Lam. fl. fr. 2. p. 307. C. densiflòra, Willdenet, in Linnæa, 1. p. 322. Cassùtha or Cuscum, Fuel, hist. 547. t. 548. Bauh. hist. 3. p. 266. Calyx red; segments bluntish. Corollas urceolately campanulate, white, usually 4-cleft, and tetrandrous; but in the south of Europe 5-cleft and pentandroid. Seeds usually 2 in each cell. Anthers yellow.

European or *Great Dodder.* Fl. Aug. Sept. Britain. Pl. parasitical.

% C. EPITHYMUM (Lin. spec. 180.) flowers fascicled, sessile; corolla 5-cleft; epipetalous scales crescent-shaped, crenated; stigmas acute. ⊙. H. Native throughout Europe; plentiful in Britain, in cultivated fields, particularly among pulse; also on furze, flax, thyme, nettles, heath, lavender, spurge, hops, grass, &c. Smith, engl. bot. 378. Oed. fl. dan. t. 427. Pleuck. off. t. 71. C. Europæa, Smith, engl. bot. t. 55. Lam. fl. t. 88. C. Europæa, β, Lin. spec. p. 180. C. filiformis, β, Lam. fl. fr. 2. p. 307. C. minor, D. C. fl. fr. no. 2755. Epithymum, Cam. epit. 983, Col. ecphr. 2. p. 23. Stems filiform. Mudi smaller in every part than *C. Europæa*. Flowers more crowded, frequently 4-cleft and tetrandrous. Calyx red. Corolla white, bell-shaped, with ncilto segment! The name is from επι, *epi*, upon, and *Thymus*, thyme; so called from being parasitical on thyme.

Epithymum or Lesser Dodder. Fl. July. Oct. Britain. Pl. parasitical.

2 C. LUPULIFORMIS (Krok. fl. siles. no. 251. t. 36.) flowers racemose, not conglomerate or pedunculate; stems lupuliform, rough, dotted. ⊙. H. Native of Bohemia and Silesia. C. monogynum, Pohl. tent. fl. boh. p. 156. Schultes, contr. fl. ed. 2d. no. 728.

Hop-headed Dodder. Pl. parasitical.

4 C. MONOGYNA (Vahl, symb. 2. p. 32.) flowers pedunculate, monogynous; throat of corolla naked; styles combined; stigma globose. ☉. H. Native of the Levant, on *Thymus Gallica*; and between Smyrna and Bursa; and of Caucasus. Sibth et Smith. fl. græc. t. 257. Bieb. fl. taur. 1. p. 116.—Tourn. cor. 45.—Barrel. icon. 1. p. 15. t. 23. Habit of *C. Americana*, but twice the size in all its parts. Stem warted. Flowers clustered, forming lateral and terminal interrupted racemes. Calyx shining red; segments ovate. Corolla urceolate, pale red; segments of the limb obtuse, spreading. Cells of capsule 2-seeded.

Monogynous Dodder. Pl. parasitical.

§ 2. *Species natives of New Holland.*

5 C. AUSTRA'LIS (R. Br. prod. p. 491.) digynous; stigmas capitate; epipetalous scales lacerately fringed, ending beneath the filaments, which are broadly subulate; calyx smooth, deeply 5-cleft; segments keeled, rather wrinkled. ☉. G. Native of New Holland, within the tropic; and New South Wales.

Southern Dodder. Fl. July, Oct. Clt. 1818. Pl. parasitical.

6 C. CAMPA'NA (R. Br. prod. p. 491.) digynous; stigmas capitate; epipetal scales lacerately fringed, exceeding the bases of the subulately filiform filaments; calyx 5-cleft, with keeled, rather wrinkled segments. ☉. G. Native of New Holland, within the tropic. Grisebach aphylla. Lour. coch. 171. Stems white. Corolla campanulate, 5-cleft. Berry white; cells 2-seeded.

Keeled-calyxed Dodder. Pl. parasitical.

§ 3. *Species natives of America.*

7 C. CORYMBO'SA (Ruiz. et Pav. fl. per. 1. p. 69. t. 115. f. b.) corymbs pedunculate; corollas urceolate, quadrifid, tetrandrous, with a naked throat; stamens inclosed; stigmas capitate. ☉. G. Native of Peru, in cultivated fields; particularly on *Medicago sativa*. Scales on the branches acute, concave. Sepals oblong, obtuse, white. Corollas white.

Corymbose-flowered Dodder. Pl. parasitical.

8 C. SCANDE'NS (Ruiz. et Pav. fl. per. 1. p. 69. t. 105. f. a.) flowers crowded, sessile; corollas campanulate; scales at the base of the filaments ovate, fringed or ciliated; stigmas capitate. ☉. G. Native of Peru, in corn-fields near Lima. Stems marked with purple lines and spots. Scales of the branches small, ovate. Flowers sweet-scented, propped by concave scales. Calyx white, dotted with red; segments roundish, obtuse. Corolla white; segments ovate, acute, reflexed; therefore the stamens are exserted. This species is called *Cabellos de Angel* in Peru.

Sweet-scented-flowered Dodder. Pl. parasitical.

9 C. UMBELLA'TA (H. B. et Kunth, nov. gen. amer. 3. p. 121.) umbels pedunculate, generally 8-flowered; calycine segments acute; corolla campanulate, with acute, reflexed segments; scales at the base of the filaments lacerately fringed; stigmas capitate; genitals exserted. ☉. G. Native of New Spain, between Queretaro and Salamanca. Flowers pedicellate, pentandrous, digynous, white.

Umbellate-flowered Dodder. Pl. parasitical.

10 C. OBTUSIFLORA (H. B. et Kunth, l. c. p. 122.) heaps of flowers sessile; calycine segments obtuse; corolla campanulate, with obtuse segments; scales at the base of the filaments lacerately fringed; stigmas capitate; genitals hardly inclosed. ☉. G. Native of Peru, on the Andes. Said by Torrey to be very abundant about the sources of the Canadian river, parasitical on *Port. Oieracea*. Plant orange-coloured. Flowers on short pedicels, pentandrous, digynous, white. Cells of capsule 1-2-seeded.

Blunt-flowered Dodder. Pl. parasitical.

11 C. OBLONGIFOLIA (H. B. et Kunth, l. c.) heaps of flowers sessile; calycine segments obtuse; corollas globose, with obtuse, spreading segments; epipetalous scales fringed; genitals exserted; stigmas capitate. ☉. i. Native of the Spanish Main, near Cumana, in meadows, where it is called by the natives *Hilo de Oro*. Flowers on short pedicels, pentandrous, digynous. Plant strong-scented.

Strong-scented Dodder. Pl. parasitical.

12 C. TOLUCA'NA (H. B. et Kunth, l. c.) heaps of flowers sessile; calycine segments acuminated; corolla nearly globose, with acute, reflexed segments; epipetalous scales ciliated; genitals exserted; stigmas capitate. ☉. G. Native of Quito, near Chillo. Plant parasitical on *Berberis* and *Bernadesia*, orange-coloured. Flowers fetid, pentandrous, digynous, white.

Fetid-flowered Dodder. Pl. parasitical.

13 C. FLORIBU'NDA (H. B. et Kunth, l. c. p. 123.) corymbs pedunculate; calycine segments obtuse; corolla globose, twice higher than the calyx, with acute, reflexed segments; epipetalous scales ciliated; genitals much exserted; stigmas capitate. ☉. G. Native of New Spain, in the places near Pont Isla. Plant parasitical on *Bignonia rosealis*, orange-coloured. Flowers pedicellate, white, pentandrous, digynous. Cells of capsule 1-2-seeded.

Bundle-flowered Dodder. Pl. parasitical.

14 C. PUTAYA'NA (H. B. et Kunth, l. c.) corymbs pedunculate; calycine segments obtuse; corolla globose, a little higher than the calyx, with acute, erect segments; epipetalous scales ciliated; genitals exserted; stigmas capitate. ☉. G. Native near Popayan, in temperate places. Plant yellow. Corymbs trichotomous. Flowers white, pentandrous, digynous, pedicellate. Cells of capsule 1-2-seeded. Said to be allied to *C. corymbosa*, Ruiz. et Pav.

Popayan Dodder. Pl. parasitical.

15 C. GRANDIFLORA (H. B. et Kunth, l. c. t. 213.) peduncles usually 3-flowered, a little crowded; calycine segments obtuse; corollas rotately-campanulate, with obtuse segments; epipetalous scales wanting; genitals included; stigmas capitate. ☉. G. Native near Santa Fe de Bogota. Plant parasitical on *Spermacoces*. Peduncles 2-3-flowered, solitary, or in fascicles. Flowers pedicellate, pentandrous, digynous. Cells of capsule 2-seeded.

FIG. 32.



Great-flowered Dodder. Pl. parasitical.

16 C. CHILE'NSIS (Ker. bot. reg. t. 602. Hook. et Arn. in Beech. voy. p. [illegible] hot, [illegible]. 35.) pentandrous, digynous; calycine segments ovate, rounded, 3 times shorter than the corolla; epipetalous scales lacerately fringed; segments of corolla ovate, 3 times shorter than the tube, reflexed; anthers sessile; one of the styles shorter than the other; stigmas pilliately capitate. ☉. i. Native of Chili, about Concepcion, Valparaiso, and Andes of Chile.

Chili Dodder. Pl. Jan. Dec. Clt. 1821. Plant parasitical.

17 C. AMERICA'NA (Lin. spec. 180.) flowers pedunculate, umbellate, pentandrous, quinquefid; corolla tubular; limb small, spreading; stigmas capitate; epipetalous scales fringed. ☉. H. Native of Jamaica, St. Thomas, Surinam, Virginia; parasitic in hedges, and on other plants, in moist situations. The

whole plant has a reddish-fellow appearance, Lam. diet. 2. p. 229. Pursh, fl. amer. sept. 1. p. 116. Jacq. amer. pict. t. 17.—Sloane, jam. 85. hist. 1. p. 201. t. 128. f. 4. C. Surinam-6nsis, Schill. lepr. t. 2. Vittm. summ. pi. 1. p. 341. C. Gronovii, Willd. herb. Flowers small, aggregate, yellowish. Genitals hardly inclosed.

American Dodder. PI. parasitical.

18 C. JALAPE'NSIS (Schlecht, in Linnsea, 8. p. 515.) scales ovate, cuneated, or spatulate at the base, much shorter than the style, which is hardly exserted; flowers aggregate; corolla deeply 5-lobed : lobes reflexed at length, therefore the anthers are exserted; capsule bicornute. %. S. Native of Mexico, near Jalapa, on *Tragia Bdccharis,* and *Croton,* &c. Flowers white. Said to come nearest to *C. Americana;* but differs from it in the corolla being longer, blunter, and more deeply lobed ; and in the other characters indicated above.

Jalapa Dodder. PI. parasitical.

19 C. MINIA'TA (Mart, reise. ex Linnaea, 5. p. 29.) racemes pedunculate, 6-8-flowered; throat of corolla closed by ciliated scales; genitals inclosed. ©. G. Native of Brazil.

Vermilion Dodder. . PI. parasitical.

20 C. RACEMO'SA (Mart. 1. c. p. 38.) flowers pedunculate, cymosely racemose; corolla twice longer than the calyx, pentandrous ; throat closed by ciliated scales. ©. G. Native of Brazil.

Racemose-Cowered Dodder. PI. parasitical.

§ 3 *A species native of Africa.*

21 C. AFRICA'NA (Thunb. phyt. Watt. p. 17. fl. cap. p. *568.)* peduncles 1-flowered ; flowers 5-cleft, pentandrous, digynous. 0. G. Native of the Cape of Good Hope, parasitical on various trees. C. Americana, Thunb. prod. p. 32. Peduncles capillary, furnished with a bractea at the base. Calyx very short, 5-cleft. Filaments 5, inserted in the incisures between the lobes of the corolla, and equal in length to them. The stems are more slender, and the flowers are smaller than those of C. *Americana.*

African Dodder. PI. parasitical.

22 C. ARA'BICA (Fres. fl. egypt. et arab. p. 165.) digynous, pentandrous; fascicles few-flowered; flowers nearly sessile, small; genitals inclosed; epipetalous scales fringed at top; branches capillary, densely imbricate. %. H. Native of Arabia. Habit of *C. epithymum.* Tube of corolla and calyx shorter than the limb.

Arabian Dodder. PI. parasitical.

§ 4. *Species natives of Asia.*

23 C. VERRUCOSA (Sweet, fl. gard. t. 6.) digynous, pentandrous ; stigmas lanceolate, obtuse, dilated at the base, fleshy ; epipetalous scales fimbriately jagged; anthers nearly sessile ; calyx 5-cleft, with roundish segments. 1/ . H. Native of Nipaul. Branches irregularly marked with purple, linear spots. Racemes numerous, often 3-flowered, but sometimes 9-10-flowered. Flowers white, fragrant.

Warted-stemmed Dodder. Fl. Sept. Nov. Clt. 1822. PI. parasitical.

24 C. HOOKE'RI (Sweet, hort. brit. p. *290.)* digynous, pentandrous ; stigmas nearly sessile, diverging, subulate; corolla campanulate, 5-toothed, with reflexed segments ; epipetalous scales fringed; anthers sessile. 0. G. Native of Mysore and Coromandel. C. reflexa, var. /3, verrucosa, Hook. exot. fl. t. 150. Stems spotted, and dashed with purple. Peduncles and calyxes warted. Corolla white.

Hooker's Dodder. Fl. Sept. Nov. Clt. 1823. PI. parasitical.

25 C. REFLE'XA (Roxb. cor. 2. p. 2. t. 104.) digynous, pentandrous ; style hardly any: stigmas large, fleshy, expanded, acuminated ; corolla with a cylindrical tube and reflexed segments ; calycine segments ovate-oblong, acutish; epipetalous scales bearded ; filaments very short, ©. G. Native of Coromandel, where it is called *Sitamaponynvoloa* by the Telingas. Stems rough. Racemes long, numerous, many-flowered. Flowers white. Capsule baccate.

Reflexed-fiowered Dodder. PI. parasitical.

26 C. CIIINE'NSIS (Lam. diet. 2. p. 229. Willd. spec. 1. p. 704.) digynous, pentandrous; stigmas subcapitate ; corolla urceolate, with corniculate segments ; calyx almost the length of the corolla, with keeled segments; genitals inclosed. 0. G. Native of China. Plant greenish-yellow. Flowers in loose, few-flowered fascicles, the whole forming an irregular panicle. Corollas white. Styles twisted.

China Dodder. Fl. July, Oct. Clt. 1803. PI. parasitical.

27 C. SULCATA (Roxb. ex Wall, cat. no. 1320.) digynous, pentandrous;. stigmas capitate ; corolla campanulate, small; calycine segments ovate-oblong, membranous, pellucid, equal, obtuse, (" fleshy, furr-owed," ex Roxb.); genitals exserted. ©. G. Native of Silhet, Martaban, Bengal. Stems filiform. Flowers crowded, in lateral, few-flowered fascicles, scaly at the base; pedicels almost wanting. Styles nearly equal, exserted. Capsule small.

Furrowed-calyxed Dodder. PL parasitical.

28 C. MACRA'NTHA ; monogynous, pentandrous; style one, short: stigma acute ; corolla tubular, 4-5 times longer than the calyx, 5-lobed at apex : lobes short, acutish, reflexed ; epipetalous scales membranous, near the base of the corolla; sepals oblong-roundish, obtuse, membranous. 0. G. Native of Nipaul. C. grandiflora, Wall, cat. no. 1318. Stems rough, black in the dried state. Common peduncles elongated, racemose, 1-2 inches long, many-flowered, those on the younger branches short and few-flowered ; flowers pedicellate. Corolla showy. Anthers sessile, in the throat of the corolla. This, along with *C. reflexa* and *C. monogyna,* might form perhaps a distinct genus from the simple style.

Large-flowered Dodder. PI. parasitical.

29 C. HYALI'NA (Roth. nov. spec. p. 220.) digynous tetrandrous; peduncles 3-flowered ; flowers pedicellate ; corolla transparent, 4-cleft;. genitals inclosed; stigmas capitate; capsule membranous. ©. S. Native of the East Indies. Stems capillary. Corolla one-half longer than the calyx. Epipetalous scales seated on the stamens, fixed to the mouth of the corolla, and alternating with its segments, which are lanceolate. Capsule 2-celled ; cells 2-seeded.

Hyaline-flowered Dodder. PI. parasitical.

30 C. CAPILLA'RIS (Wall. cat. no. 1321.) 0. S. Native of the East Indies, at Segaen, opposite Ava. This only differs from *C. sulcata* in the flowers being a little more crowded.

Capillary Dodder. PL parasitical.

31 C. CAPITA'TA (Roxb. ex Spreng. syst. 1. p. 864.) flowers disposed in crowded heads; calyx and corolla papillose, pellucid. ©. G. Native of the East Indies.

Capitate-flowered Dodder. * PL parasitical.

*\ *Doubtful species.*

32 C. FUSIFORMIS (Willd. rel. ex Rcem. et Schuhes, syst. 6. p. 205.) peduncles 1-3-flowered; corolla 4-cleft, very minute and remote. ©. G. Native of the Cape of Good Hope, on *Stavia radiata.*

Fusiform Dodder. PL parasitical.

33 C. CYMOSA (Willd. 1. c.) corollas quinquefid; flowers cymose ; cymes bifid. ©. S. Native of South America. Humb. et Bonpl. Perhaps the same as C. *umbellata.*

Cyssus-flowered Dodder. Pl. parasitical.

Cult. The species are all parasitical, or rather epiphytical plants; the hardy species grow very well on ivy, or any small shrubs. All the species may be grown by sowing the seeds in a pot of light earth, and plunging the pot in the earth at the side of any soft wooded plant.

† *It is not known whether the following genus belongs to the present order.*

XXXV. MOUROUCO'A (the name of the genus in Guiana.) Aubl. Guian. 1. p. 142. t. 54. Desr. in Lam. dict. 4. p. 337. Lam. ill. t. 105. Juss. gen. 133. ed. Usteri. p. 148.

Lin. syst. *Pentandria, Monogynia.* Calyx deeply 5-parted, coloured; segments approximate; outer ones the largest, violaceous. Corolla funnel-shaped; tube short; segments of the limb spreading, roundish. Stamens rising from the base of the lobes, in the upper part of the tube; filaments long, incurved. Stigma thick, roundish, bilamellate. Capsule girded by the calyx, 2-celled, ex Lam., 3-celled, ex Juss., ovate-oblong, coriaceous, fibrous; cells 1-seeded. Seeds large.—A climbing shrub, with stiff, elliptic, acute, glabrous leaves, and axillary, fleshy, thick peduncles, bearing fascicles of flowers at their tops. Corollas large, fine, blue.

1 M. violacea (Aubl. l. c.) ♄. ☉. S. Native of Guiana, in woods. Convolvulus macrocpérmus, Willd. spec. 1. p. 860. Stem branched. Leaves entire, plicate; petioles channelled above.

Violaceous-calyxed Mourouca. Shrub climbing or twining.

Cult. For culture and propagation see *Argyréia*, p. 257.

Order CLXV. RETZIACEÆ (this order contains plants agreeing with *Retzia* in important characters.) Bartl. ex Choisy, in mem. soc. phys. gen. 6. p. 400.

Calyx bracteate, bibracteate, deeply 5-parted. Corolla tubular, cylindrical. Stamens inserted into the tube; anthers subcordate. Stigmas 2, or bifid. Capsule 2-celled; dissepiment placentiferous on both sides; cells many-seeded.—Branched, erect, shrubs. Leaves alternate, or 4 in a whorl. Flowers lateral, sessile towards the extremities of the branches. This order differs from its allies in the cells of the capsule being many-seeded, and in the dissepiment being placentiferous.

Synopsis of the genera.

1 Re'tzia. Corolla villous. Style bifid. Cells of capsule many-seeded.

2 Lonchostoma. Corolla glabrous. Styles 2. Cells of capsule generally 10-seeded.

I. RETZIA (so named by Thunberg, in honour of Anders Johan Retzius, professor of natural history and economy, in the university of Lund, in Sweden; author of Observationes Botanicæ, Lipsiæ, fol.) Thunb. act. lund. 1. p. 53. nov. gen. 4. Lam. ill. t. 103. Schreb. gen. no. 985. Lin. suppl. 18. Juss. gen. 133. ed. Usteri. p. 149.

Lin. syst. *Pentandria, Monogynia.* Calyx 5-parted, unequal; segments lanceolate. Corolla tubular, contracted under the limb, villous inside and outside, 5-parted at apex; limb short; segments or lobes obtuse, concave, very villous at apex. Anthers subcordate. Stigma bifid, simple. Capsule oblong, acute; cells many-seeded.—An erect, branched shrub. Leaves 4 in a whorl. Flowers bracteate, terminal, crowded.

1 R. spicata (Thunb. act. lund. 1. p. 55. t. 1. f. 2. Lam. ill. t. 103. Lin. suppl. 128.) ♄. G. Native of the Cape of Good Hope, on the highest mountains. R. Capénsis, Thunb. prod. p. 24. Branches hairy. Leaves crowded, lanceolate-linear, sessile, blunt, 1-grooved above, with impressed dots, 2-grooved beneath. Flowers lateral towards the extremities of the branches, sessile, crowded, upright, almost concealed among the leaves. Bracteas acute, keeled, hairy, longer than the calyx. Corolla rufescent. This plant bears a very great affinity with *Convólvulus*, and especially with *Convólvulus cneorhoides*, which is probably also a species of *Retzia*.

Spicate-flowered Retzia. Fl. May, June. Cl. ? Shrub 4 feet.

2 R.? capensis (Spreng. syst. 1. p. 589.) glabrous; erect; stem herbaceous, branched; leaves alternate, lanceolate, entire, erect; flowers solitary, terminal, naked. ♃. G. Native of the Cape of Good Hope. Polemónium corymbosoides, Thunb. prod. p. 33. Lin. suppl. 139. Willd. spec. 1. p. 1187. Stigma bifid. Said to resemble *Campánula persicifólia*.

Campanula-like Retzia. Pl. 2 to 3 feet.

3 R. serrulata (Spreng. syst. 1. p. 589.) stems herbaceous, villous; leaves alternate, sessile, lanceolate, marginate, scabrous; flowers axillary and terminal, sessile. ♃. G. Native of the Cape of Good Hope. Polemónium roelloides, Thunb. prod. 1. p. 33. Lin. suppl. 139. Willd. spec. 1. p. 887.

Roella-like Retzia. Pl. 1 to 3 feet.

Cult. Any light rich soil will answer this shrub, or a mixture of peat, loam, and sand. Cuttings will strike root freely in sand, under a hand-glass.

II. LONCHOSTOMA (from λογχη, *lanche*, a lance; and στομα, *stoma*, a mouth; in reference to the segments of the corolla, which are lanceolate, and attenuated towards the throat of the corolla.) Wikstr. in acad. holm. 1818. t. 10. Spreng. gen. 1. p. 210.

Lin. syst. *Pentándria, Digynia.* Calyx bracteate, imbricate, 5-parted. Corolla tubular; limb 5-parted; segments lanceolate, attenuated to the throat. Stamens 5, inserted in the tube of the corolla. Styles 2. Capsule 2-celled, 2-valved; dissepiments placentiferous on both sides; cells generally 10-seeded.—Shrubs, natives of the Cape of Good Hope, with alternate leaves. Flowers spicate, terminal.

1 L. obtusifolium (Wikstr. l. c.) leaves elliptic, hairy on one side; sepals and segments of corolla obtuse; styles subclavate, inclosed. ♄. G. Native of the Cape of Good Hope. Passerina obtusifólia, Thunb. prod. 1. p. 76.

Obtuse-leaved Lonchostoma. Shrub.

2 L. acutifolium (Wikstr. l. c.) leaves ovate, pilose on one side; sepals and segments of corolla acute; styles filiform, exserted. ♄. G. Native of the Cape of Good Hope.

Acute-leaved Lonchostoma. Shrub.

Cult. For culture and propagation see *Retzia* above.

Order CLXVI. BORAGI'NEÆ (this order contains plants agreeing with *Borágo* in important characters.) Juss. gen. p. 130. ed. Usteri, p. 143. R. Br. prod. p. 492.—Asperifólia Nuciferæ, Lehm. asp.

Calyx 5-parted, rarely 4-parted, permanent. Corolla hypogynous, monopetalous, usually regular, 5-cleft, rarely 4-cleft, imbricate in æstivation. Stamens epipetalous, equal in number to the segments of the corolla, and alternating with them, rarely more. Ovarium 4-parted, 4-seeded, or simple, 2-4-celled, with

a definite number of pendulous ovula. Carpels 4, distinct, or joined at bottom; or a berry containing 2-4 pyrenae. Seeds exalbuminous. Embryo inverted.—Herbs or shrubs. Leaves alternate, exstipulate, usually rough. Flowers generally disposed in secund spikes, but sometimes panicled and corymbose, and sometimes axillary and solitary.

The true *Boraginece* are chiefly herbaceous plants, with alternate exstipulate leaves, the surfaces of which are covered with minute asperities, and with flowers arranged in one-sided spikes or racemes ; very rarely solitary. The fruit is generally composed of 4 disti :t carpels. Some, *Echiums,* and a few more, **are shrubs. The genus *Tournefortia* and *Messerschmidtia*** are chiefly composed of shrubs. Some of the plants of this order are mere weeds, quite unworthy of culture; others are **eminently beautiful, as many *E^chiums, Onosmas, Onosmodiums,*** *Symphy turns Mertensias,* and others. In general they have mucilaginous and emollient qualities, which are especially abundant in the root of *Symphy turn* and *Cynoglossum.* Pure nitre has been found in several plants of this order. A red colour is given **out by *Anchilsa tinctoria, Lithospermum tinctorium,* and *Onosma*** *cchioides,* which is used in dyeing. Several plants of the same order are employed on the same account in America.

*Synopsis of the genera**

TRIBE I.

BORAGIE^N;E. Fruit of 4 distinct, 1-celled carpels, which are imperforated at the base. Corolla deeply 5-parted, with pointed segments. Stamens usually exserted. Inflorescence diffuse.

SUBTRIBE I.

BOR'AGES. Nuts fixed to the bottom of the calyx, imperforated at the base. Corolla rotate; throat furnished with vaulted processes.

1 BORA'GO. Corolla rotate ; throat furnished with emarginate processes or arches. Stamens glabrous ; anthers oblong, pointed, fixed by the inner side. Nuts turbinate, fixed to the bottom of the calyx.

2 TRACHYSTE^MON. Corolla rotate; throat furnished with short, blunt, or emarginated processes or arches. Stamens with lengthened, hairy filaments, and incumbent, pointless anthers. Nuts fixed to the bottom of the calyx.

SUBTRIBE II.

RINDE'REJE. Nuts adnate to the central column. This, with subtribe *Cynoglossece* of tribe *Buglossece,* might with propriety form a tribe to be called *Cynoglossece,* from the carpels being fixed to the central column.

§ 1. *Throat ofcorolla furnished with vaulted processes.*

3 MA'TTIA. Corolla angular, tubularly funnel-shaped ; throat furnished with processes. Stamens exserted, but usually inclosed ; anthers sagittate, connivent. Nuts furnished with a membranous, emarginate, orbicular wing, fixed to the centre column longitudinally,

4 SOLENA'NTHUS. Corolla tubular, 5-toothed; throat furnished with 5 arched processes. Stamens exserted. Nuts 4, depressed, echinated, adnate to the central column.

§ *2. Throat of corolla naked.*

5 RINDE'RA. Corolla funnel-shaped; throat naked. Anthers sessile, between the segments of the corolla. Nuts margined by a broad, striated, stiffish wing, adhering lengthwise to the thick central column.

6 TRICHODE'SMA. Corolla subrotate; throat naked; segments subulate at apex. Anthers fixed together by hairs. Nuts 4, half immersed in as many hollows or pits of a 4-winged, central column, adnate near the apex.

TRIBE II.

SYMPHY'TE-E. Corolla tubular, truncate; with very short lobes. Stamens inclosed. Carpels or nuts fixed to the bottom of the calyx. Inflorescence usually revolute.

7 SY'MPHYTUM. Corolla tubularly campanulate ; throat furnished with subulate or lanceolate processes, which connive into a cone. Nuts 4, 1-celled, ovate, imperforated at the base.

8 COLSMA'NNIA. Corolla cylindrically campanulate ; throat naked. Anthers sagittate, distinct. Nuts 4, 1-celled, ovate-triangular, perforated at the base.

9 STOMOTE^CHIUM. Corolla tubularly subcylindrical ; throat closed by roundish, fleshy, muricated processes. Anthers oblong. Nuts 4, 1-celled, roundish, perforated at the base.

10 ONOSMA. Corolla tubularly-campanulate ; throat naked. Anthers sagittate, connected by the lobes at the base. Nuts 4, 1-celled, ovate, imperforated at the base.

11 ONOSMODIUM. Corolla tubular ; throat naked ; limb ventricose ; segments conniving. Anthers sagittate, distinct. Nuts 4, 1-celled, turgid, shining, imperforated at the base.

12 PULMONA'RIA. Corolla funnel-shaped ; throat pilose. Nuts 4, 1-celled, turbinate, imperforated at the base.

13 MERTE'NSIA. Corolla tubularly funnel-shaped ; throat naked. Nuts 4, 1-celled, ovate, smooth or wrinkled, imperforated at the base.

14 CERINTHE. Corolla tubular; throat naked. Anthers hastate, connected, having the lobes spirally twisted at the base. Nuts *2,* 2-celled, or 4, combined by twos, imperforated at the base.

TRIBE III.

LITHOSPE'RME*:. Corolla open, tubular ; with broad, mostly rounded lobes. Stamens inclosed or exserted. Nuts 4, distinct, fixed to the bottom of the calyx, imperforated at the base, **except in *Stribila.***

15 LITHOSPE'RMUM. Corolla funnel-shaped; throat naked. Anthers oblorqr, inclosed. Nuts ovate, hard.

16 BA'TSCHIA. Corolla salver-shaped, with a straight tube, longer than the calyx, bearded by a ring of hairs inside at the base ; mouth naked. Nuts 4, hard, shining. Stamens exserted or inclosed.

17 MACROMEDIA. Corolla funnel-shaped; lobes acute;

throat naked. Anthers linear-oblong, incumbent. Style a small pruinose dot. Ovaria 4, connate.

18 Mólteis. Corolla cylindrically funnel-shaped; throat naked. Stamens exserted; anthers oblong, incumbent. Nuts hemispheric, concave at the base.

19 Craniospe'rmum. Corolla cylindrical, 5-toothed at apex; throat naked. Stamens exserted. Anthers oblong. Nuts large, difformed.

20 Syribila. Corolla funnel-shaped, with a slender tube and spreading limb, villous. Stamens length of the limb of the corolla. Style bifid; stigmas 2, capitate. Fruit pyra perforated at the base.

21 E'chium. Corolla funnel-shaped; throat wide, naked; segments of the limb in many species unequal. Nuts turbinate, gigartoid, scabrous.

22 Echiochilon. Corolla with a slender arched tube, a bilabiate limb, and a naked throat; upper lip 2-lobed; lower lip somewhat 2-lobed. Nuts glabrous, tubercled.

23 Nonea. Calyx at length inflated. Corolla funnel-shaped; tube straight; throat bearded. Stamens inclosed. Stigma simple. Nuts with parallel stripes.

24 Lobostemon. Corolla funnel-shaped; throat furnished with erect processes, which bear the stamens on the back. Nuts turbinate.

25 Lycópsis. Corolla funnel-shaped, 5-lobed; tube incurved; throat furnished with ovate prominent conniving scales. Stamens inclosed. Stigma emarginate. Nuts turbinate, concave at the base.

Tribe IV.

Buglóssæ. Corolla salver-shaped, or funnel-shaped, having the mouth closed with vaulted processes. Nuts 4, 1-celled, fixed to the bottom of the calyx, perforated at the base, except in *Echinospermum*.

Subtribe I.

Anchu'sæ. Nuts fixed to the bottom of the calyx, perforated at the base.

26 Anchu'sa. Corolla salver-shaped; throat closed by erect obtuse processes. Stamens inclosed. Nuts turbinate, concave, and perforated at the base.

27 Myosotis. Corolla salver-shaped; throat furnished with short processes. Stamens inclosed. Nuts perforated at the base.

28 Exarrhe'na. Corolla salver-shaped; throat furnished with vaulted processes. Stamens exserted; anthers peltate. Nuts umbilicate at the base.

29 Bothriospe'rmum. Corolla salver-shaped; throat furnished with bifid processes. Anthers nearly sessile, inclosed. Stigma capitate. Nuts reniform, perforated at the base, and umbilicate on the inner side.

Subtribe II.

Cynoglóssæ. Nuts fixed to the central column, imperforated at the base.

30 Echinospe'rmum. Corolla salver-shaped; throat furnished with short scales. Nuts echinated.

31 Roche'lia. Corolla funnel-shaped, 5-lobed; throat furnished with arched scales or processes. Nuts 2, oblique, combined, adnate to the indurated style.

32 Omphalódes. Corolla rotate; throat closed by short processes. Nuts depressed, having the margin cup-shaped from an inflexed membrane.

33 Cynoglóssum. Corolla salver-shaped; throat furnished with erect processes. Nuts depressed, echinated.

34 Asperu'ga. Calyx compressed in the fruit-bearing state, sinuately denticulated. Corolla funnel-shaped; throat closed by processes. Nuts depressed.

Tribe V.

Heliotrópeæ. Corolla salver-shaped or funnel-shaped, having the throat pervious or bearded; limb plicate. Nuts 4, 1-2-celled, combined into a single fruit, closed at the base, without manifest torus or receptacle.

35 Heliotrópium. Calyx 5-parted. Corolla salver-shaped; throat pervious, in some bearded; limb plicate. Stigma subconical. [illegible]lled.

36 Piptocla'na. Calyx tubular, 5-toothed. Corolla salver-shaped; throat furnished with teeth between the segments of the limb. Nuts 4, or solitary, 1-celled, wrinkled.

37 Tiarídium. Calyx 5-parted. Corolla salver-shaped; tube angular, arched, 5-rayed; segments of the limb undulated. Stigma capitate. Nuts 2-celled, mitre-formed, acuminated.

38 Colde'nia. Corolla funnel-shaped; throat wide, naked; limb flat, with equal spreading segments. Style bifid at apex. Nuts 1-celled, convex outside.

39 Halga'nia. Corolla funnel-shaped; tube short; limb flat; throat naked. Stamens inclosed; anthers fixed by the base, where they are cordate and connivent. Stigma simple, obtuse. Fruit obliquely and tetragonally ovate, composed of 2 2-celled divisions; cells 1-seeded.

40 Presle'a. Corolla funnel-shaped; limb having a plica between each of the segments; throat furnished with 5 fascicles of pili, just above ;.)w, connivent anthers, which are appendiculate at the base, and inclosed. Stigma rising from a conical disk. Fruit divisible into 4 1-seeded parts of titits.

41 Ex'ploca. Corolla funnel-shaped; limb flat. Stamens inclosed. Stigma annular, bearded at apex. Nuts 4, approximating by pairs, imperforated and angular at the base, fixed to the bottom of the cal

42 Tournefórtia. Corolla salver-shaped or subrotate; throat naked. Stamens inclosed. Stigma peltate, somewhat conical. uerry containing 2 2-seeded bony nu::*.

43 Messerschmídtia. Corolla salver-shaped, or subrotate; throat naked. Stamens inclosed. Stigma peltate, somewhat conical. Berry containing 4 1-seeded nuts.

44 Cana'la. Corolla tubular, ventricose, 5-toothed, coarctate at the base into a short tube. Stamens inclosed. Nuts 2, stony, roundish, cc

T

BORAGIE'Æ (this tribe contains plants agreeing with *Borage*

in the characters given). D. Don in Edinb. phil. journ. July, 1832. Corolla deeply parted, with pointed segments. Stamens exserted. Inflorescence diffuse. Nuts 4, 1-celled, 1-seeded, distinct.

Section I.

Boragineæ. Nuts fixed to the bottom of the calyx. Corolla rotate; throat furnished with vaulted processes.

I. BORAGO (altered from *Cor*, the heart, and *ago*, to effect; in reference to cordial qualities of Borago). Tourn. inst. t. 52. Lin. gen. no. 188. Schreb. 248. Juss. gen. p. 131. ed. Usteri. p. 146. Lehm. asper. p. 2. Lam. ill. t. 93. f. 1. Stokes, bot. t. 31. Boraginoides, Boerh. p. 88. Cynoglossoides, Ludw. act. gall. 1718. t. 10.

Lin. Syst. *Pentandria, Monogynia.* Corolh. rotate; throat furnished with emarginate vaulted proc-ses. Anthers distinct, oblong or lanceolate, awned, fixed by the inner side, conniving into a cone. Nuts 4, 1-celled. uirbtn;. fixed to the bottom of the calyx.—Rough plants, with fusiform roots; oblong or lanceolate leaves, and blue, panicled, drooping flowers.

1 B. OFFICINA'LIS (Lin. spec. 197.) lower leaves obovate, attenuated at the base; segments of the 'imb of the< corolla ovate, acute, spreading. ♂ H. This plant came originally from Aleppo, but is now naturalized in most parts of Europe. It is pov to be found in England, on dunghills and heaps of rubbish frequently. Smith, engl. bot. t. 56. Sr. Hil. pl. fr. 1. t. 38. Sturm, fl. germ. fasc. icon.—Plenck, icon. t. 77.—Blackw. t. 86.—Sabb. hort. d. t. 20, 21.—Mor. hist. 437. sect. 11. t. 26. f. 1. Plant hispid from pili, glaucous. Upper cauline leaves oblong, sessile, sub-cordate at the base. Corolla blue or purple, and sometimes white. Nuts ovate oblong, obtuse, ribbed on the inner side: ribs denticulated. Borage was formerly in great request, being reckoned one of the four cordial flowers. "Very light, surely," says an ingenious author, "were those sorrows which could be driven away by borage." Yet Borage flowers are at least innocent, which is more than can be said of many other general remedies for care. The whole herb is succulent, and very mucilaginous, having a p juliar Eaml smell when bruised. The juice affords a true nitre. The plant is now seldom taken inwardly. The young tender leaves may be used as salads, or as a pot herb.

Officinal Borage. Fl. June, Sept. Britain. Pl. 1 to 1½ foot.

2 B. CRASSIFÒLIA (Vent. hort. cels. p. 100. t. 100.) leavea lanceolate, acute, fleshy; segments of the timb of the co;olla unequal, linear-lanceolate, spreading. ♃. H. Native of Persia. Willd. enum. 1. p. 185. Lehm. asp. ; 20:;. Stems exceeding, glabrous, and as if they were articulated or nodose. Leaves glaucous, muricate.l from hooked prickles on the edges above, but glabrous beneath, except o he r.erves. Flowers solitary or racemose, purplish, erect at first.

Thick-leaved Borage. Fl. Ju. Jul). Clt. 182L[1]. PL I to 2 feet.

3 B. LONGIFÒLIA (Desf. il. atl. 1. p. l(i t. 44.) leaves linear- ling. :c 1. segments of the limb ovate, acute, e; ea rivc, ♃. H. Native of Numidia, in humid places. Willd. sp ils ;tiul t:nJ;. 777. Lehm. asp. p. 204. Root branched, woody. Stem imicli Ion ger than the ad from yellow retrograde pili. Leaves scabrous a Cu do ny beneath, cauline ones half stem-clasping. Flowers stiatl in a terminal bracteate panicle. Pedic at tin es hai y. egments of the calyx linear, e rolla. Corolla blue. Nuts oblong, smooth, obtuse.

Long-leaved Borage. Fl. July, Aug. Clt. 1825. Pl. 1 foot.

4 B. LAXIFLÒRA (D. C. fl. fr. 6. p. 422.) leaves oblong: segments of the limb of the corolla ovate, bluntish, erectly spreading. ♃. H. Native of Corsica. Horn. hort. hafn. 1. p. 181. Lehm. asp. p. 203. Anchusa laxiflora, Poir. suppl. 1. p. 736. D. C. syn. no. 2728. Sims, bot. mag. t. 1795. Stems decumbent, many from the same root, hispid from retrograde bristles. Leaves rough from strigæ: radical ones rosulate; cauline ones half stem-clasping. Flowers on long pedicels, racemose, nutant. Pedicels and calyx prinse. Corolla fine blue. Nuts turbinate, wrinkled.

Lesser-flowered Borage. Fl. M y, Aug. Clt. 1818. Pl. dec.

Doubtful species.

5 B. MACRANTHE'RA (Russel, hi schr. aleppo 2. p. 151.) leaves lanceolate, ciliated; calyxes ciliated, shorter than the tube of the corolla; anthers unequal. ♃. H. Native about Aleppo.

Long-anthered Borage.

6 B.? STRIGÒSA (Forsk. fl. ægypt. p. 41.) stem of leaves furnished with stiff pungent bristles: calyx prismatic. 1/.[5] H. Nativ e of Arabia. Anthers terminated by a long bristle. Seeds flat, emarginate, serrated.

Warted-leaved Borage. Pl.

Cult. Plants of the easiest culture, requiring hardly any care. Most of them are very pretty border flowers. They are always increased by seed, which should be sown in the open ground.

II. TRACH'YSTEMON (from τραχυς, *trachys*, rough, and στημων, *stemon*, a stamen.) D. Don, in edinb. phil. journ. July-Oct. 1832. Borágo species, Lin. and Smith.

Lin. syst. *Pentandria, Monogynia.* Corolla rotate; throat furnished with short, emarginate processes. Anthers distinct, oblong, pointless, incumbent; filaments long, hairy. Nuts 4, 1-celled, fixed to the bottom of the calyx, imperforated at the base.—Rough plants, with tuberous or fusiform roots, and copious drooping blue flowers.

1 T. ORIENTA'LIS (D. Don, l.c.) lower leaves cordate; segments of the limb of the corolla revolute, pilose outside at the apex. ♃. H. Native about Constantinople, and in woods about Belgrade. Borágo orientalis, Lin. spec. 197. Sabb. hort. 2. t. 22. Smith, fl. græc. t. 175. Ker. bot. reg. 283. Mill. icon i. t. 68. Borágo cordifólia, Moench. meth. suppl. p. 275. Kerner, abbild. t. 116.—Tourn. itin. 2. t. 12.—Busb. epist. 3. p. 10. t. 30. Root tuberous, and black outside. Stem hispid from retrograde pili, paniculately branched at top. Leaves hispid, broad; radical ones on long petioles; the uppermost cauline ones ovate-lanceolate, narrowed at the base, and nearly sessile. Flowers copious, on long pedicels, purplish-blue, disposed in conjugate racemes at the ends of the branches, bracteate. Processes in the throat of the corolla, white, short, blunt, emarginate.

Oriental Trachystemon. Lemon. II, March, May. Clt. 1752. Pl. 1 to 2 feet.

2 T. CRE'TICUM; lower leaves ovate; segments of the limb of the .i.n i linear, revolute, glabrous. ♃. H. Native of the islands of Candia and Zante, and on Mount Athos. Borágo Cretica, Willd. spec. 1. p. 772. Dest. cor. Tourn. in mus. mus. 10. p. 428. t. Sibth et Smith, fl. græc. t. 176. Tourn. cor. inst. p. Lehm. asp. p. 200. Root fusiform. Stem beset with stiff hairs. Leaves pilose, with crenately undulated, subciliated edges, 3-4 inches long; superior leaves nearly sessile. Flowers white, or very pale blue, with rose-coloured stamens an<l j yellow anthers, pedicellate, disposed in loose, terminal, conjugate racemes; processes of the throat subulate. Filaments naked.

Cretan Trachystemon. Fl. Ap. Ju. Clt. 1825. Pl. 1½ foot.

Cult. These are plants of easy culture, but do best in a rather dry situation. They are easily increased by dividing the root, or by seed.

Section II.

Rhagadiæ. Nuts or carpels fixed to the central column. This, with subtribe II. *Cynoglóssea*, of tribe *Boragineæ*, might with propriety form a distinct tribe, to be called *Cynoglossæ*, from the attachment of the carpels.

§ 1. *Throat of corolla furnished with vaulted processes.*

III. MATTIA (meaning unknown to us.) Schultes, obs. p. 30. syst. 4. p. X.—Cynoglossum species of authors.

Linn. syst. *Pentandria, Monogynia.* Calycine segments linear-lanceolate. Corolla tubularly funnel-shaped; tube pentagonal; segments of the limb linear, lanceolate, or rotundish; throat furnished with compressed emarginate connivent processes, which are the length of the tube. Anthers sagittate, included or exserted, connivent. Stigma simple. Nuts 4, 1-seeded, winged by a flat, emarginate, orbicular, diaphanous membrane, concave outside, glabrous, shining, fixed to the central column at the base (top?).—Erect plants, with sessile leaves, and terminal racemes of drooping flowers.

§ 1. *Nuts compressed, smooth. Stamens exserted.*

1 M. UMBELLA'TA (Schultes obs. p. 32.) leaves narrow-lanceolate, downy, canescent; racemes terminal, umbellate; corolla a little longer than the calyx, with oblong obtuse segments; nuts smooth. ♃. H. Native of Siberia and Hungary. Cynoglossum umbellatum, Waldst. et Kit. pl. hung. 2. p. 158. t. 146. Horn. hort. hafn. 1. p. 178. Willd. enum. 1. p. 181. Symphytum rhœticum, Gmel. syst. 2. p. 329.—Gmel. itin. 3. t. 36. f. 1. Root nearly simple, perpendicular. Stems simple, bluntly angular, hairy. Radical leaves ovate-lanceolate, tapering into the petioles; upper cauline ones sessile. Pedicels and calyxes woolly. Corolla yellow, tinged with red; processes of the throat red or wanting?

FIG. 73.



Umbellate-flowered Mattia. Fl. May, June. Clt. 1823. Pl. 1½ foot.

§ 2. *Nuts compressed. Stamens inclosed.*

2 M. LANA'TA (Schultes, obs. p. 31. syst. 4. p. 32.) leaves ovate-lanceolate; villous, canescent, rather scabrous; flowers racemose; corolla twice longer than the calyx, with linear, connivent segments; nuts smooth. ♃. H. Native of Armenia. Cynoglossum lanatum, Lam. dict. 2. p. 338. Desf. ann. mus. 10. p. 332. t. 37. Tourn. cor. p. 7. Stems angular, simple, clothed with hoary tomentum, divided into simple floriferous branches at top. Racemes loose, simple, terminal, and in the axils of the superior leaves; pedicels recurved, and are, as well as the calyxes, woolly. Calycine segments linear, acute. Nuts ovate, ventricose, clypeate. Corollas reddish, drooping.

Woolly Mattia. Fl. June. Clt. 1800. Pl. 1½ f

3 M. GLASTIFO'LIA; leaves lanceolate, glabrous, beset by a few scattered papillæ beneath, and denticulately scabrous on the edges; flowers racemose; corolla nearly twice as long as the calyx, with roundish segments; nuts muricate in the centre, with membranous edges. ♃. H. Native of Armenia. Cynoglossum glastifolium, Willd. spec. 1. p. 764. Desf. cor. Tourn. in ann. mus. 10. p. 330. t. 36. Rindera glastifolia, Rœm. et Schultes, syst. 4. p. 83. Stem branched at top. Peduncles axillary and terminal, few-flowered, glabrous; pedicels racemose, loose; and are, as well as the edges of the calyxes, papillose. Segments of the calyx lanceolate, obtuse. Corollas blue.

Glastum-leaved Mattia. Pl. 1½ to 2 foot.

4 M. ANGUSTIFO'LIA; leaves linear, hispid from pilli; flowers racemose; corollas twice as long as the calyx, with rounded segments; nuts smooth, having the marginal membranes denticulated. ♃. H. Native of Armenia. Cynoglossum angustifolium, Willd. spec. 1. p. 763. Lehm. asp. p. 171. Cynogl. emarginatum, Lam. ill. in. 1799. Cynogl. racemosum, Schreb. in act. berol. 3. p. 170. Rindera? emarginata, Rœm. et Schultes, syst. 4. p. 83. Stems numerous, simple, canescent, pilose, angular. Flowers erect, secund, disposed into 2 terminal bracteless racemes. Calyx hoary, with lanceolate blunish segments. Scales in the throat lanceolate-acute, small. Corollas blue.

Narrow-leaved Mattia. Pl. ½ to 1 foot.

5 M. CANES'CENS; leaves linear-lanceolate, attenuated at the base, hispid from pilli; flowers racemose; corollas a little longer than the calyx, with rounded segments; nuts muricated in the centre, and crestedly rayed along the edges of the wings. ♃. H. Native of Armenia. Cynoglossum crispum, Lam. dict. 2. p. 337. Lehm. asp. 169. Schreb. nov. act. ac. 8. p. 478. exclusive of the synonymes. Omphalodes crispa. Schrank. denks. acad. wiss. munch. 1811 and 1812. p. 321. Root perpendicular. Stems hispid, simple, furnished with some racemiferous peduncles at apex. Racemes 2-3 terminal, and some lateral, many-flowered, loose, drooping before florescence. Pedicels secund, and are, as well as the calyxes, hispid, grey. Calycine segments lanceolate, bluntish. Corollas blue. Stamens inclosed, as in the 2 preceding species.

Crested-fruited Mattia. Pl. 1½ foot.

6 M. COLU'MNÆ; leaves ovate-lanceolate, stem-clasping, villous; flowers racemose; corollas about equal in height to the calyx, with rounded lobes; nuts muricated in the centre, and denticulately rayed on the edges of the wings. ♃. H. Native near the town of Aversa, in stony dry places. Cynoglossum Columnæ, Biv. stirp. rar. sic. man. 2. Tenore, prod. fl. neap. p. 33. Cynogl. cristatum, β. Lam. dict. 2. p. 338. Willd. spec. 1. p. 764.—Column. ecphr. 1. p. 177. t. 178.—Morr. hist. 3. p. 442. sect. 11. t. 30. f. 7. Stem angular. Racemes panicled, terminal. Calycine segments ovate-lanceolate, bluntish. Corolla dirty purple, with deeper veins. Scales of the throat ciliated. Stamens inclosed.

Columna's Mattia. Fl. June, July. Clt. 1825. Pl. 1 to 2 feet.

7 M. MAGELLA'NICA; leaves linear-lanceolate; superior ones broader at the base; flowers disposed in compact racemes; corollas about equal in length to the calyx, with rounded lobes; nuts membranous, muricated in the centre and on the margins. ♃. H. Native of Magella. Cynoglossum Magellanicum, Tenore prod. neap. p. 33. Lehm. asp. p. 168. Plant white from villi. Calyx woolly, with linear segments. Said to be nearly allied to *M. lanata*. Corolla purplish.

Ma gella Mattia. Pl. 1 foot.

§ 3. *Nuts depressed, with denticulately coy edges. Stamens inclosed. Flowers solitary. This section will probably constitute a new genus.*

8 M. PILO'SA; leaves linear, pilose, hoary; flowers solitary, pedicellate, alternating with the leaves; nuts denticulately rayed on the edges. ☉. H. Native of Peru, in the provinces of Cercola and Chancay, in arid places. Cynoglossum pilosum, Ruiz. et Pav. fl. per. 2. p. 6. t. 111. f. b. Lehm. asp. p. 167. Plant hoary pilose. Stem slender, divided into loose, nearly simple branches. Leaves 1 to 1½ inch long. Peduncles much shorter than the leaves. Calyx pilose. Corolla tubular, with a flat limb. Nuts ovate, depressed, glabrous, surrounded by a serrated membrane.

Pilo se Mattia. Pl. ½ foot.

9 M. LATERIFLO'RUM; leaves linear, pilose; flowers solitary, nearly sessile, opposite the leaves; calyxes unequal, a little shorter than the corolla; nuts with deeply-rayed edges. ☉. H. Native of Chili about Santiago, and of Peru about Lima, in arid fields. Cynoglossum lateriflorum, Lam. dict. 2. p. 337. Ill.

t. 92. f. 2. Lehm. asp. p. 166. Cynogl. lineare, Ruiz, et Pav. fl. per. 2. p. 6. Pers. ench. 1. p. 160. Stems filiform, subtrichotomously branched, pilose and hoary as the rest of the plant. Pedicels short, erect when bearing the flower, but reflexed while bearing the fruit. Calycine segments lanceolate, one longer than the rest. Corollas small, white. Nuts 4, depressed, 2 of them smaller, and probably abortive.

Lateral-flowered Mattia. PL J to 1 foot.

Cult, For culture and propagation see *Borago,* p. 509. Plants of the most easy culture.

§ 2. *Throat of corolla naked.*

IV. SOLENA'NTHUS (from *(rio^rjy,* a tube; and *avdog, anthosy* a flower ; in reference to the corolla being tubular.) Led. fl. alt. 1. p. 193. fl. ross. alt. ill. t. 26.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla tubular, 5-toothed, furnished with 5 arched processes in the throat. Stamens exserted. Stigma simple. Nuts 4, depressed, echinated, adnate to the central column, towards the apex, inside. A robust, erect plant, clothed with soft hairs. Radical leaves petiolate, upper cauline ones sessile. Racemes solitary, or twin, many flowered, bractless, at first revolute, at last erect, the whole forming a terminal naked panicle. Corollas purple or blue.

1 S. CIRCINA'TUS (Led. 1. c. p. 194) %. H. Native of Altaia, in the eastern regions of the river Irtysch, also in meadows about mounts Arkaul and Dolenkara. Root thick, perpendicular, furnished with fibres. Stem erect, villous, thickness of a small finger. Radical leaves having the petioles 4-5 inches long, semi-cylindrical, channelled above, striately furrowed beneath,- with membranous edges beset with adpressed, deflexed, white hairs ; the leaves oblong, sub-cordate at the base, unequal, acute or obtuse, entire, beset with adpressed hairs. Scales in the throat of the corolla oblong, obtuse, erect, with villous edges.

Circinate-racemed Solenanthus. Fl. April, May. PL 1| to 2 feet.

Cult. For culture and propagation see *Borago,* p. 309.

V. RINDFRA (named by Pallas after Dr. Rinder, formerly Dean of Medicine in Moscow.) Pall. itin. 1. append, p. 486. t. F. f. 1-2. Lam. ill. t. 92. f. 3. Cynoglossum species, Pall.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla with the tube a little longer than the calyx, a deeply 5-cleft limb, a naked throat, and lanceolate-acute, erect segments. Anthers nearly sessile, in the recesses between the segments of the corolla, inclosed, erect, linear, dehiscing at the sides, and subbifid at the base. Style setaceous ; stigma glandular, hardly conspicuous, simple. Nuts 4, glabrous, ovate, compressed, clypeate, each surrounded by a broad membrane, (one of which, from its small size, is abortive,) fixed to the central column at the base.—A glabrous plant, with a branched root, ovate-lanceolate leaves, and terminal racemosely corymbose reddish flowers.

This genus differs from *Mattia* in the throat of the corolla being naked, that is, without vaulted processes.

1. R. TETRA'SPIS (Pall. 1. c. Led. fl. alt. 1. p. 193.) leaves oblong, or oblong-lanceolate, smoothish; flowers racemosely *c&rjmhose; corollas twice as* long as the calyx, with linear segments ; *stamens shorter than the segments of tie C0ro)J<2, %*H. Native of Siberia. R. leevighta,* Rcem. et SchuJtes, syst. 4. p. *83.* Cynoglossum laevigatum, Lin. syst. p. 157. *suppl 131.* Willd. spec. 1. p. *763.* Lam. ill. t. 92. f. 3. Gaertn. fruct. 1. p. 324. t. *67.* f. 4. *Cynogl Rindera, Pall ft.* ross. 2. p. 96. t. 88—Falck, itin. 2. t. 2.—Mor. hist. 3. sect. 11. t. 30. f. 11. Stems simple. Leaves glaucous, green, soft, glabrous, dotted from minute glands, which are only seen through a lens. Pedicels and calyxes hoary. Calycine segments linear-lanceolate, reflexed when in fruit.

Four-pointed fruited Rindera. FL June, July. Clt. 1818. PL 1 foot.

Cult. See *Borago,* p. 309. for culture and propagation. A plant of easy culture, but of no beauty.

VI. TRICHODE'SMA (from %£ *rptxoe, thrix trichos,* a hair ; and cWjuog, *desmos,* a bond ; anthers bound by hairs to each other.) R. Br. prod. p. 496. Lehm. asper. 192.—Borago species, Lin. Juss. Lam. &c.—Boraginoides, Moench. meth. p. 515.—Pollichia, Medicus, phil. bot. 1. p. 32.—Cynoglossoides Isnard. hist, de l'acad. par. 1718. p. 257. f. 10, 11.

LIN. SYST. *Pentdndria, Monogynia.* Corolla subrotate, with a naked throat; limb 5-parted, having the segments subulate at the apex. Anthers exserted, furnished with 2 rows of hairs on the back, by which they adhere to each other; awns subulate, twisted. Nuts 4, 1-seeded, half immersed in the pits of a 4-winged central column, closed at the base.— Erect, hispid, annual plants, with terminal racemose or solitary pedicellate axillary flowers.

1 T. IVDICUM (R. Br. prod. 496. Lehm. asp. p. 193.) leaves narrow-lanceolate, bluntish, half stem-clasping; pedicels axillary ; calycine segments auricled at the base. ©. H. Native of the East Indies. Borago I'ndica, Lin. spec. ed. 2d. p. 197. Willd. spec. 1. p. 776. Borraginoides sagittata, Mcench. menth. p, 516. Pollichia I'ndica, Med. 1. c. 1718. p. 257.—Isnard. 1. c. t. 10. ed. germ. t. 9.—Pluk. aim. t. *76.* f. 3. Stem hairy, gibbous at the parts where the branches rise. Leaves scabrous above, and softish beneath. Pedicels drooping. Calyx hairy. Corollas pale blue or white; with ovate, cordate-acuminated segments, which are twisted at top ; throat green, marked by 5 rusty spots.

Indian Trichodesma. FL June, Oct. Clt. 1759. PL 1 foot.

2 T. ZEYLA'NICUM (R. Br. 1. c. Lehm. asper. p. 194.) leaves lanceolate, acute, on short petioles, attenuated at the base; pedicels axillary; calyxes not auricled. ©. H. Native of the East Indies, and the shores of New Holland, within the tropic. Borago Zeylanica, Lin. mant. p. 202. Willd. spec. 1. p. 777. Jacq. coll. 3. p. 169. icon. rar. 2. t. 314. Burm ind. p. 41. t. 14. f. 2.—Pluck, mant. 13. t. 335. f. 4. Stem purplish, canescent, scabrous at bottom, and hispid at top. Leaves scabrous above, from numerous, callous, white dots ; soft beneath, without dots, scabrous on the nerves and veins. Pedicels pilose, hoary, longer than the leaves. Calyx hoary, pilose. Limb of corolla white, with a blue star.

Ceylon Trichodesma. Fl. July, Aug. Clt. 1799. Shrub \\ foot.

3 T. AFRICA'NUM (R. Br. 1. c. Lehm. asper. p. 195.) leaves ovate-oblong, acute, petiolate, hispid from bristles ; flowers racemose ; calyxes not auricled. ©. H. Native of the Cape of Good Hope. Borago Africana, Lin. spec. ed. 2. p. 197. Willd. spec. 1. p. 777. Horn. hort. hafn. 1. p. 181. Murr. fl. i^oett. p. 142. Burm. prod. fl. cap. p. 4. Borago verrucosa, Forsk. fl. aegypt. p. 41. Borraginoides aculeata, Moench. meth. p. 516. Pollichia Africana, Med. bot. beob. 1783. p. 248.—Isnard. hist, de l'acad. par. 1718. p. 257. t. 11.—Sabb. hort. 2. *t, 22, Stem trichotomousty* branched, strigose. Flowers drooping, *disposed in axil/ary and termmaf, pecfimcufate W&1?£#'* Calycine segments *lanceolate. Corolla fine blue, with* a yellow throat; segments ovate, acuminated, spirally twisted at top. *Nuts scabrous.*

African Trichodesma. FL July, Aug. *Clt. 1759. PL 1 ft.*

4 T. LITIIOSPERMOIDES (Roem. et Schultes, syst. 4. p. 69.) leaves oblong-lanceolate, nearly sessile, attenuated at the base, with subrevolute edges ; flowers axillary, pedicellate; calyxes

not auricled. ☺. H. Native of the East Indies. Stem downy, dichotomously branched, and strigose like the leaves. Pedicels bifid: upper ones longer than the leaves. Calycine segments unequal, pilose. Corolla dark in the dried state, with tubulate segments.

Lithospermum-like Trichodesma. Pl. 1½ foot.

Cult. Plants of the most easy culture. The seeds require to be reared on a hot-bed early in spring: and the plants should be afterwards planted out in the open ground about the end of May, in a warm sheltered situation.

Tribe II.

SYMPHYTEÆ. (This tribe agrees with *Symphytum* in the characters given.) D. Don, in edinb. phil. journ. July, Oct. 1832. Corolla tubular, truncate, with very short lobes. Inflorescence revolute. Stamens inclosed. Nuts fixed to the bottom of the calyx.

VII. SY'MPHYTUM (from *συμφυω*, *symphyo*, to make unite: and *φυτον*, *phyton*, a plant: in reference to the healing qualities of the plant.) Tourn. inst. t. 36. Lin. gen. 185. Schreb. no. 245. Juss. gen. 131. ed. Usteri. p. 142. Gærtn. fruct. 1. p. 325. t. 67. f. 4. Lehm. asper. p. 3. and 343. Schkuhr, handb. t. 75.

Lin. syst. *Pentandria*, *Monogynia*. Calyx 5-parted. Corolla cylindrically campanulate; throat furnished with 5 subulate, vaulted processes, which connive into a cone. Nuts 4, 1-celled, ovate, fixed to the bottom of the calyx, imperforated at the base.—Rough, herbaceous plants, with broad leaves and terminal, twin racemes of flowers.

§ 1. *Roots tuberous or fleshy.*

1 S. OFFICINA'LE (Lin. spec. p. 195.) stem branched, winged at top; leaves ovate-lanceolate, attenuated at the base, decurrent, very scabrous above, and hairy beneath; racemes twin, rotant, with a flower in the fork; style length of corolla; calyx acute, hairy. ♃. H. Native throughout Europe and Siberia, frequent in watery places. Smith, engl. bot. t. 817. Oed. fl. dan. t. 684. Curt. fl. lond. fasc. 4. t. 18. Dicks. et Hayne, t. 36. Plenck, icon. t. 76. Woodv. med. bot. suppl. 10. t. 215. Gærtn. fruct. 1. p. 325. t. 67. Schk. handb. t. 259. Sm. Fl. Br. pl. fr. 2. t. 164. Lehm. asper. p. 351.—Pers. syn. 1. p. 188. t. 5.—Mor. hist. 3. sect. 11. t. 20. f. 1. Root fleshy, black outside. Stems angularly winged. Corolla yellowish white; segments denticulated. The root of *Comfrey* abounds in a pure, tasteless mucilage. Like that of *Marsh Mallow*, but according to Lewis more tenacious. Being easily obtained, it therefore may be conveniently substituted for *Marsh Mallow*, in all cases where emollients or demulcents are in use; as in irritations of the throat, intestines, and, above all, the bladder.

Var. β, patens (Schth. oxon. 229.) plant stronger; flowers blush-purple, red before expansion. ♃. H. Not so common in England as the species, but more so on the Continent, and in Scotland. Symphytum majus flore purpureo, Tabern. 559. Plenck, icon. 76. We suspect this to be a distinct species, as the habit is very different from that of the species.

Officinal Comfrey. Fl. May, Aug. Britain. Pl. 2 to 3 feet.

2 S. Ecte'nium (Schmidt, boh. no. 211.) leaves ovate-lanceolate, alternate, running into the petioles; racemes twin, erect, revolute at the apex; style exceeding the corolla. ♃. H. Native of Bohemia. S. officinale, β. Bohemicum, D. Don, in Sweet, fl. gard. n. s. t. 304. Stem winged. Flowers red, or reddish purple.

Echinate Comfrey. Fl. May, July. Cit. 1810. Pl. 1 to 1½ foot.

3 S. TUBEROSUM (Lin. spec. 195. Jacq. austr. 3. p. 12. t. 63.) stem simple; leaves ovate-oblong, narrowed at the base: lower ones petiolate: floral ones opposite, sessile, hardly decurrent; segments of the limb of corolla very short, obtuse. ♃. H. Native of Germany, Austria, France, Spain, and Italy. It has been observed in several parts of Scotland, about the Water of Leith, and at North Marchiston, near Edinburgh. Jacq. fl. austr. t. 275. Smith, engl. bot. t. 1502. Schk. handb. 2. t. 31. Lehm. asper. 2. p. 345.—Morr. hist. 3. sect. 11. t. 20. f. 2. S. majus, radice tuberosa. Root whitish, composed of many thick knobs or tubers. Plant not so stiff as S. hirsutum, hairy as S. officinale. The following description is given by Schimper of *S. tuberosum* to distinguish it from *S. Zeyheri* and *S. bulbosum*: Rhizoma oblique, thickened by scales, furnished with short, pro tuberant, branchlets; stem simple; leaves oblong-ovate, attenuated at the base: lower ones petiolate: upper ones approximating by pairs or opposite: floral ones somewhat decurrent; teeth of calyx linear-lanceolate, shorter than the tube of the corolla; segments of the limb of the corolla very short, reflexed. Style about equal in length to the corolla; processes of the throat inclosed.

Tuberous-rooted Comfrey. Fl. May, Oct. Scotland. Pl. 1 to 2 feet.

4 S. Zeyhe'ri (Schimper, in mag. pharm. geiger. Oct. 1829, and Jan. 1830, ex Bull. phil. vol. 21. p. 445.) rhizoma and stolons tuberous; stem almost simple; leaves ovate, acute, running into the marginate petioles: floral ones approximate, or opposite, sessile; calycine segments linear-lanceolate, shorter than the tube of the corolla; corolla funnel-shaped; anthers shorter than the filaments; segments of the limb of the corolla very broad, ovate, 3 times as short as the tube: processes of the throat much exserted, exceeding the style. ♃. H. Native of Sicily.

Zeyher's Comfrey. Pl. 1 to 2 feet.

5 S. BULBOSUM (Schimper, l. c.) rhizoma and stolons tuberous; stem simple; leaves broadly ovate-lanceolate, acute, running into the petioles; floral ones approximating by pairs, or opposite, ovate, rounded at the base, half stem-clasping; calycine teeth lanceolate; tube equalling the corolla; limb of corolla parted to the middle, with ovate, erect segments; anthers as long as the filaments; processes of the throat exserted, exceeding the style. ♃. H. Native of Heidelberg, Vallais, Schleicher; Apennines, Meyer. Rchb. icon. t. 269. f. 567. Mert. et Koch, fl. allem. 2. p. 78. Bluff. and Fingerh. fl. germ. suppl. 2. p. 598. Schimper, bot. zeit. 1829. no. 2. S. filipendula, Bischoff, in bot. zeit. 1829. no. 36. S. Clusii, Gaud. fl. hal. suppl. S. macrolepis, Gay, in Diethach. in Gregor's journ. S. pamphylum, Gaud. fl. helv.

Bulbous-rooted Comfrey. Pl. 1 to 2 feet.

6 S. CORDATUM (Waldst. et Kit. pl. hung. 1. p. 6. t. 7.) stem simple; leaves cordate, acuminated, on long petioles: floral ones ovate-lanceolate, roundish, sessile, nearly opposite; corolla ventricose, with recurved, obtuse segments. ♃. H. Native of Hungary, Transylvania, and Western Iberia, in woods. Reich. fl. exc. 1. p. 136. Lehm. asp. 2. p. 344. S. Pannonicum, Pers. ench. 1. p. 141. Besser, fl. gal. 1. p. 152. Root tuberous, creeping, brown outside. Stem simple, hairy. Leaves large, hairy. Flowers cream-coloured, disposed in short, terminal, twin racemes.

Cordate-leaved Comfrey. Fl. May, July. Clt. 1815. Pl. 1 to 1½ foot.

§ 1. *Roots fibrous.*

7 S. ORIENTA'LE (Lin. spec. 195.) stem branched, hairy; leaves ovate-oblong, acuminated, petiolate, hairy above, and villous beneath; upper ones narrowed at the base: floral ones opposite, sessile; calyx 5-cleft, tubular at the base; segments of corolla ovate, acute. ♃. H. Native of the north of Tauria; and

near Constantinople, on the banks of rivulets. Willd. enum. 1. p. 183. Sims, bot. mag. 1912. Lehm. asper. 2. p. 345. Pall, cat. fl. taur. in act. petrop. 1792. p. 306. Bieb. fl. taur. 1. p. 129.—Tourn. itin. 2. p. 243. t. 14. cor. p. 7.—Buxb. cent. 5. t. 68. Plant hairy. Corollas white," size of those of *S. qfficinale.* Calycine segments linear, acute.

Oriental Comfrey. Fl. May, July. Clt. 1752. PL 2 feet.

8 S. CAUCA'SICUM (Bieb. fl. cauc. 1. p. 128.) stem branched, hairy; leaves ovate-lanceolate, attenuated at the base, half decurrent, clothed with soft hairs, canescent beneath: upper ones opposite; calyxes obtuse; limb of corolla campanulate. %. H. Native of Caucasus, among bushes at the river Terek, between Mosdok and Kisljar. Root branched, black. Plant hairy. Very like *S. officinale,* but more soft. Stem angular, paniculately branched at apex. Calyx hispid. Corolla constantly blue.

Caucasian Comfrey. Fl. May, July. Clt. 1820. PL 2 feet.

9 S. TAU'RICUM (Willd. act. scrut. berol. 8. p. 120. t. 6. f. 1. enum. 1. p. 184.) stem branched, hairy; leaves cordate-ovate, bluntish, petiolate, hairy, bullately wrinkled above : floral ones opposite, sessile ; calyx 5-parted ; lobes of corolla obtuse. 1/. H. Native of the south of Tauria, and Caucasus. Curt. bot. mag. 1787. S. orientate, Bieb. fl. cauc. 1. p. 129.?— Tourn. itin. ed. germ. 2. p. *337.* t. *35.* Jacq. eclog. p. 119. t. 81. Stem branched. Plant hairy. Corolla milk-white.

Var. /3, hullatum (Jacq. eclog. 119. no. 81. Horn, suppl. hort. hafn. p. 13. Ledeb. in Schrad. journ. 4. p. 60.) leaves bullate, unequal at the base; corollas rather swollen. 1/. H. Native of Caucasus. Stems dotted with red. Corolla pale yellow, or cream-coloured.

Taurian Comfrey. Fl. May, July. Clt. 1806. PL \\ to 2 *feet.*

10 S. ASPE'RRIMUM (Bieb. fl. cauc. 1. p. 129.) stems branched, muricated; leaves ovate, cordate, acuminated, running into the petioles, hairy above, and strigose beneath : upper ones opposite, nearly sessile ; calyx muricated, acute ; limb of corolla campanulate. %. H. Native of Caucasus and Tauria, on the margins of rivulets. Willd. enum. 1. p. 183. Curt. bot. mag. t. 929. S. asperum, Lepechin, nov. act. petrop. vol. 14. p. 444. S. orientate *folio* subrotundo aspero, flore casruleo, Tourn. cor. p. 7. Root black. Plant tall, and very rough, but beautiful when in blossom. Stem beset with retrograde strigse. Corollas downy outside, red before expansion, afterwards blue. Leaves broad.

Var. /3, hybridum (Loud. hort. brit. p. 54.) This is a smaller variety, and appears to be a hybrid between *S. orientate* and *S. asperrimum.*

Very rough Comfrey. FL May, Sept. Clt. 1799. Plant 5 to 7 feet.

•f *Species hardly known.*

U S , ECHINA'TUM (Ledeb. cat. hort. dorp, suppl. 1811.) leaves muricated : lower ones cordate : floral ones sessile, nearly opposite ; calyx spreading, twice shorter than the tube of the corolla; stem much branched. If.. H. Native country unknown.

Echbiated Comfrey. PI 2 feet ?

12 S. RACEMO'SUM (Stephan, in Willd. herb, ex Roem, et Schultes, syst. 4. p. 752.) leaves ovate, sessile ; racemes very long, erect. %. H. Native of Persia.

Racemose-lowered Comfrey. PL

What are Symph. lse've, Bess. cat. hort. crem. suppl. 1812? Symph. intermedium, Fisch. cat. hort. goreinki ? and *S. peregrinum,* Ledeb. ?

Cult. All the species of *Comfrey* are extremely hardy, and will grow in any soil and situation. Some are very handsome border'flowers ; and are well fitted for woods or shrubberies, as they will grow under the shade of trees or shrubs. They are easily increased by dividing at the root in Spring ; or by seeds, but the former mode is preferable.

VIII. COLSMA'NNIA (named after John Colsma, ^professor at Copenhagen ; author of Prodromus descriptions Gratiolae Hafn. 1793. 8vo.) Lehm. mag. berol. ges. nat. freund. 8. p. 92. t. 4. asper. p. 3. and *356.*

LIN. SYST. *Pentandria, Monogynia.* Calyx petaloid, pentagonal, 5-parted. Corolla cylindrically-campanulate, with a naked throat. Anthers sagittate, distinct. Nuts 4, 1-celled, ovate-triangular, fixed to the bottom of the calyx, perforated at the base.—A hairy plant, with yellow, pedicellate flowers, which are disposed in terminal racemes.

1 C. FLAVA (Lehm. 1. c.) %. H. Native of the Levant. Root brown outside. Stems numerous, erect, simple, beset with adpressed, yellowish, soft hairs, like all other parts of the plant. Leaves obovate-lanceolate, bluntish, attenuated at the base, silky : lower ones petiolate. Flowers pedicellate, disposed in terminal racemes, drooping before florescence, secund : lower ones furnished with lanceolate bracteas. Calyx unequal. Corollas yellow, downy outside. Style purplish.

Ye I low-flowered Colsmannia. PL | foot.

Cult. This plant will answer very well as a low border flower : it will grow well in common garden soil; and will be easily propagated by dividing at the root, or by seed. As the plant is rare, some of it should be grown in pots, so that it may be protected in winter.

IX. STOMOTE'CHIUM (from *arofjiow, stomoo,* to close the mouth ; and *ex^ov, Echion* Bugloss. This genus differs from *Kchium* in the mouth of the corolla being closed by vaulted processes.) Lehm. asper. 4. and 395.

LIN. SYST. *Pentandria, Monogynia.* Calyx 5-angled, 5-cleft. Corolla tubularly-cylindrical; throat closed by roundish, fleshy, muricated processes. Anthers oblong, inclosed. Nuts 4, 1-celled, roundish, fixed to the bottom of the calyx, perforated at the base.—A shrubby, scabrous plant.

1 S. PAPILLO'SUM (Lehm. asp. p. 396.) J? . G. Native of the Cape of Good Hope. Stem and branches angular, smooth below, and roughish above. Leaves alternate, sessile, almost half stem-clasping, linear-lanceolate, obtuse, stiff, with revolute edges, scabrous from papillae, especially above; papillae white, hispid in the young state. Flowers contiguous, nearly sessile, secund, small, with an ovate, hispid bractea to each, disposed in spicate racemes, terminating the branches, erect, constituting terminal panicles.

Papillose Stomotechium. Shrub.

Cult. A mixture of loam, sand, and peat, is a good soil for this shrub; and cuttings may be rooted in the same-kind of soil under a hand-glass; but the surest way of increasing it, is by layering down the young shoots, having a little nick cut in each shoot so layed. Seeds are sometimes produced, by which the plant may be reared.

X. ONO'SMA (from *ovoq, onos,* an ass ; and *off/un, osme,* smell; grateful to the ass.) Lin. gen. no. *187.* ed. *Schreh. no.* 247. Gaertn. fruct. 1. p. 326. t. 67. Juss. gen. 130. ed. Usteri, p. 146. Lehm. asper. p. 4. and *366.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla tubularly-campanulate ; throat naked. Anthers sagittate, connected together by the bases of the lobes. Nuts 4, 1-celled

ovate, stony, fixed to the bottom of the calyx, imperforated at the base.—Small, suffruticose, scabrous, canescent plants, with crowded, lanceolate, or linear leaves; and terminal racemes of large, yellow, secund, usually drooping flowers.

* *Hairs or bristles stellate, rising from tubercles.*

1 O. taurica (Lehill, pl. syr. dec. 3. p. 10. t. 6.) stem shrubby, much branched, hoary; leaves obovate-oblong, hispid from bristles; flowers generally solitary, terminal, nutant. ♄. F. Native of Persia, in the province of Djilan; and of the Island of Cyprus, on Mount Santa Cruz. Smith, fl. græc. t. 175. Lehm. in nov. act. bath. 1808. t. 1. asper. p. 361. Corolla twice as long as the calyx, tubular, sulphur-coloured, an inch long; teeth short, acute, reflexed. Calycine segments hispid, linear-lanceolate. Style purple. Genitals exserted.

Shrubby Onosma. Shrub 1 to 1½ foot.

2 O. asperrima (Lehm. asper. p. 361.) strigose; stems simple; leaves linear, canescent: lower ones sheathing: upper ones dilated at the base; flowers nutant. ♃. Native of Apulia, among rocks, O. cinereum, Sieb. fl. exsic.—Sabb. hort. rom. 2. t. 32.—Column. ecphr. 1. t. 183. f. 2. Stems solitary or numerous. Leaves blueish. Racemes solitary or twin, terminal. Flowers nearly sessile, propped by lanceolate, acuminated bracteas, which are subcordate at the base. Calyx pilose, silky, canescent: with linear, ciliated segments. Corolla pilose, ventricose above; teeth short, reflexed.

Narrow-leaved Onosma. Pl. ½ to 1½ foot.

3 O. arenaria (Smith, prod. fl. græc. 1. p. 181. fl. græc. t. 173.) tuberculary hispid or strigose; stems simple, tufted; leaves linear, a little broader at top: flowers erect. ♃. H. Native of Candia, on the higher mountains. Lehm. asper. p. 364. Symphytum Creticum, echii folio angustiore longiusculis villis horrido, flore croceo. Tourn. cor. p. 6. Root fusiform, blackish brown. One of the hairs in each fascicle is much longer and stiffer than the rest. Racemes terminal, conjugate, spike-formed. Flowers nearly sessile, propped by linear bracteas, which are as long as the calyxes. Corollas yellow, ventricose, twice or thrice as long as the calyxes; teeth obtuse, short, reflexed. Nuts glabrous.

Erect-flowered Onosma. Pl. ½ foot.

4 O. erecta (Bieb. fl. cauc. 1. p. 132.) tuberculary hispid or strigose; stems aggregate; leaves lanceolate, obtuse; lower ones narrowed at the base: superior ones dilated at the base; flowers drooping. ♃. H. Lehm. asper. p. 364. Horn. hort. hafn. 1. p. 180. Stems solitary or many, from the same root. Racemes terminal, conjugate. Flowers pedicellate, propped by ovate-lanceolate bracteas. Calycine segments lanceolate-linear. Corolla citron-coloured, ventricose above; teeth blunish, reflexed. Stigma capitate, emarginate. Nuts glabrous.

FIG. 34.



Var. α, stellulata (Waldst. et Kit. pl. hung. 2. p. 186. t. 173.) leaves broader, flat; the hairs less crowded than in β. Native of Croatia, in the fissures of calcareous rocks; and of Caucasus, in subalpine, grassy, dry places (fig. 34.)

Var. β, Taurica (Pall. itul. taur. in nov. act. petrop. 1732. p. 306. Bieb. fl. casp. p. 138. no. 11.) leaves narrower, with revolute edges, canescent from hairs. ♃. H. Native of Tauria, among calcareous rocks; Island of Candia and the Peloponnesus. Willd. nov. act. cur. berol. 2. p. 132. Sims, bot. mag. 889. O. montanum, Smith, prod. fl. græc. 1. p. 181. O. cinereum, Schreber, in nov. act. nat. cur. 3. p. 474. O. orientalis, Halj. taur. p. 116. Symphytum orientale alcæ folio asperro, Tourn. cor. p. 7.—Column. ecphr. 1. p. 184. t. 183. O. echioides, var. α, Lin. spec. 196. O. echioides, var. γ, Bieb. fl. cauc. 1. p. 131.

Starry-haired Onosma. Fl. April, June. Clt. a. 1810. pl. 1801. Pl. ½ foot.

6 O. stellata (Lam. ill. no. 1840. Pers. euch. 1. p. 162.) tuberculary hispid or strigose; stem branched at top; leaves oblong-lanceolate: floral ones subcordate; calyxes clothed with white hairs: flowers drooping. ♃. F. Native of the Levant. Lehm. asper. p. 365. O. echioides, Pall. itin. 2. p. 463 t. 3. v. 2. echioides, β, altissima, Bieb. fl. cauc. 1. p. 130. fl. taur. p. 135. Roem. et Schultes, syst. 4. p. 37. Stems erect, tetragonal. Lower leaves a foot long, attenuated at the base. Racemes terminal, solitary, or conjugate. Flowers distant, pedicellate. Calycine segments linear-lanceolate. Corolla pale yellow. Stamens inclosed. Style purple. Stigma somewhat 2-lobed. Nuts glabrous.

Hairy Onosma. Fl. March, June. Clt. ? PJ. 3 to 4 feet.

6 O. bujifolia (Ledeb. fl. alt. 1. p. 180. fl. ross. alt. ill. t. 238.) tuberculary-hispid, or strigose; stem much branched at the base; leaves lanceolate, acute; flowers erect. ♃. F. Native of the south of Tauria, in dry, stony places, between Jarsoph and Nikita. Root woody, brown. Stems many from the root, tufted, prostrate at the base. One of the hairs in each fascicle is much longer and stiffer than the rest. Racemes terminal, solitary, or twin. Flowers pedicellate, propped by linear-lanceolate bracteas, which are as long as the calyxes. Calycine segments linear-lanceolate, acute. Corolla pale yellow, swollen towards the top; teeth short, blunish, reflexed. Stamens a little exserted. Stigma 2-lobed. Nuts glabrous. Nearly allied to *O. gigantea*: but differs in the smaller stature, in the want of subcordate leaves, and in the flowers being erect.

Rigid-haired Onosma. Fl. Aug. Pl. ½ to 1 foot.

* * *Hairs or bristles solitary, not stellate, as in the preceding division.*

7 O. echioides (Lin. spec. 196.) tuberculary hispid or strigose; hairs or strigæ erect; stem much branched; leaves lanceolate: floral ones, or bracteas, ovate-cordate; nuts glabrous, shining. ♄. Native of the south of Europe and Iberia, in gravelly, arid, stony places. All. pedem. 1. p. 151. Vill. dauph. 2. p. 455. Gærtn. fruct. 1. p. 126. t. c; Desf. fl. atl. 1. p. 161. Sibth. et Smith, fl. græc. t. 172. Jacq. austr. 3. t. 295. Bieb. fl. taurico-caucas. 1. p. 131. Sut. fl. helv. 1. p. 107. Lapeyr. abr. p. 89. D. C. syn. fl. fr. no. 2721. Baumg. fl. transs. 1. p. 127. O. echioides, β, Lin. spec. 1. Cerinthe echioides, Scop. fl. carn. ed. 2d. vol. 1. p. 129. Lin. spec. ed. 1. vol. 1. p. 137. Hort. cliff. p. 48. no. 1.—Jacq. icon. t. 81.—Gmel. sib. 4. p. 76. no. 15. t. 40.—Sabb. hort. rom. 2. t. 32.—Mor. hist. 3. sect. 11. t. 22. f. 1.—Anchusa lutea, Dalech. hist. 1102. Syn.

FIG. 35.



polyrum collo folio amplioro, radice rubra, flore luteo, Tournef. cor. p. 128. Root brownish-red, woody. Stems numerous, diffuse. Radical leaves crowded, tapering into the petioles; cauline ones sessile, broader. Racemes terminal, conjugate. Flowers drooping, pedicellate. Calyx very hispid, with linear-lanceolate, equal segments. Corolla pale yellow, swollen above; teeth recurved, acute. Anthers a little exserted. Stigma obtuse, emarginate. (fig. 55.)

Var. β. arenarium (Lehm. asper. p. 367.) flowers oblique; corolla cylindrically clavate; lower leaves lanceolate, obtuse; stem erect; stamens very smooth. ♃. H. Native of Hungary, in sandy places. *O. arenarium*, Waldst. et Kit. hung. 3. p. 298. t. 277. Schultes, fl. austr. no. 704.

Var. γ. branches shorter; leaves narrower. Bieb. l. c. ♃. H. Native of Caucasus, in the Caspian desert; and at the lower Volga.

Var. δ. plant dwarf, branched; hairs of the stem and leaves whitish; corollas pale. Bieb. l. c. Native of the south of Taurus, on stony hills.

Beglier-like Onosma. Fl. May, June. Clt. 1653. 3. 1804. Pl. 1 to 1½ foot.

3 O. echioides (Desf. fl. atl. 1. p. 161. t. 45.) tuberculately hispid or strigose: hairs or strigæ spreading; stem branched at top; leaves narrow-lanceolate: floral ones linear-lanceolate; nuts tuberculately wrinkled. ♃. H. Native of Barbary, in sandy deserts near Cafza. Lehm. asper. p. 368. Plant hispid from numerous white, pungent hairs. Radical leaves running into the petioles at the base: cauline ones sessile. Racemes terminal. Flowers pedicellate. Calycine segments linear-lanceolate, bluntish. Corolla yellow, a little longer than the calyx, tubularly campanulate: teeth reflexed.

Echioides Onosma. Pl. ½ to 1 foot.

4 O. stenosum (Led. fl. alt. 1. p. 181. fl. ross. a. alt, ill. t. 196.) tuberculately hispid; bristles or strigæ spreading; stem branched at top; leaves glabrous beneath, ciliated at the midrib: lower ones dilated at top: floral ones, or bracteæ, ovate; nuts reticulately wrinkled. ♃. H. Native in the plains about the Caspian Sea; and near Astrachan. Root simple, perpendicular, covered with violaceous bark. Superior cauline leaves lanceolate. Racemes terminal, solitary, or conjugate. Flowers pedicellate, drooping, at first approximate. Calycine segments lanceolate, acute. Corolla yellow, widened a little at apex; teeth short, reflexed. Anthers nearly inclosed.

Bristly Onosma. Pl. 1 foot.

5 O. taurosum (Bieb. fl. casp. append. p. 136. fl. cauc. 1. p. 182.) tuberculately-hispid, or strigose; hairs or strigæ spreading; stem much branched; leaves lanceolate: superior ones dilated at the base; filaments very short. ♃. H. Native of Taurus, in pastures in the vicinity of Sophiana. Lehm. asper. 370. Root simple, blackish, covered with copious red pigment, which stains paper a violet-colour. Leaves with revolute edges; radical ones very long, narrow-lanceolate, obtuse, narrowed towards the base: cauline ones sessile. Racemes terminal, and from the axils of the upper leaves, pedunculate. Flowers on short pedicels, propped by ovate bracteæ. Calyx very pilose, hoary at length, hispid: with linear-lanceolate segments. Corolla yellow; teeth bluntish, erectly spreading. Stigma capitate. Nuts glabrous, shining, marbled.

Var. α; corollas at first white, then citron-coloured. Bieb. l. c. ♃. B.

Var. β; corollas at first white, then violaceous. ♃. H. Native of Caucasus, in plains at the river Terek: and in fields at the river Don.

Dyer's Onosma. Fl. April, July. Clt. 1826. Pl. ½ to 1 foot.

11 O. rupestre (Bieb. fl. cauc. 1. p. 183.) tuberculately hispid, or strigose; hairs or strigæ spreading; stems very simple, leafy; leaves linear-lanceolate, bluntish, glabrous beneath, except the midrib. ♃. H. Native of Iberia, on rocks about Tiflis. Lehm. asper. p. 370. *O. tenuifolium*, Willd. spec. 1. p. 775. Stems aggregate, ascending. Leaves rather revolute on the edges. Radical leaves 3-6 inches long, attenuated at the base: cauline ones sessile: upper ones linear, dilated at the base. Racemes terminal, conjugate, or ternate. Flowers pedicellate, bracteate. Calycine segments linear. Corolla somewhat ventricose; teeth ovate, acutish, erectly spreading, at length reflexed. Stamens inclosed; anthers longer than the filaments. Nuts glabrous, shining, marbled.

Rock Onosma. Fl. April, June. Clt. 1819. Pl. ½ to 1½ foot.

12 O. sabulosum (Pall. itin. 3. append. no. 72. t. V. f. 1. Lehm. asper. p. 371.) tuberculately-hispid, or strigose; bristles or strigæ spreading; lower leaves lanceolate, obtuse; racemes very long; tube of corolla filiform, very long; limb wide. ♃. H. Native of Siberia, in rocky, arid places. Anchusa arbutifolia, Lam. ill. no. 1822. Root perpendicular, simple. Flowers on short pedicels, propped by bracteæ. Calycine segments linear, connivent. Corolla salver-shaped, downy outside: limb small, funnel-shaped, 5-cleft: lobes rounded. Nuts ovate, gyrose.

Rock Onosma. Pl. 1 foot?

13 O. divaricatum (Lehm. asper. p. 372.) hispid or strigose; hairs or strigæ spreading, pellucid; stem branched; branches divaricate; leaves lanceolate, attenuated at both ends; racemes leafy. ☉. H. Native in sandy places, towards the Caspian Sea. *O. orientale*, Pall. itin. 2. append. no. 100. in a note. Root perpendicular. Leaves sessile, strigosely ciliated; radical ones opposite. Flowers pedicellate, distant, bracteate. Calycine segments linear-subulate. Corolla having the tube cylindrical, almost as long as the calyxes, thickened under the limb, clothed with fine villi; limb short, 5-cleft: lobes obtuse. Stamens inclosed. Nuts ovate, subtrigonal, wrinkled.

Divaricate Onosma. Fl. April, June. Clt. 1818. Pl. ½ to 1 foot.

14 O. micrastrum (Pall. itin. 2. append. no. 100. t. L.) stem branched, divaricate; leaves all on long petioles, hoary and hispid beneath, naked above; racemes terminal, compound, bracteless. ☉. H. Native of Siberia, at the Irtysch; also between the Jaik and Volga, in sandy places. Lam. ill. no. 1840. Willd. spec. 1. p. 775. Lehm. asper. p. 373. Ledeb. fl. alt. 1. p. 182. Root simple, perpendicular, yellow. Stems nearly glabrous. Leaves ovate-oblong. Panicles subdichotomous. Corolla small, purplish, contracted and 5-toothed at the mouth. Anthers included. Nuts naked, oblong-linear, triquetrous, hispid. This species differs from all others in the leaves being on long petioles; in the racemes being terminal, compound, and bracteless.

Small-flowered Onosma. Pl. ½ to 1 foot.

15 O. rostellatum (Lehm. asper. p. 374.) hispid or strigose; leaves lanceolate, attenuated at both ends, hispid from pili or strigæ; flowers erect; corollas cylindrical, deeply 5-cleft; with subulate, conniving segments; stamens exserted. ♃. H. Native of the Levant, where it was gathered by Tournefort. Stem erect, branched at top. Leaves sessile, strigosely ciliated on the margins. Racemes terminal, 2-3-flowered, somewhat capitate. *Flowers on short pedicels, bracteate.* Calycine segments linear-subulate. Corolla tubular, cylindrical, 5-cleft, length of calyxes.

Rostel Onosma. Pl. ½ foot?

16 O. Syriacum (Labill. pl. rar. syr. dec. 3. p. 3. t. 3. fl. f. 2.) pilose; leaves ovate-lanceolate, denticulated, pilose, or strigose; racemes many-flowered; corollas cylindrical, 5-toothed: teeth reflexed; anthers exserted. ¥. H. Native of Syria, near Tripoli. Lehm. asper. p. 375. Leaves sessile, glandularly denticulated, ciliated. Flowers longer than the pedicels. Calycine segments linear, acute. Corolla blue, 5-cleft; segments acute. Nuts small, muricated, ex Labill.

Var. β: leaves narrow-lanceolate.

Syrian Onosma. Pl. 1 to 1½ foot.

17 O. orientale (Lin. spec. 196.) leaves lanceolate: superior ones ovate, hispid from pili or strigæ; racemes few-flowered; corolla cylindrical, drooping, 5-toothed: teeth erect; anthers inclosed. ¥. H. Native of the Levant. Lehm. asper. p. 370. nov. act. soc. reg. hafn. 1. c. t. 2. Willd. spec. 1. p. 773. O. fruticosa, Lam. ill. no. 1837. Cerinthe orientalis, Lin. amœn. 4. p. 267. no. 16. Symphytum orientale quartum, echii folio minore, flore viridi, Bon. pinc. flavescente. Tourn. cor. p. 6. Stems many, rising from a short, woody stipe. Lower leaves sessile: upper ones half stem-clasping. Racemes terminal, twin, 2-3-flowered. Flowers on short pedicels, propped by lanceolate bracteæ. Calyx hispid; segments lanceolate, acute, spreading. Corolla yellow, twice as long as the calyx; teeth lanceolate, acute, spreading. Style purplish; stigma subcapitate.

Eastern Onosma. Fl. May, June. Clt. *U^i.* I>; ½ foot.

18 O. asperrimum (Lin. spec. *196.* man! 535.) stems much branched at the base; sterile branches prostrate: floriferous ones erect: leaves linear, acutish, strigose, silky, and canescent beneath; corolla clavate or ventricose: teeth reflexed. ¥. H. Native of Siberia, Iberia, and the plains of the river Don. Bieb. fl. cauc. 1. p. 133. fl. casp. append. p. S7. Lehm. asper. 377. Curt. bot. mag. 2448. Ledeb. fl. air. Up. 153. Pall. ind. fl. taur. in nov. act. petrop. 1792. p. 306. O. Sibiricum, Lam. ill. no. 1836. O. simplex, Gmelin. fruct. 1. p. 225. Branches simple. Leaves crowded, sessile, half stem-clasping. Racemes twin, terminal. Flowers on short pedicels, propped each by an erect, cordate bractea. Calyx muricose, inflated above, pale yellow, contracted at the mouth. Stamens inclosed. Stigma capitate, somewhat 2-lobed.

Feeg simple-stemmed Onosma. Fl. April, June. Ok. 1708. Pl. ½ to 1 foot.

19 O. Graëlsii (Ledeb. ill. ail. 1. p. 64. fl. ross. alt. ill. t. 280.) tuberculately hispid or strigose; hairs or strigæ spreading; stems simple, ascending; cauline leaves spatulate-lanceolate, rounded at apex: floral ones, or bracteæ, ovate-lanceolate, acute; corolla twice as long as the calyx; anthers exserted. ¥. H. Native of Siberia, frequent among rocks between Barnaoula and Teletzkoi lake; and from Buchtarminsk, even to the lake called Noor Saisan.—Gmel. sib. 4. p. 76. no. 18, t. 10. Stems many, from the same root. Racemes terminal, twin, rarely 3. Calycine segments linear-lanceolate, acute, very hispid. Corolla pale sulphur-coloured, a little contracted at the mouth: teeth ovate, acute, reflexed. Nuts wrinkled.

Graëlsii's Onosma. Pl. ½ to 1½ foot.

20 O. polyphyllum (Ledeb. fl. alt. 1. p. 185. fl. ross. alt. ill. t. 24. Sprengl. syst. 1. p. 550.) silky; hairs prostrate or adpressed: stems tufted; floriferous branches simple, erect: leaves crowded, oblong-linear, nerveless, with revolute margins: flowers drooping: corolla clavate, with a 5-toothed mouth. ¥. H. Native of the South of Taurus, among calcareous rocks. Leaves erect, 2-3 inches long, linear, or lanceolate-linear, acute, attenuated towards the base, silky on both surfaces; lower ones crowded: superior ones more remote, broadest at the base. Racemes terminal, conjugate, many-flowered. Flowers pedicellate, bracteate. Calyx about the length of the bracteæ, with linear segments. Corolla sulphur-coloured; teeth ovate, acutish, reflexed. Tips of anthers exserted. Stigma 2-lobed. Nuts ovate, beaked, glaberous, shining.

Many-leaved Onosma. Pl. ½ to 1 foot.

21 O. virgatum (Lehm. asper. 378.) stem quite simple, leafy; leaves linear-lanceolate, very long, acute, 3-nerved, hispid above, and clothed with incumbent hairs beneath. ¥. S. Native of tropical America. Stem hispid from pili, divided into racemes at top. Leaves sessile. Racemes terminal, bracteate; bracteæ linear-lanceolate, longer than the calyxes. Calycine segments linear-lanceolate. Corolla pilose outside, pale yellow, with a 5-toothed mouth. Anthers pilose, inclosed. Style purplish; stigma capitate. Nuts ovate, obtuse, glabrous, shining.

Three-nerved-leaved Onosma. Clt. 1824. Pl. 1 foot.

22 O. sericeum (Bieb. fl. cauc. 1. p. 132.) stem branched; leaves petiolate, oblong-lanceolate, acute, canescent, clothed with silky hairs: hairs prostrate or adpressed; corollas twice as long as the calyx. ¥. ?. Native of Iberia, on rocky mountains in the vicinity of Tiflis. Willd. spec. 1. p. 774. Lehm. asper. p. 379. Stem woody at the base, clothed with white down. Leaves silky: radical and lower cauline ones petiolate: superior ones sessile, spatulately-lanceolate. Racemes terminal, and from the axiis of the superior leaves, clothed with silky villi, bracteate. Flowers pedicellate. Calycine segments lanceolate, acute, of which 2 are often combined, almost to the apex. Corolla twice as long as the calyx, villous at top, villous outside; teeth reflexed. Anthers inclosed, connected at the base. Style purplish; stigma subcapitate. Nuts not seen.

Silky Onosma. Fl. June, July. Clt. 1752. Pl. ½ to 1 foot.

23 O. virgatum (Lag. nov. gen. et spec. p. 10.) strigose; flowers drooping, longer than the calyx: nuts 3-horned.

Native of Spain, very common about Madrid, Pedro, also in Morcio, by ways Albacete, and elsewhere: in New Castile: called *Oja de Lobo*. This species differs from all others in the 3-horned nuts.

Three-horned-fruited Ofiosma. Fl. April, June. Clt. 1824. Pl. ½ foot.

24 O. macrocephala (D. Don, prod. fl. nep. p. 90.) very hispid from strigæ: leaves lanceolate, acute, soft beneath, 5-nerved: stem ascending, simple: racemes aggregate, terminal: calycine segments linear-plumose, longer than the corolla; genitals inclosed. 11 F. Native of Srinagur, where it is called *Lalgiri* by the natives. O. bracteatum, Wall. fl. ind. 2. p. 13. Leaves soft ittitf silk, beneath, but hispid above. Racemes short, glomerate. Bracteæ ovate, cuspidate, equal in length to the calyxes. Corolla tubular, yellow, silky outside.

tar ge-headed Onosma. Pl. 2 to 3 feet.

25 O. Echioides (Wall. fl. ind. 2. p. 11.) procumbent, strigose; bristles or strigæ spreading: leaves lanceolate, triple-nerved, less hairy beneath; racemes terminal, solitary; bracteæ linear, not half so long as the flowers; calyx 5-cornered, with ovate segments; corolla ventricose, 5-keeled, contracted towards the mouth; anthers longer than the filaments, inclosed; style exserted: stigma annular. ¥. F. Native of Nipeal, in Go-saingthan, where it is called by the natives *Maharinga*. Root branched, covered with deep purple bark. Stem slender, divided into simple branches at top. Leaves sessile, varying in size, mostly lanceolate, 2-5 inches long. Racemes 2 inches long. Corolla pale bluish, the base inverted over the ovarium; segments ovate, acute. Filaments inserted in as many villous protuberances. Nuts dm ed and tubercled, keeled on the inner

side, ending in a compressed, short beak. The root is used as a material for dyeing blue, and is imported from Gosainsthan ; probably also from Thibet as a drug, under the native name *Maharanga,* meaning in Sanscrit a strong, intense colour.

Emodi Onosma. Fl. Aug. Dec. PI. 1 to 2 feet.

26 O. VESTITUM (Wall. cat. no. 937.) stems simple, erect, densely clothed with spreading, yellowish hair ; leaves lanceolate, acute, clothed with soft, silky pili : radical ones crowded ; racemes terminal, and from the axils of the upper leaves, subcorymbose ; pedicels as long as the flowers, and are, as well as the calyxes, densely clothed with pili; corolla swollen, with a contracted, 5-toothed mouth, twice as long as the calyx; anthers inclosed. %. H. Native of Nipaul, in Gosainsthan. Stems many, from the same root. Calycine segments linear-lanceolate. Corolla apparently purple, with reflexed teeth.

Clothed Onosma. PL \\ foot.

27 O. HISPIDUM (Wall. cat. no. 938.) hispid from long strigose pili ; leaves long-lanceolate, bluntish, sessile: upper ones elliptic or ovate-lanceolate ; racemes terminal, and from the axils of the upper leaves ; corolla twice as long as the calyx, tubular, widened towards the top. %. H. Native of Kamaon. Stems simple, many from the same root. Calyx, pedicels, and bracteas very hispid. Calycine segments linear-lanceolate. Corolla yellow or purplish ?. Style exserted.

Hispid Onosma. PI. 1£ to 2 feet.

28 O. BICOLOR (Wall. cat. no. 939.) hispid from white, strigose pili; stem branched at top; leaves elliptic-lanceolate, tapering to both ends: radical ones subspatulate, 3-nerved ; racemes terminal, solitary, or twin ; bracteas and calycine segments ovate acuminated ; flowers nearly sessile ; corolla swollen, contracted at the mouth, half as long as the calyx ? tv\o-coloured. ©. H. Native of the East Indies. Radical leaves rosuJate.

***T?vo-coloured-flowered* Onosma. PI. 1 foot.**

Cult. AH the species of this genus are extremely handsome when in blossom. Most of them being natives of rocks or sandy deserts, they answer well to be grown on rockwork, or on wall tops, in which situations the seeds should be sown, where the species will afterwards maintain themselves if allowed to scatter their seeds. In common they are short-lived and apt to rot. They do, however, very well in pots, among other alpine plants ; and cuttings of them may be rooted under a hand-glass.

XI. ONOSMO'DIUM (so called from its similarity to *Onosma)* Michx. fl. bor. amer. 1. p. 132. Pursh. fl. amer. sept. 1. p. 132. Purshia, Lehm. asp. p. 4. and p. 382. Lithospermum species of authors.

LIN. SYST. *Penldndria, Monogynia.* Calyx 5-parted. Corolla tubularly campanulate, with a naked throat; limb ventricose ; segments conniving. Stamens inclosed; anthers sagittate, distinct. Style exserted. Nuts 4, 1-celled, turgid, shining, fixed to the bottom of the calyx, imperforated at the base. —Hispid, herbaceous plants, with terminal, drooping racemes, of white or cream-coloured flowers,

1 O. HISPIDUM (Michx. fl. amer. bor. 1. p. 133.) hispid; leaves obovate- lanceolate, acute ; segments of corolla subulate, acute. %. H. Native from New York to Carolina, *on* dry limestone rocks. Pursh, fl. 1. p. 132. Lithospermum Virginicum, Lin. spec. p. 190. Willd. spec. 1. p. 752. Lam. ill. p. 397. no. 1783. Mill. diet. no. 2. Purshia hispida, Lehm. asper. p. 382.—Mor. hist. 3. p. 447. sect. 11. t. 28. f. 3. Leaves dotted from papillae. Racemes short, revolute. Flowers yellowish-white, similar to those of *Sijmphytum.*

Hisjrid Onosmodium. Fl. June, Aug. Clt. 1759. PI. 1 foot.

2 O. MOLLE (Michx. 1. c. t. 15. Pursh, 1. c.) plant clothed with white villi; leaves oblong-ovate, somewhat triple-nerved ; segments of corolla suboval, obtuse. 1/. H. Native of the western counties, from Pennsylvania to Tennessee. Lithospermum Carolinianum, Lam. ill. 1. p. 397. Purshia mollis, Lehm. asp. 383. Lithospermum molle, Muhl. cat. pi. amer. p. 19. Leaves approximate, acutish. Racemes short, terminal, nodding. Calycine segments acute. Corollas white.

Soft Onosmodium. Fl. June, Aug. Clt. 1812. PI. 1 foot.

3 O. SCABRUM (Rcem. et Schultes, syst. 4. p. *57.)* leaves elliptic, somewhat triple-nerved, scabrous, obtuse; hairs adpressed, somewhat tubercular at the base; segments of corolla acuminately subulate, acute. *%.H.* Native of Virginia?: and on hills in the prairies of the Red River, and on the uplands of the Arkansas, frequent. Flowers axillary at the tops of the stems, on short pedicels. Calycine segments linear-lanceolate, acute, one-half shorter than the corolla. Corollas testaceous in the dried state, smaller than those of *0. hispidum.*

Scabrous Onosmodium. PI. 1 foot.

4 O. STRIGOSUM ; stem nearly simple, erect; leaves lanceolate, 3-nerved, hispid from strigae; corolla tubularly clavate, clothed with strigose down: lobes acute. %. F. Native of Mexico, in meadows near Pascuaro. Onosma strigosum, H. B. et Kunth, nov. gen. 3. p. 93. Stem very hispid. Leaves acute, *2* inches long, and \ an inch broad. Racemes terminal, twin, leafy, nearly 2 inches long. Calyx hispid, with lanceolate, linear, acuminated segments. Corolla white, a little longer than the calyx. Very nearly allied to *Onosmodium molle.*

Strigose Onosmodium. PI. 1 foot.

Cult. See *Onosma* p. 316, for culture and propagation.

XII. PULMONA'RIA (so named from its being supposed to be a good remedy in disorders of the lungs (pulmones) ; or, according to some, from the spots on the leaves resembling those on some diseased lungs.) Tourn. inst. t. *55.* Lin. gen. no. 184. Juss. gen. p. 130. Schreb. gen. no. 244. Lehm. asper. p. 3. 275.—Cerinthoides, Boerh.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-cleft, prismatically pentagonal, but campanulate while in fruit. Corolla funnel-shaped, with a pervious pilose throat. Nuts 4, 1-celled, turbinate, fixed to the bottom of the calyx, imperforated at the base.—Herbaceous plants with spotted leaves, and terminal corymbose racemes of flowers. Radical leaves petiolate; cauline ones sessile.

1 P. OFFICINALIS (Lin. spec. 194.) calyx length of the tube of the corolla; leaves scabrous; radical ones ovate-cordate, cauline ones ovate-oblong, sessile. %. H. Native throughout Europe and Caucasus, in shady woods. Found by Mr. Goodyer in a wood by Holbury-House, in the New Forest, Hampshire ; and in Flintshire, on the ruins of the monastery of Maes Glas. Smith eng. hot. t. 118. Oed. fl. dan. t. 482. Drev. et Hayne, t. 14. Plenck. off. t. 73. Woodv. med. bot. 2. t. 212. Svensk, bot. 3. t. 135. Blackw. t. *376.* Sabb. hort. 2. t. 2C. Ludw. ect. t. 45. P. altera, Matth. 1040. Cam. epit. t. 784. P. maculosa, Lob. obs. 317 icon. 586. P. latifolia maculata, Park, par. 251.—Mor. hist. 3. sect. 11. t. 29. f. 8. P. Italorum ad Buglossum accedens, Tourn. inst. p. 136. Root thick, black. Leaves spotted with white, scabrous from strigae. Flowers terminal. Calyx hairy, brownish-green, with lanceolate acute segments. Corollas red before expansion, then violaceous. The leaves, which are the part recommended in medicine, have no peculiar smell; but in their recent state manifest a slightly astringent and mucilaginous taste ; hence they are supposed to be demulcent and pectoral, and have been used in hemoptoes, tickling coughs, and catarrhal defluxions upon the lungs. The name of *Pulmonaria* seems, however, to have arisen rather from

the speckled leaves of some species, than from any intrinsic quality which experience has discovered to be useful in pulmonary complaints. Most plants of the order are more mucilaginous than this, which, according to Lemanon, when burnt, affords frequently one-seventh of its weight in ashes.

Var. β. alboflora; flowers white. ♃. H. Native of Europe. *P. vulgaris latifolia flore albo*, Bauh. pin. 259. Tourn. inst. p. 136.

Var. γ. immaculata; leaves without spots, green. ♃. H. *P. non maculosofolio*, Clus. hist. 2. 169. 2. Bauh. pin. 260. Knor. del. vern. 2. t. p. 2. Schk. crypt. 1. no. 72.

Officinal Lungwort. Fl. May. Britain. Pl. 1 foot.

2 P. ANGUSTIFOLIA (Lin. spec. 194. 2. succ. no. 164.) calyxes length of the tube of the corolla; leaves oblong-lanceolate, or lanceolate, clothed with soft down-like hairs, cauline ones half stem-clasping. ♃. H. Native of Portugal, Hungary, Switzerland, Denmark, Sweden, and Siberia, but more rare than *P. officinalis*, in England, in the same places as mentioned for *P. officinalis*. Oed. fl. dan. t. 483. Smith eng. bot. t. 1628. St. Hil. luv. 40. t. 7. Lehm. asper. p. 275.—Bocc. mus. 110. t. 86.—Park. par. 248. 3. t. 851. f. 2.—Gmel. sib. 4. p. 73. no. 6.—Mor. hist. 3. sect. 11. t. 29. f. 15.—Clus. hist. 2. p. 169. icon. Stem hairy. Racemes twin, capitate. Calyx inflated, while bearing the fruit with lanceolate-acute segments. This is very nearly allied to *P. officinalis*, and is only distinguished by the narrower spotless leaves. Corolla violaceous before expansion, and bluish-purple afterwards. There is also a variety with white flowers.

Var. γ. oblongata (Lehm. asper. 275.) leaves a little shorter, broader, and blue. ♃. H. Native of Europe. *P. oblongata*, Schreb. in litt. *P. angustifolia*, Baumg. fl. trans. 1. p. 124. Schultes, fl. austr. ed. 2nd, no 757. Lap. fl. pyr. p. 89. Gmel. fl. bad. 1. p. 424. Willd. enum. p. 105. Vill. dauph. 3. p. 481. All. ped. no. 173. D. C. syn. fl. gall no. 2720. Sut. fl. helv. 1. p. 105. Roth. tent. fl. germ. 2. p. 212. Poll. pal. 1. p. 180.—Hall. helv. no. 596.

Narrow-leaved Lungwort. Fl. Apr. May. Britain. P. foot.

P. MOLLIS (Wulf. ex Horn. hafn. 1. p. 719. D. C. fl. fr. suppl. p. 420.) calyxes rather longer than the tube of the corolla; leaves ovate-oblong, half stem-clasping, clothed with downy tomentum; radical ones oblong-lanceolate. ♃. H. Native of Germany, Transylvania, Siberia, and the Pyrenees, in shady places. Poir. suppl. 4. p. 621. exclusive of *P. angustifolia*, Pall. Baumg. fl. trans. 1. p. 125. Sims. bot. mag. 2482. Lehm. asper. p. 276. D. C. fl. fr. 6. p. 480. Reichb. icon. cent. 6. p. 4. t. 503. f. 986. *P. angustifolia*, Besser, gallic. 1. p. 150. exclusive of the synonymes. *P. officinalis*, Patrin mss. *P. officinalis*, β. Lin. *P. II. non maculoso folio* Clus. hist. 2. p. 169. Knor. del. 2. t. p. 2. An intermediate plant between *P. officinalis* and *P. angustifolia*, covered all over with soft hairs. Peduncles shorter than the floral leaves. The recesses between the lobes of the corolla are wider than in *P. officinalis*. Colour of flower the same as in the two preceding.

Soft Lungwort. Fl. April, May. Cli. 1805. Pl. ½ foot.

4 P. ANGUSTIFOLIA (D. C. cat. hort. monsp. 1813. p. 155. icon. ined. t. 64.) calyxes length of the tube of the corolla; stamens inclosed within the tube; leaves spotted with white, downy, lower ones oblong-spatulate, superior ones ovate-cordate. ♃. H. Native country unknown; but probably of some part of Europe. *P. maculata*, Dict. gart. lex. 7. p. 657. *P. angustifolia*, hort. belg. *P. angustifolia*, Poir. dict. 5. p. 785. t.—Mor. hist. 3. sect. 11. t. 29. f. 9.? Flowers reddish before expansion, afterwards bluish-purple.

Great-flowered Lung-wort. Fl. April, June. Cli. 1817. Pl. 1 foot.

5 P. RUBRA (Willd. herb. ex Roem. et Schultes, syst. 4. p. 745.) calyxes length of the tube of the corolla; leaves mucronate, veiny-nerved, glabrous above, clothed with downy tomentum beneath; radical ones ovate-petiolate; cauline ones ovate-sessile, or cordate, half stem-clasping. ♃. H. Native of Coril Islands, where it was collected by Steller and Pallas. Peduncles naked, terminal, bearing a fascicle of flowers at the apex. Calyx hairy, with lanceolate segments.

Downy Lung-wort. Fl. Apr. June. Cli. 1821. Pl. ½ to ¾ foot.

6 P. AZUREA (Besser, fl. galic. 1. p. 250. Lehm. asp. 274.) calyx hardly so long as the tube of the corolla; leaves hispid from pili; radical ones oblong-lanceolate, acuminated, tapering into the petioles; cauline ones narrow-lanceolate, sessile; limb of corolla campanulate. ♃. H. Native of Galicia, Austria, and Hungary. *P. angustifolia*, Schrad. Besseria azurea, Schultes, obs. bot. p. 27. austr. fl. 2. ed. 1st, p. 735.—Mor. hist. 3. sect. 11. t. 29. f. 8.? Pulm. cæruleo-purpurea, Clus. cærulea, P. Clusii, Baumg. fl. trans. 1. p. 123. Calyx campanulate; segments unequal, acute, keeled at the base; hence it is primatically pentagonal. Corolla tubularly campanulate; tube red, cylindrical, somewhat tetragonal at the base, attenuated in the middle; segments of the limb roundish, spreading, blue. Flowers disposed in a corymbose terminal raceme; florigerous pedicels pendulous. Bracteæ similar to the cauline leaves.

Azure-blue Lung-wort. Fl. Apr. Jn. Cli. 1823. Pl. 1 foot.

7 P. RUBRA (Schrank, cat. hort. mon. 1814.) perhaps only a slight variety of *P. officinalis*. ♃. H. Native country unknown.

Tuberous-rooted Lung-wort. Fl. April, May. Cli. 1824. Pl. ½ foot.

Cult. All the species of *Pulmonaria* are very pretty plants when in blossom; and being early flowerers they are rather desirable for borders. They are of the most easy culture, and will grow in any common garden soil, and are readily increased by division. Most of the species grow well under the drip of trees, and all do best in shady situations.

XIII. MERTENSIA (named after Prof. Mertens, of Bremen, author of a work on marine Algæ.) Roth. cat. 1. p. 24. Pers. ench. 1. p. 161.—Pulmonaria species of Lin. and others.—Lithospermum species of Lehm.

LIN. SYST. *Pentandria, Monogynia.* Calyx short, 5-parted. Corolla funnel-shaped; throat pervious, naked, or furnished with small, fleshy processes. Anthers oblong, inclosed. Nuts 4, 1-celled, ovate, smooth or wrinkled, imperforated at the base, fixed to the bottom of the calyx.—Elegant, trailing or erect, smooth glaucous plants. Racemes panicled or subcorymbose. Flowers blue, drooping. Radical leaves increasing after florescence, petiolate; cauline ones sessile.

1 M. PANICULATA; stem erect; leaves nerved, scabrous, acuminated: lower ones ovate-cordate; superior ones ovate-oblong; flowers panicled; calyx hispid from pili. ♃. H. Native of Hudson's Bay. Pulmonaria paniculata, Ait. hort. kew. 4. p. 181. Pursh. fl. amer. sept. 1. p. 131. Lithospermum paniculatum, Lehm. asp. p. 289. Peduncles glabrous, terminal, and axillary; at first sub-umbellate, then racemose. Lower leaves large. Corollas blue. Nuts ovate, trigonal, wrinkled, white, longer than the calyx. There is also a variety of this with white flowers.

Panicled-flowered Mertensia. Fl. May, June. Cli. 1778. Pl. 1½ foot.

2 M. DAHURICA; stem erect; leaves obsoletely nerved, rather scabrous; radical ones ovate, obtuse; cauline ones lanceolate, acuminated; calyxes blunt, rather villous. ♃. H. Native of Dahuria. Pulmonaria Dahurica, Fisch. hort. gorenk. Sims, bot. mag. 1745. P. amœna, Stev. in litt. Lithospermum hirsutum, Lehm. asper. p. 292. P. gracilis, Willd. herb. ex

Rœm. and Schultes syst. 4. p. 747. Radical leaves sub-cordate, cauline ones half stem-clasping. Flowers in terminal, solitary, or conjugate racemes, blue or lilac. Peduncles from the axils of the upper leaves downy; pilose.

Dilatata Mertensia. Fl. May. Clt. 1812. Pl. 1 to 1½ feet.

5 M. PULMONARIOIDES (Roth. catal. 1. p. 54.) stems erect; leaves nerved, quite glabrous: radical ones obovate-elliptic: cauline ones ovate-lanceolate, bluntish; racemes subcorymbose, many-flowered; calyxes glabrous. ♃. H. Native from Pennsylvania to Carolina, on the gravelly shores of rivers. Pulmonaria Virginica. Lin. spec. p. 194. Michx. fl. bor. amer. 1. p. 131. Pursh, fl. 1. p. 130. Horn. hort. hafn. 1. p. 178. Curt. bot. mag. 160. Mill. icon. 2. t. 212. Trew. pl. sel. t. 42. Lithospérmum pulchrum, Lehm. asper. p. 290.—Plukn. alm. t. 237. f. 6. Stem glabrous. Leaves glaucous-green, bluntish. Peduncles terminal, and from the axils of the upper leaves. Calyx small, of a greenish purple colour, as well as the peduncles and pedicels; with lanceolate, blunt, spreading segments. Corollas beautiful blue; tube [illegible] inside at the base. There is also a white-flowered variety of this.

Longest-tube Mertensia. Fl. March, May. Clt. 1699. Pl. 1 to 1½ foot.

4 M. MARGINA'TA; smallish, glabrous, erect, leaves hispid on the margins: those on the lower part of the stem oblong-spatulate, or oblong-ovate; upper ones ovate, acute, half stem-clasping, all glabrous, glaucous, and rather fleshy; fascicles or racemes pedicellate, a little longer than the leaves, 4-6-8 or more flowered; calyx 5-parted, smooth, acute, having the segments rather hispid on the margins, about half the length of the tube of the corolla. ♃. H. Native of Louisiana; and on arid hills near the confluence of the Teton river, Missouri. Pulmonaria lanceolata. Pursh, fl. amer. sept. 2. p. 729. Pulm. marginata. Nutt. gen. amer. 1. p. 115. Lithospérmum marginatum, Spreng. syst. 1. p. 541. Stem a little branched. Radical leaves petiolate; lower stem leaves sessile. Flowers subpaniculed; fascicles axillary and terminal. Corolla funnel-shaped, blue, much like those of *M. Virginica*. Leaves perfectly glabrous, except on the margins.

Marginate-leaved Mertensia. Fl. June, July. Clt 1813. Pl. 1 foot.

5 M. DAUBÉNTONII; stems glabrous, ascending; radical leaves ovate-lanceolate: cauline ones sessile, oblong-lanceolate, callous, subdenticulated, glaucous; panicles terminal, crowded; calyx glabrous, with lanceolate, acutish, somewhat denticulated segments. ♃. H. Native of North-west America. Lithospérmum Drummóndii, Lehm. pug. 1. p. 28. Stems numerous, from the same root, ½ a foot high. Peduncles much shorter than the leaves. Corolla 3 times longer than the calyx, almost half an inch long, blue; segments rounded.

Drummond's Mertensia. Fl. ½ foot.

6 M. CORYMBOSA; stem erect, pilose; leaves ovate, acute, smoothish, pilose beneath and on the margins; flowers racemosely corymbose; calycine segments lanceolate-linear, elongated, acute. ♃. H. Native of North-west America. Lithospérmum corymbósum, Lehm. pug. 2. p. 27. Stems many from the same root, [illegible]. Calyx hairy. Corolla funnel-shaped, blue, ½ an inch long; tube pilose inside; segments roundish.

Corymbose-flowered Mertensia. Pl. ½ to 1 foot.

7 M. SIBIRICA; plant glaucescent; stems erect; leaves rather fleshy, glabrous: radical ones cordate, roundish-obtuse, or broad-elliptic; cauline ones ovate, acute; calyxes glabrous; pedicels longer than the flowers. ♃. H. Native of Siberia, in woods at the river Lena: and of Kamtschatka. Pulmonaria Sibirica, Lin. spec. p. 194. Willd. spec. 1. p. 770. Lithospérmum Sibíricum, Lehm. asper. p. 292. Ledeb. fl. alt. 1. p. 177. fl. ross. alt. fil. t. 207.—Gmel. sib. 4. p. 75. no. 15. t. 39. [illegible]

had. Root blackish. Stems simple, glabrous. Leaves glaucous-green, like the rest of the plant: superior cauline ones sessile; all nerved; uppermost ones almost opposite. Flowers terminal, pedicellate, disposed in elongated, conjugate racemes, with a flower in the fork. Calyx small, sub-linear, lanceolate, acute, rather unequal segments. Corolla purplish blue; tube 3-4 times longer than the calyx, and a little longer than the limb. Style a little exserted.

Siberian Mertensia. Fl. May, July. Clt. 1801. Pl. ½ to 1½ foot.

8 M. PALLA'SII; quite glabrous, pale green; stem erect, weak; leaves membranous: radical ones subcordate-ovate, bluntish: superior cauline ones ovate, acute; pedicels shorter than the flowers; tube of corolla one and a half longer than the limb, and 3 times longer than the calyx; style shorter than the corolla. ♃. H. Native of the Altaian mountains. Pulmonária bracteáta, Willd. herb. ex Schultes, syst. 4. p. 747. Lithospérmum Pallásii, Ledeb. fl. alt. 1. p. 176. fl. ross. alt. fil. t. 23. Stems simple, striately angular. Racemes usually two, with a flower in the fork. Corolla funnel-shaped, fine blue, showy. Habit more slender than in *M. Sibirica*. Leaves pale green, not glaucous, membranous, not rather fleshy, broader and more numerous. Flowers larger. Calycine segments narrower. Corollas azure blue, not purplish blue; filaments longer and less dilated at apex; and the style longer than the corolla, not shorter.

Pallas's Mertensia. Fl. June. Pl. 1 to 1½ foot.

9 M. DENTICULA'TA; stems erect; leaves nerved, almost glabrous, acute, with denticulately scabrous edges; radical leaves ovate: cauline ones oblong: calycine segments oblong, with denticulated margins. ♃. H. Native of North America; also of Siberia. Pulmonária Sibírica, Pursh, fl. amer. sept. 2. p. 729, exclusive of the synonymes. Lithospérmum denticulátum, Lehm. asper. p. 294. Stems many from the same root, glabrous. Leaves pale green, beset with callous dots above. Petioles stem-clasping at the base: cauline leaves half stem-clasping. Peduncles terminal, corymbose, many-flowered, elongating after florescence. Calyx short. Corolla blue, [illegible] those of *M. Sibirica*.

Denticulated Mertensia. Fl. May, June. Clt. [illegible] Pl. ½ to 1 foot.

10 M. SIMPLICISSIMA; stem erect, quite simple; leaves ovate-oblong, acuminated, rather undulated, glabrous; calycine segments [illegible]-one, undulated. ♃. H. Native of Eastern Siberia. Pulmonária simplicíssima, Ledeb. obs. bot. in act. nov. acad. sc. petro. 5. p. 515. no. 5. Lithospérmum simplicíssimum, Lehm. asper. p. 293. Stem glabrous. Leaves approximating by pairs, or tern. Peduncles terminal, and from the axils of the upper leaves, solitary, at length elongated; the lower ones sometimes 2-flowered, with one of the flowers sessile, and the other pedicellate. Calycine segments [illegible] linear, acuminated. Corolla blue, twice as long as the calyx, smaller than any other species of the genus; tube a little narrower than the limb, ex Ledeb. l. c.

Very simple-stemmed Mertensia. Pl. ½ to 1½ foot.

11 M. VILLÓSULA; stem erect; leaves cordate-ovate, acuminated, nerved, almost glabrous above, but silky beneath from incumbent pili, and villous on the margins; calyxes villous. ♃. H. Native of the Carpathian mountains. Lithospérmum villósulum, Lehm. asper. p. 285. Stems smoothish. Lower leaves on long petioles, 7-nerved; upper ones sessile, ovate, and more acuminated, 5-nerved. Racemes terminal, bifid. Pedicels patent, and are, as well as the peduncles, villous. Calycine segments lanceolate, acuminated, ciliated with longer villi on the margins. Tube of corolla a little longer than the calyx, constricted under the limb.

Fallax Mertensia. Pl. ½ to 1 foot.

12. M. ECHIOIDES; stems erect, more or less rough from strigæ, like the upper surfaces of the leaves, but the under surfaces of the leaves, and margins, and bases of the stems are beset with longer, softer, strigose pili; radical leaves on long petioles, subcordate-ovate, acute, membranous; cauline leaves sessile, narrower; racemes cymose, panicled, terminal, twin. ♀. H. Native of America, in Eschscholtz Bay, beyond Behring's Straits. Stems simple or branched, many from the same root. Radical leaves 4½ inches long, and 2 broad. Pedicels drooping. Calycine segments narrow-lanceolate, acuminated. Corolla 1 to 1½ inch long, pale blue, glabrous outside, but pilose inside; tube slender; limb campanulate; throat furnished with minute, arched, glandular, fleshy processes. Nuts granular, wrinkled. Small fleshy processes of the throat have been observed in this, *M. denticulata*, *M. maritima*, and *M. Dahurica*.

Pilose Mertensia. Pl. 1½ to 2 feet.

13. M. PARVIFLORA; plant quite glabrous, glaucous; stems procumbent, much branched; leaves oval-spatulate, abruptly acuminated, fleshy; peduncles lateral, 1-flowered; corolla shortly twice as long as the calyx. Native of New England and Canada, on the sea shore. Pulmonaria parviflora, Michx. fl. amer. bor. 1. p. 133. Pursh, fl. 1. p. 151. Pulmonaria maritima of all American authors. Flowers small, blue.

Small-flowered Mertensia. Fl. July, Aug. Clt, 1827. Pl. procumbent.

14. M. MARITIMA (Link. handb. erk. der. gew. 1. p. 58.) plant glabrous, glaucous; stems procumbent, branched; leaves ovate, bluntish, fleshy; calyx glabrous. ♃. H. Native of the north of Europe, on the sea shore; as of Britain, Norway Iceland, Greenland, Lapland, &c. Pulmonaria maritima, Lin. spec. 195. Willd. spec. 1. p. 770. Smith, engl. bot. 266. Curt. fl. lond. fasc. 6. t. 18. Oed. fl. dan. t. 29. Light. fl. scot. 154. t. 7. Wahl. fl. lapp. p. 57.—Dill. hort. elth. 75. t. 63. f. 75.—Mor. hist. 3. sect. 11. t. 28. f. 12.—Pluken. phyt. t. 172. f. 3.—Per. ueit. t. 29. f. 3. Root fusiform, woody, with capillary fibres. Leaves ovate or oblong, scottish; upper ones half stem-clasping. Flowers erect, disposed in terminal, corymbose racemes. Calycine segments oval, smtish. Corolla blue, twice as long as the calyx; limb subcampanulate. This plant is a great ornament to the sandy sea coasts in Scotland and the north of England. The plant is by some called the Oyster plant, from the similarity of its taste to that of oysters.

Sea Mertensia. Fl. July. Britain. Pl. procumbent.

Cult. All the species of *Mertensia* are elegant, hardy border plants much admired by gardeners for their brilliant blue flowers, which are of a reddish hue before expansion. The first twelve species do best in a peat border, but they will also grow in common garden soil; these are best fitted for the front of flower borders. The last two species, being natives of the sea coast, require, when cultivated, to be grown in pots, in a mixture of sand and peat, or sand altogether, and placed among other alpine plants; but to keep them in vigour, even in this situation, they require to be refreshed occasionally with salted water.

XIV. CERINTHE (from κηρος, *keros*, wax; and ανθος, *anthos*, a flower; bees are supposed to obtain wax largely from this flower). Tourn. inst. t. 50. Lin. gen. no. 189. Schreb. gen. no. 240. Juss. gen. p. 130. ed Usteri. p. 143. Lam. ill. no. 662. t. 93. Gaertn. fruct. 1. no. 47. t. 67. f. 1. Schkuhr. t. 39. Lehm. asper. p. 386.

Pentandria, Monogynia. Calyx of 5 nearly equal sepals. Corolla tubular, with a naked throat. Anthers hastate, specially twisted at the base of the lobes, where they are connected. Nuts 2, 2-celled, imperforated at the base, fixed to the bottom of the calyx.—Glaucous plants, with terminal, leafy racemes of tubularly campanulate, drooping, variegated flowers.

§ 1. *Corolla 5-toothed: teeth reflexed, or spreading.*

1 C. MAJOR (Lin. spec. 135.) stem branched; leaves cordate-ovate, denticulately ciliated; corollas ventricose at top, 5-toothed: teeth very short, acuminated, reflexed. ☉. H. Native of the south of Europe, Barbary, and Siberia. Scop. fl. carn. ed. 2d. 1. p. 168. All. ped. 1. no. 170. Desf. fl. atl. 1. p. 160. Suter, fl. helv. 1. p. 1[illegible]. Hall. helv. 1. p. 150. Curt. bot. mag. t. 333. Sturm, fl. germ. 1. fasc. 12. icon. C. glabra, Mill. fig. t. 91. *D. C.* syn. fl. fr. no. 2702. C. glauca, Mœnch. meth. p. 526.—Hall. belv. no. 602.—Lob. icon 237. f. 2.—Mor. hist. 3. sect. 11. t. 29. f. 1.—Ger. emac. 533. f. 1—3.—Park. par. 521. f. 1. Stem glabrous. Lower leaves tongue-shaped, emarginate, attenuated at the base; superior ones blunt; the floral ones sometimes purplish-green, all fleshy, glaucous, and stem-clasping, glabrous above, densely beset with white dots, rough beneath. Pedicels shorter than the floral leaves. Corolla yellow at bottom and purple at top. This is one of the most common herbs all over Italy: hence Virgil's expression of "*Cerinthæ ignobile gramen.*" There is abundance of honey juice in the tube of the corolla, for which reason it is much resorted to by bees: the plant is therefore peculiarly proper to be planted near Apiaries.

Greater Honeywort. Fl. July, Aug. Clt. 1596. Pl. 1 foot.

2 C. ASPERA (Roth. catal. 1. p. 33.) stem branched; leaves oblong, denticulately ciliated, rough beneath; corolla cylindrical, 5-toothed: teeth short, acuminated, reflexed. ☉.

Native of Portugal, Spain, France, Italy, Transylvania, and the Islands of the Archipelago. Smith, fl. græc. t. 170. Lapeyr. abr. p. 88. 13. Gouan, fl. pyren. 1. p. 127. St. Hil. pl. fr. 3. t. 235. Hoffm. et Link. fl. port. 1. p. 196. D. C. syn. fl. fr. no. 2701. Lehm. asper. p. 388. C. major, β, Lin. spec. p. 196. Trait. arch. p. 85. t. 63. C. major, Mill. dict. no. 1.—Mor. hist. 3. sect. 11. t. 29. f. 2.—Bauh. hist. 3. p. 502. icone. C. major, var. α, Lam. dict. no. 1. Stem glabrous, sometimes spotted. Lower leaves tongue-shaped, all obtuse and glaucous beneath, and stem-clasping and rough from white warts above: floral ones cordate-ovate. Pedicels much shorter than the bracteas, which are sometimes coloured beneath. Corolla twice as long as the calyx, yellow, with a brownish purple tube.

Rough Honeywort. Fl. July, Aug. Clt. 1683. Pl. 1 to 2 feet.

3 C. RETORTA (Smith, prod. fl. græc. 1. p. 171. fl. græc. t. [illegible] erect, branched at top; corollas retorted, elavately cylindrical, with a constricted 5-toothed mouth; teeth spreading, acute. ☉. H. Native of the Peloponnesus; and of Caria, on cultivated parts of mountains. Leaves stem-clasping, sometimes spatulate, emarginate at top, with a short mucrone, beset with white warts on both surfaces, all quite entire and glaucous; floral ones more oblong, purple beneath while young. Margins of the sepals denticulately ciliated, as in the two preceding. Corolla not above half the size of those of the preceding, with a yellow tube and a violaceous limb.

Retorted-flowered Honeywort. Fl. July, Aug. Clt. 1823. 1½ to 2 feet.

4 C. PURPUREA (Vis. in bot. zeit. 1829. p. 8.) stem erect, branched at top; leaves stem-clasping, obtuse, glaucous, thickish, smooth, entire, spotted with white; lower leaves spatulate, attenuated at the base; superior ones cordate; corollas conically elavate, ventricose under the throat; limb constricted; teeth bluntly triangular, reflexed, very short. ☉. H. Native of Dalmatia, in the woods of Boraca. Nearly allied to *C. re-*

torta, Smith. The floral part of the plant is purple, fading to purplish or blue.

Purple-to\vped Honeywort. PI. 1 foot.

5 C. ALPI'NA (Kit. in Schultes, fl. austr. ed. 2. vol. 1. p. *353.* no. 751.) stem erect, hairy?; leaves ovate-lanceolate, quite entire ; corollas 5-toothed: teeth bluntish, erectly spreading. ©. H. Native of Hungary, on the higher alps ^ and of the Carpathian mountains.—Mor. hist. *3.* sect. 11. t. 129. f. 7.? This species differs from C. *minor,* in the leaves being much narrower and longer ; in the calycine segments being linear-lanceolate ; and in the bracteas and floral leaves being much longer and closely imbricated. Corolla yellow at bottom and violaceous at top.

Alpine Honeywort. PI. 1 foot.

§ 2. *Corolla 5-cleft, with conniving segments,*

6 C. MI'NOR (Lin. spec. 190.) stem solitary, branched; leaves cordate-ovate, quite entire, glabrous ; corollas 5-cleft, with conniving segments. *$* . H. Native of Middle and South Europe, and Barbary, in fields. Scop. fl. cam. ed. 2d. 1. p. 128. All. pedem. no. 177. Vil). dauph. 2. p. 448. Roth. fl. germ. 2. p. 210. Desf. fl. atl. 1. p. 160. Jacq. fl. austr. 2. t. 124. Smith, prod. fl. graec. 1. p. 120. Lapeyr. abr. p. *88.* Baumg. fl. trans. 1. p. 428. C. acuta, Moench. meth. p. 520.—Mor. hist. 3. sect. 11. t. 29. f. 5.—Clus. hist. 2. p. 162. icone. Root branched. Stem glabrous. Radical leaves obovate, tapering into the petioles : cauline ones all stem-clasping : lower ones of these spatulate, all glabrous and pale green, but densely beset with minute white warts above. Bracteas distinct, acutish, much longer than the pedicels, denticulately ciliated on the margins, like the sepals. Corolla ventricose, 5-cleft almost to the middle, yellow ; segments lanceolate-linear.

Smaller Honeywort. Fl. June, Oct. Clt. 1570. PI. 1 to l£ $_A$bot.

~7 C. MACULATA (Lin. spec. ed. 1. p. 137. All. ped. 1. p. 178. Bieb. fl. cauc. 1. p. 134.) stems many from the same root; leaves cordate-ovate, quite entire, glabrous; corollas 5-cleft, 5-spotted, with connivent segments. %. H. Native of Piedmont, Hungary, Tauria, and Caucasus. Lehm. asper. p. *393.* C. minor, *fi,* maculàta, Lin. spec. ed. 2d. p. 196. Willd. spec. 1. p. 772. Horn. hort. hafn. 1. p. 180. C. quinquemaculata, Wahl. fl. carp. p. 50. no. 171. Root branched. Stems many, branched, purplish at bottom. Radical leaves oblong : cauline ones stem-clasping, emarginate, all obtuse, and glaucous. Bracteas or floral leaves acutish, finely and denticulately ciliated, like the sepals. Pedicels on^ \alf shorter than the bracteas, pilosely hispid. Calyx and corolla like that of *C. minor;* but differs in the corolla being marked by 5 dark purple spots on the tube, and sometimes these spots are so close as to form a purple circle.

Spotted-flowered Honeywort. Fl. June, Oct. Clt. 1804. PI. 1 to \\ foot.

Cult. The seeds of all the species only require to be sown in the open ground. The *C. maculàta* is perennial, and requires to be planted in a sheltered dry situation, or the roots, which are fleshy, will be apt to rot.

TRIBE III.

LITHOSPE'RMEiE (this tribe contains plants agreeing with the genus *Lithospermum,* in the characters indicated below.) D.Don, in edinb. phil. journ. July, oct. 1832. Corolla open, tubular, with broad, mostly rounded segments. Stamens inclosed or exserted. Nuts 4, distinct, fixed to the bottom of the calyx, imperforated at the base, except in *Strlbila.*

XV. LITHOSPE'RMUM (from *Xtdog, lithos,* a stone; and σπέρμα, *sperma,* a seed; in reference to the hard seeds or nuts.) Tourn. inst. t. *55.* Lin. gen. no. 181. Schreb. gen. no. 241. Lam. ill. no. 255. t. 91. Gsertn. fruct. 1. no. 420. t. *67.* f. 8. Schkuhr, handb. t. 29. Trev. entw. des embryo, t. 4. f. 61—*67.* Lehm. asper. p. 282. sect. 2. and 3. Buglossoides, Mcench. meth. p. 418.—Arnebia, Forsk. fl. aegypt. p. *62.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla funnel-shaped, with a naked pervious throat. Anthers oblong, inclosed. Nuts 4, 1-celled, fixed to the bottom of the calyx, imperforated at the base.—Rough plants, with usually narrow leaves, and terminal white or blue flowers. Radical leaves not increasing after the plants have done flowering.

SECT. I. LEIOCA'RYON (from *etog, leios,* smooth ; and *xapvov, karyon,* a nut; the nuts or carpels are smooth and even.) Nuts hard, stony, glabrous, shining, in most of the species hispid, and beset with impressed dots.

§ 1. *Corolla blue, or purplish blue,*

1 L. GRAMINIFOLIUM (Viv. fragm. fl. ital. fasc. 1. p. 3. t. 5. ann. bot. 1. p. 163.) stems herbaceous, erect; loaves long-linear, scabrous above, but hoary and silky beneath, with revolute edges ; flowers terminal, somewhat corymbose. %. H. Native of Italy, on the alps at Etruria, and Carrara, at the foot of the mountains. Lehm. asper. p. 297. Pulmonaria suffruticosa, Lin. spec. 1. p. 1667. Willd. spec. 1. p. 769. Lois, not. p. 37. journ. bot. 2. p. 261. Lithospermum angustifblium umbellatum, C. Bauh. pin. p. 238. 517. Plukn. phyt. t. 42. f. 7.—Bocc. sic. p. 77. t. 41. f. 2. B". C—Mor. hist. 3. sect. 11. t. 31. f. 6. bad. Plant forming a dense tuft. Stems numerous, simple, pubescently tomentose. Leaves sessile, approximate, green above : lower ones drooping : superior ones erectly spreading, all acuminated, 3-6 inches long. Flowers sessile, secund, forming 3-4 short spikes, which constitute a terminal corymb. Calyx hispid ; segments rather unequal, acute. Corolla blue, tubular. Stigma subcapitate. Nuts ovate, shining. Bracteas linear, longer than the calyx.

Grassy-leaved Gromwell. Fl. May, June. Clt. 1825. PI. ½ to | foot.

2 L. PURIVREO-CCERU'LEUM (Lin. spec. p. 190.) stems herbaceous : sterile ones creeping: floriferous ones erect; leaves lanceolate, acute, attenuated at the base, scabrous; flowers axillary and at the sides of the leaves, disposed in terminal, short, twin racemes, which are elongated at length. If.. H. Native of Middle and South Europe ; and of Caucasus, in woody mountain places ; in England, as in Somersetshire, near Taunton; near Denbigh, in Wales ; in chalky soil in several parts of Kent, in hedges. Scop. fl. earn. ed. 2. 1. p. 122. All. pedem. 1. no. 186. Vill. dauph. 2. p. 451. Jacq. fl. austr. 1, p. 11. t. 14. Roth, tent. fl. germ. 2. p. 214. Sut. fl. helv. 1. p. 103. Smith, engl. bot. t. 117. Gmel. fl. bad. 1. p. 415. Smith, prod. fl. graec. 1. p. 114. L. violaceum, Lam. fl. fr. 2. p. 271.—Hall. helv. no. 596.—Mor. hist. 3. sect. 11. t. 31. f. 2.—Sabb. hort. rom. 2. t. 28.—Lob. icon. 458. f. 1.—Bocc. sic. 75. t. 40. and 41.—Plukn. phyt. t. 76. f. 2. Root blackish. Stems pilose, scabrous. Leaves on short petioles, or sessile, dark green, with revolute margins, \\ inch long. Calyx hairy, scabrous, with linear segments. Corolla showy, at first red, afterwards purple. Nuts hispid, smooth, shiny, whitish. There is a variety of this witli white flowers.

Purple-blue-flowered Gromwell. Fl. May. England. 'PI. 1 foot.

3 L. PROSTRVTUM (Lois. fl. gall. 1. p. 105. t. 4.) stems suffruticose, prostrate; leaves lanceolate-linear, hispid; tube of corolla 3 times longer than the calyx, densely villous inside above. F? . H. Native of France, in dry places, and by way

sides about Bayonne. Lapeyr. abr. p. 86. Lehm. asper. p. 300. Stems pilose, branched ; branches canescent from dense pili. Leaves sessile. Flowers axillary, distant, sessile, disposed in terminal leafy spikes on the older branches. Calyx densely pilose, canescent, with subulate segments. Corolla bluish purple, size of those of *L. purpureo-cceruleum,* downy outside. Stigma emarginate.

Prostrate Gromwell. Fl. May, June. Clt. 1825. Shrub prostrate.

4 L. FRUTICOSUM (Lin. spec. 190.) stem shrubby, erect, much branched; leaves linear, bluntish, with revolute edges, strigosely hispid, hoary beneath ; tube of corolla twice as long as the calyx. h_c . H. Native of the south of Europe; and at Algiers. Desf. fl. atl. 1. p. 155. Smith, prod. fl. graec. 1. p. 114. Lapeyr. abr. p. 86. D. C. syn. fl. fr. no. 2717. Lehm. asper. p. 301. Lois. fl. gall. 1. p. 105. Hoffm. et Link, fl. port. 1. p. 170. t. 21. L. fruticosum, /3, rosmarinifolium, Pers. syn. 1. p. 158.—Barrel, icon. 1168. obs. 143.—Garid. aix. p. 68. t. 15.—Alp. exot. p. 69. t. *68.* Branches hairy, scabrous. Leaves sessile, deep green above. Flowers distant, axillary, disposed in 5--6-flowered, terminal, leafy racemes. Calyx pilose, with linear segments. Corolla of a violet blue colour. Anthers beyond the throat. Stigma obtuse. Nuts ovate, hispid, shining, brown when ripe.

Far. /3, *major* (Lehm. asper. p. *302.)* corolla 3 times as long as the calyx ; stamens about equal in length to the corolla. J?. H. Native of Naples, in Goat's Island ; and the Islands in the Grecian Archipelago, on the mountains. L. rosmarinifolium, Tenore. syn. fl. neap. p. *33.* no. 20. Lindl. bot. reg. 1736. L. fruticosum, Smith, fl. graec. t. 161. This variety differs from the species in the larger form, longer and broader, more crowded leaves, and in the corollas being much larger.

Shrubby Gromwell. Fl. May, June. Clt. 1683. Shrub 1 to /\ foot.

5 L. CILIATUM (Forsk. desc. p. 39. Vahl. symb. 1. p. 14.) stem suffruticose, erect, branched, muricately hispid above; leaves cordate-ovate, hoary, with callous, setosely ciliated edges. J? • F. Native on the banks of canals near Cairo. Willd. spec. 1. p. 755. Lehm. asper. p. 314. Branches dichotomous, white. Leaves thick, half stem-clasping. Calycine segments lanceolate. Corolla violaceous, longer than the calyx. Nuts small, black. Spikes lateral, half an inch long.

Ciliated-leaved Gromwell. Shrub \ to 1 foot.

6 L. CALLOSUM (Vahl. symb. 1. p. 14.) stem suffruticose, branched, hispid; leaves lanceolate-linear, obtuse, callosely warted, strigose, very hispid ; bracteas setosely ciliated. J? . F. Native about Cairo, in deserts. Willd. spec. 1. p. 754. Lehm. asper. p. 315. L. angustifdlium, Forsk. descr. p. 39. icon. vol. *2.* t. 16. f. *2.* Stem covered with white bark, villous below, and hispid above. Leaves sessile, canescent while young. Flowers disposed in terminal racemes. Calyx hispid, with linear, ciliated segments. Corolla twice as long as the calyx ; tube villous, red ; limb violaceous, white in the middle, fading to blue ; segments ovate, acutish. Nuts ovate, acute.

Far. /3, *niveum* (Poir. suppl. *2.* p. *836.)* stems very white, with deciduous bark ; leaves small, ovate-lanceolate. Fp . F.

Callous-tubercled Gromwell. Shrub \ to 1 foot.

7 L. ARNE'BIA (Lehm. asper. p. 316. Roem. et Schultes, syst. 4. p. 45.) stems herbaceous ; leaves linear-lanceolate, obtuse, pilosely hispid ; spikes solitary, terminal, secund ; bracteas lanceolate. 0. H. Native of Egypt. Arnebia tinctoria, Forsk. descr. p. *62—63.* L. tinctdrium, Vahl, symb. *2.* p. *33.* t. 28. Willd. spec. 1. p. 752. but not of Lin. L. tetrastigma, Lam. ill. no. 1790. Pers. ench. 1. p. 158. Root fusiform, red. Stems simple, pilosely hispid, as well as the whole plant: lateral ones decumbent: middle ones erect. Leaves sessile : radical ones *2* inches long: cauline ones 1 inch. Calycine segments linear, bluntish. Corolla longer than the calyx, blue, with a filiform tube. Nuts obcordately triangular, smooth, shining. *Segaret el arneb* is the Arabic name of the plant.

Arnebia Gromwell. PI. J foot.

8 L. MINIMUM (Moris, elench. sard, ex Linnaea, 5. p. 93.) hispid; stem erect, a little branched; leaves oblong-linear: lower ones spatulate ; tube of corolla hairy, almost twice as \QV%* as the calyx. ©. H. Native of Sardinia, in arid pastures by the sea side. Corolla blue, with a yellow throat.

Least Gromwell. Fl. March, April. PI. \ foot.

§ 2. *Flowers white or pale yellow.*

9 L. AGGREGATUM (Ruiz, et Pav. fl. per. *2.* p. 4.) stem herbaceous, prostrate, branched; leaves opposite, ovate, obtuse, wrinkled. ©. H. Native of Peru, on the hills of Tarma and Huanuco. Lehm. asper. p. 313. Plant downy. Root fusiform. Leaves on short petioles. Flowers aggregate, nearly sessile, secund, small, white. Nuts 2, ovate, smooth.

Aggregate-Lowered Gromwell. PI. prostrate.

10 L. LINEATUM (Lehm. asper. p. 312.) stem herbaceous, erect, branched ; lower leaves obovate, obtuse : superior ones broad-lanceolate, hairy, subciliated, lined ; tube of corolla twice as long as the calyx. %. H. Native country unknown. Stem woody at the base, branched, scabrous, hairy. Lower leaves 3-4 inches long, all lined above, with a rudiment of a branch in nearly the axils of all. Racemes terminal, leafy, at first nutant. Calyx hairy, with unequal linear segments. Corolla pale yellow ; tube downy ; throat furnished with 5 obtuse, glandular protuberances. Stigma capitate. Nuts hispid, shining, beset with impressed dots and lines.

Lined-fruited Gromwell. Fl. July, Aug. Clt. 1826. PI. 1 to lj foot.

11 L. OFFICINALE (Lin. spec. p. 189. fl. suec. ed. 2d. p. 159.) stems herbaceous, terete, erect, much branched ; leaves broad-lanceolate, acute, veiny, very scabrous; tube of corolla length of calyx. %. H. Native of Europe, Asia, and North America, on way sides, among bushes; also in waste places, in dry, gravelly, or chalky soil. In Britain it is found but sparingly in some woods. Smith, engl. bot. t. 131. Oed. fl. dan. t. 1084. Bieb. fl. cauc. 1. p. 121. Sturm, fl. germ. fasc. 5. icone. Lehm. asper. p. 310. Svensk, bot. t. 177. Hayne, term. bot. t. 21. f. *3.* Woodv. med. bot. p. 134. t. 213.—Plenck. icon, t. *75.*—Sabb. hort. rom. 2. t. *29.*—Ludw. ect. 147.—Lob. stirp. t. 542. f. 2.—Hall. helv. no. 595. Root fibrous. Stem setosely scabrous. Leaves sessile, deep green above, and paler beneath. Flowers on short pedicels, solitary, axillary, disposed in leafy elongated racemes during florescence. Calyx hairy, with linear-lanceolate segments. Corolla pale yellow ; throat furnished with 5 erect gibbae. Nuts hispid, shining, white, hard ; whence they have been celebrated in ancient times as a cure for the stone, without the least shadow of reason.

Far. /3, *latifolium* (Lehm. asper. p. 311.) seeds turgid, ovate, shining, beset with pitted dots all over; fructiferous calyx spreading, exceeding the corolla ; leaves ovate-oblong, nerved. 1/. H. Native from Virginia to Kentucky, in shady woods. L. latifolium, Michx. fl. bor. amer. 1. p. 130. Pursh, fl. amer. sept. 1. p. 131. L. officinale, β_y majus, Willd. spec. 1. p. 751.—Sabb. hort. rom. *2.* t. 29. Flowers pale yellow.

Officinal Gromwell, or Grey Mill or Millet. Fl. May, Aug. Britain. PI. \\ *to 2* feet.

12 L. SCABRUM (Thunb. in Schrad. journ. 1806. p. 44. prod, fl. cap. p. 34.) stem herbaceous, angular, strict, branched ; leaves narrow-lanceolate, with revolute margins, scabrous from papillae above, rather hairy beneath; tube of corolla hardly longer than

the calyx. %. G. Native of the Cape of Good Hope. Willd. spec. 1. p. 753. Lehm. asper. p. 309. Stem and branches hairy. Leaves sessile, bluntish, lj to 2 inches long. Racemes usually bifid, terminating the stem and branches ; bracteas lanceolate. Corolla salver-shaped, white ; throat marked by 5 obtuse gibbosities. Stigma obtuse. Nuts half ovate, acuminated, shining, white. Habit of//, *qfficinalis.*

Scabrous Gromwell. PL 1 to \\ foot.

13 L. ANGUSTIFOLIUM (Michx. fl. bor. amer. 1. p. 130.) Pursh, fl. amer. sept. 1. p. 137.) stems herbaceous, procumbent ; leaves linear, clothed with adpressed pubescence; flowers as if they were lateral; nuts beset with impressed dots. ©. H. Native of shady woods, on the banks of the river Ohio. Lehm. asper. p. 309. Flowers white. Nuts turgidly ovate, shining.

Narrow-leaved Gromwell. Fl. July, Aug. PI. 1 foot.

14 L. STRICTUM (Lehm. asper. p. 303.) stem herbaceous, very simple, thick; leaves linear, acute, adpressed to the stem, strigose above, and almost glabrous beneath ; spikes terminal, solitary; tube of corolla twice as long as the calyx. ©. H. Native of tropical America. Stem terete, canescent at top. Lower leaves \ inch long, very blunt: upper ones 1^ inch long. Flowers on short pedicels from the axils of linear bracteas. Calyx pilose, with linear-lanceolate segments. Corolla villous outside, pale yellow. Anthers sagittate. Nuts ovate, turgid.

Straight Gromwell. PI. 1 to 1| foot.

15 L. CUNEIFOLIUM (Ruiz, et Pav. fl. per. 2. p. 5. no. 4.) stems herbaceous, prostrate, hoary ; leaves cuneiform, hoary; flowers sessile, axillary, solitary. ©. H. Native of Peru, on arid hills. Pers. ench. 1. p. 158. Lehm. asper. p. 307. Root fusiform, fibry. Stems numerous. Leaves sessile. Corolla white. Nuts ovate, acuminated, shining.

Wedge-leaved Gromwell. PI. prostrate.

16 L. MICRA'NTHUM (Viv. fl. libyc. p. 10. t. 1. f. 4.) hispid from strigae ; leaves linear-lanceolate ; flowers disposed in short, terminal, secund spikes, the whole forming a kind of cyme ; hairs on the calyx spinescent when bearing the fruit; tube of corolla filiform. ©. H. Native of Libya, in the great Syrtus. Root simple. Stem a finger in height. Calycine segments linear, acute. Corolla yellowish green, longer than the calyx, with a naked throat. Nuts ovate, acute, convex on the back.

Small-flowered Gromwell. PL \ foot.

SECT. II. DEINOSPE'RMUM (from *luvoq^ delnos,* rough; and *cnrepfjLa, sperma,* a seed ; the nuts are rough.) Nuts very hard, wrinkled, callosely dotted, rough, or muricated.

§ 1. *Flowers white or yellow.*

17 L. A'PULUM (Vahl. symb. *2,* p. *33.)* stems herbaceous; leaves linear-lanceolate, acute, pilose ; spikes terminal, secund ; bracteas lanceolate ; nuts muricated. ©. H. Native of Portugal, south of France, Italy, Samos, and other islands of the Archipelago; in the kingdom of Tunis, near Caffan ; as well as of North America, in Virginia, Ohio, and Mississippi, in dry woods. Willd. spec. 1. p. *752.* Sibth. et Smith, fl. graec. t. 158. Hoffm. et Link. fl. port. 1. p. 169. Pursh, fl. amer. sept. 1. p. 131. Lehm. asper. p. 317. Myosotis A'pula, Lin. spec. 189. All. pedem. no. 192. Desf. fl. atL 1. p. 158. Lapeyr. abr. p. 83. Myosotis lutea, Lam. fl. gal. *2.* p. 282.—Mor. hist. 3. sect. 11. t. 28. f. 8.—Column, ecph. 1. p. 185. f. 1—Plukn. phyt. t. 16. f. 5.—Lob. icon. t. 587. f. l.—Buglossum luteum annuum minimum, Tourn. inst. p. 134. Root branched. Stems rarely more than one from the same root, pilose. Leaves sessile, deep green, an inch long. Spikes *3-5* together, terminal, many-flowered. Calyx very hairy. Corolla yellow, longer than the calyx. Nuts gibbous on both sides, beaked, marked with 4 elevated submuricated lines.

Apulian Gromwell. Fl. June, July. Clt. 1768. PL \ foot.

18 L. PU'MILUM (Lehm. asper. p. 319.) stems herbaceous, ascending, branched ; leaves imbricate, linear, obtuse, strigosely pilose ; flowers solitary, sessile, interfoliaceous; segments of the limb of corolla acute ; nuts rugose. %. H. Native of North America. Habit of *Anchilsa ccespitosa,* but smaller. Root thick, with filiform fibres. Stems many, 2-3 inches long. Leaves crowded, an inch lon£, and more. Calyx pilose, with ciliated segments. Corolla yellow ? ; tube a little longer than the calyx.

Dwarf Gromwell. PL \ foot.

19 L. MYOSOTOIDES (Lehm. asper. p. 319.) stems herbaceous, procumbent, filiform; leaves linear-lanceolate, pilose; flowers solitary, lateral; tube of corolla longer than the calyx ; limb obtuse ; nuts rugose. ©. H. Native of Chili, in sandy places about Conception ; and at Santiago. L. tinctdrium, Ruiz, et Pav. fl. per. 2. p. 4. t. 114. L. tingens, Roem. et Schultes, syst. 4. p. 44. Plant pilose. Root slender, fusiform. Stems numerous; middle ones erect. Flowers on short pedicels. Calyx closed in the fructiferous state. Corolla white, exceeding the calyx.—This plant tinges paper in which it has been pressed of a violet colour.

Mouse-ear-like Gromwell. PL procumbent.

20 L. ARVE'NSE (Lin. spec. 190. fl. suec. no. 160. ed. 2d.) stems herbaceous, erect, branched; leaves lanceolate, narrowed at the base, acutish, hairy, subciliated; calyxes a little shorter than the corolla, spreading in the fructiferous state; nuts wrinkled, scabrous. ©. H. Native of Europe, Asia, Africa, and North America, in cultivated fields, and sterile or waste places; plentiful in some parts of Britain. Oed. fl. dan. t. 456. Smith, engl. bot. t. 123. Bieb. fl. cauc. 1. p. 121.—Hall. helv. no. 594.—Mor. hist. 3. sect. 11. t. 31. f. 7.—Riv. mon. tab. 9. f. 1. Root perpendicular, branched, red outside. Stem scabrous from adpressed hairs. Leaves sessile, scabrous, 1| inch long. Flowers nearly sessile, solitary, disposed in leafy racemose spikes. Calyx hispid or pilose. Corolla white, pilose outside, with a violaceous ring inside. Nuts scabrous, black.

Far. /3 ; flowers blue. ©. H. Native of Iberia. Bieb. fl. cauc. 1. p. 121.

Far, y; flowers purplish. ©. H. Native of France. L. arvense, /3, D. C. fl. fr. no. 2713.

Corn-field Gromwell, or Bastard Alkanet. Fl. May, June. Britain. PL £ to l£ foot.

21 L. PLEBEIUM (Cham, in Linnaea, 4. p. 446.) stem erect or prostrate, trichotomous at the nodi, clothed with spreading pili; leaves opposite ; spikes elongated, leafy ; leaves linear, or linear-lanceolate, obtuse, nearly naked above and strigose beneath, irregularly ciliated with twin pili; calyx densely pilose ; nuts rugose, glabrous. ©. H. Native of Unalaschka and the Aleutian Islands, on the sea shore. Stems rarely solitary and erect; but generally many from the same root, and trailing. Flowers nearly sessile. The largest leaves are 3 inches long and 4 lines broad. Calyx 5-cleft or 5-parted, with lanceolate acutish segments. Corolla salver-shaped, hardly exceeding the calyx, glabrous, white or pale yellow.

Plebeian Gromwell. PL \ to f foot.

22 L. RUDERA'LE (Dougl. mss. ex Lehm. pug. 2. p. 28.) stem herbaceous, erect, hairy ; leaves linear, acuminated, strigose ; spikes leafy ; corolla villous : tube length of calyx. ©. H. Native of North-west America. Stem angular, furrowed, branched at top. Leaves scattered, crowded, sessile. Calyx

hairy, with unequal linear segments. Corolla yellow. Flowers almost sessile. Stigma simple.

Rubbish Gromwell. PL 1 foot.

23 L. SCHREBERIANNUM (Spreng. syst. 1. p. 546.) stems nearly simple; leaves all ovate, hispid: radical ones petiolate : cauline ones sessile ; calyx hairy, equal in length to the tube of the corolla. 1J-. H. Native of Kamtschatka. Pulmonaria pùmila, Schrank.

Schreber's Gromwell. PI. dwarf.

24 L. CRASSIFOLIUM (Lehm. asper. p. 324.) stems herbaceous, ascending, hoary ; leaves lanceolate-spatulate, obtuse, canescent from incumbent hairs; floral leaves cordate, acute, nearly glabrous; corolla a little longer than the calyx; nuts rugose. 1/. F. Native of the Levant. Stems numerous. Radical leaves petiolate : cauline ones sessile. Flowers disposed in terminal, leafy, conjugate spikes. Corolla glabrous, the colour not known.

Thick-leaved Gromwell. PI. \ ascending.

25 L. ORIENTA'LE (Lin. syst. ed. 12. vol. 2. p. 145.) stems ascending, herbaceous, branched from the base ; leaves oblong-lanceolate, bluntish, repand, pilose : floral ones ovate-lanceolate; corollas longer than the calyxes, which droop in the fructiferous state; nuts tubercular. %. H. Native of the Grecian Islands; and in sandy places of Cafsa. Vahl, symb. 1. p. 14. Willd. spec. 1. p. *753.* exclusive of the syn. of Forsk. Desf. fl. atl. 1. p. 153. Curt. bot. mag. t. 515. Sibth. et Smith, fl. grsec. t. 160. Anchusa orientals, Lin. spec. ed. 1st. p. 133. ed. 2d. p. 191.—Dill. hort. elth. 1. p. 60. t. *52.* f. 60.—Buxb. cent. 3. t. 29. Root fusiform, black outside. Plant pilosely hispid. Leaves soft, pale green. Flowers golden yellow, on short pedicels, disposed in long, leafy, terminal racemes. Corolla with a cylindrical tube, which is contracted in the middle, longer than the calyx ; limb short, recurvedly convex, with roundish segments, and rather elevated recesses. Nuts incurvedly gibbous, rather reniform, brown, shining. Habit of *Lycopsis lutea.*

Eastern Gromwell. Fl. June, July. Clt. 1713. PI. ascending.

26 L. DECU'MBENS (Vent. eels. t. *37.)* stem herbaceous, decumbent ; leaves lanceolate, acute, strigose ; calyx pentagonal at the base, with subulate, erect segments ; tube of corolla much longer than the calyx ; nuts tubercular. ©. H. Native of the Levant, near Bagdad. Lehm. asper. p. *326.* Root fusiform, fibry. Stems hispid, dichotomously branched ; branches ending in very long spike-formed racemes. Flowers nearly sessile, shorter than the bracteas. Calyx hispid. Corolla yellow, downy outside ; segments rounded, erectly spreading. Nuts pyramidal, angular, acute, truncate at the base.

Decumbent Gromwell. PI. decumbent.

27 L. CORNU'TUM (Ledeb. fl. alt. 1. p. 175. fl. ross. alt. ill. t. *25.)* hairy; stem herbaceous, erect; leaves oblong, callous, ciliated ; calyxes, when bearing the fruit, furnished with 5 horns at the base : segments lanceolate-linear, erect; tube of corolla one half longer than the calyx ; nuts tubercled. ©. H. Native *o^* Siberia, in dry places ; at the river Irtysch ; between the river Kurtschum and the lake called Noor-Saisan ; as well as on the Arkaul and Dolenkara mountains. Stems simple. Plant strigose. Racemes erect, bracteate. Calyx hairy. Corolla yellow, pilose outside. Stigmas 4, capitate. Calyx structure of that of *L. decúmbens.*

Horned-calyxed Gromwell. Fl. May. Plant \ to § foot.

28 L. MURICA'TUM (Ruiz, et Pav. fl. per. 2. p. 4. no. 2. Lehm. asper. p. *327.)* stems herbaceous, prostrate; leaves lanceolate-linear, obtuse, downy : lower ones opposite; calyx equal in length to the corolla, expanded while in fruit; nuts muricated. ©. H. Native of Chili, in waste places, and on walls. Plant downy. Stems many. Flowers lateral and terminal, sessile. Corolla white.

Muricated-seeded Gromwell. PL prostrate.

29 L. HÍSPIDUM (Ruiz, et Pav. fl. per. 2. p. 5. no. 5.) stems herbaceous, ascending, strigosely hispid; leaves linear-lanceolate, acute, revolute at apex, strigosely hispid ; calyx setosely hispid, length of the tube of the corolla; nuts granular. ©. H. Native of Peru, in stony places. Lehm. asper. p. 328. Plant hispid, whitish. Root fusiform, fibry. Stems numerous, rather angular, branched. Leaves sessile, an inch long. Spikes long; flowers nearly sessile, secund : superior ones more crowded and bractless. Corolla yellow. Nuts ovate, acute.

Hispid Gromwell. PI. 1 foot, ascending.

30 L. CALYCÍNITM (Moris, in acad. del Torino, vol. *87.* p. 98. t. 22.) hispid from bristles ; stem herbaceous, erect, branched ; leaves lanceolate : superior ones dilated at the base, sessile, undulated : spikes dense, secund, bractless, revolute at apex ; calyx equal in length to the corolla, expanded in the fruit-bearing state; nuts wrinkled from tubercles. %. F. Native of Chili. Root fusiform, fibrous at bottom. Calyx hispid, like the rest of the plant. Corolla yellow, funnel-shaped. Nuts ovate, gibbous outside, conniving at top. Perhaps the same as *L. hispidum.*

Large-calyxed Gromwell. PI. 1 foot.

31 L. RAMOSUM (Willd. herb, ex Lehm. asper. *328.)* stem herbaceous, erect, much branched ; leaves linear-lanceolate, bluntish, strigose, with ciliated, hispid margins ; calyx hispid, length of the tube of the corolla; nuts granular. ©. H. Native of Mexico. Stem hairy, canescent. Leaves \ an inch or more long. Spikes lateral, and at the tops of the branches, all lateral, conjugate, sometimes solitary, leafy. Flowers sessile, distant, opposite the bracteas, or from the axils of the bracteas. Corolla white, downy under the limb. Nuts ovate, subtrigonal, acuminated, granular outside.

Branched Gromwell. PI. 1 foot.

32 L. PAPILLÒSUM (Thunb. in Schrad. journ. 1806. p. 44—45. prod. fl. cap. p. 34.) stem herbaceous, assurgent, nearly simple ; leaves oblong-lanceolate, papillose, hairy, with revolute margins; calyxes hairy, length of the tube of the corolla, spreading in the fructiferous state; nuts wrinkled. ©. ? H. Native of the Cape of Good Hope. Lehm. asper. p. *329.* Stem bearing 2 flowering branches at top, hispid. Leaves sessile, strigose, canescent. Racemes bracteate : bracteas longer than the flowers. Calycine segments obtuse, concave, lanceolate. Flowers distant. Corolla white; tube a little longer than the calyx. Nuts ovate.

Papillose Gromwell. PI. ^ foot.

33 L. LYCOPSOÌDES (Lehm. pug. *2.* p« 28.) stems herbaceous, procumbent, branched, hairy ; leaves ovate-lanceolate, denticulated, setosely ciliated, hairy on both surfaces; flowers scattered, lateral and axillary; nuts ovate-trigonal, emarginate, convex and wrinkled on the back. ©.? H. Native of North-west America. Stems terete, di-trichotomous. Flowers on short pedicels. Calyx very hispid, drooping when in fruit, somewhat inflated ; segments lanceolate. Corolla yellow, glabrous ; limb small, erect.

Lycopsis-Yike Gromwell. PI. 1 foot ?

34 L, TENUIFLÒRUM (Lin. fil. suppl. p. 130.) stem herbaceous, erect, branched ; leaves lanceolate, obtuse, hairy, scabrous : lower ones opposite ; calyxes shorter than the filiform tube of the corolla, conniving when bearing the fruit. ©. H. Native of Egypt, and the island of Cyprus. Lehm. asper. p. 320. Jacq. icon. rar. *2.* p. 10. t. 313. Sibth. et Smith, fl. grsec. t. 159. Horn. hort. hafn. 1. p. 175. Buglossoides ramosissima,

Mi ^nch. meth. p. 418. Habit of *L. arvense,* but much smaller. Stt downy, scabrous. Leaves 1 to 1£ inch long : floral ones lent ->f calyxes. Flowers on short pedicels, secund, disposed in ten. al, leafy racemes. Calycine segments ciliated. Corolla downy utside, inflated at the base, and constricted in the middle, white, suffused with red ? Nuts brown, incurved, tubercled.

Thin-flowered Gromwell. Fl. May, June. Clt. 1796. PI. \ to 1 foot.

35 L. TENE'LLUM (Nutt. in amer. phil. trans, n. s. 5. p. 188.) leaves linear, acute, strigose ; flowers remote, pedicellate; calyx foliaceous, with unequal segments ; nuts glabrous, convex. ©. H. Native of North America, in arid places in the prairies of the Red River. Stem about a span high, clothed with adpressed whitish strigse. Flowers scattered, small, white. Corolla funnel-shaped. Nuts 4, convex outside, connivent, and rather pilose and angular. Perhaps this plant is not precisely a *Lithosjiermum;* bearing, indeed, some affinity to *Cynoglossum,* and by no means according with the usual character of the fruit of this genus.

Slender Gromwell. PI. J to 1 foot.

§ 2. *Flowers blue or purple.*

36 L. TINCTORIUM (Lin. spec. ed. 1st. p. 132. mat. med. p. 58.) stems herbaceous, procumbent; leaves lanceolate, obtuse, pilosely hispid : floral ones subcordate ; calyxes hairy, a little shorter than the tube of the corolla; nuts tubercled. %. H. Native of Spain; south of France; Italy, and Hungary, in sandy, sterile places ; and in deserts about Alexandria. D. C. syn/fl. fr. no. 2716. Andr. bot. rep. t. 576. Regnau, bot. 1. t. 34. Lehm. asper. p. 330. Anchusa tinctdria, Horn. hort. hafn. 1. p. 176. Willd. enum. 1. p. 178. exclusive of the synonymes. Lapeyr. abr. p. *86.* L. tuberculata, Forsk. descr. p. 41. L. procumbens, seminibus rugosis, Sauv. monsp. p. *63.* Anchusa puniceis floribus, Bauh. pin. p. 255. Anchusa monspeliaca, Bauh. hist. 3. p. 584. Root rather woody, twisted, of many branches, tinges paper of a violet colour. Stems many, dividing into 2 branches at top, hispid, as well as the leaves. Upper leaves half stem-clasping ; lower ones petiolate, subspatulate-lanceolate. Flowers sessile, disposed in simple or conjugate, terminal, leafy spikes. Corolla fine blue, with a white throat. Anthers sessile, in the middle of the tube.

Dyer's Gromwell, or Bugloss. Fl. June, Aug. Clt. 1596. PI. procumbent.

37 L. DISPE'RMUM (Lin. spec. 191. dec. 1. t. 7.) stem herbaceous, erect, branched ; leaves linear-lanceolate, obtuse, pilose; calyx beset with spreading hairs : segments linear, spreading, but incurved in the fructiferous state; nuts covered with callous dots. ©. H. Native of Siberia, at the Volga; in Tauria, and of Caucasus ; also of Thessaly, on Mount Ossa. Willd. spec. 1. p. 755. Smith, prod. fl. graec. 1. p. 115. Bieb. fl. taur. 1. p. 122. Pers. ench. 1. p. 158. L. incurvum, Pers. 1. c. L. retortum, Pall. itin. 3. append, no. 722. t. L. 1. f. 2. Lam. diet. 3. p. 30. Willd. spec. 1. p. 755. Messerschmidtia cancellata, Asso, synop. fl. arrag. no. 162. t. 1. f. 7. Willd. spec. 1. p. 790.—Quer. hisp. 4. p. 145. t. 25. Root simple, perpendicular. Plant pilose. Stem canescent. Lower leaves petiolate, spatulate: upper ones sessile, lanceolate. Flowers secund, on short pedicels, disposed in leafy terminal racemes. Corolla pale purple. Tube of corolla a little longer than the calyx, pale ; limb blue. Nuts usually 2, rarely solitary, or 3, ovate-trigonal.

Two-seeded Gromwell. Fl. June, July. Clt. 1799. PI. 1 foot.

38 L. INCA'NUM (Forst. prod. p. 12. no. *63.)* stem shrubby, decumbent; leaves linear-lanceolate, clothed with silky pill, canescent; calyxes unequal, shorter than the tube of the corolla; nuts rough. P? . G. Native of the island of Teautea, and Savage Island. Plant silky and canescent. Stem and branches pilose. Leaves an inch long. Spikes terminal, pedunculate, compound, | to 1 inch long, coarctate, bracteate, secund, pilose ; flowers on very short pedicels. Corolla pilose outside, colour unknown. Nuts ovate.

Hoary Gromwell. Shrub \ to 1 foot.

39 L. HISPIDULUM (Smith, prod. fl. groec 1. p. 11 \ fl. graec. t. 162.) stem shrubby, depressed, diffuse; leaves obovate, obtuse, hispid ; tube of corolla inflated above, twice as long as the calyx; nuts tubercled, scabrous. 1?. F. Native of Rhode Island. Stems tufted; branches hoary and silky. Leaves generally £ an inch, scabrous. Flowers axillary at the tops of the branches, twice as long as the leaves, blue. Corolla glabrous. Stigma obtuse. Nuts ovate.

Hispid Gromwell. Shrub diffuse, tufted.

40 L. VILLOSUM (Wall. cat. no. 941.) plant clothed with long white hairs all over, which rise from white warts, most conspicuous on the bracteas and calyxes ; leaves narrow-lanceolate: the radical ones crowded ; racemes terminal, and from the axils of the upper leaves, bracteate, very hairy. %. F. Native of the Carnatic, near Hurdwar and Dorhora. Anchusa polygama, Hani. herb. Plant tufted ; stems many from the same root. Corolla salver-shaped, with a long tube. Nuts rugose ?

Villous Gromwell. PI. 1 foot ?

41 L. FLEXU6SUM (Lehm. asper. p. *333.)* stem shrubby, decumbent, flexuous ; leaves ovate, scabrous above, hispid beneath ; calyxes length of the tube of the corolla, spreading and incurved in the fructiferous state; nuts callously muricated. h. G. Native of the Cape of Good Hope. Cynoglossum muricatum, Thunb. in Schrad. journ. 1806. p. 49. prod. p. 34. Willd. spec. 1. p. 762. Stem branched, hispid. Flowers on short pedicels, disposed in terminal, leafy racemes; bracteas lanceolate. Calyx hispid. Corolla blue. Anthers in the middle of the tube, beneath the throat. Nuts 2, ovate, triangular.

Muricated Gromwell. Shrub decumbent.

42 L.OLEIFOLIUM (Lapeyr. abr. suppl. p. 28.) shrubby, diffuse; leaves elliptic-oblong, green above, shining, and beset with short adpressed hairs, but silky and silvery beneath ; branches hoary. T? . F. Native of the Eastern Pyrenees, among rocks on the banks of the river Caumella, below St. Aniol. Lower leaves opposite, 1J inch long, and \ inch broad. Flowers axillary. Calycine segments clothed with silky down, obtuse. Corolla thrice as long as the calyx, blue ; tube downy. Nuts 2, downy, cinereous, trichotomous, somewhat rostrate, glabrous.

Olive-leaved Gromwell. Shrub J to 1 foot.

t *Species not sufficiently known.*

43 L. DIFFU SUM (Lag. gen. et spec. nov. diagn. p. 10.) stem sufFruticose, diffuse ; leaves substrigose, linear, broadest at the base, with revolute edges; corolla 3 times longer than the calyx. *2 . F. Native of Spain, among bushes near Arvas, Pajares, and elsewhere.

Diffuse Gromwell. Shrub diffuse.

44 L. JEGYPTIACUM (Mikan ex Schrank, obs.bot. in act. acad. reg. sc. mon. 1813. § 14. p. 73.

Egyptian Gromwell. PI. ?

Cult. For the culture and propagation of the perennial, herbaceous species, see *Borago,* p. 309 ; for those of the annual species, see *Anchusa,* p. 343; and for those of the shrubby kinds, see *Onosma,* p. 317.

XVI. BA'TSCHIA (named by Michaux after G. J. G.

5 E. CANDI'CANS (Lin. fil. suppl. p. 131.) stem branched, subtomentose above ; leaves lanceolate, feather-veined, clothed with silky silvery canescent down ; panicles terminal, conical ; spikelets pedunculate, simple. T?. G. Native of Madeira, on high rocks. Jacq. coll. 1. p. 44. icon. rar. 1. t. 30. Ait. hort. kew. ed. 1. vol."1. p. 1S6. Willd. spec. 1. p. 782. Lehm. asper. p. 409. Ker. bot. reg. t. 44. Leaves tapering to both ends. Calyx hairy; segments nearly equal, oblong, acute. Corolla campanulate, blue, pilose at top outside.

Whitish Viper's Bugloss. Fl. May, June. Clt. 1777. Shrub 2 to 4 feet.

6 E. CYNOGLOSSOIDES (Hort. par. ex Poir. suppl. 5. p. 487. Roem et Schultes, syst. 4. p. 17.) stem branched, downy ; leaves lanceolate, clothed with silk-grey down; panicle very large, composed of elongated racemes or spikes. J?. G. Native of the Canary Islands. This species is very nearly related to *E. candicans,* but differs in the size of the panicle, and in the down being cinereous. Leaves *5-6* inches long, and 2 broad, attenuated into the petioles at the base. Panicles pilose. Calycine segments acute. Corolla blue ; limb obtuse.

Hound's-tongue-like Viper's Bugloss. Fl. May, June. Clt. 1818. Shrub 2 to 4 feet.

7 E. FASTUO'SUM (Jacq. fil. eclog. no. 41. p. 61. t. 41. Lehm. asper. p. 410.) stem branched, rather villous above ; leaves oblong-lanceolate, acuminated, veiny, beset with soft hairs, ciliated; panicle thyrsoid, ovate, large, dense; spikelets pedunculate, simple. J?. G. Native of the Canary Islands. *E. candi'cans.* D. C. cat. hort. monsp. 1813. p. 107. Leaves pale green, clothed with soft white hairs. Calyx hairy; segments narrow-lanceolate, acute. Corolla campanulate, deep blue.

Proud Viper's Bugloss. Fl. April, Aug. * Clt. 1779. Shrub 2 to 4 feet.

8 E. MACROPHY'LLUM (Lehm. asper. p. 412.) stem erect; leaves oblong-lanceolate, obliquely acuminated, veiny, very soft, nearly glabrous, rather silky, silvery on both surfaces. h_c . S. Native of the Canary Islands ?. Leaves crowded at the tops of the stem and branches, from a span to a foot long, and 1 \ to 2 inches broad ; almost as silvery as those of *Protea argentea,* glaucous, green. Flowers unknown.

Long-leaved Viper's Bugloss. Fl. June, July. Clt. 1823. Shrub 2 to 4 feet.

y E. FOLIO'SUM (Lehm. asper. p. 412.) stem branched, hoary and pilose above; leaves oblong-lanceolate, clothed with soft hairs; panicles leafy; peduncles one-half shorter than the leaves ; spikelets nearly simple. J?. G. Native of the Canary Islands?. Leaves pale green, 5-6 inches long, and 1 or \\ **broad : floral ones *2-3* inches long. Lower spikelets bifid: upper ones simple. Peduncles and calyxes hairy. Segments of calyx unequal, lanceolate, acuminated. Corolla campanulate, white; segments unequal, obtuse.**

***Leafy* Viper's Bugloss. Fl. May, June. Clt. 1815. Shrub *2* to 4 feet.**

10 E. LINEA'TUM (Jacq. fil. eclog. p. 62. t. 42.) stem branched, clothed with white pubescence above ; leaves ovate-lanceolate, hairy, glaucous-green ; spikelets of panicles pedunculate, bifid. F?. G. Native *of* the Canary Islands ?. Lehm. asper. p. 413. Lower leaves 3 inches long; tapering into the stem-clasping petioles: upper ones gradually shorter. Flowers disposed in a leafy raceme, formed from axillary spikelets. Calyx hairy ; segments ovate-lanceolate, acute, marked each with a paler nerve outside. Corolla campanulate, bluish white, fading to purple, nearly equal, elegantly marked inside with 5 blue nerves. Stamens with white filaments and blue anthers.

***Lined-flowered* Viper's Bugloss. Fl. May, June. Clt. 1815. Shrub 1| to 2 feet.**

11 E. SIMPLEX (D. C. cat. hort. monsp. 1813. p. 108. icon. hort. monsp. ined. t. 21.) stem simple; leaves large, ovate-lanceolate, silky on both surfaces ; panicle long, spike-formed ; spikelets bifid; stigma simple. $?. Jj . G. Native of Teneriflfe. Lehm. asper. p. 415. Stem woody, but nevertheless biennial ; hardly a foot high, and leafy at top the first year, but in the second year it lengthens out into a very long, cylindrical, regular panicle, which is leafy at the base. Flowers white.

Simple-stemmed Viper's Bugloss. Fl. June, July. Clt. 1820. Shrub 1 to 3 feet.

12 E. STRICTUM (Lin. fil. suppl. p. 131.) stem branched, hispid from retrograde pili, or bristles; leaves oblong-lanceolate, very scabrous, hairy ; spikelets of panicle bifid : when young capitate. f? . G. Native of Teneriffe among rocks. Lam. ill. p. 414. no. 1868. Jacq. schcenbr. 1. p. 15. t. *35.* Willd. spec. 1. p. 783. Ait. hort. kew, ed. 1st. vol. 1. p. 186. D. C. cat. hort. monsp. 1813. p. 108. Horn. hort. hafn. 1. p. 182. Leaves 2-4 inches long, and | inch broad, callosely dotted above, paler and less dotted beneath. Peduncles axillary and terminal, very hispid; lower ones 3-4 inches long, becoming gradually shorter to the top. Calycine segments lanceolate. Corolla blue, rarely white, sub-campanulate, nearly regular ; segments acutish : the 2 superior ones broadest. Anthers blue.

Strict Viper's Bugloss. Fl. May. Dec. Clt. 1779. Shrub 2 to 3 feet.

13 E. BRACHYA'NTHUM (Horn. hort. hafn. 1. p. 182. Lehm. asper. p. 417.) stem branched; branches hairy ; leaves lanceolate, veiny, hairy ; spikelets of panicles bifid ; corollas nearly equal, one half shorter than the calyx. J? . G. Native of Madeira among rocks. Panicle terminal, ovate, hispid. Calycine segments narrow-lanceolate, acuminated, unequal. Corolla subcampanulate, white, becoming reddish-violet as they fade, pilose at top outside ; segments roundish.

Short-flowered Viper's Bugloss. Fl. June, July. Clt. 1819. Shrub *3-5* feet.

14 E. BIFRONS (D. C. cat. hort. monsp. 1813. p. 107. icon, pi. monsp. ined. t. 19.) stem shrubby, branched; branches pubescent at top ; leaves oblong-lanceolate, downy, attenuated at both ends; panicles ovate ; spikelets usually simple. J? . G. Native of the Canary Islands. Lehm. asper. p. 418. This very distinct species is difficult to characterize : the calyxes in the terminal panicles are equal in length to the corollas, but those in all the lateral panicles are not one half the length of the corolla, hence the specific name. Corolla white, fading to red.

Two-faced Viper's Bugloss. Fl. May, June. Clt. 1820. Shrub 2 to 3 feet.

15 E. VIRE'SCENS (D. C. cat. hort. monsp. 1813. p. 107. exclusive of thesyn. of Jacq Lehm. asper. p. 471.) stem shrubby, branched; branches clothed with soft hairs ; leaves lanceolate, green, hairy ; panicle spike-formed ; spikelets pedunculate, lower ones bifid, superior ones simple. ^ . G. Native of Teneriffe among rocks. Flowers pale blue, with white lines.

Greenish Viper's Bugloss. Fl. June, July. Clt. 1820. Shrub 2 to 3 feet.

16 E. AMBIGUUM (D. C. cat. hort. monsp. 1813. p. 107. icon pi. monsp. ined. t. 20.) stem shrubby, branched; branches hispid from bristles ; leaves oblong-lanceolate, attenuated at both ends, hispid ; panicle oblong-ovate; spikelets bifid; calycine lobes equal in length to the corolla, f? . G. Native of the Canary Islands. E. candicans, Lam. ill. no. 1866. t. 94. f. 2, exclusive of the synonymes. A humble shrub, one-half smaller than *E. bifrons,* and all the species belonging to the present section. Flowers small, from white to flesh-colour.

Ambiguous Viper's Rugloss. Fl. May, June. Clt. 1820. Shrub 1 to 2 feet.

17 E. NERVO'SUM (Ait. hort. kew, ed. 2d. 1810, vol. 1. p. 300.)

stem shrubby; leaves lanceolate, nerved, and rough, as well as the branches, silky; calycine segments linear, bluntish; racemes or panicles ovate; style hairy. ♄. G. Native of Madeira. Flowers blue or purple?

Nerved-leaved Viper's Bugloss. Fl. June, August. Clt. 1777. Shrub.

* * CAPE SPECIES. *Shrubby plants, natives of the Cape of Good Hope. Flowers solitary, axillary or spicate. Stamens exserted or inclosed.*

18 E. ROSSIANUM (Pers. euch. 1. p. 183. Lehm. asper. p. 412.) stem branched above, glabrous; leaves narrow-lanceolate, very scabrous above; racemes subcymose; corollas tubular, very long. ♄. G. Native of the Cape of Good Hope. E. tubiflorum, Poir. dict. 8. p. 655. E. grandiflorum, Desf. arb. 1. p. 177. Vent. malm. p. 37. t. 97. Andr. bot. rep. t. 20. Ker. bot. reg. 124. Kerner, scrop. 5. t. 205. Leaves clasping the stem at the base, grass-green, 3-4 inches long, with spaniously denticulated margins. Bracteas subcordate at the base. Calyx hairy, sub-bilabiate; segments unequal. Corolla equal, red, 1½ inch long. Stamens equal in length to the corolla. Stigma exserted.

Beautiful Viper's Bugloss. Fl. June, July. Clt. 1757. Shrub 2 to 3 feet.

19 E. SCABRUM (Lehm. asper. p. 419.) stem hairy above; leaves ellipsic-lanceolate, scabrous, hispid; spikelets terminal, bipartite; bracteas falcate, hispid. ♄. G. Native of the Cape of Good Hope. Stem much branched at top; branches scabrous; branchlets hairy. Leaves beset with adpressed strigæ, 1 to 1½ inches long. Calycine segments acute, lanceolate, rather unequal, hairy. Corolla irregular, large, blue. Stamens length of corolla.

Scabrous Viper's Bugloss. Fl. May, July. Clt. 1820. Shrub 2 to 3 feet.

20 E. PARVIFLORUM (Lin. spec. p. 199.) stem tomentose; leaves lanceolate-spatulate, scabish, clothed with silky villi; spikelets crowded, corymbose. ♄. G. Native of the Cape of Good Hope. Berg. pl. cap. p. 29. Willd. spec. 1. p. 781. Ait. hort. Kew, ed. 1st, vol. 1. p. 186. Ker, bot. reg. 26. E. Africanum, Pers. euch. 1. p. 183.—Comm. hort. 2. p. 107. t. 54. Stem branched. Spikelets usually bipartite, hairy. Calycine segments acute, nearly equal. Corolla purple, with rather unequal segments. Stamens a little longer than the corolla.

Var. β. setosa (Thunb. fl. cap. prod. p. 83.) stem, as well as the leaves, which are oblong, silky; spikelets alternate, pedunculate. ♄. G. Native of the Cape of Good Hope. Leaves more spatulate, bluntish, and twice the size of those of the species.

Shrubby Viper's Bugloss. Fl. May, June. Clt. 1759. Shrub 2 to 3 feet.

21 E. SABULICOLUM (Lin. mant. p. 308. Lehm. asper. p. 421.) stem branched; leaves lanceolate, acute, reflexed at the apex, clothed with silky pili; margins of the floral ones setosely prickly; spikes terminal, simple, leafy. ♄. G. Native of the Cape of Good Hope. Berg. cap. p. 40. Lam. ill. p. 412. no. 1862. Andr. bot. rep. 154. Thunb. prod. fl. cap. p. 83. Willd. spec. 1. p. 788. E. fruticosum, Jacq. schœnbr. 1. t. 34. Branches hairy, from copious adpressed pili, hispid above from stiff bristles. Lower leaves 1½ inch long. Calyx hispid, with unequal segments; the two lateral ones larger, and keeled. Corolla blue, campanulately tubular; segments unequal, obtuse. Stamens unequal; the 2 lower ones longer than the corolla, the rest inclosed. Plant canescent.

Var. β. ferox (Lehm. asper. p. 422.) stem shrubby; branches and leaves prickly; flowers spicate; corollas nearly equal.

♄. G. Native of the Cape of Good Hope. E. ferox, Pers. euch. 1. p. 183. E. ferocissimum, Andr. bot. rep. t. 20. E. argenteum, Roth. bot. abh. p. 25.

Silvery Viper's Bugloss. Fl. June, July. Clt. 1780, 3. 1794. Shrub 3 to 6 feet.

22 E. CASTORIOLENS (Jacq. coll. 3. p. 225. icon. rar. 3. p. 10. t. 312.) stem branched; leaves lanceolate, glabrous, with callously scabrous edges, glaucous; spikelets bipartite, lanceolate. ♄. G. Native of the Cape of Good Hope. Lehm. asper. p. 423. Andr. bot. rep. t. 165. E. lavigatum, Lam. ill. p. 413. no. 1863. but not of Thunb. E. glaucum, Thunb. in Schrad. journ. bot. 1800, p. 28. prod. fl. cap. p. 83. Stem quite glabrous. Leaves sessile, acute, 1½ inch long, scabrous from white callous dots on the edges. Spikelets panicled, terminal, and from the axils of the leaves. Calyx glabrous, with lanceolate segments, which are edged with callous dots. Corolla violaceous; limb almost regular. Stamens unequal, longer than the corolla.

Glaucous-leaved Viper's Bugloss. Fl. July. Clt. 1792. Shrub 2 to 3 feet.

23 E. LAXUM (Lin. spec. p. 199. Thunb. prod. p. 83.) stem simple, glabrous; leaves ovate-lanceolate, glabrous, spaniously ciliated on the margins; spikes terminal, compound; spikelets simple, very short. ♄. G. Native of the Cape of Good Hope. Lehm. asper. p. 424. Willd. spec. 1. p. 785. exclusive of the syn. of Jacq. Leaves ciliated with distant white bristly strigæ, and with callous dots along the midrib beneath. Calycine segments strigose along the margins and middle nerves. Corolla funnel-shaped; limb nearly equal, obtuse. Stamens much exserted, declinate, unequal. Stigma simple. Corolla blue.

Smooth Viper's Bugloss. Fl. June, July. Clt. 1774. Shrub 1 to 2 feet.

24 E. PANICULATUM (Thunb. in Schrad. journ. 1800. p. 41. prod. p. 83.) stem branched; branches elongated, angular, and downy above; leaves lanceolate, hispid, spaniously ciliated; spikelets panicled. ♄. G. Native of the Cape of Good Hope. Willd. spec. 1. p. 784. Lehm. asper. p. 425. Branchlets subfastigiate, hispid, and compressedly angular. Leaves about an inch long, with diaphanous cilias, which rise from papillæ. Panicle terminal. Calyx 5-angled; segments acute, having the angles and edges hispidly ciliated. Corolla white, regular; limb bluntish. Stamens unequal, twice as long as the corolla.

Panicled-flowered Viper's Bugloss. Fl. May, July. Clt. 1815. Shrub 3-5 feet.

25 E. SWARTZII (Lehm. asper. p. 426.) stem branched at top, glabrous; leaves linear-lanceolate, glabrous, furnished with callous dots on the margins, but when young hispidly ciliated; spikelets terminal, bifid or trifid. ♄. G. Native of the Cape of Good Hope. E. angustifolium, Swartz in litt. Branchlets scabrous. Leaves sessile. Bracteoles hispid. Calyx hispid, with unequal lanceolate segments. Corolla irregular, blue, rather large. Stamens exserted.

Swartz's Viper's Bugloss. Shrub 2 to 3 feet.

26 E. ORIENTALE (Vahl. symb. 3. p. 29.) stem branched; leaves narrow-lanceolate, somewhat falcate, glabrous above, but beset with callous dots beneath; uppermost leaves, as well as the calyxes pilose, or strigose; spikelets alternate. ♄. G. Native of the Cape of Good Hope. Lehm. asper. p. 427. Andr. bot. rep. t. 165. E. falcatum, Lam. ill. p. 413. no. 1864. E. Vahlii, Roem. et Schultes, syst. 4. p. 14. Branches purplish, beset with adpressed villi. Leaves an inch long. Spikelets erect, 2 inches long, leafy, from the axils of the upper leaves. Calyx pilose, with lanceolate unequal segments. Corolla irre-

gular, white. Stamens unequal, the 2 lower ones longer than the corolla, the rest shorter. Stigma sub-capitate, somewhat 2-lobed.

Glabrous Viper's Bugloss. Fl. May, June. Clt. 1791. Shrub 1 to 2 feet.

27 E. VENOSUM (Thunb. in Schrad. journ. bot. 1806. p. 42. prod. p. 33.) stem branched, villously hispid above; leaves oblong-lanceolate, obtuse, canaliculate, very numerous, strigosely pilose; stamens inclosed. ♄. G. Native of the Cape of Good Hope. Lehm. asper. p. 428. Willd. spec. 1. p. 784. Leaves somewhat imbricated, keeled below, very soft and canescent while young. Spikelets terminal, few-flowered. Calyx hoary, villous, with lanceolate obtuse segments. Corolla large, pilose outside, with an obtuse limb. Stamens unequal, about the length of the corolla. Stigma simple.

Tri-coloured Viper's Bugloss. Shrub.

28 E. VERRUCOSUM (Swartz, in litt. ex Lehm. asper. p. 429.) stem branched; leaves linear, bent, much crowded, hispid, but papillosely scrose beneath; spikelets panicled. ♄. G. Native of the Cape of Good Hope. Branches hoary and hairy. Leaves numerous, an inch long. Spikelets forming a terminal crowded panicle. Calyx hairy and hoary, with linear acute segments. Corolla white, rather irregular. Genitals exserted.

Warted Viper's Bugloss. Fl. June, July. Clt. 1822. Shrub.

29 E. CAPITATUM (Lin. suppl. p. 202. Willd. spec. 1. p. 785. Lehm. asper. p. 430. Jacq. hort. vind. 3. p. 17. t. 49. Lam. ill. p. 414. no. 1869. Thunb. prod. p. 33. Burm. cap. p. 4.) stem branched, pilose; leaves lanceolate, hispid; flowers equal, disposed in capitate corymbs; calyxes hoary. ♄. G. Native of the Cape of Good Hope.

Capitate-flowered Viper's Bugloss. Fl. June, July. Clt. 1818. Shrub 2 to 3 feet.

30 E. STRIATUM (Vahl. symb. 3. p. 22. Lehm. asper. p. 431.) stem branched, glabrous; leaves lanceolate, sub-imbricated, convex and strigose beneath; heads of flowers terminal, solitary. ♄. G. Native of the Cape of Good Hope. E. capitatum, var. sphærocephalum, Lam. ill. 1. p. 414. no. 1865. Roem. et Schultes, syst. 4. p. 13. Branches angular, and hispid at top. Leaves sessile, half amplexicaul-clasping, obtuse, hardly a nail in length, pilose above and on the margins, but strigose beneath. Bracteas ciliated. Calyx pilose, with linear segments. Corolla equal, a little longer than the calyx. Stamens fleshy, much longer than the corolla.

Round-headed Viper's Bugloss. Shrub.

31 E. ROSMARINIFOLIUM (Vahl. symb. 3. p. 22.) stem pilose; leaves petiolate, linear, with revolute edges, pilose, and canescent beneath; spikelets terminal, simple. ♄. G. Native of the Cape of Good Hope. Lehm. asper. p. 432. Branches towards the base incurved below, and clothed with white villi above. Peduncles and calyxes pilose. Calycine segments linear, unequal. Corolla nearly regular; tube pilose from the middle to the limb. Genitals inclosed.

Rosemary-leaved Viper's Bugloss. Shrub.

32 E. STRIGOSUM (Swartz, in litt. ex Lehm. asper. p. 432.) stem hoary, villous; leaves lanceolate, obtuse, keeled, strigose on both surfaces; spikelets terminal, bipartite. ♄. G. Native of the Cape of Good Hope. Leaves an inch long, hoary. Bracteas and calyxes hispid. Calycine segments lanceolate, nearly equal. Corolla large, violaceous; limb rather unequal. Stamens exserted.

Strigose Viper's Bugloss. Fl. June, July. Clt. 1821. Shrub 1 to 2 feet.

33 E. TRICHOTOMUM (Thunb. in Schrad. journ. bot. 1806. p. 39. prod. p. 33.) stem glabrous at bottom, somewhat trichotomously branched; leaves linear, very numerous, hoary, villous; spikelets terminal, bipartite, divaricate. ♄. G. Native of the Cape of Good Hope. Lehm. asper. p. 433. Willd. spec. 1. p. 784. Stem purplish. Branches glabrous: when young simple, or bipartite, bifid at apex, villous and hoary. Leaves alternate, scattered, and 3 in a whorl, ½ an inch long, keeled. Flowers [illegible] pedicels; bracteas ovate, acute. Calyx hoary, very villous, with linear segments. Corolla white: limb irregular. Stamens [illegible] exserted.

Trichotomous-branched Viper's Bugloss. Shrub 2 to 3 feet.

34 E. HISPIDUM (Thunb. l. c. p. 40. prod. p. 33.) stem glabrous, branched; branches and leaves hispid; leaves lanceolate; spikelets terminal, rather compound. ♄. G. Native of the Cape of Good Hope. Willd. spec. i. p. 784. Lehm. asper. p. 433. Leaves sessile, an inch long, bluntish. Spikelets terminal, many-flowered. Bractcas linear-lanceolate, hispid. Calyx hispid, with linear, acute segments. Corolla white, regular. Stamens about as long as the corolla, or a little longer.

Hispid Viper's Bugloss. Fl. May, June. Clt. 1818. Shrub 1 to 2 feet.

35 E. LUCIDUM (Link. enum. 1. p. 170.) stem shrubby, branched; leaves lanceolate, quite glabrous, shining, ciliated at the base; spikes terminal, aggregate, thyrsoid, very villous. ♄. G. Native of the Cape of Good Hope. Stem suffruticose, branched from the base. Leaves sessile, bluntish. Corolla funnel-shaped, hardly longer than the calyx, pilose outside, unequal; segments obtuse, longer than the calyx. Stamens unequal, inclosed. Stigma simple. Nuts [illegible] pilose.

Shining-leaved Viper's Bugloss. Shrub.

36 E. LAMORUXIANUM (Link. enum. 1. p. 170.) stem beset with adpressed hairs; leaves lanceolate, apiculated, silky; spikelets short; corollas nearly equal; stamens about equal in length to the corolla, but the style is longer. ♄. G. Native of the Cape of Good Hope? E. longifolium, Hort. but not of Dietrich. Leaves hoary and soft throughout with incumbent hairs. Spikes few-flowered, not curved. Calycine segments linear-lanceolate, about equal in length to the corolla. Corolla pilose outside, white, with a rounded limb. Filaments glabrous.

Woolly-leaved Viper's Bugloss. Fl. June, July. Clt. 1819. Stirub ¾ to 5 feet.

§. 5. *Stems herbaceous: but in a few of the species they are woody at the base.*

37 E. CAUDATUM (Thunb. in Schrad. journ. bot. 1806. p. 43. prod. p. 33. Lin. 61. suppl. p. 202.) stem simple, villous, woody at the base; lower leaves oblong-lanceolate, superior ones lanceolate, all hispid or strigose; spikes terminal, ovate-oblong, compound; stamens unequal, exserted. ♄. G. Native of the Cape of Good Hope, in sandy places. Willd. spec. 1. p. 786. Lehm. asper. p. 436. Stem purplish. Leaves an inch broad, petiolate; lower ones sessile, 2-3 inches long. Spike 2-3 inches long. Calycine segments linear, beset with silky pili on the margins and back. Corolla small, red, irregular.

Tailed Viper's Bugloss. Fl. May, June. Clt. 1818. Plant 2 feet.

38 E. STRICTUM (Thunb. l. c. p. 41, 42. prod. p. 33.) stem herbaceous, simple, pilose; leaves lanceolate-linear, viscid; hairy:

spreading; spikes terminal, compound, linear-oblong; stamens exserted. ♃. G. Native of the Cape of Good Hope, in sandy places. Willd. spec. 1. p. 786. Lam. Ill. 1. p. 313. no. 1961. Lam. exp. p. 5. Root scaly, fusiform, purplish. Stems 2 or more from the same root, purplish. Radical leaves 2-3 inches long, rosulate, nearly sessile, long as the flowering stem, petiolate; cauline leaves sessile, 2-3 inches long, acuminated. Spikes a finger or 2 inches long. Bracteas subulate. Calyx clothed with silvery silk; segments oblong-linear, obtuse. Corollas small, white.

Scarce-flowered Viper's Bugloss. Fl. March, May. Cl. 1799. Pl. 1 to 2 feet.

5 E. rosulatum (Thunb. 1. p. 23. prod. p. 33.) stems herbaceous, simple, canescent; leaves linear-oblong, rather scabrous, clothed with adpressed hairs, subacute; racemes spicate, loose. ♃. G. Native of the Cape of Good Hope, in Swartland, in sandy places. Willd. spec. 1. p. 786. Lehm. asper. p. 150. Leaves a span long, attenuated, and a little shining at the base: cauline ones lanceolate; uppermost ones an inch long. Racemes from a finger to a span long, composed of spikelets. Peduncles and pedicels very short. Calycine segments linear, obtuse, hoary and hairy. Corolla irregular, blue.

Hoary Viper's Bugloss. Pl. 1 to 1½ foot.

40 E. sericeum (Willd. herb. ex Lehm. asper. p. 147.) stem herbaceous, simple; leaves lanceolate, acuminated, clothed with white silk; racemes terminal, compound of nearly sessile spikelets; corolla nearly equal; stamens exserted. ♃. H. Native of Persia, in exposed places of woods. Root nearly simple, dark purple. Stem strigose. Radical leaves petiolate: cauline ones sessile. Bracteas pilose, linear-lanceolate. Calyx clothed with white silk; segments linear, rather unequal. Corolla villose outside; segments obtuse. Stigma sub-capitate.

Short-leaved Viper's Bugloss. Pl. 1 to 2 feet.

41 E. virescens (Vent. malm. p. 98. in a note.) stem herbaceous, simple, hairy; leaves oblong-lanceolate, very rough; flowers (hybrid); corolla unequal; stamens exserted. ♃. H. Native country unknown. Poir. dict. 8. p. 670. Lehm. asper. p. 151. Stem hispid. Leaves strigose above, and pilose below; lower ones 3-5 inches long: superior ones narrower, and gradually shorter. Spikelets approximate at top, forming a terminal thyrse; lowest ones 2 inches long. Calyx hispid, with linear segments. Corolla bluish, villous outside; with ovate, nearly equal segments.

Hyssop-leaved Viper's Bugloss. Fl. July, Aug. Cl. 1820. Pl. ½ to 2½ feet.

42 E. hyssopifolium (Jacq. fl. austr. 5. append. p. 27. t. 3.) stems herbaceous, simple, hispid; leaves linear-lanceolate, hispid; spike terminal, compound, very long; corolla nearly regular; stamens exserted. ♃. H. Native of Austria, Hungary, Transylvania, Tauria, Siberia, and Caucasus, in exposed fields. Lehm. asper. p. 139. Fisch. fl. cauc. 1. p. 135. Sims. bot. mag. t. 1826. Bourg. fl. trans. 1. p. 130. E. Russicum, Gmel. syst. 2. p. 225. E. Creticum, Pall. ind. taur. E. Italicum, Gmel. itin. 1. p. 119. t. 19.—Mor. hist. 3. sect. 11. t. 27. f. 2.—Clus. hist. 2. p. 164. f. 2. Root woody. Stem usually solitary. Flowers in nearly sessile axillary fascicles, the whole forming a compound terminal spike, from ½ to 1½ foot long. Calyx hispid, with unequal linear segments. Corolla red, 3 times longer than the calyx, with downy lines outside; segments of the limb unequal, obtuse. Stigma simple.

Red-flowered Viper's Bugloss. Fl. July, Aug. Cl. 1791. Pl. 2 to 3 feet.

43 E. creticum (Willd. herb. ex Lehm. asper. p. 149.) stem herbaceous, nearly simple; leaves linear-lanceolate, strigose; spike terminal, compound, very short; corolla unilaterally declinate; stamens exserted. ♃. H. Native of the river Ural. Root woody. Stem hispid. Radical and lower cauline leaves petiolate, 2-3 inches long; upper sessile, lanceolate, strigose, with adhering appendiculate scales. Spikelets of flowers sessile, forming 3 terminal spikes. Calyx strigose, with subulate unequal segments. Corolla downy outside. Stigma emarginate, sub-bifid.

Clasping-leaved Viper's Bugloss. Pl. 1 to 2 feet.

44 E. paniculatum (Lehm. asper. p. 151.) stem suffruticose, simple; leaves oblong-linear-lanceolate, attenuated at the base, ciliated, papillose-strigose; spikelets axillary, sessile, short, secund; corolla rather unequal; stamens exserted. ♃. H. Native of Siberia. *Symphytum secundum*, Gmel. syst. 2. p. 330. n. 3. t. 58. f. 1. Stem rather angular, beset with soft hairs. Lower cauline leaves 2-3 inches long, obtuse-oblong, becoming gradually smaller and narrower as they ascend. Calyx pilose-hoary, with lanceolate segments. Corolla downy outside. Stigma simple.

Purplish Viper's Bugloss. Pl. 1½ to 2 feet.

45 E. crassifolium (Poir. dict. 8. p. 670.) stem hoary at the base, simple, strict, hispid; leaves oblong-lanceolate, rough; racemes spike-formed, very long, composed of glomerate spikelets; corolla nearly equal; stamens exserted. ♃. H. Native of Syria. Lehm. asper. p. 142. Stem angular, erect. Leaves adherent, beset with adpressed strigæ: lower ones a span long, upper ones 2-3 inches long, and 2-3 lines broad, becoming gradually shorter as they ascend. Racemes constituting the greater part of the stem. Bracteas with setose margins. Calyx pilose, with lanceolate-linear, with hispid edges. Corolla nearly regular. Style bifid at top.

Glaucous-leaved Viper's Bugloss. Pl. 2 to 3 feet.

46 E. glaucum (Lin. spec. 200.) stem herbaceous, simple, striate; leaves linear-lanceolate, hirsid from strigæ; racemes very long, spike-formed, composed of bifid dense-flowered spikelets; corolla nearly equal; stamens exserted. ♃. H. Native of Spain, south of France, Italy, Switzerland, Hungary, Transylvania, Greece, Tauria, Lesser Caucasus, Dacia, and Jersey, in waste fields. All. fl. ped. no. 180. Sutter, fl. Helv. 1. p. 107. Smith, engl. bot. t. 2041. Lapeyr. abr. p. 89. Sm. prod. fl. græc. 1. p. 124. Bourg. fl. trans. 1. p. 131. E. asperrimum, Bieb. fl. cauc. 1. p. 135. exclusive of the synonyme of Lam. and Sabat. E. altissimum, Jacq. fl. austr. 5. p. 25. app. t. 10. E. lanceolatum, Moench. meth. suppl. p. 119. Hall. hist. no. 604. Stems many from the same root, beset with dark purple dots, and spreading stiff hairs. Calyx hispid, with linear rather unequal segments. Corollas white, or pale violet, pilose outside; segments ovate obtuse. Style bifid at apex.

Var. β. Italicum (Lehm. asper. p. 144.) stem simple; leaves lanceolate, very hairy; corolla nearly regular; stamens exserted. ♃. H. Native of the Pyrenees. E. Italicum, Lapeyr. abr. p. 91. Flowers yellow.

Var. γ. leaves softer and more villous; flowers nearly sessile. ♃. H. Native of the Pyrenees. E. Italicum, β. Lapeyr. abr. p. 89. "Echium, corollis vix calycem excedentibus margine villosis." Lin. herb. spec. p. 35.

Italian Viper's Bugloss. Fl. July. Britain. Pl. 2 to 4 feet.

47 E. Pyrenaicum (Lin. mant. p. 824.) stem herbaceous, branched, hispid from strigæ; branches ascending pyramidal-panicled; leaves linear-lanceolate; spikelets elongated; flowers rather distant; corolla nearly equal; stamens exserted. ♃. H. Native of the South of France; Upper Italy; Lower Pyrenees; and about Tangiers and Algiers. Desf. fl. atl. 1. p. 134. D. C. syn. no. 2708. fl. gall. 6. p. 418. Willd. enum. 1. p. 187. Lehm. asper. 145. E. pyramidale, Lapeyr. abr. p. 90. d. pyr. p. 66. E. asperrimum, Lam. Ill. no. 1954. Pers. euch. 1. p. 196. E. Italicum, var. γ. Willd. spec. 1. p. 787. E. Italicum, var. β. Lin. spec. p. 201. E. Italicum, Lam. fl. fr. 3. p. 451. E. hexagonum, G. Vitm. sicul. 1. p. 128. Murray, syst.

15. p. 126. Stem and branches beset with dark purple dots and spreading stiff hairs. Leaves hispid, from strigæ, deep green. Spikelets conjugate on the top of the stem and branches, axillary. Calyx hispid, with linear almost unequal segments. Corolla white or pale violet, villous outside, with lanceolate, obtuse segments. Style bifid at apex. Nuts beaked.

Pyrenean Viper's Bugloss. Fl. July, Aug. Clt. 1815. Pl. 1½ to 2 feet.

48 E. MARSHALLI'ANUM (Lehm. asper. p. 446.) stem herbaceous, branched, very hispid from bristles; leaves lanceolate, bristly; bristles rising from large tubercles; spikelets almost simple, elongated; stamens about equal in length to the corolla, which is tubular. ☉. H. Native of Egypt. E. Ramwölfii Delile, fl. Egypt. t. 19. f. 3. Spikelets usually solitary, rarely conjugate, very long and very hispid. Calyx hispid, with lanceolate, unequal segments. Corolla rather unequal, white; pilose outside.

Pearl Viper's Bugloss. Pl. 1½ to 2 feet.

49 E. MENZIE'SII (Lehm. pug. 2. p. 29.) stem herbaceous, erect, beset with retrograde strigæ; leaves sessile, acute, very hispid; lower ones narrow-lanceolate; superior ones ovate-lanceolate; racemes many-flowered, imbricate, hispid; stamens much shorter than the corolla, which is small and somewhat tubular. ♃. H. Native of the North-west coast of America. Stems herbaceous, erect, angular, 1½ foot, branched. Leaves obscurely 5-nerved. Racemes secund, simple, terminal, bracteated. Calyx very hispid, with equal linear segments. Corolla glabrous, yellowish; having 3 of its lobes twice the breadth of the rest. Nuts ovate, trigonal, wrinkled.

Menzies's Bugloss. Pl. 1½ foot.

50 E. PLA'TUM (Desf. fl. atl. 1. p. 164. t. 45.) stem herbaceous, simple; leaves lanceolate, very hairy; raceme terminal, spike-formed; spikelets simple, dense; corolla almost regular; stamens exserted. ♂. H. Native of Atlas, near Tlemsen. Lehm. asper. p. 447. The whole plant is covered with numerous yellowish hairs. Racemes very numerous, axillary, twisted into a spire, but erect while in fruit. Calycine segments subulate. Corolla yellow; tube slender, arched; limb obtuse. Stigmas bifid.

Yellow-flowered Viper's Bugloss. Pl. 1 to 2 feet?

51 E. RUBRUCA'NUM (Sibth. et Smith, prod. fl. græc. 1. p. 125. fl. græc. t. 160.) stem herbaceous, nearly simple, tubercularly hispid, as well as the leaves; leaves linear-oblong, repand; spikelets simple, spreading; stamens about equal in length to the corolla, which is irregular. ♃. H. Native of Sicily. Lehm. asper. p. 448. Hairs or strigæ very long, shining, rising from large white tubercles, giving the plant a canescent appearance. Tubercles on the stem blackish. Root fusiform. Calyx hispid, with nearly equal linear segments. Corolla large, sub-bilabiate, blue, or violaceous, before expansion red, marked with pilose lines outside. Style bifid at apex.

Portelate Viper's Bugloss. Pl. 1 to 1½ foot.

52 E. VULGA'RE (Lin. spec. p. 200. fl. suec. ed. 2d. no. 165.) stem herbaceous, usually simple, strigose; leaves linear-lanceolate, hispid; raceme terminal, spike-formed, very long, composed of spreading simple spikelets; corolla irregular; stamens exserted. ♂. H. Native throughout Europe to Caucasus; also of North America, by way sides, and in waste fields and places; plentiful in some parts of Britain. Scop. fl. carn. ed. 2d. 1. p. 129. All. ped. no. 181. Mœnch, meth. p. 442. Vill. dauph. 2. p. 446. Sut. fl. helv. 1. p. 108. Bieb. fl. cauc. 1. p. 135. Bess. fl. gall. 1. p. 174. Smith, prod. fl. græc. 1. p. 125. engl. bot. t. 181. Oed. fl. dan. t. 415. Sturm. fl. germ. fasc. 18. with a figure. Pursh, fl. amer. sept. 1. p. 130. Blackw. t. 229.—Mor. hist. 3. sect. 11. t. 27. f. 1.—Riv. tab. t. 7. f. 2.—Sabb. rom. 2. t. 96. and a monstrous variety, t. 97. Root branched. Stems many from the same root, covered with black tubercles, furnished with axillary spikelets from the middle to the top, the whole forming a very long raceme. Radical leaves roudate, obtuse. Calyx hispid, with unequal segments. Corolla downy outside, fine purple before expansion, afterwards of a violet blue colour. Style bifid at apex. Nuts wrinkled, tuberculed.

Var. β. stem branched from the base, spreading, and often decumbent; stamens longer. ♂. H. Native of Britain. E. vulgare, β, Smith, fl. brit. 1. c. E. violaceum, Schmidt, fl. bohem. no. 203. p. 3.

Var. γ. *albiflorum* (Roth, l. c. and others.) flowers white.

Common Viper's Bugloss. Fl. July, Aug. Britain. Pl. 2 to 4 feet.

53 E. TRAXENSE'NSE (Hoffm. et Link, fl. port. 1. p. 183.) stem herbaceous, simple, upright, tubercularly hispid, as well as the leaves; leaves lanceolate-linear, with revolute margins; spikelets simple, erect, strict; stamens about equal in length to the corolla, which is irregular. ♃. ♂. H. Native of Portugal; by way sides, particularly about Lisbon and Coimbra. Root branched. Superior leaves sessile, 1-3 inches long, and 2-3 lines broad. Spikelets axillary and terminal, dense, pedunculate. Calyx very hispid, with linear segments. Corolla blue, pilose outside. Style bifid at top.

Tubercular Viper's Bugloss. Fl. July, Aug. Clt. 1820. Pl. 1½ to 2 feet.

54 E. LEVITA'NICUM (Royen, lugdb. p. 407. Lin. spec. p. 200.) stems herbaceous, simple, hairy; leaves lanceolate, attenuated at the base, acute, rather villous; spikelets simple, alternate, erectly spreading; corolla nearly equal; stamens exserted, 2 of which are very lon'%. *It. 11.* . Kativ e of Portugal, in sandy places. Lehm. asper. 450. Willd. spec. 1. p. 789. Pers. eneb. 1. p. 164. Mill. dict. no. 4. E. Italicum, Brot. fl. lus. 1. p. 290. Hoffm. et Link, fl. port. 1. p. 185. Root branched. Stems many from the same root. Radical leaves roudate, canescent, 1 foot long, and 2 inches broad, on short petioles; cauline ones sessile, gradually narrower and shorter. Spikelets simple, ous, pedunculate, axillary, covering the stem almost from the base to the top. Peduncles and calyxes strigosely hispid, the hairs rising from blackish tubercles. Calycine segments equal, lanceolate, Lcunlinatec!. Corolla fi unnel-shoped, pilose outside; limb blue, painted with violet lines, blumish. Style bifid at ap ex.

Portugal \'i\ er's Bugloss. Fl. July, Aug. Clt. 1731. Pl. 2 to 3 feet.

55 E. VIOLA'CEUM (Lin. mant. p. 42.) stem herbaceous, branched; lower leaves oblong; upper ones lanceolate, cordate at the base, stem-clasping, hispid from strigæ; spikelets simple, elongated; stamens about equal in length to the corolla, which is irregular. ☉. H. Native of the South of Germany, Spain, France, Italy, Transylvania, and in the South of Tauria, &c. Retz. obs. fasc. 2. p. 9. Willd. spec. 1. p. 788. Bieb. fl. cauc. 1. p. 422. D. C. ill. fl, j'r. \>. no. 2709. Bess. fl. gal. 1. p. 154. Baumg. fl. trans. 1. p. 191. Lapeyr. abr. p. 91. E. Creticum, Lam. ill. no. 1857. Lapeyr. abr. p. 91. Root fusiform. Stem hispid, from strigæ. Lower leaves obtuse, tapering into the petioles at the base; cauline ones acuminated. Calyx pilose, with unequal, narrow-lanceolate, ciliated, spreading segments. Corollas large, violet or pale blue, striated, beset with scattered hairs. Style bifid at apex.

Violaceous-flowered Viper's Bugloss. Fl. July, Aug. Clt. 1658. Pl. 1 to 2 feet.

56 E. ORIENTA'LE (Lin. hort. cliff. p. 43. spec. 200.) stem herbaceous, branched; branches ascending, pyramidal; leaves oblong-lanceolate; uppermost ones cordate, ovate, soft on both surfaces from dense pili; stamens shorter than the corolla, which is large. ♂. H. Native of the Levant. Willd. spec. 1. p. 789. Lam. ill. p. 413. no. 1559. Echium orientale, Verbas-

ci folio, flore maximo campanulato, Tour. itin. 2. p. 107. t. 107,—Trew. pi. rar. 1. t. 1?. Root fusiform, fibrous. Stem pilose. Leaves pale green ; radical and lower cauline ones a foot and more long : the rest gradually shorter as they ascencf. Spikelets axillary and terminal, simple. Calyx hairy ; with lanceolate, acute, segments. Corolla large, purplish blue, with a rather curved tube, and obtuse limb. Style bifid at apex.

Eastern Viper's Bugloss. Fl. July, Aug. Clt. 1780. PI. 2 to 3 feet.

57 E. GRANDIFLORUM (Desf. fl. atl. 1. p. 166. t. 46.) stem herbaceous, nearly simple, pilosely strigose ; leaves ovate-oblong, clothed with downy tomentum : floral ones ovate-lanceolate; spikelets simple, erect; corolla 4 times longer than the calyx ; stamens inclosed. ©. H. Native of Barbary and Cyrenaica. Horn. hort. hafn. 1. p. 183. Lehm. asper. p. 456. E. raacranthum. Roem. et Schultes, syst. 4. p. 20. Leaves bluntish : lower ones drawn out into petioles : middle and upper ones sessile, 2-3 inches long, becoming gradually shorter as they ascend. Spikelets terminal, and from the axils of the superior leaves. Bracteas clasping, hispid. Calyx pilose or hispid, with linear-subulate segments. Corolla large, nearly an inch long, violaceous, striated, pubescently pilose outside, particularly at the striae. Style bifid at apex.

Great-flowered Viper's Bugloss. Fl. July, Aug. Clt. 1818. PI. 1| foot.

58 E. PLANTAGINEUM (Lin. mant. p. 202.) stem herbaceous, erect, paniculately-branched; radical leaves petiolate, ovate-oblong, lined ; cauline leaves sessile, lanceolate, beset with long incumbent hairs ; stamens hardly equal in length to the corolla, which is irregular. ©. H. Native of Greece, Portugal, South of France, Italy, Montevideo, &c. All. ped. no. 138. Smith, prod. fl. grsec." 1. p. 124. fl. grsec. t. 179. Jacq. hort. vind. 1. t. 45. D. C. syn. fl. fr. no. 2711. St. Hil. pi. usuell. bras. t. *25.* Hoffm. et Link, fl. port. 1. p. 186. Poir. diet. 8. p. 671. Horn. hort. hafn. 1. p 182. Lehm. asper. p. 457. E. plantaginoides, Rcem. et Schultes, syst. 4. p. 19.—Barrel, icon, 1026. obs. 145. E. amplissimo folio Lusitanicum, Tourn. inst. p. 135. —E. orientale, folio oblongo molli et cinericio, Tourn. cor. p. (5. Root fusiform, reddish brown. Stems many from the same root, soft to the touch at the base, but scabrous above. Radical leaves obtuse, 2-3 inches long, and 1 to 1J broad: cauline ones stem-clasping : uppermost ones acute. Flowers large, showy, disposed in solitary, many-flowered, pedunculate spikelets. Calyx hispid; with linear lanceolate, nearly equal segments. Corolla large, purplish-violet, rarely white, red before expansion; limb sub-bilabiate, obtuse. Filaments glabrous. Style bifid at apex.

Plantain-like Viper's Bugloss. Fl. July, Oct. Clt. 1779. PL 1 to 2 feet.

59 E. BENTHA'MII (Wall. cat. no. 931.) plant thickly clothed with strigose pili ; radical leaves long, lanceolate, tapering at both ends, acuminated, 5-nerved ; stems simple, naked from the base to the spike of flowers : lower bracteas ovate-lanceolate, acuminated, gradually diminishing in size to the top of the spike: calycine segments very long, linear, very villous. 1/. H. Native of the East Indies, at Buddrinath. Leaves 1 to 1J foot long. Spike solitary, a foot long. Corolla not seen.

Bentham's Viper's Bugloss. PI. 2 to 4 feet.

60 E. E'LEGANS (Lehm. asper. p. 459.) stem herbaceous, erect, branched at the base, pilosely hispid ; leaves linear-lanceolate, hispid, somewhat repand ; stamens a little longer than the corolla, which is irregular. *$* . H. Native in the fields of Naples. E. hispidum, Smith, fl. graec. 1. p. 125. fl. grsec. t. 181. E. Sibthorpi, Rcem. et Schultes, syst. 4. p. 26. The whole plant is canescent. Branches beset with red spots. Spikelets simple, alternate, many-flowered. Bracteas linear, ovate at the base. Calycine segments unequal, lanceolate, acute. Corolla of a fine scarlet colour, pilose at bottom. Filaments glabrous. Style bifid at apex.

Elegant Viper's Bugloss. Fl. June, July. Clt. 1824. PI. 1 to 2 feet.

61 E. CRE'TICUM (Lin. spec. 200.) stem herbaceous, diffuse, very hispid, branched at the base ; leaves oblong-lanceolate, hispid; calyxes while bearing the fruit distant and widened; stamens inclosed. ©. H. Native of Candia, and throughout the Grecian Islands, in the sand by the sea-side. Smith, prod. fl. graec. 1. p. 126. fl. graec. 1.183*. Sims, bot. mag. 1934. Schultes obs. p. *33,* Nocca, in Usteri. ann. bot. 5. stuck, p. 14. Willd. enum. 1. p. 187. Horn. hort. hafn. 1. p. 183. Lehm. asper. p. 460. Sabb. hort. rom. 2. t. 95. E. rubrum Mcench. meth. p. 421. E. angustifdlium, Mill.dict.no. 6. E. Creticum angustifolium rubrum, Tourn. inst. p. 136. Root slender, brown. Stems decumbent in the spontaneous plant, but erect when cultivated. Leaves bluntish : radical ones petiolate : cauline ones sessile: floral ones acute, stem-clasping at the base. Spikelets simple, axillary, and terminal, many-flowered. Calyx hispid, with unequal foliaceous segments. Corolla irregular, reddish-violet, marked by 5 villous lines outside. Style bifid at apex.

Cretan Viper's Bugloss. Fl. July, Sept. Clt. 1683. PI. | to 1 4 foot.

62 E. FLORIBU'NDUM (Lehm. pug. 2. p. 24.) leaves nearly sessile, linear-lanceolate, acute, a little ciliated, downy on both surfaces : radical ones lanceolate, petiolate : racemes bifid, bracteolate ; nuts smoothish : prickles glochidate, disposed in a simple series along the margins. ©. H. Native of the north-west coast of America. Stem beset with adpressed hairs. Racemes axillary, pedunculate, panicled at the top of the stem, many-flowered. Pedicels pilose : floriferous ones length of calyx, erect; but twice that length, and refracted in the fruit-bearing state. Calycine segments lanceolate, obtuse. Corolla blue, size of that of *Myosotis paliistris,* wiih roundish segments. Nuts ovate, acute.

Bundle-flowered Bugloss. PI. 1 to 2 feet.

63 E. BONARIE'NSE (Poir. diet. 8. p. 674.) stem herbaceous, simple, pilose; lower leaves linear, very narrow : superior ones dilated at the base, hairy ; stamens hardly exceeding the corolla, which is large. £ ?. ©?. H. Native of Buenos Ayres. Lehm. asper. p. 462. Stem somewhat fistular. Leaves stem-clasping, 1 to 2 inches long, obtuse: floral ones subsagittate. Spikes terminal on long peduncles. Calyx very hispid, with lanceolate, acuminated segments. Corolla bluish-violet, irregular. Style glabrous ; stigma bifid.

Buenos Ayrean Viper's Bugloss. PI. 1 foot ?

64 E. ANGUSTIFOLIUM (Lam. ill. p. 412. no. 1856.) stem herbaceous, simple, erect, hispid ; leaves linear, very narrow, attenuated at the base, hispid; corolla twice as long as the calyx; stamens exserted. ©. H. Native of Spain. Pers. ench. 1. p. 184. Lehm. asper. p. 462.—Barrel, icon. 1011. —Bocc. raus. t. 78. f. 3. Hairs rising from white conical tubercles. Leaves bluntish, 3-4 inches long, and about a line in breadth: lower ones petiolate : upper ones sessile. Spikelets solitary, pedunculate, terminal, and from the axils of the upper leaves. Calycine segments subulate. Corolla funnel-shaped, blue, beset with long, white, stiff hairs above ; segments unequal. Style bifid at apex.

Narrow-leaved Viper's Bugloss. PI. 1 to 2 feet ?

65 E. MERTE'NSII (Lehm. asper. p. 463.) stems woody at the base, simple, erect, leafy ; leaves linear-lanceolate, hispid, hoary ; corolla twice as long as the calyx ; stamens equal in length to the corolla. 1/. H. Native of Spain. Root fusiform, simple. Stems one or more from the same root, hispid, hoary. Lower leaves 3-4 inches long, and 1-2 lines, broad,

acutish; superior ones smaller, all imbricate at the base, and clasping the stem, with revolute edges. Flowers on short pedicels, disposed in short pedunculate spikelets, the whole constituting a terminal, compact, oblong raceme. Calyx hoary and pilose; with linear, nearly equal segments. Corolla funnel-shaped, blue, beset with long white hairs; segments unequal. Style bifid at apex.

Mertens's Viper's Bugloss. Fl. June, July. Clt. ", 1824. Pl. ½ to 1 foot.

66 E. SPATULÆFOLIUM (Viv. fl. libyc. p. 3. t. 9. f. 1.) plant shrubby, strigose; leaves long-spatulate; corolla twice as long as the calyx; stamens inclosed. ½. F. Native of Libya, on the shores of the Great Syrtus. Stem branched from the base. Leaves tapering into the petioles; upper ones oblong, sessile. Flowers disposed in short terminal spikes. Calyx very hispid; with linear, acute segments. Corolla violaceous, hairy outside, ciliated. Stigma emarginate.

Spatulate-leaved Viper's Bugloss. Shrub.

67 E. SERPENS (Vahl. symb. 2. p. 35.) stems woody at the base, procumbent, branched; leaves linear-lanceolate, very hispid, hoary; stamens a little longer than the corolla. ½. H. Native of Egypt. Willd. spec. 1. p. 784. Lehm. asper. p. 464. E. rubrum, Forsk. descr. p. 41. icon. 2. t. 17. f. 2.—The whole plant is hoary, and strigosely hispid. Leaves blunish, smaller; lower ones more than an inch long. Spikelets terminal, solitary; bractæa ovate-lanceolate. Calycine segments linear-lanceolate, rather unequal. Corolla irregular, red inside, and evanescent from villi outside. Style bifid at apex.

Prickly Viper's Bugloss. Pl. procumbent.

68 E. ECHIOIDES (Vahl, symb. 2. p. 35.) stems woody at the base, ascending, branched, diffuse; leaves linear, emarginated, hoary on both surfaces from incumbent hairs; stamens much longer than the corolla. ½. H. Native of Egypt. Willd. spec. 1. p. 785. Lehm. asper. p. 465.—The whole plant is hoary and pilose. Leaves obtuse: lower ones crowded, petiolate, 1-3 inches long; petioles ciliated, semi-clasping; upper leaves gradually shorter, semi-clasping at the base. Flowers sessile, disposed in terminal, simple, compact spikelets. Calycine segments equal, lanceolate. Corolla irregular, villous outside. Style bifid at apex.

Silky Viper's Bugloss. Pl. ascending.

69 E. SERICEUM (Viv. fl. libyc. p. 8. t. 5. f. 1.) stem shrubby, decumbent, hispid from adpressed bristles; leaves linear, and arc, as well as the calyxes and bracteæ, strigose; corolla twice as long as the calyx; stamens exserted. ½. F. Native of Libya, in the Great Syrtus, on the shores of Pentapoli. Leaves sessile, with subrevolute edges. Calycine segments linear. Spikes conjugate. Floral leaves length of calyxes. Corolla blue, hairy outside, with roundish lobes. Stigma deeply bifid. Allied to *E. arrectum*, and *E. setosum*.

Two-spiked Bugloss. Pl. decumbent.

70 E. BIFRONS (Willd. spec. 1. p. 788. Lehm. asper. p. 466.) stems herbaceous, ascending, simple; leaves spatulate-lanceolate, obtuse, villously strigose, cinereous; stamens about equal in length to the corolla, which is large. ☉. H. Native of Italy and Sicily, near the sea side; and in corn-fields of Tenos. E. maritimum stœchadum, flore maximo cœruleo, Tourn. inst. p. 136.—Barrel. icon. t. 1012.—Bocc. mus. 2. t. 78. f. 1. Root quite simple. Lower leaves tapering into petioles 3 inches long; superior ones sessile, lanceolate, obtuse. Spikelets terminal, and from the axils of the upper leaves, dense, pedunculate. Calyx hoary from numerous hairs, with unequal, lanceolate segments. Corolla blue, irregular, downy outside; segments unequal. Style bifid at apex.

Sea-side Viper's Bugloss. Fl. July, Aug. Clt. 1818. Pl. ascending, ½ to 1 foot long.

71 E. VULGARE (Roth. cat. bot. fasc. 2. p. 16.) stem herbaceous, erect, branched, slender; leaves linear-lanceolate, setosely pilose; stamens unequal, shorter than the corolla, which is small. ☉. H. Native of Barbary, in sandy places. Pers. euch. 1. p. 164. exclusive of the syn. of Schousb. Lehm. asper. p. 467. The whole plant, with the exception of the corollas, is beset with tubercles, and stiff, dense hairs. Leaves acute, 2-3 inches long, and 3-4 lines broad. Racemes terminal, usually 3, alternate, dense. Calycine segments lanceolate-linear, nearly equal, acuminated, connivent. Corolla small, pale blue, reticulately veined, downy outside; limb oblique, unequal, obtuse.

Var. β, humile (Lehm. asper. p. 467.) leaves narrow-lanceolate, pilose, scabrous, running into the petioles at the base; calyxes very hairy. ☉. H. Native of Barbary, in sandy places. E. humile, Desf. fl. atl. 1. p. 165. Pers. euch. 1. p. 164. Plant tufted, 3-4 inches high. Calycine segments linear-subulate.

Slender Viper's Bugloss. Fl. June, July. Clt. 1824. Pl. 1 foot.

72 E. SUBULATUM (Lehm. pug. 1. p. 18.) stem herbaceous, simple; leaves linear-lanceolate, hispid, hoary; spikes terminal, simple, very short; stamens a little longer than the corolla, which is large. ½. H. Native of Egypt. Root rather woody. Stems 2 inches high, simple, hispid. Leaves obtuse. Spikes simple, dense, 8-12-flowered, at first resolute. Calyx hispid; segments equal, linear, blunish. Flowers large for the size of the plant, irregular, violaceous, pilose outside, 3 times as long as the calyx. Stigma bifid.

Dwarf Bugloss. Pl. 2 inches.

73 E. PARVIFLORUM (Mœnch. meth. p. 425. Roth. catal. fasc. 2. p. 14.) stems herbaceous, ascending, branched; leaves obovate-oblong, bluntish, strigosely pilose; stamens one half shorter than the corolla, which is small. ☉. H. Native about the shores of the Mediterranean sea, &c. Pers. euch. 1. p. 164. Host. hort. hafn. 1. p. 183. Willd. enum. 1. p. 187. E. calycinum, Viv. fragm. fl. nat. fasc. 1. p. 2. t. 4. D. C. fl. fr. 4. p. 312. Lois. journ. bot. 2. p. 262. E. prostratum, Tenore. fl. neap. prod. p. 18. fl. neap. 1. p. 60. t. 12. E. sessiliflorum, Tenore. Pour dict. 5. p. 666. E. microanthum, Schousb. Icon. tum. Pour dict. 5. p. 666. E. maritimum, Lamarck. Fl. fr. 3. p. 508. E. Lamarckianum, All. ped. pp. 182. E. maritimum, Tenore.—Till. hort. pis. p. 56. t. 22. f. 3.—Bocc. mus. p. 102. t. 132. Root fibrous. Stems many from the same root, strigosely hispid. Tubercles white, from which hairs rise. Radical leaves more than 2 inches long, petiolate, as well as the lower cauline ones: upper cauline ones sessile. Flowers nearly sessile, disposed in simple, terminal spikes. Calyx hispid, inflated, and larger in the fruit-bearing state; with unequal, lanceolate segments. Corolla rather irregular, pale blue, tubular, pilose outside; segments roundish-cordate. Style bifid at apex.

Small-flowered Viper's Bugloss. Fl. July, Aug. Clt. 1798. Pl. procumbent.

74 E. DIFFUSUM (Smith, prod. fl. græc. 1. p. 135. fl. græc. t. 182.) stems herbaceous, prostrate, diffuse, nearly simple; leaves linear-subspatulate, setosely strigose; stamens a little shorter than the corolla, which is large. ☉. H. Native of Candia. Root thick, rather woody. Stems numerous, hispid. Leaves 1-2 inches long. Flowers sessile, disposed in terminal, simple, many-flowered elongated spikes; bracteæ oblong-spatulate, recurved. Calyx bristly, with nearly equal, linear, acute segments. Corolla irregular, scarlet, beset with white pili outside. Style bifid at apex.

Diffuse Viper's Bugloss. Fl. June, July. Clt. 1[illegible]. Pl. procumbent.

75 E. LONGIFOLIUM (Delile. descrip. egypt. 2. t. 16. f. 3.) erect, simple ; leaves linear-lanceolate, elongated, strigose; corolla large ; stamens exserted. 3/ . H. Native of Egypt.

Long-leaved Viper's Bugloss. PI.

76 E. ARENA'RIUM (Guss. sem. hort. Bocc. 1825. ex Linnsea, 4. p. 37.) stem diffuse ; leaves obtuse ; corolla small, tubular; calyx hispid from strigae, by which it differs from *E. diffusum,* and *E. tenue.* %, H. Native of the South of Europe.

Sand Bugloss. PI. diffuse.

f *Species doubtful or hardly known, many of which are probably synonymous with some of those described above.*

77 E. SALMA'NTICUM (Lag. gen. et spec. nov. diagn. 1806. p. 10.) radical leaves lanceolate ; stamens very long, glabrous; throat of corolla impervious. %. H. Native of Spain, about Salamanca. Plant hispid.

Salamanca Viper's Bugloss. Fl. June, July. Clt. 1811. PI. 1 to 2 feet.

78 E. VALENTINUM (Lag. 1. c.) plant strigose; leaves lanceolate ; corollas campanulately funnel-shaped, nearly equal, longer than the calyx ; stamens about equal in length to the corolla. 1/. H. Native of Spain, in the province of Valentia, where it was gathered by Cavanilles.

Valentia Viper's Bugloss. PI.

79 E. SCHIFFE'RI (Lang, in syll. soc. reg. ratisb. vol. 2. with a figure, ex Bull. phil. 18. p. 240.) We know nothing of this species.

Schiffer's Viper's Bugloss. PL

80 E. LAGA'SCJE (Roem. et Schultes, syst. 4. p. 27.) strigose; stem panicled at top ; branchlets alternate, terminated by a bifid spike ; corolla shorter than the calyx ; upper leaves lanceolate, subpetiolate. %. H. Native of Spain, near Hispalim. E. panicul&tum, Lag. 1. c. but not of Thunb.

Lagasca's Viper's Bugloss. PL

81 E. ELONGA'TUM (Lam. ill. no. 1855. Poir. diet. 8. p. 669.) stem herbaceous, erect, pilose, forming a long spike at top ; corolla hardly exceeding the calyx ; stamens exserted. £.? H. Native country unknown. This species is said to differ from *E. asperrimum,* and *E. Pyrendicum,* in the long spike ; in the sessile flowers, small, obliquely truncate corollas, with short, obtuse, white lobes.

Elongated-sp\ke& Viper's Bugloss. PL

82 E. SPINE'SCENS (Med. bot. beob. des jahres. 1783. no. *36.* Lehm. asper. p. 474.) Nothing is known of this plant but the name.

Spinescent Viper's Bugloss. PL

83 E. MEGALA'NTHUM (Lapeyr. abr. suppl. p. 39.) stem herbaceous, sijjple, elongated, pilose ; leaves lanceolate, strigose ; corolla unequal, rather villous outside, much longer than the calyx ; pistil longer than the stamens, which are exserted. $. H. Native of the Pyrenees ; as well as of Galicia and Jacca, on the mountains. E. grandifldrum, Lapeyr. abr. p. 90. fl. pyr. ined. t. 65. E. longistamineum, Pourr. chlor. hisp. no. 6i1. Habit of *E. altissimum,* Jacq.; but the stem is only floriferous at the apex. Corolla irregular, 4 times longer than the calyx, white, ciliated on the edges. Perhaps only a var. *E. violaceum.* SeeD.Cfl.fr. 6. p. 418.

Large-flowered Viper's Bugloss. PL 2 to 3 feet.

84 E. AUSTRA'LE (Lam. ill. no. 1860. Poir. diet. 8. p. 692.) stem herbaceous, pilose ; leaves ovate, attenuated at both ends ; corollas equalling the stamens, which are villous at the apex. 0. H. Native about the Nile, in fields. Poir. diet. 8. p. 692. D. C. syn. fl. fr. no. 2710. Pers. ench, 1. p. 164. This species is joined by Loiseleur, in fl. gall. 1. p. 111. with *E. Lusitdnicum;* others have joined it with *E. violaceum, E. Creticum,* and *E. grandflbrum.* It is often to be found in gardens and Herbaria under the names of *E. violaceum,* and *E. Creticum;* and is probably the *E. Creticum* of Schultes, obs. bot. p. 33. of which he gives the following diagnosis : " Stem 1-2 feet high, clothed with cancscent -hairs. Superior leaves acuminated. Spikes elongated, leafy, very hispid. Calycine segments straight, acute. Corolla twice as long as the calyx, rather pilose, violaceous or purple, irregular. Stamens and style rather pilose; stigma bifid. ©. H. Native of the south of Europe."

Southern Viper's Bugloss. Fl. July, Aug. Clt. 1824. PL l£foot.

85 E. LONGIFLORUM (Du Mont de Courset, bot. cult. 7. suppl. p. 147. to vol. 3. p. 198.) Nothing is known of this plant but the name. T?. G. Native of the Cape of Good Hope.

Long-flowered Viper's Bugloss. FL June, July. Clt. 1806. Shrub 2 to 3 feet.

86 E. PYRAMIDA'TUM (DU Mont de Courset, 1. c.) J? . G. Native of the Cape of Good Hope. Nothing is known of this plant but the name.

Pyramidal Viper's Bugloss. Fl. May, July. Clt. 1820. Shrub 2 to *3* feet.

87 E. BRACHYSTA'CHYUM (Pall, ex herb. Willd. see Roem. et Schultes, syst. 4. p. 726.) corollas nearly equal, twice longer than the calyx ; stamens longer than the corolla ; spikes axillary, usually 5-flowered, sessile ; leaves lanceolate, obtuse, rough from dots or tubercles. %. H. Native of Siberia. Pallas.

Short-spiked Viper's Bugloss. PL

88 E. A'LBICANS (Schott. fil. ex Roam, et Schultes, syst. 4. p. 726.) stem erect, simple, hairy, mixed with long strigae ; radical leaves broad-lanceolate : cauline leaves linear-lanceolate, densely strigose ; bracteas and leaves of calyx hispid from long, ciliated §trig3e ; corolla pale red, hairy. $. ? H. Native near Tarifa, Schott. Plant white from strigse. Spikes lateral, much shorter than in *E. Itdlicum.*

Whitish Viper's Bugloss. PL erect.

Cult. All the species of *Echium* are very elegant when in flower ; and are, therefore, worth cultivating in every collection, particularly the hardy species. The shrubby kinds, being all greenhouse plants, grow very well in a mixture of loam, sand, and peat; and cuttings of them will strike root in the same kind of soil, under a hand-glass; but they are more readily increased by layering down the young shoots, making a small incision with a knife on the back of each shoot so laid before pegging it down ; they may be also raised from seeds, which are sometimes produced in this country. The hardy species grow ver^ well in common garden soil, in a dry situation; and they are omy to be increased by seeds, which should be sown in the open ground in spring ; their treatment is that of other hardy, perennial, biennial, and annual plants. All the hardy kinds are well fitted for decorating flower borders, from the different shades of their elegant blossoms.

XXII. ECHIOCHrLON (from *tχtlv, echion,* Bugloss ; and XctXoc, *cheilos,* a lip ; in reference to the bilabiate limb *of* corolla, and its affinity with Bugloss.) Desf. fl. atl. 1. p. 166. t. 47. Lehm. asper. p. 477.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 4-parted. Corolla with a slender arched tube, a naked throat, and a bilabiate limb ; upper lip 2-lobed : lower one somewhat 3-lobed. Stamens 5, inclosed. Nuts 4, 1-celled, glabrous, tubercled, imper-

torated at the base, fixed to the bottom of the calyx.—A shrubby plant, with hairy branches, evergreen, subulate, hispid leaves, and axillary, sessile, solitary, small blue flowers. This genus appears to be the connecting link between *Boraginece* and *Labiàtce.*

1. E. FRUTICOSUM (Desf. 1. c. Delile, fl. segypt. 238. Viv. p. 9.) *h* • F. Native of the kingdom of Tunis', near Kerwan ; and on the shores of the Great Syrtus. Stems and leaves tubercular, rather strigose. Branches clothed with white pili. Lower leaves reflexed : upper ones adpressed to the stem. Corolla hairy outside ; lobes rounded. Anthers versatile. Style slender ; stigma 2-lobed.

Shrubby Echiochilon. Shrub 1 foot.

Cult. For culture and propagation see *Onósma,* p. 317.

XXIII. NO^NNEA (named by Mcench, after J. P. None, a German botanist.) Mcench. nieth. 420. Med. phil. bot. 1. p. 31. D. C. syn. fl. fr. no. 2718, &c.—Oscámpia, Mcench. meth. p. 420. Lycópsis, Lehm. asper. 252.—Echioides, Dill. —Lycopsis species of Lin. and other authors.

LIN. SYST. *Pentdndria, Monogynm.* Calyx 5-cleft, drooping, inflated and campanulate in the fruit-bearing state. Corolla funnel-shaped, with a pervious bearded throat, and a straight tube. Stamens inclosed. Stigma simple. Nuts 4, 1-celled, turbinate, concave, and perforated at the base, fixed to the bottom of the calyx.—Hispid, annual plants; with terminal, leafy racemes of flowers. Habit of species of *Lycópsis.* Radical leaves petiolate : cauline ones sessile.

1 N. PICTA; hispid; stems procumbent, much branched; leaves linear-lanceolate, undulated, obsoletely toothed: floral ones broadest at the base; limb of corolla equal, shorter than the tube. ©. H. Native of Siberia, in sandy deserts at the Volga, Terek, and Kuma; in vineyards about Astrachan ; and in Eastern Iberia ; as well as in the Soongarian desert. Anchùsa pìcta, Bieb. fl. cauc. 1. p. 127. Trev. in schrift. gesell. nat. freund. berol. 1817. p. 147. Lehm. asper. 255. Ledeb. fl. alt. 1. p. 185. Root simple. Floral leaves much longer than the flowers. Calycine segments unequal, subulate. Corolla having the tube a little longer than the calyx, pale at bottom, with a pilose throat, and a blue limb, painted with deeper veins.

Painted-dowered Nonea. Fl. June, July. Clt. 1800. PI. procumbent.

2 N. CA'SPICA ; hispid ; stem erect, almost simple ; leaves lanceolate, or narrow-oblong, attenuated at both ends, entire ; limb of corolla equal, shorter than the tube. ©. H. Native in sandy places towards the Caspian Sea ; and in the Soongarian desert. Ledeb. fl. alt. 1. p. J85. Onósma Càspica, Willd. spec. 1. p. 775. exclusive of the synon. of Pall. Lycópsis Càspica, Lehm. asper. p. 256. Root fusiform, violaceous. Pedicels shorter than the floral leaves. Calycine segments hairy, lanceolate-linear, long-acuminated. Corolla one-half longer than the calyx, purple; tube slender, dilated at top, equal in length to the limb.

Caspian Nonea. PI. ¡ to § foot.

3 N. CILIA'TA (Roam, et Schultes, syst. 4. p. 71.) hispid; stem simple, erect; leaves oblong-lanceolate, obtuse, denticulated : floral ones acuminated ; limb of corolla unequal, nearly the length of the tube. 0. H. Native of the Levant. Lycópsis ciliàta, Willd. spec. 1. p. *780.* Lehm. asper. p. *257.* Root quite simple. Racemes twin, terminal. Floral leaves longer than the calyx. Calycine segments narrow-lanceolate, **acuminated. Corolla large, yellow ; tube cylindrical, a little longer than the calyx. Leaves beset with long white pili, especially *on* the margins and midrib.**

Ciliated-leaved Nonea. Fl. June, July. Clt. 1804. PI. * to | foot.

4 N. OBTUSIFÒLIA ; hispid from pili; stems ascending, simple ; leaves oblong-lanceolate, obtuse, nearly entire: floral ones lanceolate, acute ; limb of corolla unequal, one-half shorter than the tube. ©. H. Native of Chio. Lycopsis obtusif61ia, Willd. spec. 1. p. 780. Pulmonària Chia echii folio verrucoso, calyce vesicario, flore cceruleo, Tourn. cor. p. 6. Root fibrous. Stems many from the same root. Radical leaves rosulate, roundish-obtuse: cauline leaves half stem-clasping. Calycine segments ovate, acute. Corolla blue, one-third longer than the calyx.

Far. fl. Pulmónaria Lesbia, echii folio verrucoso, calyce vesicario, flore cceruleo, Tourn. cor. p. 6. ©. H. Native of Lesbo. This is larger ; the leaves more hispid, and obsoletely and remotely toothed, but otherwise very like var. a.

Obtuse-leaved Nonea. Fl. June, July. Clt. 1818. PL \ to f foot.

5 N. SIBTHORPIA'NA ; hispid from pili ; stems procumbent, almost simple ; radical leaves oblong-elliptic : cauline ones lanceolate, obtuse, quite entire : floral ones acute, ovate-lanceolate at the base ; limb of corolla equal, flat, one-half shorter than the tube. 1/. H. Native of Candia, on the Spaciotic mountains. Anchusa ventricdsa, Smith, prod. fl. graec. 1. p. 117. fl. graec. t. 169. Viv. fl. libyc. p. 10. t. 4. f. 1. Root fusiform, fibrous. Steins simple or bifid at top : lateral ones prostrate : middle ones ascending. Leaves sessile. Flowers sessile, in the axils of the floral leaves. Calycine segments short, unequal, acute. Corolla white, ex Smith, violaceous or blue, ex Viv., small, having the tube a little longer than the calyx, and the throat bearded; processes in the throat ciliately fringed. Style exceeding the corolla. This and *N. alpestris* are probably species of *Anchùsa*, from the throat of the corolla being furnished with fringed processes.

Sibthorjfs Nonea. PI. procumbent.

6 N. ALPE'STRIS ; hispid; stems ascending, simple; leaves oblong-lanceolate, bluntish, erosely toothed ; limb of corolla equal, length of tube ; calyx 5-toothed ; teeth bluntish, ex Stev. acute, ex Lehm. 2£.? H. Native of Eastern Caucasus, on alp Schahdagh, at the fountains of the river Jucharibasch. Anchusa alpestris, Stev. in Lin. trans. 11. p. 409. t. 32. Lycopsis alpestris, Lehm. asper. p. 260. Root branched, blackish. Racemes terminal, conjugate, revolute at top. Bracteas lanceolate, acuminated. Corollas size of those *of Anchusa liitea,* twice as large as the calyx; tube cream-coloured; limb yellow, with a fulvous base; throat closed by 5 very short bearded scales. **Calyx with 5 bluish lines.**

***Alp* Nonea. PI. 1 foot.**

7 N. ROSEA (Link, enum. 1. p. 167.) hispid; stems procumbent, simple ; leaves oblong, bluntish, obsoletely toothed, clammy ; limb of corolla equal, length of tube. 0. H. Native of Siberia, at the river Terek, in gardens and vineyards. Anchusa rosea, Bieb. fl. cauc. 1. p. 225. cent. pi. ross. t. 43. Lehm. asper. p. 261. Root fusiform, simple. The whole plant is hispid and clammy. Floral leaves cordate-oblong, obliquely acuminated, much longer than the flowers. Racemes usually solitary. Calycine segments lanceolate-subulate, conniving in the fruit-bearing state. Corolla having the tube a little curved, a little longer than the calyx; limb fine purple, marked with 10 yellow lines towards the throat, disposed by pairs; throat bearded with long hairs. Anthers bluish.

/tose-coloured-flowered Nonea. Fl. June, July. Clt. 1823. PI. procumbent.

8 N. DECU'MBENS (Mcench, meth. p. 422.) hispid; stems

procumbent, branched ; leaves lanceolate, quite entire: floral ones much longer than the calyx ; corolla equal, hardly exceeding the calyx; limb very short. ©. H. Native of Europe, and in sandy places near Tozzer. N. violacea, D. C. syn. fl. fr. no. 2718. exclusive of the syn. of Desf. Echioides nigricans, Desf. fl. atl. 1. p. 163. Anchusa nigricans, Brot. fl. lus. 1. p. 298. Lycopsis nigricans, Pers. ench. 1. p. 163. Horn. hort. hafn. 1. p. **181.** Hoffm. et Link, fl. port. 1. p. 130. t. 22. Lycopsis vesicaria, Lin. spec. 198. Roth. tent. fl. germ. 2, p. 216. Willd. spec. 1. p. 779. enum. 1. p. 188. Lapeyr. abr. p. 89. Lehm. asper. p. 262.—Mor. hist. 3. sect. 11. t. 26. f. 11. —Zan. hist. t. 30. Leaves acute, pale green ; floral ones obliquely acuminated. Calycine segments lanceolate, acute. Corolla with a yellowish tube, and a dark purple, almost black limb ; throat pilose. Anthers brown. ,

Decumbent Nonea. Fl. June, July. Clt. 1686. PI. procumbent.

9 N. ELONGATA ; hispid from pili; stem erect, simple ; leaves lanceolate, quite entire: floral ones ovate, cordate, shorter than the calyxes ; limb of corolla equal, one-half shorter than the exserted tube. %.*1* H. Native of the deserts of Alexandria. Lycopsis elongata, Lehm. asper. p. 264. Calycine segments lanceolate, unequal. Corolla with a pale yellow tube, and purplish blue limb ; tube of corolla length of calyx.

E longated-racemed Nonea. PI. 1 \ to 2 feet.

10 N. COLSMANNIA^NA ; hispid; stems erect, branched; branches divaricate; leaves linear-lanceolate, quite entire: floral ones ovate, acuminated ; limb of corolla unequal, a little shorter than the tube. %. H. Native country unknown. Lycopsis Colsmanniana, Lehm. asper. p. *265.* Root woody, twisted. Stems many from the same root, tufted. Floral leaves a little longer than the flowers. Racemes usually conjugate. Calycine segments lanceolate, acute. Corolla purple ; tube length of calyx. Nuts as in *N. decumbens.*

Colsmann's Nonea. PI. \ to § foot.

11 N. PULLA (D. C. syn. fl. fr. no. 2719.) pilose; stems erect, nearly simple; leaves lanceolate, quite entire, soft, clothed with adpressed pili: floral ones ovate-lanceolate ; limb of corolla equal, length of tube. %. H. Native of South and Middle Europe, in corn-fields, and by way sides ; and of Caucasus, in grassy places. Lycopsis **pulla,** Lin. spec. p. 196. Jacq. fl. austr. 2. p. 53. t. 188. Gsertn. fruct. 1. p. 327. Lapeyr. abr. p. 89. Bess. fl. gal. 1. p. 153. Anchusa pulla, Bieb. fl. cauc. 1. p. 125. Lycopsis vesicaria, Horn. hort. hafn. 1. p. 181. but not of Lin. Echioides violacea, Desf. fl. atl. 1. p. 164. Anchusa tinctoria, Pall. ind. taur.—Clus. hist. 2. p. 164. f. 1.— Riv. intr. herb. 1. t. 8. Root fusiform, simple. Leaves somewhat canescent: radical ones more or less crowded : cauline ones half stem-clasping, acuminated, ciliated with long rigid hairs, longer than the flowers. Racemes axillary and terminal, at the tops of the stems, short, dense, many-flowered, nutant. Calycine segments unequal, acuminated. Corolla with a pale yellow tube, which is shorter than the calyx, and a dark purple, almost black limb.

ZW£-flowered Nonea. Fl. June, July. Clt. 1648. PI. \ to \\ foot.

12 N. LUTEA (D. C. fl. gall. 6. p. 420.) pilose; stems ascending, branched above ; leaves oblong, obtuse, almost quite entire : floral ones subcordate, obliquely acuminated, at last distich; limb of corolla equal, length of tube. ©. H. Native of France and Italy; and of Caucasus, in sterile places, especially among sand at the river Terek. Lycopsis lutea, Lam. ill. no. 1828. Schultes, obs. p. *33.* Lehm. asper. p. 267. Anchusa lutea, Bieb. fl. cauc. 1. p. 126. exclusive of the syn. of Lin. and Curt. Horn. hort. hafn. 1. p. 176. Willd. enum. 1. p. 179. exclusive of the syn. of Lin. and Forsk. Anchusa lycopsidis, Retz, fil. pug. p. 8—9. Anchusa dubia, Nocca, hort. ticin. t. 3. Asperugo divaricata, Murray, in nov. comm. goett. 1776. vol. 7. p. 25. t. 2. Oscampia dichotoma, Mcench. meth. p. 421. Root fibrous. Radical leaves obovate-oblong, obtuse ; floral ones longer than the calyxes, all rather clammy. Racemes terminal, erect. Calycine segments lanceolate, acuminated. Corolla pale sulphur-coloured, longer than the calyx; tube much shorter than the calyx, marked by 5 hollows under the throat, which is green and pilose.

Far. /3; flowers about half the size. 0. H. Bieb. fl. cauc. 1. p. 126.—Bieb. cent. 2. t. 13. f. 2.

Yellow-flowered Nonea. Fl. June, July. Clt. 1805. PI. 1 to 2 feet.

13 N. FLAVESCENS ; annual, downy, also beset with stiff bristles or strigae ; stems diffuse or erect, branched ; leaves oblong-lanceolate, acute, quite entire : cauline ones sessile: floral ones subcordate ; corollas about equal in length to the calyx: tube 3 times longer than the limb, which is equal; calyxes, when bearing the fruit, inflated and pendulous: teeth connivent; nuts obovate, nearly glabrous. ©. H. Native of Caucasus, in fields near Sallian and Lenkoran ; as well as in the island of Sara. Lycopsis flavescens, Meyer, veiz. pflanz. p. 98. Corollas pale yellow.

***Yello?vish-flow ered* Nonea. PI. diffuse.**

14 N. SETOSA: strigose; stem erect, simple; leaves oblong-lanceolate, denticulated : floral ones ovate ; limb of corolla equal, twice as long as the calyx, and the length of the tube. ©. ? H. Native of Iberia. Lycopsis setosa, Lehm. asper. p. 269. Leaves obtuse. Strigse or bristles very long. Racemes at first conglobate. Calycine segments lanceolate, acuminated. Corolla large, yellow, with a pilose throat. Habit of JV. *oides.*

Bristly Nonea. PI. | to 1 foot.

15 N. ECHIOIDES; pilose; stems erect, much branched; leaves lanceolate, quite entire, pilose, rather silky: floral ones ovate, somewhat cordate; limb of corolla unequal, thrice as long as the calyx, but one-half shorter than the tube. %. H. Native of Caucasus and Armenia, in alpine pastures. Lycopsis echioides, Lin. spec. p. 199. Willd. spec. 1. p. 781. Lehm. asper. p. 270. Lycopsis pulchra, Willd. herb. no. 3396. Anchusa echioides, Bieb. fl. cauc. 1. p. 270.—Buxb. cent. t. 1. Stems numerous. Radical leaves large ; lower cauline ones 3-4 inches long. Flowers nearly sessile, disposed in terminal, conjugate, leafy, spike-formed racemes. Calyx silky from pili, with lanceolate segments. Corolla large, an inch long, pale yellow, with very black spots in the throat, which is pilose.

Bugloss-like Nonea. Fl. June, July. Clt. 18^0. PI. § to \ foot.

16 N. DECURRENS ; perennial; the whole plant clothed with short, minute, velvety down; stem erect, a little branched, winged ; cauline leaves lanceolate, acute, quite entire, a little decurrent; corollas hardly longer than the calyx ; tube exceeding the limb, which is equal; calyx, when bearing the fruit, inflated, pendulous; teeth of calyx connivent; nuts large, downy. *V-.* H. Native of Caucasus, on the Talusch Mountains, in grassy places, at the altitude of 900 to lOOOjiexapods. Lycopsis decurrens, Meyer, verz. pflanz. p. 98. Corollas purple.

***Decurrent-leaved* Nonea. PI. erect.**

17 N. VEiisfcoLOR (Sweet, hort. brit.) pilose or strigose ; stems prostrate; leaves obtuse; corollas equal. 0. H. Native of Caucasus, on alps about Chinalug; and on the edges of fields towards Kasbek. Anchusa versicolor, Stev. m act. mosc. p. 1]. Nearly allied to *N. rbsea,* and *N. lutea,* but differs in the floral leaves being obtuse, not cordate ; in the co-

rollas being larger, and the limb subcampanulate, striped with blue, dusky-white, and violet ; in the nuts being larger and veiny, not smooth.

Party-colour ed-Rowered Nonea. Fl. June, Aug. Clt. 1820. PI. prostrate.

18 N. PIIANERANTHE^RA (Viv. fl. libyc. p. 9. t. 1. f. 3.) radical leaves elliptic: cauline and floral ones half stem-clasping; spikes erectish, secund; stamens exserted, alternating with the segments of the corolla. ©. H. Native of Cyrenaica. M61-kia Cyrenaica, Spreng. syst. 1. p. 548. Stem erect, hispid, simple, but sometimes branched at the base. Leaves hispid ; cauline ones linear-elliptic ; floral ones ovate-acuminated. Flowers disposed in a secund, racemose spike, which is hardly recurved. Calyx cleft beyond the middle; segments linear, acuminated, connivent, but reflexed in the fructiferous state. Corolla glabrous, hardly longer than the calyx ; throat naked. Nuts convex on the back, reticulately veined, beaked at the apex, and tubercled at the sides. Filaments inserted a little below the segments of the corolla.

***Appearing-anlhered* Nonea. PI. \ foot?**

19 N. SCHULTE'SII; plant very hispid; leaves and bracteas very long, lanceolate; stem erect; calyx at length inflated. 0. H. Native of Teneriffe. Lycopsis calycina, Koem. et Schultes, syst. 4. p. 74. Root purple, a span long. Stems many, branched from the base. Leaves thin. Bristles or strigae on the leaves white, on the calyxes and bracteas yellowish. Bracteas twice as long as the flowers, or more. Calycine segments linear-subulate, unequal. Corolla twice as long as the calyx, fucescent in the dried state.

Schulles's Nonea. PL J to 1 foot.

20 N. CONFERTIFLORA ; branches decumbent, diffuse, very rough ; leaves long-lanceolate, quite entire, strigose ; spikes imbricate, bracteate ; corolla longer than the calyx. ©. ? H. Native of Palestine. Lycopsis confertiflora, Clark, ex Spreng. syst. 1. p. *556.*

Crowded-jlorvered Nonea. PI. decumbent.

t *Species hardly known.*

21 N. ALBA (D. C. fl. gall. 6. p. 420.) *Q.* H. Native in corn-fields near Avignon. Corollas white.

***White-fiowered* Nonea. PI.**

22 N. CAPE'NSIS ; leaves lanceolate, strict, dotted ; peduncles recurved ; flowers terminal, spicate, secund.—Native of the Cape of Good Hope. Lycopsis Capensis, Burm. prod. fl. cap. p. 4.

Cape Nonea. PI. ?

What are *Echioides rubra,* Desf. fl. ad., and *Echioides grandiflora,* Desf. tabl. d l'ecole, bot. 1815 ?

Cult. For culture and propagation see *Anchusa,* p. 343.

XXIV. LOBOSTEMON (from \o/3oc, *lobos,* a lobe, and <nV *jcwp, stemofi,* a stamen ; in allusion to the processes of the throat bearing the stamens on their back). Lehm. sem. hort. hamb. 1827.

LIN. SYST. *Pentdndria, Monogynia** Calyx 5-parted. Corolla funnel-shaped ; throat furnished with erect processes, which bear the stamens on their back. Nuts 4, 1-celled, turbinate, fixed to the bottom of the calyx, imperforated at the base.—A small **shrub, with the habit of *E'chium sphcerocephalum.***

1 L. ECHIOIDES (Lehm. 1. c. t. 5. f. 1.) stem terete, glabrous ; branches hairy ; leaves scattered, sessile, elliptic-lanceolate, obtuse, glabrous above, but strigose beneath ; spikes *2-3* together, terminal bracteate ; bracteas length *of* calyx. J? • G. Native of the Cape of Good Hope, at Brede river. Corolla blue.

Bugloss-like Lobostemon. Shrub.

Cult. For culture and propagation see the shrubby species of ***E'chium,* p. *335.***

XXV. LYCO'PSIS (from *XVKOQ, lycos,* a wolf; and *ofa, opsisy* the face ; some resemblance in flowers.) Lin. gen. no. 190. Schreb. gen. no. 250. Juss, gen. p. 131. ed. Usteri, p. 146. Schkuhr, handb. 1. t. *29.* Lam. ill. t. 92.—Anchusa species of Lehm. and Bieb. Buglossum, Gaertn. fruct. 1. no. 414. t. *67.* f. 2. Echioides, Dill. gen. 3.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-cleft, erect, not inflated. Corolla funnel-shaped, 5-lobed, erectly spreading ; lobes entire; tube incurved ; throat furnished with ovate, prominent, connivent processes; Stigma emarginate. Nuts concave at the base, 1-celled, turbinate, fixed to the bottom of the calyx.—Rough, erect plants. This genus differs principally from *Anchusa* in the curved tube of the corolla.

1 L. ORIENTA^LIS (Lin. spec. p. 199.) stem erect, dichotomously branched ; leaves ovate, half stem-clasping, unequal at the base, quite entire, hispid from strigae ; racemes very long, leafy ; tube of corolla unequal, incurved: the processes in the throat pencilled. ©. H. Native of Caria. Smith, prod. fl. grace. 1. p. 124. Anchusa ovata, Lehm. asper. p. *222.*—Buxb. cent. 5. t. 30. Plant strigose. Stem bluntly angular. Pedicels one half shorter than the bracteas. Calycine segments linear-lanceolate, unequal, erect in the flowering state, but spreading in the fruit-bearing state. Tube of corolla length of calyx, white at bottom and violaceous at top; limb sky-blue. Nuts wrinkled, black.

Eastern Wild Bugloss. Fl. June, July. Clt. 1796. PI. 1 foot.

2 L. VARIEGATA (Lin. spec. 198.) stems ascending, nearly simple ; leaves ovate-oblong, half stem-clasping, hispid from strigae, spiny, toothed ; racemes solitary, bracteate at bottom; tube of corolla unequal, incurved ; processes in the throat downy. ©. H. Native *of* Italy, and the adjacent islands ; Candia, and other islands of the Archipelago and of the Peloponnesus. Allion, pedem. no. *168.* Smith, fl. graec. t. 178. L. bullata, Cyrill. pi. rar. fasc. 1. p. 34. Anchusa perlata, Lam. ill. no. 1820. Anchusa variegata, Lehm. asper. p. 223.—Mor. hist. 3. sect. 11. t. 26. f. 10.—Stiss. bot. t. 57.—Barrel, icon, t. 403.—Munt. oeff. pi. t. 309. Buglossoides, Riv. mon. p. 9. Anchusa Cretica, Mill. diet. no. 7. Plant very hispid from strigae. Radical leaves obtuse, 3-4 inches long; the upper cauline ones hardly an inch. Racemes short at first, capitate. Calycine segments linear, unequal. Tube of corolla a little shorter than the calyx ; limb blue, variegated with white lines ; processes in the throat white.

Fariegated-fiowered Wild Bugloss. Fl. June, July. Clt. 1683. PI. ascending, 1 foot.

3 L. ARVE'NSIS (Lin. spec. 199. fl. suec. no. 167.) stem erect, branched ; leaves lanceolate, half stem-clasping, toothed, very hispid from strigae; racemes leafy ; tube of corolla incurved, length of the calycine segments, which are unequal and lanceolate ; processes of the throat hairy. ©. H. Native throughout Europe and North z\merica, in corn-fields and waste grounds; plentiful in Britain. Curt. fl. lond. t. *336.* Oed. fl. dan. t. 435. Smith, engl. bot. t. 938. Anchusa arvensis, Hoffm. et Link, fl. port. 1. p. 179. Bieb. fl. cauc. 1. p.. 123. Lehm. asper. p. 225. —Blackw. t. 234.—Mor. hist. 3. sect. 11. t. 26. f. 8. Echioides, Riv. mon. t. 7. f. 2. Plant hispid from strigae. Leaves undulated. Racemes short at first, but at length elongated. Corolla

blue, striped with 5 fine white veins. Nuts reticulately wrinkled, girded by a tumid circle below. This plant was formerly recommended as a remedy against the anthrax, or corrosive ulcer, commonly called a carbuncle, by laying the bruised leaves on the tumour ; but it is difficult to persuade oneself that such a plant can have any efficacy in such a disease.

Corn or Common Wild Bugloss. Fl. June, Sept. Britain. PI. | to 1 foot.

4 L. VIRGINICA (Gron. virg. 140. Pursh, fl. 1. p. 133.) leaves linear-lanceolate, entire, crowded, soft, tomentose ; stem erect. ©. H. Native from Pennsylvania to Virginia, in dry woods. Plant small, very hispid. Lower leaves spatulate, entire. Racemes solitary. Corollas small, white.

Virginian Wild Bugloss. PI. small.

Cult. The seeds of all the species only require to be sown in the open border in spring.

Tribe IV.

BUGLO'SSEiE (*fiovyTuoaaog* is the Greek name for Bugloss, from *fiovg, bous,* an ox ; and yXwcro-a, *glossa,* a tongue ; in reference to the roughness and shape of the leaves of most species.) D. Don. in edinb. phil. journ. July, Oct. 1832. Corolla salver-shaped, having the mouth closed with vaulted processes. Nuts 4, distinct, 1-celled.

Sub-Tribe I.

ANCHUSEiE. Nuts perforated at the base, fixed to the bottom of the calyx.

XXVI. ANCHLPSA (from *ayxovcra, anchousa,* paint for the skin ; use of some species.) Lin. gen. no. 182. ed. Schreb. no. 242. Juss. gen. p. 131. Lam. ill. no. 257. t. 92. Schkuhr, handb. 1. t. 29. Lehm. asper. p. 211.— Buglossum Gaertn. fruct. 1. no. 414. t. *67.* f. 2. Tourn inst. t. 53.—Lycopsis species of authors.

LIN. SYST. *Pentdndria, Monogijnia.* Calyx 5-cleft or 5-parted. Corolla funnel-shaped ; throat closed by erect obtuse processes. Nuts 4, 1-celled, turbinate, fixed to the bottom of the calyx, perforated and concave at the base.—Rough plants, usually with terminal flowers.

§ 1. *Calyx 5-parted, erect in the fruit-bearing state. Corollas unequal in most of the species.*

1 A. LINIFOLIA (Willd. herb, ex Lehm. asper. p. 215.) stems decumbent, stoloniferous ; leaves opposite, sessile, linear-lanceolate, acute, entire, nearly glabrous, ciliated at top ; flowers axillary, solitary, equal. %.F. Native of South America. A. leucántha, Willd. herb. 1. c. A. lanceoláta, Willd. herb. no. 3316. Root creeping. Calyx pilose. Corolla glabrous, pale yellow : tube length of calyx: throat closed by 5 very hairy tubercles; segments roundish, obovate.

Flax-leaved Bugloss. PI. \ foot.

2 A. OPPOSITIFOLIA (H. B. et Kunth, nov. gen. amer. 3. p. 91. t. 200.) stems procumbent, creeping, branched; leaves opposite, linear, quite entire, ciliated with strigae on the back and margins ; flowers axillary, solitary, on short pedicels. "2/. F. Native of the Andes, of Quindiu near Teindala; and Jaquanquer, between the town of Pasto and Tulcan. Herb tufted, strigose. Leaves subconnate at the base, acute, 9-10 lines long, and one broad. Calyx hispid, with lanceolate, equal segments. Corolls white, about the size of those of *M. palustris.* Nuts strigose, glabrous.

Opposite-leaved Bugloss. PL procumbent.

3 A. PYGMiEA (H. B. et Kunth, nov. gen. 3. p. 92.) plant tufted, creeping, leafy ; leaves scattered, sessile, linear, quite entire, hispid from strigae; flowers axillary, solitary, sessile. *Vl.* F. Native of Quito, on the top of Mount Antisana, at the altitude of 2104 hexapods. Leaves imbricate at the base, acutish, 4 lines long. Calyx beset with adpressed pili; with linear-lanceolate, acute, nearly equal segments. Corolla funnel-shaped, white, glabrous, size of those of *Myosbtis arvénsis.* Nuts wrinkled, glabrous.

Pygmy Bugloss. PI. tufted, creeping.

4 A. CRUCIA'TA (Cham, in Linnaea. 4. p. 438.) shrubby, strigosely pilose, canescent at top, much branched ; branches ascending ; leaves linear-lanceolate, connate at the base, and are, as well as the axillary branchlets, strictly opposite ; cymes scorpioid, panicled at top, furnished with bracteas which are hardly longer than the calyxes. P?. F. Native of the South of Brasil. Calyx very hairy, with lanceolate, unequal segments. Corolla hairy outside, with a short tube ; processes of the throat fringed. Stigma emarginate.

Cross-leaved Bugloss. Shrub 1 to 1^ foot.

5 A. STCECHADIFOLIA (Cham, in Linnsea, 4. p. 439.) nearly allied to *A. crucidta,* and in like manner has opposite leaves, but differs from it in the cymes being solitary and terminal, in the flowers being larger, in the leaves being linear, with revolute margins, hoary, and in habit. J? . F. Native of the South of Brasil. Habit of *Gnaphálium Stce'chas,* or *Lavdndula;* of a hoary aspect. Bracteas longer than the pedicels. Corolla having the tube shorter than the calyx, and the limb blue, villous outside; processes *of* the throat fleshy, papillose. Stigma subcapitate.

Stcechas-leaved Bugloss. Shrub 1 to *I*\ foot.

6 A. TETRA'QUETRA (Cham, in Linnaea, 8. p. 113.) glabrous: tops and inflorescence hairy ; stems simple, erect, tetraquetrous ; leaves lanceolate, or oblong-lanceolate, mucronate : radical ones on long petioles : cauline ones opposite, partly connate at the base, all strigose ; cymes on long peduncles, composed of short spikes : terminal ones twice bifid: axillary ones bifid; flowers sessile, bracteate; nuts smooth, solitary by abortion; calyx 5-toothed. %. F. Native of Brasil, Sello. Stems height of the radical leaves. Teeth of calyx acute. Corolla pilose outside; processes of the throat small, fringed. Nuts smooth, a little smaller than the calyx.

Four-sided-stemmed Bugloss. PI. 1-i to 2 feet.

7 A. SELLOWIA'NA (Cham, in Linnaea, 8. p. 115.) plant scabrous, from strigae ; stems erect and decumbent, glabrous, acute-angled at the base; leaves scattered, mucronate : superior ones ovate, half stem-clasping : lower ones obovate-lanceolate, narrowed into marginate half stem-clasping petioles ; spikes twin, terminal and axillary, on peduncles which are equal in length to the leaves ; bracteas broad, cordate, ovate, acute, exceeding the flowers a little; nuts granular, glabrous, solitary by abortion ; covered by the 5-cleft calyx. %. F. Native of Brasil, Sello. Corolla clothed with silky pili outside ; processes of the throat small, villous. Stigma deeply emarginate.

Seltfs Bugloss. PI. \\ foot.

8 A. C^SPITOSA (Lam. diet. 1. p. 504. ill. no. 1818.) stems decumbent; leaves linear, obtuse, hispid from pili, undulated, longer than the stems ; racemes terminal, few-flowered; flowers equal. %. H. Native of Candia, on the Spaciotic mountains. Willd. spec. 1. p. 759. Sibth et Smith, fl. graec. t. *}(&*-— Buglóssum Créticum humifusum acaulon perenne, echii folio angustissimoTourn. cor. p. 6. Roots woody, dark brown Sterns simple, short, tufted. Flowers 2-4 terminal, large for the size of the plant. Corolla with a white tube, which is nearly twice as long as the calyx, and a deep blue limb ; the processes in the throat pencil-formed and white.

Tufted Bugloss. PI. decumbent and tufted.

9 A. HISPIDA (Forsk. descr. p. 40. VahL symb. fasc. 2. p.

33.) stems diffuse ; leaves ovate-lanceolate, attenuated at the base, bluntly-toothed, hispid from strigae ; pedicels axillary, conjugate ; flowers equal.—Native in Egypt. Lehm. asper. p. 216. Stem hispid, from retrograde pili. Calyx hispid. Corolla small, nearly the length of calyx ; segments ovate, short.

TZ^rf Bugloss. Fl. May, June. Clt. 1817. PI. diffuse.

10 A. CILIA'TA (Cham in Linnaea, 4. p. 440.) leaves tufted, large, obovate, elliptic-lanceolate, but usually linear-lanceolate, exceeding the stems, which are erect or ascending, and furnished with small leaves; cymes scorpioid, bracteate, forming terminal panicles ; flowers sessile. 1/. F. Native of Brazil, both within and without the tropic. Habit of *Myosotis.* Plant beset with short strigose hairs. Radical leaves a foot long ; cauline ones *3* inches long, half stem-clasping, ciliated with longer strigae, all acuminated. Calycine segments equal, lanceolate, acute, pilose on the back. Corolla tubular, hairy outside; segments of the limb lanceolate, acute; processes of the throat fringed, bearded. Stigma capitate, hardly emarginate. Nuts usually solitary by abortion, chartaceous, shining.

Ciliated Bugloss. PI. 1 foot.

11 A. TENE'LLA (Lehm. asper. 217.) stems depressed, dichotomous, weak ; leaves on short petioles, ovate, hispid ; pedicels solitary, interfoliaceous, nodding, while bearing the fruit; flowers equal. ©. H. Native of China. Horn. hafn. 1. p. 176. A. Zeylanica, Jacq. eclog. p. 47. t. 29. Horn. enum. 1807. Plant hairy. Corolla small, glabrous, white ; tube shorter than the calyx; segments of the limb roundish-obovate, purplish at the base; processes *of* the throat emarginate, yellowish. Nuts somewhat kidney-shaped, verrucose.

Weak Bugloss. Fl. May, June. Clt. 1820. PL \ foot.

12 A. TINCTORIA (Lin. spec. ed. 2d. vol. 1. p. 192. exclusive of the syn. edit. 1st.) stems diffuse; leaves oblong, hispid from pili ; bracteas exceeding the calyx; processes of corolla shorter than the stamens. %. H. Native of the Peloponnesus, Island of Cyprus, and in deserts about Alexandria. Sibth. et Smith, fl. graec. t. 166. Desf. atl. 1. p. 156, exclusive of many synonymes. Willd. spec. 1. p. 758. Lehm. asper. p. 218. Plant pilose. Root woody, descending, of a dark blood colour. Spikes or racemes usually twin, rarely 3 or 4 terminal, many-flowered. Corolla with a deep blood-coloured tube, which is inflated at the base and the length of the calyx ; processes inserted near the middle of the tube ; limb deep blue ; segments roundish, obovate. This plant is cultivated in the South *of* France for the deep purplish red colour of its roots. It imparts a fine deep red colour to oils, wax, and all unctuous substances, as well as to spirits of wine. The spirituous tincture on being inspissated changes to a dark brown. Its chief use is for colouring plasters, lip-salves, &c.

Dyer's Bugloss. Fl. June, Oct. Clt. 1596. PL J foot, diffuse.

13 A. AGGREGA'TA (Lehm. asper. p. 219.) stems diffuse, strigose ; leaves linear-oblong, obtuse, very hispid; flowers sessile, aggregate, 4 times shorter than the bracteas; nuts hemispherical. 0. H. Native near Athens. A. parviflora Smith, prod. fl. graec. 1. p. 117. fl. graec. t. 167, but not of Willd. Plant very hispid. Flowers sessile, crowded in dense, solitary, terminal, leafy spikes. Corolla with a pale tube, which is twice as long as the calyx ; limb deep blue, with ovate flattened segments ; processes of the throat pencil-formed. Calyx subglobose, with conniving segments. Perhaps a species of Nonea.

sJggregate-fiowered Bugloss. PL •£ foot.

14 A. PARVIFLORA (Willd. spec. 1. p. 759.) stem much branched, hispid ; leaves linear, bluntish, hispid ; racemes few-flowered, crowded. 0.? H. Native *of* the Levant. Lehm. asper. 220.

Small-flowered Bugloss. PL \ to 1 foot.

15 A. ECHINA'TA (Lam. diet. 1. p. *505.* ill. no 1821.) stems ascending, nearly simple, bristly; leaves sessile, lanceolate, attenuated at the base, acute, very hispid from bristles ; spikes leafy ; flowers equal.—Native *of* Syria, near Tripoli. Lehm. asper. p. 221. Root woody, twisted. Bristles on the plant stiff and white. Spikes of flowers lateral and terminal, simple, or bifid. Calyx white, from bristles. Corolla having the tube longer than the calyx ; segments of the limb obtuse.

Echinated Bugloss. PL 1 foot.

16 A STYLOSA (Bieb. fl. cauc. 1. p. 123.) stem erect, branched at top; leaves lanceolate, attenuated at the base, undulately denticulated, hispid; bracteas subulate ; calyxes nearly equal, shorter than the tube of the corolla, with subulate segments. ©. H. Native of Tauria, on stony hills, on the banks of the Karasu, and among corn. Bieb. cat. pi. t. 23. A. annua Pall, ind. taur. Buglossum Orientale erectum, foliis undulatis, flore amoene coeruleo Tourn. cor. p. 6.—Barrel, icon. *578.*—Bocc. mus. t. 77. Root perpendicular, branched, white. Plant hispid. Racemes axillary, and terminal, usually twin. Flowers regular, a little smaller than those of *A. officinalis.* Corolla fine blue ; segments of the limb roundish : processes of the throat naked. Style equal, filiform, about equal in height to the corolla.

Long-styled Bugloss. FL May, June. Clt. 1820. PL 1 foot.

17 A. BARRELIE RI (D. C. syn. fl. fr. 2731.) stems erect, nearly simple; leaves oblong-lanceolate, denticulated, hispid; racemes conjugate, panicled, bracteate; calyxes very blunt, longer than the tube of the corolla ; corolla regular. 1/. H. Native of the South of Europe, by road sides, among rubbish, and in shady places; as of Piedmont, Naples, &c. Baumg. trans. 1. p. 122. Bess. fl. gal. 1. p. 147. Lehm asper. 227. Lois. fl. gall. 1. p. 106. Vittm. summ. 1. p. *288.* Bell, append, fl. pedem. p. 15. Tenor, fl. neap. p. 46. Buglossum Barrelieri, All. pedem. no. 164. Pentagn. inst. 2. p. 314. Myosotis obtusa, Waldst. et Kit. pi. rar. hung. 1. p. 103. t. 100. Schultes, fl. austr. no. 792. Horn. hafn. 1. p. 173. Willd. enum. 1. p. 176.—Barrel, icon. *333.* Root woody, branched. Cauline leaves half stem-clasping. Calyx pilose; segments obtuse. Corolla with a white tube ; limb blue, with roundish obtuse segments ; throat yellow ; processes of the throat erect, white. The flowers are very like those of a species of *Myosotis,* both in colour and form.

Barrelleds Bugloss. FL May, June. Clt. 1820. PL 1 to 2 feet.

18 A. STRIG6SA (Labill. icon. pi. syr. dec 3. p. 7. t. 4.) stem erect, branched at top; leaves ovate-lanceolate, denticulated, prickly ; racemes conjugate, furnished with bracteoles at the base, which are shorter than the pedicels; calyxes obtuse, shorter than the tube of the corolla ; flowers regular ; processes of the throat papillose. %. H. Native of Syria, about Tripoli. Lehm. asper. p. 229. Plant covered all over with white bristles, which rise from white papillae or glands. Racemes twin, secund. Corolla blue; processes of the throat nearly orbicular.

Strigose Bugloss. PL 1| foot.

19 A. PANICULA'TA (Ait. hort. kew. 1. p. 177.) stem erect, branched ; leaves lanceolate, undulated, strigose, lucid ; racemes conjugate, divaricate, panicled, bracteate ; flowers equal; calyxes longer than the tube *of* the corolla, with subulate segments; processes of the throat pencil-formed. %. H. Native of the South of Europe, North of Africa, Island of Madeira, and Siberia. Willd. spec. 1. p. *756.* Sibth et Smith, fl. graec. t. 163. Lehm. asper. p. 230. A. Italica, Retz, obs. 1. p. 12. Wulf. in Jacq. coll. 4. p. 302. Hoffm. et Link, fl. port. 1. p. 176. Sut. fl. helv. 1. p. 104. Trew. dec. 2. p. 14. t. 15. Tratt. arch. p. 105. t. *120.* A. officinalis, Gouan, *monsp,* p. 81. Brot. fl. lus. 1. p. 197. Desf. fl. atl. 1. p. 157. Sav. fl. pis. 1. p. 204. mat. med. p. *37.* t. 2. Jaume St. Hil. pi. fr. 1. t. *63.* Buglossum officinale, Lam. fl. fr. 2. p. 278. Bugl.

elàtum Mcench. meth. p. 418. Bugl. angustifolium, All. ped. no. 163?—Mor. hist. 3. sect. 11. t. 28. f. 2. and t. 26. f. 1. —Tourn. inst. p. 134. Buglossum amoènum, Gaertn. fruct. 1. p. 323. t. *67.* f. 2. Roots creeping. Plant hispid, large. Racemes twin, with a flower in the fork, constituting panicles at the tops of the stems. Bracteas linear, length of pedicels. Calycine segments subulate, unequal. Corolla blue, or violaceous^ with a white throat; processes of the throat erect, pencilformed ; segments of the limb unequal, obovate-roundish, obtuse. This is a very showy plant when in blossom.

Panicled-flowered Bugloss. Fl. May, June. Clt. 1777. PL *3* to 5 feet.

20 A. MICROCA'LYX (Vis. in bot. zeit. 1829. p. 8.) hispid; stems weak, nearly simple ; leaves flat: radical ones obversely-lanceolate, attenuated at the base, obtuse, repand: cauline ones lanceolate, sessile, acute, entire ; racemes pedunculate, conjugate, alternate, leafy at the base, loose ; calyx very hispid, 5-cleft, shorter than the tube of the corolla, but twice as long as the bracteas ; processes of the throat thickened at tops, truncate, smoothish. !£. H. Native of Dalmatia, about Verlika, on the edges of fields. Calyx smaller than in *A. sempervirens.* Tube of corolla straight. Nuts wrinkled, acutely bicostate at the apex, and umbilicate. Peduncles erect in the fructiferous state.

Small-calyxed Bugloss. PL 1 foot ?

21 A. DASYA'NTHA (Cham, in Linnaea, 4. p. 437.) leaves of the floriferous branches oblong-cuneated, sometimes acute, and sometimes bluntish at apex, and short-acuminated : upper ones dilated at the base, and more acute ; bracteas subcordate-ovate, acute, length of flowers ; cymes or spikes glomerate ; flowers sessile; calyx hardly 5-cleft to the middle; corolla funnel-shaped ; tube exceeding the calyx; throat villous ; stigma 2-lobed. %. F. Native of Tropical Brasil. Said to have the habit of *Anchiisa sempervirens;* but the flowers are smaller, the calyx hardly 5-cleft to the middle, the corollas hairy outside, the processes of the throat small and bearded. The upper portion of a branch is the only part of this plant which has been examined.

Thick-flowered Bugloss. PL ?

22 A. MILLE^RI (Willd. enum. 1. p. 179.) stems ascending, diffuse ; leaves oblong, bluntish, obsoletely denticulated, hispid ; racemes solitary, leafy ; calyx length of the tube of the corolla, with linear-obtuse segments; corolla equal. ©. H. Native country unknown, Levant. ? Lycopsis Milleri, Horn. hort. hafn. 1. p. 182. Plant strigose, hispid. Corolla flesh-coloured; throat oblique, incurved ; segments of the limb obovate, roundish ; processes of the throat erect, yellow, pilose at the base. Perhaps a species of *Lycopsis* from the oblique, incurved throat of the corolla.

Miller's Bugloss. FL May, June. Clt. 1713. PL 1\ foot.

23 A. MACROPHY'LLA (Lam. ill. no. 1816. Lehm. asper. p. 233.) stem weak, branched at top ; radical leaves oval: cauline ones lanceolate, acute, quite entire, strigose ; racemes somewhat panicled, loose, bracteate ; calyxes length of the tube of the corolla, with acutish segments ; flowers regular. *%1.* H. Native of the kingdom of Morocco. Desf. atl. 1. p. 157. Lycopsis macrophylla, Lam. diet. 3. p. 657. Plant strigose. Radical leaves large, disposed in an orb: cauline ones half stem-clasping. Corolla tubular, pale yellow, small, a little longer than the calyx, glabrous ; segments of the limb obtuse ; processes of the throat erect, obtuse, tomentose.

Long-leaved Bugloss. PL \\ foot.

24 A. LATIFOLIA (Lehm. sem. hort. hamb. 1821. p. 2. png, 1. p. 6.) leaves ovate-lanceolate, undulated, hairy ; bracteas ovate-lanceolate, equal in length to the calyx ; calyx 5-cleft, bluntish ; processes of the throat bearded. *$.* H. Native country unknown. Anchusa versicolor Hortul. Stems many from the same root, erectish, hairy, much branched. Flowers imbricate, on short pedicels, disposed in conjugate, bracteate, terminal racemes. Corolla with a violaceous tube, equal in length to the calyx; constricted below the throat; limb deep rose-coloured, having the edges variegated with white.

Broad-leaved Bugloss. FL May, June. Clt. 1826. PL 1| to 2\ feet.

25 A. VILLOSA (Spreng. syst. 1. p. 560.) stem branched; leaves lanceolate, quite entire, villous ; racemes axillary ; flowers remote ; bracteas exceeding the calyxes ; calycine segments bluntish, shorter than the tube of the corolla. %. H. Native country unknown. Calyx 5-parted, erect.

Villous Bugloss. PL

26 A. MYOSOTIDIFLORA (Lehm. asper. p. 234.) stem erect, simple ; radical leaves on long petioles, reniformly cordate : cauline ones sessile, ovate, hairy ; racemes terminal, panicled, bractless; flowers equal. %. H. Native of Siberia, among rocks. Myosotis macrophylla, Bieb. cauc. 1. p. 119. Adams and Web. et Mohr, cat. 1. p. 46. no. 7. Bieb. cent. pL ross. t. 14. Root oblique, covered by the remains of the leaves at top. Leaves large, canescent while young. Calycine segments linear. Corolla having the tube the length of the calyx ; limb fine blue ; and the throat closed by yellow processes.

Mouse-ear-flowered Bugloss. Fl. July, Sept. Clt. 1825. PL 1 foot.

27 A. TUBEROSA (H. B. et Kunth, nov. gen. 3. p. 92.) root tuberous; stem erect, nearly simple; leaves scattered, sessile, linear, quite entire, hispid from strigae; spikes leafy, terminal. # . F. Native of Mexico, in bushy places, between Moran and Regla, at the altitude of 1300 hexapods. Root tuberous, turnip-formed, globose, size of a cherry, furnished with fibres. Plant strigose. Leaves an inch long, and 1 line broad. Calyx hispid, with linear, bluntish segments. Spikes 1-2 inches long. Corolla pale yellow, ex Bonpl. downy outside, sweet-scented. Ovaria glabrous.

*Tuberous**rooted Bugloss. PL I foot.

§ 2. *Calyx 5-cleft, or deeply 5-toolhed, campanulate when in fruit, and more or less inflated and nodding. Corollas equal.*

28 A. AMPLEXICAU'LIS (Sibth et Smith, prod. fl. grsec. 1. p. 116. Lehm. asper. p. 237.) cauline leaves cordate-oblong, stein-clasping, repand ; spikes dichotomous, 2-leaved; calyx 5-cleft. 7£?. H. Native in fields about Constantinople. According to the diagnosis given this plant would appear to approach the *Anchusa sempervirens,* now *Omphalodes sempervirens.*

Stem-clasping-\eaved Bugloss. PL 1 foot.

29 A. VERRUCOSA (Lam. ill. p. 403. no. 1819. Horn. hort. hafn. 1. p. 176. Lehm. asper. p. 238.) leaves oblong-lanceolate, . repandly-toothed, hispid from strigae, which rise from white warts : upper ones subcordate at the base; pedicels interfoliaceous. ©. H. Native of Egypt. A. flava, Forsk. descr. p. 40. no. 30. Lycopsis iEgyptiaca, Lin. spec. 1. p. 138. Pers. ench. 1, p. 163. Asperugo ^Egyptiaca, Lin. spec. ed. 2. p. 198. mant. 334. Vahl. symb. 1. p. 14. Jacq. vind. 3. p. 15. t. 21. Willd. spec. 1. p. 778. Plant very hispid from strigse. Stems branched at top. Upper leaves sometimes subcordate at the base. Calycine segments unequal, lanceolate-linear, acute. Corolla yellow; tube shorter than the calyx; segments of the limb rounded ; processes *of* the throat yellow.

Parted-leaved Bugloss. FL July, Aug. Clt. 1821. PL \ to 1 foot.

30 A. DEFLE'XA (Lehm. sem. hort. hamb. 1823. p. 17. pug.

1. p. 5.) leaves linear-lanceolate, hispid; pedicels solitary, axillary, deflexed while bearing the fruit. ©. H. Native of Egypt. Stem solitary, or many from the same root, nearly terete, hispid. Calycine segments linear-lanceolate, bluntish, beset with white strigae, especially along the edges. Corolla shorter than the tube of the calyx ; segments roundish obovate, rose-coloured, or blue, with deeper veins; processes of the throat glabrous.

Deflexed-pediceMed Bugloss. PL ½ to 1 foot.

31 A. OCHROLEU'CA (Bieb. fl. cauc. 1. p. 125. Curt. bot. mag. t. 1603. Lehm. asper. 239.) leaves lanceolate, strigose, hispid, ciliated on the edges ; bracteas linear-lanceolate ; calyx 5-toothed : teeth obtuse ; tube of the corolla length of the calyx. %. H. Native of Caucasus and Transylvania, in fields. Bailing, fl. trans. 1. p. 120. Horn. hafn. 1. p. 176. Willd. enum. 1. p. 178. Schrank, pi. rar. mon. 1. t. 6.—Gmel. sib. 4. p. 74. no. 13. Root branched. Stems diffuse, angular, scabrous. Flowers on short pedicels in the axils of the bracteas, disposed in conjugate, spike-formed, terminal racemes, which are crowded in fascicles before expansion. Corolla cream-coloured ; tube a little longer than the calyx; processes of the throat erect, villously tomentose.

Cream-coloured flowered Bugloss. FI. July, Aug. Clt. 1810. PI. 1 to *2* feet.

32 A. AGA'RDHII (Lehm. asper. p. 241.) leaves linear-lanceolate, tubercled, strigose ; bracteas ovate-lanceolate, setosely ciliated ; calyx 5-cleft: segments obtuse ; tube of corolla one-half longer than the calyx. 1/. H. Native of Siberia. Stem erect, strigose. Flowers on short pedicels, distant, disposed in terminal racemes, which are generally conjugate. Corolla purple ; processes of the throat erect, pilose.

AgardKs Bugloss. Fl. July, Sept. Clt. 1820. PI. 1 foot.

33 A. UNDULA'TA (Lin. spec. ed. 2d. 1. p. 191. ed. 1. p. 133.) leaves lanceolate, dentately undulated, hispid from strigae ; racemes spike-formed, compact ; bracteas lanceolate; calyxes deeply 5-parted, acute. 1£. H. Native of Italy, France, Spain, Portugal, Barbary, and the Islands of the Archipelago, in meadows and fields. Sibth et Smith, fl. graec. t. 165. HofFm. et Link, fl. port. 1. p. 177. t. 22. Brot. fl. lus. 1. p. 297. Curt. bot. mag. t. 2119. Horn. hort. hafn. 1. p. 175. Mill, fig. 1. t. 29.—Sabb. hort. 2. t. 24. Stems many from the same root. Plant canescent. Flowers on short pedicels, secund, disposed in conjugate, terminal, compact racemes. Corolla purple, with the tube longer than the calyx, and ovate obtuse segments; processes of the throat saccate above, with pilose edges.

Undulated-hawed Bugloss. Fl. June, Aug. Clt. *1752.* PI. | to 1| foot.

34 A. CRISP A (Viv. append, fl. cors. 1825. ex Linnaea. 1. p. 500.) strigose ; leaves linear-oblong, coarsely and distantly toothed: cauline ones undulately curled ; spikes loose ; calyx 5-cleft, equal in height to the tube of the corolla, when bearing the fruit ventricose, pendulous, and secund; corolla with obovate segments ; processes of the throat ovate, ciliated ; nuts smooth, triquetrous. 2/ ?. H. Native of Corsica.

Curled-leaved Bugloss. PI. \ to 1 foot.

35 A. HY'BRIDA (Ten. prod. fl. neap. 1. p. 45. t. 11.) leaves oblong-lanceolate, sinuately toothed, undulated, villously hispid ; bracteas ovate-cordate ; calyx 5-toothed : teeth bluntish. If. H. Native near Naples, along way-sides. Root fusiform. Plant villously hispid. Stems simple. Flowers on short pedicels, disposed in axillary and terminal, conjugate racemes. Corolla purple ; tube longer than the calyx ; processes *of* the throat white, obtuse, pilose.

Hybrid Bugloss. Fl. June, Aug. Clt. 1820. PI. 1 to 1| foot.

36 A. ANOUSTIFOLIA (Lin. spec. ed. *2d.* vol. 1. p. 192.) leaves linear-lanceolate, hispid from pili; bracteas ovate-lanceolate, small when the flowers are open ; calyx 5-toothed: teeth very blunt. %. H. Native of the South of Europe. Curt, bot. mag. 1897. Sibth et Smith, fl. graec. t. 164. Horn. hort. hafn. 1. p. 175. Lapeyr. abr. p. 86. A. officinalis, Lin. spec, ed. 1st. p. 133. A. spicata, Lam. ill. no. 1810. Buglossum angustifolium, Moench, meth. p. 418.—Zan. hist. 49. t. 50. stirp. rar. t. 39.—Mor. hist. 3. sect. II. t. 28. f. 9.—Lob. stirp. *576. f. 2.* Buglossum angustifolium minus, Tourn. inst. 134. Root fusiform. Stems very scabrous, canescent from retrograde hairs. Racemes spike-formed, conjugate, terminal; bracteas hispidly ciliated. Corolla with a pale purple tube, which is white at bottom, exceeding the calyx; limb deep blue; segments obovate-oblong, conniving a little.

Narrow-leaved Bugloss. Fl. May, June. Clt. 1640. PI. 1 to *2* feet.

37 A. LYCOPSOIDES (Bess. hort. Krzem. ex Link. enum. 1. p. 166.) very like *A. procera* and *A. angustifolia,* but smaller; flowers secund, almost in one row; bracteas ovate, acuminated, ciliated, spreading also in one row. *y* . H. Native of Russia. Corolla smaller than in *A. procera,* at first violaceous, but at length blue.

Lycopsis-Uke Bugloss. Fl. July, Aug. Clt. 1824. PI. 1 \ foot.

38 A. PROCE'RA (Bess. 1. c. ex Link. 1. c.) larger than *A. angustifolia ;* flowers secund in 2 rows; bracteas ovate, acuminated, ciliated, distinct, spreading; calyx closed. ^. H. Native of Galicia. Corolla blue. Perhaps a variety of *A. angustifolia.*

Tall Bugloss. Fl. May, June. Clt. 1824. PL 2 to 3 feet.

39 A. LEPTOPHY'LLA (Roam, et Schultes, syst. 4. p. *90.)* leaves oblong-lanceolate, strigose ; spikes secund, imbricate ; calyxes 5-cleft, length of the tube of the corolla. %. H. Native of the South of Europe. A. angustifolia, Willd. enum. 1. p. 178, exclusive of his spec. pi. Schultes fl. austr. 2. ed. 1. p. 364. Sims, bot. mag. 1897. Corolla twice smaller than in *A. officinalis,* pale blue. Stem pilose. Calycine segments obtuse, silky, from adpressed hairs. Leaves thinner than in *A. officinalis.*

Slender-leaved Bugloss. Fl. July, Oct. Clt. 1640. PI. 1 to 2 *feet.*

40 A. OFFICINA'LIS (Lin. spec. ed. 2. vol. 1. p. 191. fl. suec. ed. 2d. no. 161.) leaves lanceolate, hispid; bracteas ovate-lanceolate, equal to the calyx in length; calyxes 5-cleft, acute. 1/. H. Native of Europe, Asia, and Africa, in waste places, and by way sides, and on the edges *of* fields. Smith's engl. bot. t. 662. Oed. fl. dan. t. 5. Bieb. fl. cauc. 1. p. 124. Bess. fl. gal. 1. p. 146. Gmel. fl. bad. 1, p. 417. Vill. fl. dauph. 2. p. 455. Scop. fl. cam. ed. 2. vol. 1. p. 123. Willd. 1. p. *756.* Lehm. asper. p. 247.—Plenck, off. t. 79.—Blackw. herb. t. 500. Plant hispid. Radical leaves tufted. Flowers sessile, imbricate, disposed in conjugate, terminal spikes. Corolla blue, or purple ; tube length of calyx ; segments of the limb oblong-roundish ; processes of the throat erect, tomentose. This plant when tender in the spring is eaten boiled in Upland. The tube of the corolla is melliferous, and the bees are very fond *of* it. This is not the *Anchusa,* but the Bugloss of the officinal writers. It appears to be nearly similar to Borage; the leaves being less juicy, and the roots more mucilaginous ; these, with the leaves and flowers, are ranked among the articles of the Materia Medica, bnt they are very seldom made use of. " In China," Loureiro says, "the plant is in great esteem for gently promoting the eruption of the small-pox."

Far. /3. ccerulea; flowers blue. %. H. Native of Europe. A. angustifolia, Baumg. fl. trans. 1. p. 121. Schultes fl. austr. no. *783.* Gmel. fl. bad. 1. p. 418. Suter, fl. helv. 1. p.

104. Roth tent. fl. germ. 2. p. 220. Vill. dauph. 2. p. 455. Poll. pal. 1. p. 183, and of many other European Floras.

Far. y. incarnata; flowers flesh-coloured, or red. 1/. H. Roth. tent. fl. germ. 1. c. and some other Floras. A. incarnata Schrad. in litt.

Far. Z. alba; flowers white. %. H. Roth. 1. c.

Officinal Bugloss. Fl. June, Oct. Britain. PL 1 to 2 feet.

41 A. CAPE'LLII (Moris, elench. sard, ex Linnaea, 5. p. 93.) plant procumbent, clothed with strigose hairs ; leaves lanceolate, denticulated: radical ones undulated; bracteas ovate-lanceolate, half stem-clasping ; flowers loosely racemose ; calyx 5-cleft, when bearing the fruit inflated and nutant. %. H. Native of Sardinia. Allied to *A. qfficinalis* and *A. angustifblia.*

Capellis Bugloss. PI. procumbent.

42 A. CAPE'NSIS (Thunb. in Schrad. journ. 1806. p. 45. prod. fl. cap. p. 34.) leaves linear-lanceolate, attenuated at both ends, somewhat hispid from villi; racemes terminal, panicled; bracteas ovate-lanceolate; calyxes 5-cleft, obtuse. $. G. Native of the Cape of Good Hope, Andr. bot. rep. t. *336.* Curt, bot. mag. t. 1822. Lehm. asper. p. 249. Stems simple, hairy, canescent. Corolla blue, twice as long as the calyx.

Cape Bugloss. Fl. July, Aug. Clt. 1800. PI. 1| foot.

43 A. LEUCOIIIFOLIA (Lehm. asper. p. 249.) leaves linear-subspatulate, bluntish, silky and hoary ; spikes solitary ; bracteas lanceolate, attenuated at the base ; calyxes 5-cleft, acute. *11.* H. Native of Armenia. Lithospermum Orientale leucoji folio, flore coeruleo parvo, Tourn. cor. p. 6. Stem downy, hoary, leafy at bottom. Flowers sessile, crowded into terminal spikes. Bracteas longer than the calyx. Corolla a little longer than the calyx; tube very short; limb blue, with obovate-rounded segments.

Snow-drop-leaved Bugloss. PI. 1 foot.

44 A. BRACTEOLA'TA (Viv. fl. libyc. p. 10. t. 4. f. 2—3.) plant clothed with soft white hairs, which rise from obsolete tubercles; lower leaves spatulate: cauline ones linear-oblong, sessile, obtuse : floral ones half stem-clasping, cordate, acute, imbricated in two rows. 1(1. H. Native of Cyrenaica, on the mountains. Lycopsis Cyrenaica, Spreng. syst. 1. p. *557,* Stem ascending, dividing into spike-bearing branches at top. Floral leaves or bracteas a little longer than the leaves. Flowers disposed in dense, leafy, revolute spikes. Calyx hispid, with linear-acute segments, equal in length to the tube of the corolla. Corolla blue; the throat and tube white.

Bracteolate Bugloss. PI. ascending.

** Species hardly known,*

45 A. LONGIFOLIA (Lam. ill. no. 1817. diet. 1. p. 502.) leaves long, tongue-shaped, broadest' at the base and apex ; spikes small, naked, somewhat panicled. %. *H.* Native of Italy. Stem simple; hairs springing from white tubercles. Flowers small, of a beautiful blue.

Long-leaved Bugloss. Fl. June, Aug. Clt. 1819. PI. 1J foot.

46 A. AFRICA'NA (Burm. prod. fl. cap. p. 4.) stem shrubby, villous ; leaves lanceolate, tomentose beneath. ^ • G. Native of the Cape of Good Hope.

African Bugloss. Shrub.

Cult. The species of *Bugloss* are of the most easy culture ; they will grow in any soil, and are readily increased by seed. *A. Capensis* should be treated as a green-house plant. Some of the species are very pretty when in blossom, as *A. paniculata, A, Barrelieri,* &c.

XXVII. MYOSO'TIS (from f/vc *fivog, mys myos,* a mouse; and *ove U)TO£, ous otos,* an ear ; supposed resemblance in leaves.) Dill. gen. 3. Lin. gen. no. 180. Schreb. gen. no. 240. Juss. gen. p. 131. ed. Usteri, p. 146. Schkuhr, handb. t. 29. Lehm. asper. p. 78.—Echioides, Moench. meth. p. 416.

LIN. SYST. *Pentdndria, Monogynia.* Corolla salver-shaped ; throat furnished with short processes ; limb 5-parted, obtuse. Stamens inclosed. Nuts 4, 1-celled, fixed to the bottom of the calyx, perforated at the base.—Annual or perennial, rough or smoothish plants, with terminal racemes of blue flowers ; the racemes revolute before expansion.

§ 1. *Nuts smooth, glabrous.*

1 M. LATIFOLIA (Poir. suppl. 4. p. 45. Lehm. asper. p. 82.) stem erect, nearly simple, pilose ; leaves on long petioles, ovate-lanceolate, pilose; calyxes acute, villous ; corollas a little longer than the calyx. 1/. F. Native of the Canary Islands. This species differs from the rest in the leaves being on long petioles, 2-3 inches long, and 1| inch broad. Corollas blue?

Broad-leaved Scorpion-grass. PI. ?

2 M. GRANDIFLORA (H. B. et Kunth, nov. gen. amer. 3. p. 90. t. 199.) stems nearly simple ; leaves strigose, obtuse: radical ones lanceolate, petiolate: cauline ones lanceolate-oblong, sessile; spikes terminal, solitary, or twin, leafy ; flowers pedicellate ; calyx closed; fruit glabrous. %. F. Native of Quito. Stems terete, strigose. Corolla white, size of those of *Tiaridium Vndicum ;* processes of the throat roundish, downy. Calycine segments linear, acutish.

Great-jlowered Scorpion-grass. PI. \ to f foot.

3 M. CORYMBOSA (Ruiz, et Pav. fl. per. 2. p. 5. no. 2.) stems procumbent, divaricate; leaves linear, acute; flowers corymbose; corollas 3 times longer than the calyx. ©. H. Native of Chili, about Conception, in fields. Pers. ench. 1. p. 157. Lehm. asper. p. 82. Plant hispid. Middle stem erect; side ones procumbent; branches forked at top. Corymb forked, sometimes spicate. Corolla white.-

Corymbose-Rowered. Scorpion-grass. PI. procumbent.

4 M. ROBU'STA (D. Don, prod. fl. nep. p. 101.) leaves elliptic-oblong, acute, sessile, pilose on both surfaces; racemes conjugate, short, bractless; calycine segments oval, obtuse, longer than the tube of the corolla. 1/. H. Native of Nipaul, in Gosainsthan, where it is called *Khurkurree* by the natives. Root fusiform. Stems ascending, simple, pilose. Leaves 3 inches long, and \ inch broad.

Robust Scorpion-grass. PI. 1| foot.

5 M. LA'XA (Lehm. asper. p. 83.) stem filiform, loose ; leaves obovate-lanceolate, obtuse, nearly glabrous; racemes bractless, very long ; pedicels diverging while bearing the fruit, very long, much longer than the calyx, which is spreading and obtuse; corollas small. ©. H. Native of North America. Stem glabrous, divided at top into some racemiferous branches. Calyx rather pilose, ventricose at the base ; teeth ovate-lanceolate, acute.

Loose Scorpion Grass. PI. 1 to 1| foot.

6 M. SPARSIFLORA (Mikan, in Hoppe. taschenb. 1807. p. 74. Pohl, fl. boh. 1. p. 175.) stem branched, diffuse; leaves oblong-lanceolate, acutish ; racemes loose, few-flowered, leafy at the base ; pedicels deflexed while bearing the fruit, longer than the calyx, which is spreading, and beset with hooked bristles at the base ; corollas small. ©. H. Native of Bohemia, Silesia, Transylvania and Caucasus, in shady humid places ; and of Altaia, at the river Kurtsclmm. Baumg. fl. trans. 1. p. 117. Horn. hort. hafn. 1. p. 174. Bess. fl. gal. 1. p. 143. Lehm. asper. p. 84. Led. fl. alt. 1. p. 186. M. sepium, Hort. crac. Stem angular at top, scabrous from reflexed hairs. Leaves strigose. Racemes axillary and terminal. Calyx globose at the base. Corollas small, blue, sometimes white ; throat yellow.

Scattered-flowered Scorpion Grass. Fl. May, June. Clt. 1822. PI. *h* foot*

7 M. SYLVATICA (Ehrh. herb. 31. Lehm. asper. p. 85.) leaves oblong-lanceolate, bluntish, clothed with soft hairs; racemes very long, loose, bractless; pedicels diverging while bearing the fruit, a little longer than the 5-cleft, closed calyx; limb of corolla flat, longer than the tube. 1/. H. Native throughout Europe, in woods in mountainous places. Hoffm. deutschl. fl. 1. p. 85. exclusive of *M. alpina.* Baumg. fl. trans. I. p. 117. exclusive of the synonymes. Pers. ench. 1. p. 156. Sut. fl. helv. 1. p. 102. M. intermedia, Smith, engl. fl. 1. p. 250. M. scorpioides, var. sylvatica, Horn. hort. hafn. 2. p. 956, M. scorpioides, var. Smith, fl. brit. 1. p. 212. M. arvensis, Wahl. fl. suec. 1. p. 120.—Hall. helv. no. 591 Knip. cent. II. t. 81. M. pererinis, *ft,* D. C. fl. fr. no. 2725. M. arvensis,? *ft,* sylvatica, Pers. ench. 1. p. 156. M. intermedia, a, parviflora, Led. fl. alt. 1. p. 187. Stems simple, divided at top into long loose racemes, hairy. Racemes solitary and conjugate. Calycine segments unequal, lanceolate, acuminated, obsoletely 3-nerved, furnished with hooked hairs at the base, conniving while bearing the fruit. Corolla blue, with a yellow throat.—There is a variety of this species found at the Cape of Good Hope. See Cham, in Linnaea, 4. p. 445.

Wood Scorpion Grass. Fl. June, July. Britain. PI. \ to 1 foot.

8 M. CESPITOSA (Schultes, fl. starg. suppl. p. 11. Ledeb. fl. alt. 1. p. 188.) plant strigose, tufted; leaves lanceolate, obtuse; calyx 5-cleft, about equal in length to the tube of the corolla, strigose; fruit bearing pedicels twice as long as the calyxes; racemes loose, naked. %. H. Native of the duchy of Mecklenburgh; and of Altaia, near Riddersk, Smejow, &c, in boggy places; in Britain, common about ponds. Link. enum. 1. p. 165. Bess. pi. volh. p. *52.* Hook, suppl. engl. bot. t. 2661. M. lingulata, Schultes. Lehm. asper. 1. p. 110. M. uliginosa, Schrad. M. commutata, Schultes, syst. 4. p. 102. M. strigulosa, Rchb. M. scorpioides parviflora, Wahl. fl. suec. 1. p. 119. Hairs of the stem and calyx adpressed. Corolla blue, with a yellow throat; limb as long as the tube. Very nearly allied to *M. palustris.*

Tufted Mouse ear. Fl. June, Aug. Britain. PI. tufted.

9 M. ALPE'STRIS (Hoppe, in Schmidt, fl. boh. cent. 3. no. 225.) stems tufted, erect; leaves lanceolate, or oblong-linear, acutish, obsoletely 3-nerved, strigose; racemes strict, bractless; pedicels spreading while bearing the fruit, a little longer than the calyx, which is 5-parted and spreading; limb of corolla flat, a little longer than the tube. 1/. H. Native of Europe, and the north of Asia, on the alps, and in dry alpine places; in Scotland, on the elevated range of the Breadalbane mountains. Lehm. asper. p. *86.* Schultes, fl. austr. 1. p. 788. Willd. enum. 1. p. 175. Ledeb. fl. alt. 1. p. 189. M. lithospermifolia, Horn. hort. hafn. 1. p. 173. M. scorpioides, *ft,* lithospermifolia, Willd. enum. 1. p. 175. M. suaveolens, Waldst. et Kit. hung. ined. Willd. 1. c. M. odorata, Poir. suppl. 4. p. 44. M. rupicola, Smith, engl. bot. t. 2559. M. Pyrenaica, Pourr. mem. acad. toul. 3. p. *323.* M. montana, Bess. fl. gal. 1. p. 142. Bieb. 3\ p. 116. exclusive of the syn. of Erhr. pi. volh. p. 8. M. alpina, Lapeyr.—Barrel, icon. t. 404. Root brown. Stern beset with adpressed hairs, simple at bottom, but divided at top into short racemes; the raceme terminating the stem, conjugate; those terminating the branches solitary. Calyx beset with hooked hairs; segments linear-lanceolate, acute. Tube of corolla shorter than the calyx; limb blue; throat yellow There are varieties of this with white and reddish flowers.

Alp Scorpion Grass. Fl. June, July. Scotland. PI. \ foot.

10 M. NEMOROSA (Besser. pi. volh. p. *52.* Ledeb. fl. alt. 1. p. 188.) stem erect, acute-angled, shining and smooth at the base; racemes loose, naked; fruit bearing pedicels a little longer than the calyxes; calyx 5-toothed, exceeding the tube of the corolla, hispid from strigae, as well as the leaves. %. H. Native of Altaia, in woods and groves near Riddersk, &c. M. laxiflora, Rchb.

Grove Scorpion-grass. Fl. June, Aug. PI. \ foot.

11 M. ROTUNDIFOLIA (Wall. cat. no. 930.) plant tufted, beset with short strigae; leaves small, oval-roundish: radical ones on long petioles; upper cauline leaves sessile; racemes terminal, twin. *1[.* H. Native of Kamaon. Stems simple, erect. Nuts unknown. Nearly allied to *M. alpestris.*

Round-leaved Scorpion-grass. PI. 5 foot.

12 M. ? LONGIFLORA (Wall. cat. no. 929.) root creeping; stems smoothish, prostrate or ascending; leaves ovate, mucronate, on long petioles, beset with short strigse; racemes short, simple or twin, terminal. }/. H. Native of Simla and Kamaon. Racemes and calyxes strigose. Calycine segments linear-lanceolate, shorter than the tube of the corolla. Corolla salver-shaped, white or blue. Nuts unknown. Habit of a species of *Omphalodes.*

Long-flowered Scorpion-grass. PI. prostrate, creeping.

13 M. PALU'STRIS (With. p. 225.) hairs of the stem adpressed; leaves obovate-lanceolate, obtuse, rather scabrous from strigae; racemes bractless; pedicels diverging while bearing the fruit, nearly twice the length of the calyx, which is 5-parted, obtuse, and spreading, and equalling the tube of the corolla; limb of corolla flat, longer than the tube. %. H. Native throughout Europe, Asia, and North America, in humid meadows, bogs, banks of rivers, rivulets, and ditches; plentiful in Britain, in like situations. Lehm. asper. p. *88.* Hoffm. et Link, fl. port. 1. p. 174. Bess. fl. gal. 1. p. 142. M. perennis, Mcench. hass. no. 154. Lapeyr. abr. p. 84. D. C. syn. fl. fr. no. *2725.* M. scorpioides, Horn, hort. hafn. 1. p. 173. Pursh, fl. 1. p. 133. Willd. spec. 1. p. 746. Wahl. fl. lapp. p. 54. Bieb. fl. cauc. 1. p. 118. Michx. fl. 1. p. 129. M. scorpioides, var. palustris, Lin. spec. ed. 2d. vol. 1. p. 188. fl. suec. ed. 2d. no. 157. Smith, fl. brit. 1. p. 212. Curt. fl. lond. fasc. *27.* t. *65.* Smith, engl. bot. 1973. St. Hil. pi. fr. 3. t. 264. Sturm, fl. germ. fasc. 5, with a figure. Svensk, bot. 1. t. *72.* Ledeb. fl. alt. 1. p. 189. Echioides palustris, Moench, meth. p. 416. Plant pale green, roughish. Stems creeping at the base. Racemes simple or conjugate. Corolla blue; throat yellow; tube length of calyx; segments of the limb obovate, emarginate, or obcordate.—There is also a variety of this with white flowers. This, the *Forget-me-not,* is the emblem of affection among the Germans. It is now a general favourite, and deservedly so; its beauty is so striking as to have acquired for it a kind of proverbial name. Few who have observed the flower are likely to forget it.

FIG. *36.*



Var. ft, parviflora (Led. fl. alt. 1. p. 189.) flowers 3 times smaller, and more crowded than in the species. 1/. H. Native near Barnaoul.

Marsh Scorpion Grass, or Forget me not. Fl. April, May. Britain. PI. \ to 1 foot.

14 M. RE'PENS (G. Don, Hook. fl. scot. p. 83. under M. palustris. Engl. bot. suppl. t. 2703.) hairs of the stem spreading; leaves obovate, obtuse, rather strigose; calyx covered

with adpressed bristles, deeply 5-cleft when in fruit, mostly connivent, shorter than the diverging pedicels ; limb of the corolla flat, longer than the tube: lobes somewhat emarginate. %. H. Native of Scotland ; and in Yorkshire, Kent, and Sussex, in open heaths and parts of forests. Root creeping. Leaves Ungulate. Nuts smooth. Plant pilose.

Creeping Scorpion Grass, or Mouse-ear. Fl. April, Aug. Britain. PI. \ foot.

15 M. COLLINA (Hook. engl. bot. suppl. 2629. ed. 2d. t. 257.) annual; calyx beset with spreading, uncinate bristles, open and ventricose when bearing the fruit, as long as the diverging pedicels; limb of corolla concave, shorter than the tube. ©. H. Native of Britain, common in dry fields, and on sunny sandy banks, flowering early in summer, and soon withering away. M. arvēnsis, Smith, engl. bot. 2558. engl. fl. 1. p. 252. Racemes without peduncles, the flowers beginning among the leaves, sometimes from the very base of the stem. Corollas small, blue, with a yellow throat.

Hill Scorpion Grass. Fl. May, June. Britain. PI. | to \ foot.

16 M. ARVE'NSIS (Sibth, fl. oxon. p. 68.) leaves oblong-lanceolate, acute, hairy; racemes bractless; pedicels spreading while bearing the fruit, twice as long as the calyx, which is erect, 5-cleft, and open; limb of corolla erectly spreading, nearly the length of the tube. 0. H. Native throughout Europe, Asia, Africa, and North America, in corn fields and in sterile dry places; plentiful in Britain in like situations. Bess. fl. gal. 1. p. 142. Wahl. fl. lapp. p. *55.* Bieb. fl. cauc. I. p. 119. Willd. spec. 1. p. 747. Lehm. asper. p. 90. M. ānnua, Mcench, fl. hass. no. 153. Lapeyr. abr. p. 84. D. C. syn. no. 2724. M. scorpioides, Desf. fl. atl. 1. p. 153. M. scorpioides, var. *a* arvē'nsis, Lin. spec. ed. 2d. p. 188. Smith, fl. brit. 1. p. 212. engl. bot. suppl. 2629. (Ed. fl. dan. t. 583. Bull, herb. t. 355. Lin. fl. suec. ed. 2d. no. 157. Echioides ānnua Moench. meth. p. 416.—Hall. hist. no. 590.—Gerard, hist. p. 338. f. 4.—Lob, icon. 461. f. 2. Stem beset with spreading hairs. Lower hairs of calyx hooked. *Calycine segments linear-lanceolate, unequal, conniving when in fruit. Corolla with a white tube, which is a little shorter than the calyx; limb blue ; throat yellow ; segments hardly emarginate.

Far. /3. *simplex* (Pers. ench. 1. p. 156.) stem very simple; leaves rosulate ; petals not emarginate ; flowers on short pedicels. ©. H.

Far. $. alpīna; stem dwarf, branched, more pilose; radical leaves tufted; flowering racemes revolute ; flowers on short pedicels; corolla small, blue, rarely white or purple, with a yellow throat. ©. H.

Corn Scorpion Grass, or Mouse-ear. Fl. April, Aug. Britain. PI. \ to 1 foot.

17 M. VE'RNA (Nutt. gen. addend.) small and hairy; stem simple; radical leaves spatulate-oblong : cauline ones linear-oblong ; spikes simple; flowers nearly sessile ; seeds smooth and shining. ©. H. Native of New Jersey, in sandy woods and by way sides. Flowers small and white. Lycopsis Virginica, Pursh ?.

Spring Mouse-ear, or Scorpion Grass. Fl. May, July. PI.

18 M. MULTICAU'LIS (Wall. cat. no. 7020.) plant rough from short strigse; stems numerous, simple, ascending, dividing into racemiferous branches at top; radical leaves oval, on long petioles : lower cauline ones petiolate : upper cauline ones sessile, oval-oblong; racemes numerous, axillary, and terminal, slender; pedicels erect. %. H. Native of Nipaul, in Gosainsthan. Stems many from the same root. Racemes twin or solitary. Nuts unknown.

Many-stemmed Mouse-ear, PI. ascending, 1 foot long.

19 M. PA'LLENS (Wall. cat. 7019.) hispid from strigse ; stems erect, simple; radical leaves rosulate: cauline ones lanceolate, sessile, and half stem-clasping, bluntish, tnucronate ; terminal racemes twin, with a flower in the fork: axillary ones solitary ; nuts unknown. ©. H. Native of Kamaon. Lower leaves lanceolate-spatulate. Pedicels at length drooping. Nearly allied to *M. arvēnsis.*

Pale Mouse-ear, or Scorpion Grass. PI. 1 to \\ foot.

20 M. INTERMEDIA (Link. enum. 1. p. 164.) stem erect, branched, hispid; leaves obversely lanceolate, or ovate-oblong, hispid; pedicels much longer than the flowers ; calyx beset with hooked hairs, exceeding the corolla, closed in the fruit-bearing state. ©. ? H. Native of Europe, in humid places : and of the Cape of Good,Hope. M. arvēnsis, Lehm. asper. p. 90. but not of Lin. Drev. et Heyne, bild. 2. t. 51. M. intermēdia, *fi,* parviflōra, Ledeb. fl. alt. 1 . p. 187. M. scorpioides, Thunb. fl. cap. 183. Racemes strict, naked. Corolla small, blue, with a yellow throat. This species is usually confounded with *M. arvēnsis.*

Intermediate Mouse-ear, or Scorpion Grass. Fl. April, May. Britain. PL 1 to 2 feet.

21 M. VERSICOLOR (Roth. fl. germ. 2. p. 222.) leaves lanceolate, bluntish, hairy; racemes bractless ; pedicels erectly spreading while in fruit, shorter than the calyx, which is 5-cleft, acute, and closed ; limb of corolla spreading, shorter than the tube. ©. H. Native throughout Europe, in dry, arid places. Engl. bot. ed. 2d. t. 258. M. scorpioides, Smith, engl. bot. 480. f. 1. M. scorpioides, y, Lin. spec. ed. 2d. p. 189. Smith, fl. brit. 1. p. 212. M. arvensis, var. y, versicolor, Pers. ench. 1. p. 156. M. arvēnsis, /3, Willd. 1. p. 747. M. discolor, Lin. syst. *ej\.* 15. p. 190. M. collina, Hoffm. fl. germ. 1791. p. 61. Ehrh. herb. p. 51.? M. arvensis, var. /3, Gmel. fl. bad. 1. p. 411. Smith, fl. brit. 1. p. 213. Roth. 2. p. 223.—Knip. cent. 11. t. 80. Stems angular, hairy, solitary, or tufted. Flowers on short pedicels. Lower hairs of calyx hooked. Calycine segments unequal, narrow-lanceolate, conniving when in fruit. Corolla small, blue, with a yellow throat, or pale yellow; segments of the limb obtuse.

Far. /3, *arenāria* (Schrad. in litt. ex Lehm. asper. p. 93. Schulz, starg. suppl. p. 12.) flowers small, all blue ; throat yellow ; stigma somewhat 2-lobed. ©. H. M. ramosissima, Roehel. Leaves oblong, hispid. Tube of corolla exserted, usually yellow.

Far. y, *lūtea* (Pers. ench. 1. p. 156. Hoffm. et Link, fl. port. 1. p. 173.) stem scabrous, hairy ; superior leaves lanceolate, quite entire ; tube of corolla exceeding the calyx. ©. H. M. arvensis, var. /3, Willd. 1. p. 747. Anchūsa lūtea, Cav. icon. 1. p. 60. t. 69. f. 1. exclusive of the synonymes.

Party-coloured-flowered Scorpion Grass, *qr* Mouse-ear. Fl. April, June. Britain. PI. J to 1 foot.

22 M. STRI'CTA (Link, enum. 1. p. 164. exclusive of var. versicolor, Roth. Ledeb. fl. alt. 1. p. 186.) stem branched at the base, hispid as well as the leaves, which are oblong ; racemes strict, naked; pedicels shorter than the calyx; calyx 5-cleft, exceeding the tube of the corolla, hispid from hooked bristles. ©. H. Native of Siberia, in dry sterile places on hills near Sogra, between Butokowna and Tscheremschuka. Flowers usually yellow.

Strict Mouse-ear. Fl. June, July. Clt. 1822. PL 1 foot.

23 M. FORSTE'RI (Lehm. asper. p. 95.) leaves obovate-spatulate, hispid from strigse ; racemes bractless ; pedicels erectly spreading while in fruit, length of calyx ; calycine segments oblong, bluntish, 3-nerved. 2/. G. Native "of New Holland, where it was collected by Forster. Root creeping ; fibres in fascicles. Stems ascending, hispid. Racemes filiform.

Forster's Scorpion Grass. PI. \ to 1 foot.

24 M. LITTORA[N]LIS (Stev. cat. hort. gorenki ? Lehm. asper. p. 95.) radical leaves obovate, obtuse : cauline ones ovate-cor-

date, pilose above and nearly glabrous beneath ; flowers nearly sessile, imbricate, disposed in spike-formed, bractless racemes. ©. H! Native on the shores of the Caspian Sea. Plant small at the time of flowering, but afterwards more elongated. Radical leaves rosulate. Racemes solitary, pilose, many-flowered. Calyx hairy; segments unequal, connivent, linear-lanceolate. Tube of corolla length of calyx.

Sea-shore Scorpion Grass. PI. 1 to *2* inches.

25 M. PUSILLA (Lois, in Desv. journ. 2. p. 260. t. 8. f. 1. not 36. D. C. fl. fr. 6. p. 421. no. 2724. Lehm. asper. p. 96.) radical leaves somewhat spatulate, obtuse : cauline ones oblong, pilose; racemes short, leafy; pedicels axillary, erect, much shorter than the leaves; tube of corolla a little longer than the calyx ; limb very short. ©. H. Native of Corsica, in fields. Root simple, slender, with some long fibres. Stems simple, numerous from the same root, pilose. Calycine segments acute.

Least Mouse-ear. Fl. June, July. Clt. 1820. PI. | foot.

26 M. SPATULATA (Forst prod. p. 12. no. *62.)* stem filiform, procumbent ; leaves petiolate, ovate, distant, hispid from pili ; pedicels lateral, one-half shorter than the leaves ; tube of corolla much longer than the calyx. ©. H. Native of New Zealand. Pers. ench. 1. p. 175. Willd. spec. 1. p. 748. Lehm. in act. soc. hal. 3. t. 1. f. 2. asper. 97. Anchusa spatulata, Rcem. et Schultes, syst. 4. p. 100. Stem pilose. Calyx obovate, with lanceolate segments.

Spatulate-leaxed Mouse-ear. PI. procumbent.

27 M. SERI'CEA (Lehm. asper. p. 98.) stem erect; leaves sessile, oblong-lanceolate, silky ; racemes leafy ; pedicels axillary, erect when in fruit, length of the floral leaves; tube of corolla length of calyx. ©. H. Native of Siberia. Anchdsa serfcea, Roam, et Srhultes, syst. 4. p. 774. M. pectinata, Hort. Stem silky, divided into many erect leafy racemes at apex. Calycine segments linear, bluntish. Corollas large, blue.

Silky Mouse-ear, or Scorpion Grass. Fl. June, Aug. Clt. 1802. PI. ½ to 1 foot.

28 M. FOLIOSA (Lehm. asper. p. 99.) leaves spatulate-lanceolate, roundish, obtuse, nearly glabrous; flowers axillary, on short pedicels, one-half shorter than the leaves ; tube of corolla nearly the length of the calyx. %. G. Native of South America. Anchusa foliosa, Roem. et Schultes, syst. 4. p. 775. Roots nearly simple. Stem scabrous from adpressed short hairs. Racemes leafy. Calyx pilose ; with linear-lanceolate, obtuse segments. Corolla rather pilose outside.

Leafy Mouse-ear, or Scorpion Grass. PI. \ to 1 foot.

29 M. VILLOSA (Ledeb. act. ITOV. acad. petrop. 5. p. 516. no. 3. fl. alt. 1. p. 191: fl. ross. alt. ill. t. 215.) plant clothed with white villi; stems simple ; leaves elliptic, obtuse, 3-nerved, reticulately veined, villous; racemes twin, bracteate; bracteas minute ; pedicels hardly the length of the flowers; nuts truncate, marginately toothed : teeth inflexed. %. H. Native of Siberia, on the alps, along with *Dryas octopetala;* and of the bay of St. Lawrence, along with *M. alpestris.* Lehm. asper. p. 100. Anchusa villosa, Roem. et Schultes, syst. 4. p. *775.* Plant tufted, white from villi. Root woody. Stems simple, divided at top into simple leafy racemes. Racemes axillary and terminal. Calycine segments linear. Corolla rather large, deep blue, with a pale throat.

Villous Mouse-ear, or Scorpion Grass. PI. J foot.

30 M. ARETIOIDES (Cham, in Linnaea, 4. p. 443.) stems tufted, clothed with long white hairs, divided at top; leaves densely imbricated, sessile, lanceolate, cuneate at the base, acutish at the apex; racemes cymose, twin, terminal, each furnished with a leaf at the base. 3/. H. Native of the island of St. Laurence. Stems hardly emerging from the tufts of leaves. Surculi creeping. Pedicels longer than the calyxes. Calycine segments lanceolate, acutish. Corolla salver-shaped; limb fine blue ; genitals inclosed.

Aretia-like Mouse-ear. PI. 2 to 4 inches.

31 M. RUPE'STRIS (Pall. itin. 3. append, p. 716. E. f. *3.* R. Br. prod. p. 494.) plant silky ; leaves linear, villous ; racemes twin or tern, alternate, leafy at the top of the stem ; pedicels erectly spreading while bearing the fruit, length of the floral leaves, but exceeding the flowers. If.. H. Native of Dahuria, and Altaia, on the mountains, in dry rocky places. Willd. spec. 1. p. 748. Lam. ill. p. 305. no. 1772. Lehm. asper. p. 100. Anchusa rupestris, Roam, et Schultes, syst. 4. p. 100. Root simple. Stems tufted, numerous from the same root, simple, slender, canescent. Racemes axillary and terminal. Calyx villous ; with spreading segments. Corolla large, showy, deep blue, twice as long as the calyx. Nuts truncate, marginate, with the margins toothless.—There is a white-flowered variety of this plant foundat the river Tschuja.

Rock Mouse-ear. Fl. July. Clt. 1802. PI. \ to \ foot.

32 M. OBOVATA (Ledeb. fl. alt. 1. p. 190.) plant rather silky; stems tufted, simple; leaves obovate-oblong ; racemes twin, bracteate; pedicels hardly exceeding the flowers ; nuts unknown. %. H. Native of Kamtschatka ; also of Dahuria, near Nertschinsk. Root thick, woody. Radical leaves rosulate, all attenuated into the petioles. Flowers like those of *M. rupestris.*

Obovate-leaved Mouse-ear, or Scorpion Grass. Fl. June, July. PI. ½ to | foot.

^ *33* M. FLACCIDA (Dougl. mss. ex Lehm. pug. 2. p. 22.) stem erect, branched ; leaves linear, strigose ; spikes bractless, bifid ; calyx 5-parted, closely adpressed *to* the fruit, closed, very hispid at the base and apex. ©. H. Native of Northwest America. Stem beset with adpressed hairs or strigae. Calycine segments linear, obtuse. Corolla yellow, glabrous ; limb short. Nuts ovate, beaked, smooth.

Flaccid Mouse-ear, or Scorpion Grass. PI. 1\ foot.

34 M. LEUCOPHCEA (Dougl. mss. ex Lehm. pug. 2. p. *22.,* stem erect; leaves lanceolate-linear, silky above and strigose beneath ; spikes crowded at the top of the stem, few-flowered ; calyx very hispid; nuts unknown. ©. H. Native of Northwest America.—A very pretty plant. Stem angular, beset with adpressed hairs below, and spreading pili above. Leaves 3-nerved. Spikes hispid. Calycine segments linear, obtuse, tomentose inside at apex. Corollas large, white ; with roundish, obovate segments.

Leucophceous Mouse-ear, or Scorpion Grass. PI. I foot.

35 M. PAUCIFLORA (Ledeb. in act. nov. acad. petrop. 5. p. 517. no. 4. Lehm. asper. 1. p. 101.) leaves linear, villously hispid, hoary ; racemes conjugate, usually 3-flowered ; pedicels 3 times longer than the calyx when bearing the fruit; bracteas minute. %. H. Native of Dahuria. Anchusa pauciflora, Roem. et Schultes, 4. p. 774. Plant clothed with white, shining hairs. Stems simple, numerous from the same root. Racemes terminal. Corollalarge for the size of the plant, pale blue, with a yellow throat.

Few-Jlorvered Mouse-ear. PI. \ to \ foot.

§ 2. *Nuts wrinkled, rugged, granular, or bristly.*

36 M. PEDUNCULARIS (Trev. in scrift.ges. freund. berol. 1813. p. 147. t. 2. f. 6, 7, 8,9.) leaves elliptic-roundish, obtuse; racemes many-flowered, bractless, loose ; pedicels longer than the calyxes, thickened above while in fruit; nuts pyramidal, downy. ©. H. Native near Astrachan, in fields and vineyards. Lehm. asper. p. 102. Roots fibrous. Steins numerous from the same root, beset with adpressed hairs, as well as the leaves. Racemes terminal, simple. Calycine segments linear,

or lanceolate, erectly spreading. Nuts beset with hooked bristles at the sides, nevertheless shining.

Peduncular Mouse-ear, or Scorpion Grass. Fl. May, June. Clt. 1821. PI. *I* to *I* foot.

37 M. TENUIFLORA (Viv. fl. libyc. 9. t. 1. f. 2.) plant strigose; stem erect; lower leaves spatulate: superior linear-oblong; calyx 5-parted, equal in length to the corolla, erect when bearing the fruit; bracteas linear-lanceolate, exceeding the flowers. ©. H. Native of Cyrenaica, in dry, exposed parts of mountains. Stem sparingly branched. Flowers disposed in short, imbricate, solitary, terminal spikes. Calyx hispid; with linear, acute, connivent segments. Corolla furnished with 5 fascicles of hairs inside. Nuts triquetrous, having the margins and back tubercled.

Thin-flowered Mouse-ear. PL | foot.

38 M. NANA (Vill. dauph. 2. p. 459.) leaves oblong-lanceolate, villous; racemes few-flowered, leafy at bottom; nuts denticulately crenulated on the margins*. %. H. Native of the alps of Dauphiny, Piedmont, Switzerland, Tyrol, Carinthia, Carniola, and Savoy. Vill. delph. 4. t. 13. prosp. p. 41. t. *23.* f. 3. All. ped. no. 189. Wulf. in Jacq. coll. 1. p. 261. Schmidt, fl. boh. cent. 2. p. 27. Lam. ill. 1. p. 396. no. 1780. D. C. syn. fl. fr. no. 2726. Lois. fl. gall. 1. p. 104. Sut. fl. helv. 1. p. 102. Pers. ench. 1. p. 157. M. pauciflora, Vittm. summ. 1. p. *382.* M. Terglovensis arid M. nana, Vittm. summ. 1. p. 382. M. Terglovensis Hacq. pi. alp. cam. p. 21. t. 2. f. 6. Arctia Hacq. in act. soc. hist. nat. berol. 1780. p. 128. Lithospermum alpinum tomentdsum minimum Tourn. inst. p. 137. Plant tufted, the smallest species of the genus. Root blackish. Steins numerous, simple, leafy. Radical leaves rosulate. Racemes simple, with hardly ever more than 4 flowers. Calyx villous; segments lanceolate, bluntish. Corollas large, sweet-scented; tube pale, about the length of the calyx; limb blue; throat yellow; segments ovate-roundish.

Dwarf Mouse-ear, or Scorpion Grass. Fl. May, July. Clt. 1800. PI. 1 to 3 inches.

39 M. PECTINATA (Pall. itin. vol. 3. append, no. 71. t. E. f. 4.) leaves ovate-lanceolate, villous; racemes erect, strict, bracteate; nuts truncate at the apex, pectinated by erect marginal bristles. %. H. Native among frigid, mossy rocks, at the Jenissee; also about the Baical, and in Kamtschatka. Pers. ench. 1. p. 157. Willd. spec. 1. p. 750. Lam. ill. p. 396. Lehm. asper. p. 105. Root fibrous, adhering to the fissures of rocks. Stems erect, pilose, many from the same root, divided into simple racemes at top. Calyx pilose, with lanceolate, acute segments. Corolla blue, with a pale throat; tube length of calyx.

Pectinate-fruited Mouse-ear. PI. | to 1 foot.

40 M. CILIATA (Rudolph, in mem. acad. st. petersb. 1809. vol. 1. p. *352.* t. 11. Led. fl. alt. 1. p. 191. fl. ross. alt. ill. t. 215.) leaves oblong-lanceolate, canescent, strigose, as well as the stems; racemes many, bracteate, loose; nuts truncate at the apex, girded by a toothed margin, having the teeth erect and ciliated. *If.*. H. Native of Siberia, in exposed places at the Jenissee, especially near Krasnajarsk; also of the Altaian mountains, near Salair. Root perpendicular, fibry. Stems simple, many from the same root, divided into numerous loose racemes at top, strigose and canescent. Pedicels 3 times as long as the flowers. Calyx pilose, with linear segments. Corolla twice as long as the calyx; throat closed by 5 peculiar scales. Habit of *Echinospermum barbatum.*

Ciliated-toothed Mouse-ear. PI. \ to 1 foot.

41 M. ALBIDA (H. B, et Kunth, nov. gen. amer.3.p. 91.) stem erect, much branched, and are, as well as the leaves, hispid, white; leaves sessile, linear, acutish; spikes terminal, leafy; flowers sessile; calyx closed; nuts scabrous. ©. H. Native of Mexico, near San Juan del Rio, and Hacienda de Lira, at the altitude of 1000 hexapods. Lithospermum ramosum, Lehm. asper. p. 328. ex Lam. Leaves 1 to \\ inch long, and one line broad. Corollas very minute, yellow, glabrous; and the processes of the throat orange-coloured. Calyx hispid, with linear-lanceolate segments.

Whitened Mouse-ear. PI. 1 foot.

42 M. GRANULOSA (Ruiz, et Pav. fl. per. 2. p. 5. no. 1.) stem erect; leaves linear-lanceolate, bluntish, rather hispid; corolla twice longer than the calyx; nuts granular. ©. H. Native of Peru, in sandy places in the provinces of Lima and Chancay. Pers. ench. 1. p. 157. Lehm. asper. p. 108. Plant hispid, or strigose. Root fusiform, fibry. Branches disposed in a corymbose manner. Racemes terminal. Flowers distant. Calyx hairy, with obtuse segments. Corolla white. Nuts ovate.

Granular-fruited Mouse-ear. PI. J to 1 foot.

43 M. HUMILIS (Ruiz, et Pav. fl. per. 2. p. 5. no. 4.) stems procumbent; leaves linear, hispid; flowers lateral, secund; nuts rugose. 1/. G. Native of Peru, in fields. Pers. ench. 1. p. 157. Lehm. asper. p. 108. Plant hispid from pili. Root fusiform, fibry. Middle stems erect. Flowers on short pedicels. Calycine segments lanceolate. Corolla white, longer than the calyx. Nuts ovate.

Humble Mouse-ear. PI. procumbent.

44 M. FULVA (Hook, et Arn. in Beech, voy. pt. bot. p. 38.) hispid; stem erect, nearly simple; leaves remote, broad-linear, bluntish; racemes spike-formed, conjugate, bractless; calyx densely pilose, deeply 5-parted; nuts only 2, and one of which is abortive. ©. H. Native of Chili, about Conception. Stem slightly branched upwards. Root fusiform, simple. Pedicels and calyxes clothed with fulvous hairs. Leaves strigose. Corolla white. Nuts wrinkled.

FulvousAmired Mouse-ear, or Scorpion Grass. PL 1 foot.

45 M. MICRANTHA (Pall, in litt. ex Lehm. asper. p. 109.) stems diffuse, decumbent; leaves narrow-lanceolate, obtuse, strigose; flowers nearly sessile, interfoliaceous; nuts rugose, with prominent ribs.—Native of Siberia, at the Volga. Stems strigose, branched, many from the same root. Flowers distant, secund, axillary, and interfoliaceous. Calyx hairy; segments lanceolate, elongated and spreading when in fruit. Corolla small, a little longer than the calyx. Nuts ovate.

Small-flowered Mouse-ear. PI. procumbent.

46 M. CHORISIANA (Cham, in Linnaea, 4. p. 444.) plant beset with white strigose pili; radical leaves linear, acute, obscurely 3-nerved; stems filiform, ascending, usually simple, bearing racemes from the base; segments of calyx, bearded at apex; stigma capitate; nuts wrinkled. ©. $?. H. Native of New California, at port St. Francisco. Calyx beset with adpressed strigae. Radical leaves 3 inches long, and 2 lines broad. Corolla rotate. Calycine segments lanceolate, acute. Said to agree in hairiness and duration with *M. ccespitosa,* Schultes, and in the racemes being leafy at bottom with *JVL parmflbra,* but the nuts are wrinkled, and the habit peculiar.

Choris's Mouse-ear, or Scorpion Grass. PI. \ to 1 foot.

47 M. GLOMERATA (Nutt. gen. amer. 1. p. 112.) stem erect, simple; leaves spatulate-linear, those on the stem rather acute, hairy; spikes pedunculate, axillary, conglomerate, bifid, sessile above; calyx extremely hispid; lobes of corolla entire. $. H. Native of the Missouri, on arid, argillaceous hills, around the great Bend. Cynoglossum glomeratum, Pursh. fl. amer. 2. p. 729. Rochelia glomerata, Torrey. Radical leaves villous, obovate-spatulate. Corolla white; tube constricted near the base. Stigma capitate. Stamens included beneath the arched protuberances of the orifice. Nuts rugose, with an elevated, scabrous, or minutely crenulated ridge in the centre.

Glomerate-spiked Mouse-ear, or Scorpion Grass. Fl. May, Aug. Clt. 1812. PL \ to 1 foot.

†*Species not sufficiently known.*

48 M. AUSTRA'LIS (R. Br. prod. p. 495.) hispid; leaves oblong-lanceolate; calyxes equal to the tube of the corolla, beset with hooked hairs. © ?. H. Native of New South Wales, about Port Jackson; and of Van Diemen's Land. R. Br. says that the anthers are peltate in *Myosdtis,* and that there is hardly any difference between it and *Anchusa,* unless in the one the racemes are bractless, and bracteate in the other.

Southern Mouse-ear. PL

49 M. ALPINA (Lapeyr. abr. p. 85. fl. pyr. t. 64.) nuts smooth; stem simple, sub-bifid; flowers capitate; calyxes hoary from villi; leaves lanceolate, those at the bottom of the stem very villous. %. H. Native of the Pyrenees. This is a peculiar species.

Alpine Mouse-ear. PL tufted.

50 M. LINGULA'TA (Lehm. asper. p. 110.) the specimen received by Lehmann under this name is nearly allied to *M. palustris,* and is probably the *M. commutata,* Schultes. It has also been received under the name of *M. uligindsa,* Schrad.

Lingulate-leaved Mouse-ear. PL 1. foot ?

51 M. RAMOSISSIMA (Rochel, Lehm. asper. p. 111.) stem much branched, beset with spreading hairs; floriferous branches beset with adpressed bristles; calyx divided beyond the middle, unequal, a little shorter than the corolla: with linear, hispid, obtuse segments. ©. H. Native country unknown. Flowers very small, blue.

Much-branched Mouse-ear. PL \ to | foot.

Cult. Some of the species of this genus are very delicate and beautiful when in blossom, as *M. palustris,* the *Forget-me-not, M. rupestris, M. repens, M. nana,* and all the perennial kinds. They thrive best in moist places, or by the edges of ponds or ditches; they also may be grown in pots and placed among the other alpine plants. The annual species grow best in dry sandy soil, or on old walls where the seed may be sown. Most of the perennial species may be increased by dividing at the root, and all by seed.

XXVIII. EXARRHE^{N}NA (e£, *ex,* without; and *atfrjv, arrhen,* a male; in reference to the exserted stamens.) R. Br. prod. p. 495. Lehm. asper. *76.*

LIN. SYST. *Pentdndria Monogynia.* Calyx 5-cleft. Corolla salver-shaped; throat closed by arched processes; limb 5-parted, obtuse. Stamens exserted; anthers peltate. Style length of stamens; stigma nearly simple. Nuts 4, distinct, 1-celled, fixed to the bottom of the calyx, umbilicate at the base.—A pilose herb, with the habit of *Myosdtis,* and differs principally from that genus in the exserted stamens. Leaves decurrent. Racemes conjugate or solitary, bractless. Flowers white, sweet-scented.

1 E. SUAVE'OLENS (R. Br. 1. c.) *Q* ?. H. Native of Van Diemen's Land. Lehm. asper. 1. c. Myosdtis suaveolens, Poir. suppl. 4. p. 44.

Sweet-scented-dowered Exarrhena. PL

Cult. For culture and propagation see *Myosdtis* above.

XXIX. BOTHRIOSPE'RMUM (from *fiodpiov, bothrion,* a small pit, and *anepfia, sperma,* a seed; in reference to a deep pit on the inner side of each carpel.) Bunge, in mem. acad. petersb. 2. p. 121.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted, permanent at length, a little widened or increased. Corolla salver-shaped; throat furnished with bifid, arched processes; tube short; limb 5-cleft. Anthers nearly sessile, oblong. Stigma capitate. Nuts 4, 1-celled, fixed to the bottom of the calyx, reniform, granular on the outside, perforated at the base, and deeply umbilicate on the inner side; each pit girded by a neck. —This genus is nearly allied to *Myosbtis, Exarrhena* and *Borago.* Habit of *Myosbtis.*

1 B. CHINE'NSE (Bunge, 1. c.) $. H. Native of China, near Pekin, among rubbish. Herb very hairy. Leaves oblong, entire, attenuated into the petioles. Racemes leafy. Flowers blue, like those of *Myosdtis.* All parts of the plant are more robust than most species of *Myosdtis.*

China Bothriospermum. PL 1 foot ?

Cult. For culture and propagation see *Myosdtis* above.

SUBTRIBE II. CYNOGLO'SSEJE. Nuts fixed to the central column, not perforated at the base.

XXX. ECHINOSPERMUM (from $e_{X}ivo_{Q}$, *echinos,* a hedgehog, and *(Tnepfxa, sperma,* a seed; in allusion to the seeds or nuts being echinated.) Swartz, ex Lehm. asper. p. 113. Blum, bijd. 846. Led. fl. alt. 1. p. 197. Myosotis species, Lin. Juss. Lam. &c. Lam. ill. t. 91. Gsertn. fruct. 1. t. 68. f. 1.—Lappula Rivin.—Mcench. meth. 1. p. 416.—Rochelia, Lam. ill. t. 91, under Myosotis. Roem. et Schultes, syst. 4. p. xi. and p. 108.—Echioides species, Mcench.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla salver-shaped, or funnel-shaped; throat furnished with short scales; limb 5-parted, obtuse, spreading. Nuts 4, distinct, 1-celled, triangular, compressed, echinated, fixed to the central column, not perforated at the base.—Scabrous, annual, or biennial-branched, erect plants. Leaves decurrent. Racemes bracteate, terminal. Flowers small, blue. "The Linnean species of *Myosdtis,* with echinated fruit, constitute a distinct genus, nearly allied to *Cynoglossum,* from the nuts being adnate to the central column, but differs from that genus in the nuts being compressed, not depressed, and in the racemes being bracteate." R. Br. prod. p. 494.

§ 1. *Fruit drooping, or defiexed. Racemes almost bractless.*

1 E. ZEYLA'NICUM (Lehm. asper. p. 116.) leaves somewhat cordately ovate, callously hispid; racemes erect, very long, bractless; nuts densely clothed with sub-imbricate, glochidate prickles. %. H. Native of Ceylon, on the sea-shore among the sand. Myosotis Zeylanica, Swartz in litt. Lehm. in act. soc. schrift, hall. 3. p. 20. Cynoglossum Zeylanicum Thunb. in litt. Anchusa Zeylanica, Vahl. herb. Horn. enum. hort. hafn. 1807. Rochelia Zeylanica, Roem. et Schultes, syst. 4. p. 108. Plant hispid, erect, branched. Corollas small, blue, a little longer than the calyx. Calycine segments ovate, obtuse.

Ceylon Echinospermum. PL 1 to 2 feet.

2 E. VIRGINICUM (Lehm. asper. p. 117.) leaves ovate-oblong, acuminated, scabrous above, downy beneath; racemes divaricate, bracteolate; nuts beset with dense, scattered, glochidate prickles. ©. H. Native of North America, in woods, especially in Virginia, Carolina, and Kentucky. Myosotis Virginica, Lin. spec. ed. 2d. vol. 1. p. 189. Pursh. fl. 1. p. 134. Willd. spec. 1. p. 748. Mill. diet. no. 1. Michx. fl. bor. 1. p. 129. Wahl. fl. lapp. p. *56.* Rochelia virginica, Rcem. et Schultes, syst. 4. p. 108.—Mor. hist. 3. p. 449. sect. 11. t. 30. f. 9. Myosotis seminibus hispidis, foliis lanceolato-ovatis, Gron. virg. p. 19. i Plant erect, scabrous, branched; hairs on the stem retrograde. Corolla white, a little longer than the calyx. Calyx pilose, with ovate lanceolate segments, which are elongated and divaricate in the fruit-bearing state. "Leaves large. Flowers small, pale blue." Pursh. 1. c.

Virginian Echinospermum. Fl. June, July. Clt. 1699. PI. 1 to \\ foot.

3 E. JAVA'NICUM (Lehm. asper. p. 118. Blum, bijdr. p. 846.) leaves lanceolate, strigose above, hairy beneath; racemes erect, loose, bifid, bractless; nuts depressed, densely clothed with scattered, somewhat imbricate, glochidate prickles. 1/. H. Native of Java, on mounts Gede and Salak, in dry, exposed places. Myosotis Javánica, Swartz in litt. Lehm. in act. soc. schrift. hall. 3. p. 20. Rochèlia Javánica, Roem. et Schultes, syst. 4. p. 108. Cynoglóssum Javánicum, Thunb. in litt. Stem erect, downy. Racemes bifid. Corolla blue; tube a little longer than the calyx, hispid, with ovate obtuse segments. This species differs from *E. Firginicum,* to which it is very nearly allied, in the floriferous branches being erect, not divaricate, in the leaves being elliptic-lanceolate, short-acuminated, strigose above, and hairy beneath, not villous ; and in the racemes being longer and bractless.

Java Echinospermum. PL 1 foot.

4 E. BORBÓNICUM (Lehm. asper. p. 119.) suffruticose; leaves lanceolate-linear, very long, nearly naked ; racemes erect, bractless ; nuts beset with densely scattered, very short, glochidate prickles. F? . S. Native of the island of Bourbon. Myosótis Borbónica, Lehm. in act. soc. scrift. hall. 3. p. 25. t. 2. Pers. ench. 1. p. 157. Myosótis Borbóniae, Lam. ill. 1. p. 396. no. 1777. diet. 4. p. 401. Rochèlia Borbónica, Roam, et Schultes, syst. 4. p. 108. Stem scabrous, branched at top. Leaves scabrous above from white dots, and almost glabrous beneath. Flowers in 2 rows. Calyx obovate ; with oblong lanceolate, bluntish segments. Corolla as in *Myosótis palústris.*

Bourbon Echinospermum. Shrub 1 to 1-J foot.

5 E. DEFLE'XUM (Lehm. asper. p. 120.) leaves oblong-lanceolate, bluntish, hairy ; racemes erectly spreading, bracteolate at the base ; nuts having a simple series of prickles along the margins, which are connate at the base, and glochidate at the apex. $. H. Native of Lapland, Norway, Hungary, Siberia, and Styria, at the bottom of the Alps, in stony shady places. Myosótis deflexa, Wahl. fl. carp. p. 47. fl. lapp. p. *55.* act. stockh. 1810. p. 113. t. 4. Horn. hort. hafn. 1. p. 174. Oed. fl. dan. t. 1568. Rochèlia deflexa, Roam, et Schultes, syst. 4. p. 109. Root fusiform, fibry. Stem hispid, branched at top. Calyx hairy, with oblong, obtuse segments, which are elongated, divaricate, and reflexed in the fruit-bearing state. Corolla size and colour of *E. Idppula.* There are varieties of this, with blue or white, smaller or larger corollas.

Deflexed-calyxed Echinospermum. Fl. May, June. Clt. 1820. PL I to 1 foot.

§ 2. *Fruit erect. Racemes leafy.*

6 E. LA'PPULA (Lehm. asper. p. 121.) stem branched at top ; leaves lanceolate, beset with incumbent strigae, ciliated ; calyx at length spreading, exceeding the pedicels ; corolla small, exceeding the calyx, with an erectly spreading limb ; nuts furnished with a double row of glochidate prickles along the margins, having the disk and sides tubercled. ©. H. Native of Europe, Asia, and North America, among rubbish, stones, and on walls ; and of China, on mountains. Myosótis Lappula, Lin. spec. ed. 2d. vol. 1. p. 189. fl. suec. ed. 2d. no. 158. All. ped. 1. p. 191. Smith, prod. fl. graec. 1. p. 112. Bess. fl. gall. 1. p. 145. Pursh. fl. 1. p. 134. Baumg. fl. trans. 1. p. 118. Oed. fl. dan. t. 692. Wahl. fl. lapp. p. 56. Bieb. fl. taur. 1. p. 120. Lam. ill. 91, Lappula Myosótis, Mcench. meth. p. 417. Cynoglóssum Lappula, Scop. fl. cam. ed. 2d. vol. 1. p. 25. Rochèlia Lappula, Roem. et Schultes, syst. 4. p. 109.—Hall. hist. helv. no. 589.—Column, ecphr. p. 179. icon.—Clus. hist. 2. p. 163. f. 1. Root fusiform. Stems scabrous from pili, branched at top. Calycine segments linear-lanceolate, spreading in the fruit-bearing state. Corolla with a very short tube; limb exceeding the calyx, blue. There is also a white flowering variety.

Far. /3. squarrósum (Lehra. asper. 1. p. 122.) angles of nuts beset with hooked prickles; leaves lanceolate, pilose, callous at apex. ©. H. Myosótis squarrósa, Retz. obs. 2. p. 9. no. 10. Willd. spec. 1. p. 749, exclusive of the syn. of Pall. Pers. ench. 1. p. 157.

Burdock Echinospermum. Fl. April, Aug. Clt. 1656. PL 1 to 1| foot.

7 E. HETERACA'NTHUM (Ledeb. suppl. ind. hort. dorp. 1823. p. 3. fl. alt. 1. p. 198.) stem erect, branched above; leaves strigose ; corolla hardly exceeding the calyx ; calyxes at length, spreading, exceeding the pedicels ; nuts furnished with 2 rows of glochidate prickles along the margins : those in the inner row connate at the base, having the disk tubercled, and the sides tubercled and prickly. ©. H. Native near Astrachan.

Farious-spined Echinospermum. PL 1 foot.

8 E. INTERMEDIUM (Ledeb. fl. alt. 1. p. 199. fl. ross. alt. ill. t. 180.) stem branched above; leaves strigose; corolla length of calyx; flowers pedicellate ; pedicels a little longer than the calyx in the fruit-bearing state; nuts furnished with a single row of horizontal, approximate, glochidate prickles along the margins, having the disk granulated, and the sides wrinkled. ©. H. Native of Altaia, in sandy places at the river Katunga. Habit exactly of *E. Lappula.* Stem hispid. Leaves oblong-linear. Racemes solitary or twin. Bracteas ciliated. Corollas blue.

Intermediate Echinospermum. PL 1 to 1^- foot.

9 E. PA'TULUM (Lehm. asper. p. 124.) branches divaricate, spreading ; leaves oblong-lanceolate, beset with spreading strigae ; corolla length of calyx, at length spreading; flowers sessile ; nuts furnished with a single row of distant, elongated, glochidate prickles along the margins, having the sides and disk beset with acute prickles. ©. H. Native of Caucasus, at the rivers Kuma and Terek ; also on the lower Volga, about Sarepta, and about the town of Astrachan, &c. Myosótis squarrósa, Bieb. cauc. 1. p. 120, exclusive of the synonymes of Retzius, Horn. hort. hafn. 1. p. 174. Willd. enum. 1. p. 176. Rochèlia squarrósa, Rcem. et Schultes, syst. 4. p. 124. M. Lappula, var. Pall, kin 3. p. 718. no 71, in a note. Root simple, perpendicular. Stem beset with rigid spreading hairs. Calyx pilose; segments linear, erectly spreading inflorescence, but in the fruit-bearing state they are divaricate and elongated. Corolla small, blue, a little longer than the calyx, like those of ***Myosótis arvensis.***

Spreading-hvdiuchedi Echinospermum. FL April, Aug. 1802. PL \ to \\ foot.

10 E. STRÍCTUM (Ledeb. fl. alt. 1. p. 200. fl. ross. alt. ill. t. ^ branches erect; leaves lanceolate, beset with spreading strigse ; tube of corolla length of calyx; flowers pedicellate ; pedicels when bearing the fruit length of calyx ; nuts furnished with a single row of erect, approximate, glochidate prickles along the margins, keeled and beset with obtuse tubercles on the disk, and wrinkled on the sides. ©. H. Native of Altaia, in sandy places at the river Irtysch, between the river Kurtschum and Lake Noor-Saisan. Sterns many from the same root. Limb of corolla pale blue. Bracteas much smaller than in *E. pdtulum.*

Strict Echinospermum. PL 1 foot.

11 E. TE^NUE (Ledeb. fl. alt. 1. p. 201. fl. ross. alt. ill. t. 182.) stem branched above, hispid from strigse, as well as the leaves; leaves oblong-linear, obtuse; corolla exceeding the calyx a little ; calyxes when bearing the fruit divaricate, twice as long as the pedicels ; nuts furnished with a single row of short, distant, glochidate prickles along the margins, having the disk a little

keeled, and the sides tubercled. ⊙. H. Native of Altaia, at the river Tscherysch, and near Smejew. The whole plant is hispid from spreading hairs. Racemes terminal, elongated, usually solitary, rarely twin; bracteas narrow, ciliated. Corolla pale blue. Segments of calyx linear.

Slender Echinospermum. Pl. ½ to 1 foot.

12 E. MICROCARPUM (Ledeb. fl. alt. 1. p. 202. fl. ross. *i,* alt. ill. 1. 128.) stems branched above, and are, as well as the leaves, silky from strigæ; leaves oblong, or •ivate-oblonj», attenuated at the base: radical ones rosulate; tube of corolla exceeding the calyx; segments of calyx erectly spreading while bearing the fruit, about equal in length to the pedicels; nuts furnished with a single row of approximate, glochidate Tickles *a'* long the margins, having the disk a little keele (1, ami the keel and sides tubercled. ☿. H. Native of Altaia, in stony places, near ihe summits of the Arkaul mountains; and on moi «s terini: ntains near Buckterminsk, and near the mine of N colnjew, Stems many from the same root. Racem al, and sometimes axilliry. Bracteas ciliated. Corolla ; with a pole bhte limb; and the scales on the throat yellow.

Small-fruited Echinospermum. PL £- to 1 foot.

13 E. COMPLICATUM (Lehm. asper. p. 12 ',) branches diva* ricately reflexed; leaves lanceolate, villous; pedicels tlickined when bearing the fruit; nuts furnished with a single row of glochidate prickles along the margins. *11.* H. Native of Siberia. Root fusiform, simple, woolly. Stem branched above, beset with incumbent hairs. Racemes ir the most pan conjiigate, with a solitary flower in the fork; flowers distant. Calyx strigose; with oblong scutish segments, which are elongated and divaricate in the fruit bearing state. Corolla fine itlut: tube nearly the length of the calyx.

Club-bearing Echinospermum. PL 1 foot.

14 E. MACROCARPUM (Led. (1. alt. 1. p. *2t>3.* fl. rciss. alt. ill. i. 302.) stems branched above, and are, as well as the leaves, rather silky from adpressed soft strigæ; leaves as in *E. microcarpum;* tube of corolla a little sh arter than the calyx; but twice shorter than the limb; calycine segments ITCCC in the fructiferous state, exceeding the pedicels; nuts edged with a single row of very short prickles, having the disk . tubercled. ⊙. H. Native of Altaia, in exposed stony places between Batukowa and Tscherremschuka, and near Bar '.tarmsk. Very like *E. microcarpum.* Racemes elongated. . Calyx Natty. Corolla varying to blue, red, an •/ white.

Miium. PI. I i o 2 feet.

Short-spurred Echinospe . ross. ah. ill. 495. 15 E. SPINULOSUM (Ledeb. fl. alt. 1. p. 204. fl. 'i, as L 28.) leaves oblong, glabrous above, but hispid beneath, as salve i ; tube of corolla len»ih of parte as well as the stems which are branche yx, and about equal in length to the pedicels; nuts furnished lengt a single row of very long glochidate •lickU'i along Lhe margins, having the disk keeled and l>nckly, anil the sides tubercled. ⊙. H. Native of .\h;ii3, in salush s;;ii(ly plao s at the river Irtysch, not far from the Lake called Noor-Saisan. Stems many from the same root, rather tufted I. liadical li aves rosulate, sub-spatulate, obtuse; cau'iue leaves (illated at the base. Racemes solitary or twin, bracteate. I alyx hispid. Corolla small white, rarely pale blue,

Half-glabrous Echinospermum. Pl. ½ to 1 foot.

16 E. SACRA'STRUM (Ledeb. fl. alt. |. p. 205. fl. ross. alt. ill. i. 29.) stem branched; leaves strigose, oblong, obtuse, tapering to the base; corollas twice as large as the spreading ilyx; fruit-bearing pedicels about equal in length to the calyx; nuts furnished with a single row of glochidate prickles, which are dilated at the base, upper ones the smallest, having the disk keeled; the keel prickly, and the sides somewhat tubercled. ⊙. or ☿. H. Native of Altaia, in sandy, salush places, at the river Irtysch, not far from the Lake called Noor-Saisan. Stem solitary, or many from the same root. Leaves strigose. Racemes terminal, erect, strict. Bracteas similar to the leaves. Calyx hispid. Corolla with a white tube, one-half shorter than the calyx, and a blue limb, which is 3 times l inger tlia;. the tube.

Large-flowered Echinospermum. Pl. ½ to 1½ foot.

IT E. MAXIMUM (Lehm. asper. p. 126.) branches iivaricatc; leaves lanceolate, obtuse, beset with spreading hairs; pedicels thickened in the fruit-bearing state; nuts large, furnished with a single row of somewhat branched, glochidate, very long prickles along the inai gins. ⊙. H. Native of Siberia, at the Volga, in nitrous places. Myosotis echinophora. Pall. itin. 3. appt i d. no. 71. t. j. f. 1. Willd. spec. 1. p. 750. Rochelia echinophora, Roem. et Schultes, syst. 4. p. ' *10.* I lant hispid from white hairs. Root simple, perpendicular. Calycine segme: ts lanceolate, elongated, and spreading in the fruit-bearing state. ' Corolla small, nea |y the length oi the calyx, with a blue limb and a white thr pei ::ium. PI ½ foot.

18 E. i | or. p. i 27.) stem simple, straight; l^-ives lanceolate-linear, besei with spreading hairs, reflexeil; nuts furnished with ;i sii gle row of short glochidate gins, £.11. t* ative of Russia. Myosotis • i. lialn. 1. p. 174. Redówskii, Roem. ho Rochelia Redówskii, R«"ii r yst. 4, p. 110 et Schultes, syst. Root fusiform. Stem EUtc mi ;la •<'•• ami I rminal, simple or strigose. -ifid. Calyx ith linear segmer ts, hardly the length of the corolla, pilose, w e elongated and spreading in the fruit-bearing state.

Redowski's Echinospermum. Fl. May, July. Clt. 1819. Ti. 1 to 2 feet.

19 E, i: ARRA'TUM (Lehm. asper. p, 128.) stem branched abc> ; leave : lanceolate! beset nidi inci mbent hairs; corolla large, with a flat limb; nuts tunii shed with a double row of very short glochiciate prickles along the edges. ⊙.11. Native of Tauria, DD calcareous monii ains, to Caucasus *at* Iber a, in gravelly i.iiii exjioseil placet Myosotis barbata, Bieb. fl. cauc. 1. ;.. 121. pi, cent. ross. t. 36. Myosotis, Pall. cat. |»l. tatir. in nov ser. p ;rop. 1/1)2. p. 303. Rochelia barbata, Roem. et Schultes, syst. . p. 1 10. Root fibry, reddish. Stem beset wttli soft incumbent hairs. Branch* leafy, bearing the flowers attlie aJii'v, tor the most part bifid, Calyx villous, with oblong, acuiiah segments, which spr cad in the fruit-b earing state. Corolla fine azure blue, size of those nf *Myosotis palustris.* Proceses o : [ho throat orange colour.

Bearded Echinospermum. PI. June, Jnly. Clt. !828. PI. 1 to 1½ foot.

20 E. ORA'TUM (Lehm. asper. p. 129.) stems procumbent, filif uni ; le:r es linear; nuts vehicated; vehiue glochidate. ⊙. H. Nit live of Chili, about Conception in fields, and on hills. Myosotis gracilis, Ruiz, et Pav. fl. per. *2.* |>. *ij* nnd *G.* no. *$,* Per-. ench. 1. p. 157. Rocbelia gi acilis, Roem. et Scbi ltes, syst. .+. p 111. Horn capillary. Plant rather hispid. Flu wers lateral, secund, disposed in a loose, leafy raceme. Corolla white.

Wenk Echinospermum. Pl. procumbent.

21 E. MARSHA'TUM (Lehm. asper. p. 130.) stem erect, branched above; leaves oblong, obtuse, beset with sprea !mj£ hairs; nuts furnished with a single row of glochidate prickles aloii the margins, which are combi t-d to the middle. 0. H. Native on the Lower Volga, about Astrachan, in vineyards and sandy places. Myosotis marginata, Bieb. fl. cauc. 1. p. 120. Horn. hort. hafn. 1. p. 174. Willd. enum. :. I.]). 178. Rochelia marginata, Roem. et Schultes, syst. . t simple, perpendicular. Stem pilose. Racemes erect. Calyx pilose; segments lanceolate, spreading in the fruit-bearing state. Corolla small, a little longer than the cal yx, blue.

4. p. 11" Km

Margin-fruited Echinospermum. Fl. April, Aug. Clt. 1824. Pl. ½ to 1 foot.

22 E. OTTAVIANUM (Lehm. purg. 2. p. 33.) stem and leaves hairy; radical leaves petiolate, oblong-lanceolate; upper cauline ones ovate, obtuse, sessile; racemes erect, simple, bracteate; nuts covered with glochidate prickles all over. ☉. H. Native of the north-west coast of America. Myosotis diffusa, Dougl. mss. Stem divided at top into racemiferous branches. Leaves somewhat 3-nerved. Pedicels subsecund, drooping in the fructiferous state. Calycine segments oblong-linear, blunt. Corollas large, white.

Diffuse Echinospermum. Pl. 1 foot.

23 E. SYMPHYTOIDEUM (Lehm. asper. p. 131.) stems erect, subfrutticose; leaves lanceolate, obtuse, hispid; nuts furnished with a single row of long, glochidate prickles along the margins, which are combined to the middle. ♄. G. Natives of the Cape of Good Hope. Myosotis cynoglossoides, Lain. ill. no. 1778. p. 396. Pers. ench. 1. p. 137. Cynogl. echinatum, Thunb. in Schrad. new. journ. bot. 1809. p. 4 tf. pmd, I. p. 34. Pers. ench. 1. p. 60. Willd. spec. 1. p. 788. Rochelia cynoglossoides, Roem. et Schultes, syst. 4. p. 111. Stems numerous, branched from the base, clothed with adpressed hairs. Racemes erect, secund. Calyx hispid; with lanceolate segments, which spread in the manner of a star in the fruiting state. Corolla blue?

Cynoglossum-like Echinospermum. Shrub 1 to 2 feet.

24 E. VARIEGATUM (Lehm. asper. p. 132.) stem suffruticose, dichotomously branched at top; leaves linear, densely pilose, greyish; nuts muricately spinose. ♄. G. Native about Alexandria. Myosotis spinosa, Vahl, symb. 2. p. 32. Willd. spec. 1. p. 790. Lehm. in act. nat. scrut. hal. 3. 2. p. 24. Lam. ill. t. 1. Anchusa spinosa, Forsk. descr. p. 41. Del. cat. hort. p. 42. t. 17. f. 2. Plant greyish. Leaves bluntish. Pedunculs axillary, solitary, in the branches. Leaves ?; undfir each calyx. Keel of nuts toothed.

Vahl's Echinospermum. Shrub ½ foot.

Cult. Most of the species of this genus have rather a weed-like appearance; and therefore they are chiefly to *he* found in botanical gardens. They are of the most easy culture; only requiring the treatment given to other common hardy annuals and perennials. The two last species, being natives of America, should be kept in pots and placed among other greenhouse plants. They are all increased by seed.

XXXI. ROCHE LI A (named after Anthony Rochel, director of the botanic garden at Pest, in Hungary, who has written on the plants of the Carpathian mountains.) Rchb. consp. in icon. pl. rar. 2. p. 15. t. 125. f. 236. 237. Ledeb. fl. alt. 1. p. 172. fl. ross. alt. ill. t. 241. but not of Roem. et Schultes.

LIN. SYST. *Pentándria, Monogynia.* Calyx 5-parted. Corolla funnel-shaped, 5-lobed; throat furnished with inflected scales. Nuts 2, oblique, sinuate to the indurated style, or central column, combined, 1-celled, 1-seeded.—Hispid plants, with narrow leaves, and terminal racemes of flowers.

1 R. CZIOCA'NA (Ledeb. l. c.) plant hispid from spreading pili; cauline leaves oblong-linear; nuts smooth, glabrous. ☉. H. Native of the Soongarian steppe, in sterile places at the river Kurtschum. Herb green. Stem simple, divided into 2 or 3 racemes at top, or branched from the base to the apex: the branches very straight, and adpressed to the stem.

Smooth-fruited Rochelia. Pl. ½ foot.

2 R. STELLULA'TA (Led. fl. alt. 1. p. 172.) plant hoary, and hispid from erectish strigæ; cauline leaves oblong-linear, somewhat spatulate; nuts strigose. ☉. H. Native of Siberia.

Starry Rochelia. Pl. ½ foot.

Cult. For culture and propagation, see *Echinospermum* above.

XXXII. OMPHALO'DES (from ομφαλος, *omphalos*, the navel; and ειδος, *eidos*, like; nuts or fruit resembling the navel; hence some species have been called Venus's Navelwort.) Tourn. inst. t. 38. Mœnch. meth. p. 420. Lehm. asper. p. 180.—Cynoglóssum species, Lin. gen. no. 151, and Schreb. no. 242. Juss. gen. p. 131. ed. Usteri. p. 147. Gærtn. fruct. 1. no. 426. t. 87. f. 4. C.—Picótia species, Roem. et Schultes, syst. 4. p. 84—85.

LIN. SYST. *Pentándria, Monogynia.* Calyx 5-cleft. Corolla rotate; throat closed by short vaulted processes; limb 5-parted, obtuse. Nuts 4, 1-celled, depressed, cup-shaped, with an inflexed membrane along the margin, fixed to the central column, not perforated at the base.

§ 1. *Perennial plants, with usually rhizomatous roots, broad green leaves, and terminal racemes of blue or white flowers.*

1 O. KI'RTDA (Lehm. in new schrift. gesell. berol. 8. p. 97. asper. p. 181.) leaves oblong-lanceolate, nerved, glabrous above, and shining, downy beneath; lower ones on long petioles; superior ones sessile. If. H. Native of Portugal, in humid places, under the shade of trees. Hoffm. et Link, fl. port. 1. p. 104. t. 25. Cynoglóssum nítidum. Willd. enum. 1. p. 181. Sims, bot. mag. t. 2529. *Cynoglóssum Lusitánicum*, Lam. dict. 2. p. 23H. Br< t. fl. lus. 1. p. 296. Cynoglóssum lanceolátum of Viiiit ns Herbaria. Picótia nítida, Roem. et Schultes, syst. 4. p. 84. Omphalódes Lusitánica, Cynoglóssi fólio, Tourn. inst. p. . ... Rhizoma creeping under ground. Stems numerous from the .into root. simplish. branched. Racemes bracteate. Jong, Pedicels and calyxes beset with adpressed hairs. Calycine segments ovate, acute. Corolla blue; tube white; throat yellow; scales in the throat floccose, of an obscure violet-colour. Membrane of nuts toothed.

Shining Venus Navel-wort. Fl. April, June. Clt. 1812. Pl. 2 to 4 feet.

2 O. CORDIFÓLIA (Lehm. in new. schrift. gesell. berol. 8. p. 97. t. 5. asper. 182.) radical leaves on long petioles, ovate-cordate, acuminated, nerved: cauline ones nearly sessile: upper ones ovate-lanceolate: upper ones ovate; racemes solitary, many-flowered. 2. H. Native of Cappadocia. Cynoglóssum Cappadócicum, Willd. spec. 1. p. 787. Pers. ench. 1. p. 167. Cynoglóssum omphalódes, β, Lam. dict. 2. p. 239. Picótia cornifólia, Roem. et Schultes, syst. 4. p. 85. Omphalódes Orientális cornifólia, Tourn. cor. p. 7. Rhizoma creeping under ground. Stems filiform, a span high, hairy. Leaves nearly glabrous. Flowers distant. Calyx pilose at the base; with ovate, acuminated segments.

Dogwood-leaved Venus Navelwort. Pl. ½ foot.

3 O. VERNA (Mœnch. meth. p. 420.) radical leaves ovate-cordate: cauline ones ovate-lanceolate, petiolate, nearly glabrous; racemes conjugate, few-flowered. If. H. Native of Piedmont, Carniola, Transylvania, and Caucasus, in mountain woods. Lehm. new. schrift. gesell. berol. 8. p. 98. asper. p. 183. O. répens, Schrank, in denkx. acad. wiss. munch. 1811, 18 12. p. 221. Cynoglóssum omphalódes, Lin. spec. ed. 2d. vol. 1. p. 195. Pall. fl. ross. p. 90. Lois. fl. gall. 1. p. 167. Willd. spec. 1. p. 786. *Jaume St. Hil. pl. fr. 7. t. 116.* Curt. bot. mag. 7. Scop. fl. carn. 1. no. 170. t. 3. Mill. fig. 2. t. 190. f. 2. Sturm. fl. germ. fasc. 21. icons.—Mart. hist. 3. sect. 11. t. 26. f. 2.—Lob. icon. p. 577. f. 1.—Bull. herb. t. 309.—Knor. del. 2. t. c. 7. Rhizoma creeping under ground. Stems many: floriferous ones erect, glabrous, simple, emitting

stalons from their base. Petioles ciliated at the base. Racemes bractless. Flowers distant, on long pedicels. Calyx beset with incumbent hairs. Corolla fine blue, with a white throat.

Spreng Venus Navel-wort. Fl. March, May. Clt. 1633. Pl. ½ foot.

4 O. AMPLEXICAULIS (Lehm. new. schrift. gesell. berol. 8. p. 98. t. 6.) lower leaves spatulate: the rest cordate, stem-clasping, glabrous, with smooth margins; racemes erect, many-flowered. ♃. H. Native of Spain and Portugal: particularly of Cordoba. Lehm. asper. p. 185. O. Lusitánica, Schrank, denks. acad. wiss. munch. 1811, 1812. p. 221. Cynoglóssum brassicæfólium, Lag. gen. et spec. 1816. p. 10. Cynogl. Lusitánicum, Lin. spec. p. 193. Vahl. symb. 2. p. 34. exclusive of all synonymes. Willd. spec. 1. p. 765. exclusive of the synonymes of Lin., Mill., and Tourn. Picótia brassicæfólia, Roem. et Schultes, syst. 4. p. 85. Plant glabrous, glaucous-green. Stem branched. Racemes bractless. [illegible]ous, with ovate-lanceolate segments. Corolla white.

Stem-clasping-leaved Venus Navel-wort, n, June, Aug. Cit. 1825. Pl. 1 to 1½ foot.

5 O. CRASSIFÒLIUS (D. Don, prod. fl. nep. p. 101. in a note) leaves ovate, obsoletely denticulated, hispid: lower ones on long petioles: superior ones sessile; pedu[illegible]teles axillary, 2-le.ivcd: racemes conjugate, subcapitate. %. H. N[illegible]ive of the South of Europe; and in England, but a doubtful native, Aii: [illegible]i supervirens. Lin. spec. ed. V[illegible]L vol. 1. p. 192. hort. cliff. 47. Hoffm. et Link, fl. port. 1. p, j 78, SmW • engl. bot. •, 45. Vill. dauph. 2. p. 456. L[illegible]lire, nsper. p. 236.—Mor. hist. 5. sect. 11. t. 26. f. 2.—Sabb. hort. roin. S, t, 2S.—Lob. icon. 775. f. 2. Plant hispid. Stem erect, hispid from retro[illegible]•rade strigæ. Calycine segments lancolate. C[illegible]>rolb. blue, with a short white tube. Perforations of nuts closed by a scalt, ex Lehm.

Evergreen Venus Navel-wort. Fl. May, July. Briuin. PL. 1 to 2 feet.

6 O. STROICOPHRAS (Schrank, densk. acad. wiss. munch. 1811, 1812. p. 222. Lehm. in new. schrift. gesell. berol. 8. p. 98.) radical leaves spatulate-lanceolate: cauline ones sessile, linear-lanceolate, strigose, rough; flowers loo[illegible]:ly racemose, ♃. H. Native on the top of Mount Lebanon ;• nod ot'C-ndia, on the Sphacliotic mountains. Lehm. asper. p. 188. €ynog]6s-sum oyosotoides, Labill. pl. syr. dec. 2. p, 6. t. S Smith, prod. fl. grsc. 1. p. 118. Cynoglóssum lithospermifolium, Lam. dict. 2. p. 240. iii. no. 1805. Picótia lithospermifólia, Roem. et Schultes, syst. 4. p. 86. Stems many from the same root, filiform, ruffed, hairy. Corolla funnel-shaped, small, blue, hardly longer than the calyx; tube very short. Calj s; pil osé, with subovate segment. Nuts flat, ovate, acute, glabrous.

Mouse-ear-like Venus Navel-wort. Pl. ½ foot.

7 O. STRIGÒSUS leaves strigose, rough: radical ,:ies spatulate-lanceolate: cauline ones linear-lanceolate; flowers loosely racemose, calyx equal in length to the tube of the corolla; carpels girded by a toothed, membranous margin, muricated in the centre. ♃. H. Native of Arabia, on rocks. Cynoglóssum intermédium. Fres. th. egypt. et arab. p. 168. N[illegible]ariy aijied to boi

Toothed Venus Navel-wort. Pl. ½ foot.

§ 2. *Annual, erect, glaucous plants, with fibrous roots, and terminal racemes of white, or very pale blue flowers.*

8 O. LITTORÀLIS (Lehm. in new. schrift. gesell. berol. 8. p. 98. asper. p. 187.) radical leaves spatulate: cauline ones sessile, oblong: superior ones ovate, dilated at the base, papillose, with strigose edges: racemes bracteate. ⊙. H. Native of the West of France, on the sea shore. Picótia littoralis. Roem. et Schultes, 4. p. 156. Cynoglóssum littorale, Spreng. syst. 1. p. 587. Root simple. Plant glaucous-green. Racemes axillary and terminal, rather strigose. Calycine segments ovate-lanceolate. Corolla white, as in *O. linifolia*. Nuts with an inflexed, ciliated membrane.

Sea-shore Venus Navel-wort. Fl. June, *Aug.* C[illegible]. 1820. Pl. ½ foot.

9 O. LINIFÒLIA (Mœnch. meth. p. 419. Schrank, densk. acad. wiss. munch. 1811, 1812. p. 221. Lehm. in new. schrift. gesell. berol. 8. p. 99. asper. p. 187.) radical leaves cuneiform: cauline ones linear-lanceolate, glabrous, with denticulately ciliated margins; racemes bractless. *U* H. Nalieeof; Portug[illegible], lr-> nce, and Italy, on the sea shore. Hoffm. et Link, fl. ; ort. 1. p. 193. Cynog!t>.isr linifolium, Lin. spec. p. 193. hort. cliff. p. 43. Vahl. symb. 2. p. 35. Gœrin. fruct. 1. p. 524. t. 67. f. 4. Cynogi, Lnsiutnici! n, Mill. fig. 2. t. 13ft. f. 1. Picótia linifólia, Roem. et Schultes, syst. 4. p. 86.—Sabb. hort. rom. 2. t. 28.—Barrel. icon. 1234.—Mor. hist. 3. sect. 11. t. 30. f. 11. Omphalódes Lusitánica lini folio, Tourn. inst. 140. Plant glaucous-green, glabrous. Branches terminating in loose race mi[illegible] Calyx strigose at the base; segments lanceolate, with dent[illegible]culately ciliated edges. Corolla white, rarely with a tinge of I[illegible]ue; processes o[illegible]: the tbrfjat nearly globose. Nuts with a tooil)0<3, indexed margin.

Flax-leaved, or Common Venus Navel-wort. Fl. June, Aug. Clt/1748. P[illegible] ½ to 1 foot.

10 O. scoKPioi[illegible]es (Schrank, \. c. Lt!«n. !. •. t. 8. asper. p, 18!).) stem prostrate, [illegible]c)tot<J0W«s ;..;leaves scabrous: radical ones spatulate: cauline ones lanceolate, sessile: lower ones oppositc, tlie r[illegible]st alternate; pedicels axillary. ⊙. or ♂. H. Native of b<[illegible]hemia, in shady places; and in the valley of Oycow, about Cracow, Cj[illegible]noglóssum scorpioides, Hænke, in Jaeq. coll. 2. p. », V, ult, in Rom. arch. 3. p. 336. Schmidt. fl. boh. 3. no. 220, Sturn). 8. germ. fasc. 21. icon. Bess. 2. gall. ii. p. 14:9. Pidotia storj>ioj<ii'.>, Hoem, c! Schultes, syst. 4. p. 87. Root branched, fibrous. I[illegible]lant glabrous, pale green. Stems somewhat tetragonal. Siowci[illegible] solitary, in the axils of the upper leaves. Calyx rather str[illegible]gose, with lanceolate-acute segments. *aettis,* CoroJIa small, of a watery-blue colour: processes of the throat yellow. Nuts glabrous Habit of *Myosótis palústris.*

^*Scorpion-like* Vernis tiayel-woit. Pl. prostrate.

11 O. *Fortisii;* leaves <~> [illegible]e-lanceolate, quite [illegible]utirc, viK lous, ciliated at the base; stem ob[illegible]oletely striated, scabrous; Sowers opposite *the* leave[illegible]; seeds small, muricated. ♂. H. Native of the Island of CJberso. (Cynoglóssum Lusitánicum, Fortis, observ. cherso, ed. osero. p. 68. Lehm. schrift. gesell. berol. 2. p. 97, '• icótia F[illegible];rtfs;i, RK m. et Schultes, syst. 4. p. 87, Hoot woody. Flower* smaJf, biuii[illegible]h white.

Fortis's Venus Navel-wort, i[illegible]

All t!t

Cult. The species are elegant border flowers, and of the most easy culture. The perennial kinds grow well under the shade of trees or shrubs, and are increased by division. The seeds of annual species should be sown in spring, in the open border.

XXXIII. OVNOGLO'SSUM (ironi [illegible], a dog; and γλωσσα, *glossa,* a tongue; from the form of the leaves of most of the species; in English, however, the generic name is *Hound's-tongue,* instead of *Dog's-tongue.*) Tourn. inst. t. 57. Lin. gen. no. 183. Schreb. gen. no. 243. Juss. gen. 131, ed. Usteri, p. 147. Lam. ill. no. 256. t. 94. Gœrin. fruct. 1. no. 110. t. 67. f. 4. A. B. Lehm. asper. p. 184. exclusive of Mtittt: and Rudéra.

Lin. syst. *Pentandria, Monogynia.* Calyx J-pamd, Corolla

funnel-shaped, or subrotate; throat furnished with erect processes. Stamens inclosed. Stigma nearly simple. Carpels 4, 1-celled, depressed, echinated, imperforated at the base, fixed to the central column.—Tall, robust, downy plants, soft to the touch. Leaves large, broadest at top. Racemes usually bractless, secund, terminal, simple, bifid, or twin. The prickles on the outside of the carpels are usually glochidate.

§ 1. *Stamens inclosed.*

1 C. PAUCIFLORUM (Ruiz, et Pav. fl. per. 2. p. 6.) stem erect; leaves lanceolate, narrowed towards the base ; peduncles usually 7-flowered ; flowers on short pedicels. ©. H. Native of Chili, in fields about Conception. Lehm. asper. p. 139. Plant densely hispid, canescent. Peduncles axillary. Corolla twice as long as the calyx.

Few-flowered Hound's-tongue. PI. 1 to 2 feet ?

2 C. JAPONICUM (Thunb. fl. jap. p. 81. icon. dec. 3. t. 2.) stems prostrate ; leaves oblong, stem-clasping, acute, villous, finely serrulated. ©. H. Native of Japan. Lehm. asper. p. 139. Root fibrous. Calyx villous. Corolla purple, longer than the calyx.

Japan Hound's-tongue. PI. decumbent.

3 C. DIFFU'SUM (Roxb. fl. ind. ed. Wall. 2. p. 7. Lehm. asper. p. 140.) stems ascending, diffuse; leaves obovate-spatulate, petiolate, strigosely pilose, terminated by a short acumen ; racemes leafy. ©. H. Native of Bengal. Root fusiform, fibrous. Calyx pilose, with ovate-lanceolate, acuminated segments. Stems and pedicels canescent from long hairs. Corolla with a gibbous tube ; its mouth contracted by 5 broad, emarginate scales. Carpels obovate, scabrous.

Diffuse Hound's-tongue. PL ascending.

4 C. PROSTRA'TUM (Hamilt. mss. ex D. Don, prod. fl. nep.' p. 100.) plant hispid from bristles, prostrate; radical leaves obovate, on long petioles: cauline ones elliptic, sessile ; flowers on short pedicels, generally extra-axillary ; nuts muricate. ©. H. Native of Nipaul, at Baguanpur.

Prostrate Hound's-tongue. PI. prostrate.

5 C. FURCA'TUM (Wall, in Roxb. fl. ind. 2. p. 6. D. Don, prod. fl. nep. p. 100.) stem erect; leaves elliptic-oblong, acute, half stem-clasping, silky on both surfaces, as well as the stem ; racemes erect, thin-flowered. %. F. Native of Upper Nipaul, at Suembu. C. caeruleum, Ham. mss. Racemes twin, woolly, bractless. Calycine segments ovate, obtuse, bristly. Corolla blue. Carpels glochidate. Very like a species of *Myosbtis.*

For ked-r seemed Hound's-tongue. PI. lj foot.

6 C. MARIF6LIUM (Roxb. fl. ind. ed. Wall. 2. p. 8.) plant diffuse, hairy; leaves bifarious, oblong; flowers solitary, between the leaves ; corolla half the length of the calyx. ©. H. Native of Bengal. Leaves \ inch long. Flowers on short pedicels, of a pale, whitish blue. Stigma emarginate. Nuts rough, round, almost hid by the calyx.

Marum-leaved Hound's-tongue. PL procumbent.

7 C. PANICULA'TUM (Hook, et Arn. in Beech, bot. p. 37.) plant clothed with adpressed hairs ; leaves lanceolate, very acute, gradually tapering into the petioles, ciliated, shining, clothed with hoary, silky down beneath; racemes terminal, panicled, loose, few-flowered, bracteate; fruit bearing pedicels, very long, spreadingly deflexed; carpels glochidate. $. ? F. Native of Chili, at Conception ; and of Peru, in Murilla Bay.—The base of the plant is frutescent. Leaves 3-4 inches long, with slightly revolute edges.

Panicled Hound's-tongue. PL 1| to 2 feet.

8 C. CHEIRIFOLIUM (Roy. lugdb. p. 406. Lin. spec. p. 193.) stem erect; leaves lanceolate, obtuse, tomentose, hoary ; racemes bracteate; corolla twice as long as the calyx. $.? %. F.? Native of the South of Europe, Levant, and Barbary. Horn, hort. hafn. 1. p. 177. Lapeyr. abr. p. 87. Hoffm. et Link, fl. port. 1. p. 191. Vill. dauph. 2. p. 457. All. ped. 1. no. 171. Gouan. hort. monsp. p. 82. Lehm. asper. 141. C argenteum, Lam. fl. fr. 2. p. 277.—Dalech. hist. 2. p. 1261. *L* 1. Stems many from the same root, simple. Plant hoary from fine tomentum. Racemes terminal, simple, rarely bifid. Calycine segments lanceolate, bluntish. Corolla rose-coloured; processes of the throat deep red. Carpels covered with glochidate prickles.

Far. /3, *lanatum* (Lehm. asper. p. 141.) leaves villous; calyxes hairy ; stamens rather longer than the corolla. $. F. Native of Barbary. Anchusa lanata, Lin. spec. p. 192. Desf. fl. atl. 1. p. 158. Willd. spec. 1. p. 758. Lam. ill. gen. no. 1813.

Far. y, *calcaratum* (D. C. fl. fr. 6. p. 422.) $. H. Native of France.

Wall-flower-leaved Hound's-tongue. Fl. June, July. Clt. 1596. PL | to 1 foot.

9 C. DECU'RRENS (Ruiz, et Pav. fl. per. 2. p. 6. no. 1.) stem erect, angularly winged ; leaves broad, lanceolate, acute, decurrent, veiny, hispid. ©. H. Native of Chili, in groves. Lehm. asper. p. 143. Feulle, chil. 2. t. 49. Hook, et Arn. in Beech, voy. pt. bot. p. *37.* Plant hispid. Flowers distant. Corollas whitish-blue. Carpels echinated with glochidate bristles. Racemes terminal, leafy.

Decurrent-lesived Hound's-tongue. PL 1 to 2 feet ?

10 C. MEXICA'NUM (Cham, in Linnaea, 5. p. 114.) stem erect, hairy, leafy, branched at the top ; radical leaves elliptic, mucronate, on long petioles, clothed with hair-like down, rough above: cauline leaves similar to the radical ones: uppermost ones lanceolate, sessile; racemes loose, panicled; carpels furnished with glochidate prickles on the outer sides. $. H. Native of Mexico, on Mount Macultipec. Flowers blue. Nuts size of grains of pepper.

Mexican Hound's-tongue. PL 2 to 3 feet.

11 HI'SPILUM (Thunb. in Schrad. journ. 1. p. 1806. p. 46. prod. p. 34.) stem orect; lower leaves oblong-lanceolate, obtuse : upper ones lanceolate, acute, hispid; racemes bractless, usually 3-flowered; stamens shorter than the corolla, whkv'}^. ventricose. ©. H. Native of the Cape of Good Ha^.* Lehm. asper. p. 143. Stem hispid from adpressed hairs. Racemes constituting a terminal panicle. Calyx hispid ; segments oblong, obtuse. Corolla rufescent ; processes of the throat fleshy.

Hispid Hound's-tongue. PL 1 to 1| foot.

12 C. TOMENTOSUM (Lehm. asper. p. 144.) stem erect: lower leaves oblong-lanceolate, bluntish : superior ones linear-lanceolate, half stem-clasping, clothed with dense, yellow, golden tomentum ; racemes terminal, bractless, many-flowered. %. H. Native of Italy. Stems angular, canescent. Radical leaves 3-4 inches long. Racemes twin, terminal. Calycine segments oblong-lanceolate, obtuse. Carpels covered with short glochidate prickles.

Tomentose Hound's-tongue. PL \ to 1 foot.

13 C. LANCEOLA^TUM (Forsk. descr. p. 41.) stem erect; leaves sessile, lanceolate, acute, entire, attenuated at the base, hairy, veined, downy beneath; racemes solitary, bractless; stamens inclosed. ©. H. Native of the Cape of Good Hope, and Arabia. Vahl, symb. 2. p. 34. Willd. spec. 1. p. 761. Lehm. asper. p. 145. C. hfrsutum, *Thunb. in Schrad.* jouvn. 1. p. 1806. p. 47—48. prod. fl. cap. p. 34. Willd. spec. 1. p. 763. Stems hairy, canescent. Young branches densely clothed with yellow hairs. Leaves hairy or strigose ab^ve.

Racemes simple, hairy. Calycine segments oblong, obtuse. Tube of corolla length of calyx. Carpels cohered with glochidate bristles.

Lanceolate-leaved Hound's-tongue. PL 1 to \\ foot.

14 C. VESICULOSUM (Wall. cat. no. 920.) hispid from strigse ; stem much branched ; leaves oval, attenuated at both ends ; racemes terminal, solitary or twin, slender ; calycine segments ovate, acute ; carpels beset with glochidate prickles on the margins, and smooth in the centre. $. H. Native of Nipaul. Corollas rather small, white. Racemes bractless.

Bladdery Hound's-tongue. PL 2 to 3 feet.

15 C. HE'YNEI ; plant hispid from strigae; leaves ovate-lanceolate, acuminated ; racemes slender, terminal twin, or axillary solitary ; carpels beset with glochidate prickles along the margins, and tubercled in the centre, shorter than the calycine segments, which are bluntish. $. H. Native of the East Indies, at Dindigul. C. lanceolatum, Heyne, herb, ex Wall. cat. no. 921. but not of Forsk. Racemes bractless.

Heyne's Hound's-tongue. PL 1 to 2 feet.

16 C. WALLI'CHII ; stem erect, angular, rather strigose; leaves oblong-lanceolate, 3-nerved ; racemes twin or solitary, elongated, terminal, or from the axils of the upper leaves ; flowers distant; calyx spreading, longer than the carpels, with ovate, mucronate segments; carpels beset with glochidate prickles along the margins, and tubercles in the centre. $. F. Native of Nipaul, in Gosainsthan. C. calycinum, Wall. cat. no. *923.* but not *of* Meyer. Leaves 3-5-nerved. Racemes bractless.

WallicKs Hound's-tongue. PL *2 to 3* feet.

17 C. CANE'SCENS (Horn. hort. hafn. 1. p. 177. Willd. enum. 1. p. 180.) stem erect, branched at top ; cauline leaves lanceolate, acute, petiolate, erosely denticulated, hairy, clothed with soft hairs beneath, somewhat 3-nerved ; racemes conjugate, divaricate, bractless. ©. H. Native of the East Indies. Lehm. asper. p. 144. C. micranthum, Desf. pi. hort. par. 1804. p. 220. C, hirsutuin, Jacq. hort. schcenbr. 4. t. 489. exclusive of the synonymes. C. racemdsum, Roxb. fl. ind. ed. Wall. 2. p 6. ex Lehm. Plant hispid. Flowers secund. Calycine segments ovate, obtuse. Corolla white ; throat a"d scales blue. Carpels ovate, clothed with glochidate prickles.

Canescent Hound's-tongue. Fl. June, Aug. Clt. 1819. PL [illegible] feet.

C. HIRSUTISSIMUM (Lehm. asper. p. 145.) stem erect, simple ; leaves narrow-lanceolate, half stem-clasping, acute, papillosely-hairy on both surfaces; hairs spreading; racemes solitary, elongated, bractless. ©. ? H. Native of Africa. Stem very hairy. Peduncles hairy, terminal and lateral, racetniferous. Calyx hairy, with oblong, obtuse segments. Carpels beset with glochidate prickles.

Very-hairy Hound's-tongue. PL 1 to \\ foot.

19 C. REVOLUTUM (Ruiz, et Pav. fl. per. *2.* p. 6. no. *3.)* stem erect, branched; leaves lanceolate, acute : cauline ones sessile, hispid ; racemes subspicate, leafy, revolute at apex ; pedicels lateral. ©. H. Native of Peru, in Huassa-Huassi, in shady places. Pers. ench. 1. p. 160. Lehm. asper. p. 148. Plant hispid. Stem angular. Pedicels drooping. Corolla whitish-blue. Carpels beset with glochidate prickles.

Revolnte-racemed Hound's-tongue. PL 3 feet

20 C. SUAVE'OLENS (R. Br. prod. p. 495. Lehm. asper. p. 148.) leaves lanceolate, strigose; those of the branches half stem-clasping; racemes bracteate; carpels echinated with equal glochidate prickles.—Native of New Holland.

***Sweet-scented-Cowered* Hound's-tongue. PL**

21 C. AUSTRA'LE (R. Br. 1. c.) stems erect; leaves lanceolatj^trigose on both surfaces ; racemes bractless ; carpels echinated with glochidate prickles : the prickles on the back fewer, and with a single row of longer ones along the margin.—Native of New Holland.

Southern Hound's-tongue. PL ?

22 C. LANUGINOSUM (Lehm. asper. p. 148.) stem erect; leaves linear-lanceolate, acute, half stem-clasping, woolly, and hoary ; racemes terminal, loose, bractless.—Native country unknown. Stem furrowed, simple, white from wool. Calyx woolly, with lanceolate, bluntish segments. Corolla very like that of *C. qfficinale.* Carpels ovate, covered with glochidate prickles.

Woolly Hound's-tongue. PL 1 to 2 feet.

23 C. CLANDESTINUM (Desf. fl. atl. 1. p. 159. *t.* 42.) *stem* erect; leaves narrow-lanceolate, bluntish, half stem-clasping, hairy ; racemes bractless ; corolla villous at top. $. H. Native of Portugal and Algiers. Hoffm. et Link. fl. port. 1. p. 190. Horn. hort. hafn. 1. p. 117. Lehm. asper. p. 149. C. officinale, Brot. fl. lus. 1. p. 295. C. fulvum, Rudolph, in Schrad. journ. 1795. p. 295. Pers. ench. under *Auchusa ltdlica.* Root fusiform. Plant pilose. Pedicels and calyxes clothed with dense, yellow, silky hairs. Calycine segments lanceolate, obtuse. Corolla violaceous, hardly longer than the calyx ; limb tomentosely villous at apex. Carpels ovate, covered with glochidate prickles.

Clandestine Hound's-tongue. FL June, Aug. Clt. 1821. PL 1 to 2 feet.

24 C. DIOSCORIDIS (Vill. dauph. 2. p. 457. prosp. p. 21. exclusive of the synonymes. Lehm. asper. p. 150.) stem erect; leaves narrow-lanceolate, acuminated, dilated at the base, rather hispid ; racemes elongated, bractless, loose. $ H. Native of Dauphiny. C. elongatutn, Horn. hort. hafn. 2. p. *956.* C. Virginicum, Willd. enum. 1. p. 180. exclusive of the synonymes. C. remotum, Mcench, meth. p. 419. Root fusiform. Stem simple, canescent, beset with retrograde hairs. Racemes pilose, terminal and axillary in the spontaneous plant; but terminating the stem and branches in the cultivated plant. Calycine ^pgriients ovate, obtuse. Corolla red or flesh-coloured, with deeper veins. Carpels ovate, clothed with short glochidate bristles.

Dioscorides's Hound's-tongue. FL June, Aug. Clt. 1820. PL l£ to 2 feet.

25 C. OFFICINA'LE (Lin. spec. p. 192. fl. suec. 162. hort. cliff. 47.) stem erect, leafy; lower leaves broad-lanceolate: superior ones broadest at the base, acute, canescent from downy tomentum ; racemes bractless, panicled at the time the flowers are open. $. H. Native of Europe, Asia, Africa, and North America, in waste places, and by way sides and margins of fields, and particularly near towns; in Britain, in like situations, but a doubtful native. Scop. fl. earn. ed. 2d. p. 124. Vill. dauph. 2. p. 456. All. ped. 1. no. 124. Desf. fl. atl. 1. p. 158. Suter, fl. helv. 1. p. 105. Smith, engl. bot. t. 921. Oed. fl. dan. t. 1147. Curt. fl. lond. t. 149. Regnault, bot. 8. t. 364. Sturm, fl. germ. fasc. 9. icone. Baumg. fl. trans. 1. p. 122. Pursh. fl. 1. p. 123. MayrhofF, fl. mon. t. *23. Led.* fl. alt. 1. p. 196.—Blackw. herb. t. 249.—Plenck. icon. t. *76.* Stem sulcately angular, branched at top, beset with soft, incumbent hairs. Flowers nutant, secund. Racemes terminating the stem and branches, canescent, villous. Calycine segments oblong, connivent. Corolla reddish ; processes of the throat purple. Carpels ovate, densely clothed with glochidate prickles. The whole plant has a disagreeable smell, like most of the species, much resembling that of mice. It is suspected to possess narcotic qualities. It has formerly been used in medicine ; and Mr. Ray informs us, from Dr. Hulse, that a decoction of the roots inwardly, and cataplasms of them outwardly,

were used in strumose and scrophulous cases. It is, however, discarded from the present practice. All animals are said to dislike it, and leave it untouched. The large Dutch Hound's-tongue is only a variety of this.

Var. /3, bicolor (Lehm. asper. p. 153.) leaves lanceolate, narrowed at the base, downy: upper ones sessile, cordate. $. H. Native of Germany and Siberia. Corolla white; with the processes in the throat red, and the limb marked with 5 red spots. C. hybridum, Thuill. fl. par. 1. p. 94. C. angustifdlium, Hort. C. officinale, var. flore albo, Roth, tent. fl. germ. 2. p. 170.

Officinal, or Common Hound's-tongue. Fl. June, July. Britain. PL 2 feet.

26 C. PICTUM (Ait. hort. kew. ed. 1. vol. 1. p. 179.) stem erect, leafy; leaves lanceolate, acute: upper ones ovate-lanceolate, cordate, finely tomentose; racemes bractless; limb of corolla dilated, veiny. $. H. Native of the South of Europe, Iberia, Barbary, and Madeira. Vahl, symb. 2. p. 34. Willd. spec. 1. p. 761. Willd. enum. 1. p. 180. Lehm. asper. 154. Hoffm. et Link. fl. port. 1. p. 189. t. 24. Bieb. fl. cauc. 1. p. 128. Sims, bot. mag. t. 2134. Mcench, suppl. 147. C. amplexicaule, Lam. ill. no. 1794. C. cheirifolium, Jacq. coll. 3. p. 30. Scop. fl. earn. ed. 2d. vol. 1. p. 125. Pall. ind. taur. C. Creticum, All. auct. p. 4. Vill. dauph. 2. p. 457.—Clus. hist. 2. p. 1(52. f. 2. C. variegatum, Hort. Root fusiform, Stem bluntly angular, furnished with axillary, racemiferous branches at top, and canescent from short, soft, retrograde T °aves canescent. Calyx clothed with incumbent hairs; o ^iong-lanceolate, bluntish. Corolla a little longer than me calyx, purple or blue, elegantly marked with deeper dichotomous veins, which are branched at top. Carpels covered with glochidate prickles.

Painled-fiowered Hound's-tongue. Fl. Aug. Clt. 1658. PL 2 feet.

27 C. CILIATUM (Dougl. mss. ex Lehm. pug. 2. p. 24.) stem erect, simple, hairy; leaves linear, acute, elongated, 3-nerved, clothed with hair-like tomentum, ciliated; racemes terminal, bracteate, secund; stamens inclosed. $. H. Native of North-west America. Stem terete, canescent; hairs on the base of the stem retrograde, but those at its top are spreading. Racemes subcorymbose. Calyx villous; with lanceolate, obtuse segments. Corolla blue, one half longer than the calyx.

Ciliated-\eaved Hound's-tongue. PL 1^ foot.

28 C. GRANDE (Dougl. mss. ex Lehm. pug. 2. p. 25.) stem erect, glabrous, naked above; leaves petiolate, pilose beneath: lower ones large, cordate-ovate, undulated: superior ones oblong-lanceolate; racemes bractless, glabrous, pedunculate, few-flowered; calyx villous. $. H. Native of North-west America. Stem rather angular, destitute of leaves at top. Leaves acute, ciliated, beset with adpressed hairs above, and paler beneath, 9 inches long, and 4 lines broad. Racemes constituting a loose, terminal panicle. Pedicels glabrous, pilose at top. Calycine segments elliptic-lanceolate, obtuse. Corolla blue, twice as long as the calyx, larger than those of *C. officinale**

Great Hound's-tongue. PL 2 to 3 feet.

29 C. VIRGINICUM (Gron. virg. p. 19. Lin. spec. p. 193.) stem ercfif; leaves oval-oblong, acute: upper ones cordate at the base, stem-clasping, veiny, hairy; racemes short, corymbose, bractless. 1/. H. Native of Virginia and Pennsylvania; and Arkansas, in woods. C. amplexicaule, Michx. fl. amer. bor. 1. p. 132. Pursh, fl. 1. p. 133. Pers. ench. 1. p. 159. Stems terete, beset with retrograde hairs, branched at top. Leaves green. Racemes canescent from hairs. Calycine segments oblong-lanceolate, bluntish. Corolla blue, twice as long as the **calyx.** ***Carpels ovate, furnished with glochidate prickles.***

Virginian Hound's-tongue. Fl. May, July. Clt. 1812. PI- 2 to 3 feet.

30 C. PILOSUM (Nutt. gen. amer. 1. p. 114.) erect and hairy; radical leaves spatulate-oblong, obtuse; the rest lanceolate-oblong, obtuse; flowers axillary, almost spiked, unilateral; stamens very short, inclosed; carpels scabrous, depressed, oblong, acute, muricate on the margins. %. ? H. Native of Missouri, on arid hills above Rapid River. Flowers small, white.

Pilose Hound's-tongue. PL erect.

31 C. SYLVATICUM (Smith, fl. brit. 1. p. 216. engl. bot. t. 1642.) stem erect; lower leaves somewhat spatulate-lanceolate: superior ones half stem-clasping, ovate-oblong, acute, smoothish above and shining, but scabrous beneath; racemes bractless. $. H. Native throughout Europe, in shady places, in elevated situations; in England, about hedges in several parts, especially in Essex; but, like many other biennials and annuals, changes its abode; it is also found in like situations in North America. Gmel. fl. bad. 1. p. 421. Sut. fl. helv. 1. p. 105. Haenke, in. Jacq. coll. 2. p. 77. Baumg. fl. trans. 1. p. 122. Pursh, fl. 1. p. 133. C. officinale, *ft,* sylvaticum, Willd. spec. 1. p. 760. C. montanum, Lam. fl. fr. 2. p. 277. (exclusive of the syn. of Lin.) diet. 2. p. 237. Horn. hort. hafn. 1. p. 177. Pers. ench. 1. p. 159. exclusive of the synonymes. Lam. ill. no. 1794. exclusive of the syn. of Lin. D. C. fl. fr. syn. no. 2737. C. Virginicum, Lin. syst. ed. 13th. p. 157. but not of his spec. Willd. spec. 1. p. 762. exclusive of the syn. of Gron. C. officinale, var. y, Lin. spec. 193. C. Apenninum, Roth, tent. fl. germ. 2. p. 219. exclusive of the synonymes. C. virens, Schreb. spec. fl. lips. no. 162. C. Germanicum, Jacq. obs. 2. p. 31. under Arenaria mucronata.—Hall. helv. no. 588.—Column, ecphr. 176. t. 175. C. folio virente, Bauh. hist. 3. p. GOO. Root fusiform, fibrous. Stems many from the same root, hairy, branched at top. Leaves pale green. Calyx rather hairy, with oblong, obtuse segments. Corolla a little longer than the calyx, purplish-blue, with deeper coloured veins; processes of the throat obtuse, with white, pilose edges. Carpels ovate, beset with glochidate prickles.

Wood Hound's-tongue. Fl. June, July. Britain. PL 2 to 3 feet.

32 C. HJE'NKII (Schultes, oestr. fl. ed. 2d. vol. 1. p. 362. syst. 4. p. 74.) plant of a hoary green; leaves lanceolate, scabrous on both surfaces, 'flat, nearly sessile, remote; carpels rugged. $. H. Native of Bohemia Galicia, and Hungary, in hedges and margins of woods. C. sylvaticum, Sm. fl. boh. no. 219. Haenke, in Jacq. coll. 2. p. *77.* Bess. fl. gal. 1. p. 149. C. officinale, *ft,* Willd. spec. 1. p. 760. C. hybridum, Thuill. fl. par. 1. p. 94.? C. officinale, *ft,* D. C. fl. fr. no. 2736. ? This plant is said to differ from *C. officinale* in the character given above; in the stem being more humble; in the flowers being smaller, blue, verging to red or purple. Perhaps **not distinct from *C. Dioscoridis,* or *C. sylvaticum.***

Hcenke's Hound's-tongue. FL June, Aug. Clt. 1819. PL li to 2 feet.

33 C. CLAVATUM (Viv. fl. libyc. p. 11. t. 5. f. 2.) hoary; cauline leaves half stem-clasping: racemes secund, leafy; processes in the throat of the corolla cylindrically clavate, emarginate, equal in length to the limb; style permanent, elongated, subulate, exceeding the calyx. $. H. Native of Libya. Stem branched, terete. Floral leaves lanceolate-linear, longer than the flowers. Calycine segments lanceolate, acuminated. Corolla glabrous. Carpels beset with stellate, glochidate bristles.

Ctofl/e-appendaged Hound's-tongue. PL erect.

34 C. VIRIDIFLORUM (Willd. herb, ex Lehm. asper. p. 160. Ledeb. fl. alt. 1. p. 196. fl. ross. alt. ill. t. 106.) stem *erect, simple; leaves oblong, acute: lower ones petiolate: unnpr ones sessile, attenuated at the base, glabrous,* and pale *JJ*

z z 2 to

above, tomentose or downy beneath; racemes erect, loose, panicled : lower ones bracteate: upper ones bractless. $. ? H. Native near Schemanaika and Schulba, in sandy places. Stems simple, glabrous. Racemes constituting a terminal, pyramidal panicle, a foot or a foot and a half long. Calyx and pedicels grey from silky hairs. Calycine segments obtuse. Corolla salver-shaped, twice as long as the calyx, yellowish green. Carpels ovate, densely beset with glochidate prickles.

Green-flowered Hound's-tongue. PL 4 to 6 feet.

35 C. CALYCINUM (Meyer, verz. pflanz. p. 100.) annual, glaucous ; stems branched, assurgent; leaves sessile, thick, oblong, bluntish, entire ; racemes bracteate ; corollas small; calyx in the fructiferous state large, with ovate, connivent lobes ; carpels oblong, convex, scabrous; style marcescent. ©. H. Native of Caucasus, near the Caravansarai Koete-Koili, in the desert between Baku and Sallian. Corollas blue.

Large-calyxed Hound's-tongue. PL assurgent.

36 C. DIVARICATUM (Steph. in litt. ex Lehm. asper. p. 161.) stem erect, branched; branches divaricate ; lower leaves oval, petiolate : superior ones sessile, lanceolate, attenuated at both ends, nearly glabrous above, and downy beneath ; racemes bracteate. *%.H.* Native of Siberia. Root perpendicular. Stems beset with incumbent hairs. Pedicels and calyxes hairy, cinereous. Leaves pale green. Calycine segments ovate, bluntish, a little shorter than the corolla, which is small. Carpels ovate, densely covered with glochidate prickles.

Divaricate Hound's-tongue. PL 1J to 2 feet.

37 C. LATIFOLIUM (R. Br. prod. p. 496.) stem prickly; floral leaves ovate, on short petioles, acuminated, scabrous; peduncles extra-axillary. $. ? H. Native of New Holland.

Broad-leaved Hound's-tongue. PL

38 C. ROYLEI (Wall. cat. no. 917.) rough from strigae ; radical leaves wanting in the specimens examined: cauline ones cordate, petiolate, acuminated, nerved, and canescent from down; racemes short, canescent, bracteate. $. H. Native on Choor Mount.

Royle's Hound's-tongue. PL

39 C. LAXUM ; stem erect, branched at top; leaves ovate, acuminated, 7-nerved, all peticlate, and beset with short strigae, as well as the upper part of the stem and branches ; racemes terminating the e^m did branches, twin, loose, few-flowered, t"^t$_r$* solitary flower in the fork ; corolla rotate; carpels com-~pressed, beset with glochidate prickles outside. £. H. Native of Emodus and Gosainsthan, in Nipaul. Rindera glochidata, Wall. cat. no. 926. Picotia glochidata, Wall. mss. Perhaps a species of *Mdttia,* or *Omphalodes.* Corolla blue. Leaves distant. Racemes bracteate at the base.

Loose Hound's-tongue. PL *3* to 5 feet.

§. 2. *Stamens exserted. Perhaps a distinct genus.*

40 C. LONGIFLORUM (Lehm. asper. p. 162.) stem erect; leaves lanceolate, acute, strigosely muricated, scabrous; racemes bracteate, few-flowered; pedicels in the axils of the bracteas; tube of corolla twice as long as the calyx; and the segments of the limb linear ; stamens equal in length to the corolla. $. ? H. Native of Syria, about Aleppo. Lycopsis Dioscoridis nondum cognita, Rauwolf, trav. syr. 1. ch. 9. p. 120. t. 22.? Stem glabrous. Pedicels nutant. Calycine segments lanceolate, having the margins and keel tubercularly ciliated. Corolla glabrous. Anthers beyond the throat of the corolla. Carpels ovate, beset with glochidate prickles.

Low-flowered Hound's-tongue. PL 2 feet ?

41 C. STAMINEUM (Desf. am. mus. 10. p. 431. t. 36. journ. hot. par. 1. p. *35S.)* stem erect, simple; cauline leaves lanceolate, obtuse, sessile, silky above, and finely tomentose beneath ; flowers minute, disposed in short, bractless racemes, the whole forming a terminal panicle ; stamens twice as long as the corolla. $. ? H. Native of Syria and Cappadocia. Cynoglossum Orientale vulgari simile, flore minimo longis staminibus donato, Tourn. cor. p. 7. Stem tomentose. Calyx tomentose, with linear-lanceolate segments. Corolla salver-shaped, rose-coloured, length *of* calyx ; limb length of tube, with bluntish segments. Stamens inserted in the throat of the corolla, rather unequal. Anthers incumbent. Carpels ovate, prickly on the outer side. Habit of a species of *Eschium,*

Long-stamened Hound's-tongue. PL 2 to *3* feet.

42 C. APENNI'NUM (Lin. spec. p. 193.) stem erect, leafy; cauline leaves linear-lanceolate, attenuated at the base, sessile, acute, very long, rather villous ; racemes bractless, compact before expansion ; stamens a little longer than the corolla. $. H. Native of the South of Europe; as of Italy, in subalpine places. Lehm. asper. p. 164. Lapeyr. abr. p. *87** Smith, prod. fl. graec. 1. p. 118. Willd. spec. 1. p. *762.* Gaertn. fruct. 1. p. 324. t. *67.* f. 4. Sabb. hort. rom. 2. t. *36.* Willd. enum. 1. p. 181. D, C. fl. fr. syn. no. 2740.—Column, ecphr. 1. p. 168. t. 170. Stem simple, villous. Racemes forming large, dense, ovate, leafy, terminal panicles. Pedicels and calyxes hoary and villous. Calycine segments lanceolate-acute. Corolla length of calyx, at first red, afterwards violaceous, with short segments. Anthers incumbent. Nuts not seen.

Apennine Hound's-tongue. FL April, July. Clt. 1731. PL 1 to 3 feet.

43 C. MOLLI'SSIMUM (Lehm. asper. p. 165.) stem erect; leaves oblong, on long petioles, almost glabrous above, and downy beneath; flowers in short, compact, bractless racemes, the whole forming a terminal panicle; stamens twice as long as the corolla. $. H. Native *of* Persia, in the province *of* Djilan. Root perpendicular. Stem hoary, pilosely tomentose. Pedicels and calyxes canescent from villi. Calycine segments oblong, obtuse. Corolla a little longer than the calyx, veined. Stamens fleshy, alternating with the bearded processes of the throat. Habit of *C. Apenninum.*

Very soft Hound's-tongue. PL 1| foot.

f *Species hardly known.*

44 C. BORBONICUM (Bory. St. Vine. trav. p. *383.)* leaves lanceolate, acute, pilose ; branches forked ; seeds rough.—Native of the Island of Bourbon.

Far. a; leaves broader, oblong. Bory. 1. c.

Far. /3 ; leaves narrower, linear. Bory. 1. c.

Bourbon Hound's-tongue. PL ?

45 C. LIME'NSE (Wilid. spec. 1. p. 762. Lehm. asper. p. 177.) leaves oblong, acuminated, sessile, glabrous. £, ? G. Native of Peru, in the valley called Ylo, near Lima. Poir. suppl. 2. p. 432. Cynogl. foliis nervosis acutissimis, Feuille, per. 1. p. 71. t. 49. Plant pale green. Racemes terminal, simple. Calyx glabrous, with ovate, acute segments. Corolla having the margin white, and the centre blue. Carpels tubercled.

Lima Hound's-tongue. PL 1 to \\ foot.

46 C. VALENTYNUM (Lag. gen. et spec. nov. p. 10. no. 133.) leaves narrow-linear, hairy : cauline ones sessile ; calycine segments ovate ; spikes or racemes bractless. $. ? H. Native of Spain, in Valentia, Cavanilles. Plant herbaceous, with the habit of *Anchusa angustifolia.*

Falentia Hound's-tongue. PI.

47 C. LUSITA'NICUM (Lin. spec. 193. exclusive of the synonymes.) leaves linear-lanceolate, scabrous.—According to Hoffmansegg and Link, the plant named *C. Lusitdnicum,* by Linnaeus,

is not a native of Portugal, but of Siberia, according to the Linnean herbarium. See Schrad. new. journ. bot. p. 183. If the plant should prove distinct, it is undoubtedly referrible to the genus *Omphalodes,*

Portugal Hound's-tongue. PL

48 C. PELLU'CIDUM (Lapeyr. abr. suppl. p. 28.) lower leaves on long petioles : cauline and rameal ones half stem-clasping ; all lanceolate and acute ; calyxes pellucid ; peduncles axillary, elongated ; flowers secund. $. H. Native of the Pyrenees. Stem erect, simple, furnished with a few white hairs. Cauline leaves ciliated, diaphanous, furnished with some callous warts. Peduncles naked, or furnished with leaves. Calycine segments spatulate. Corolla blue, almost inclosed in the calyx. Carpels prickly.

Pellucid Hound's-tongue. PI. 2 to 3 feet.

49 C. HOLOSERICEUM (Stev. in act. mosq. p. 12.) clothed with silky tomentum ; leaves oblong-lanceolate; racemes terminal, simple ; flowers drooping; segments of corolla blunt. %. H. Native of Caucasus, on the tops of the alps of Chinalug and Wander. Corolla rose-colour. Carpels muricate.

Silky Hound's-tongue. Fl. June, Aug. Clt. 1821. PI. 2 feet?.

50 C. BAICALE'NSE (Willd. herb, ex Roem. et Schultes, syst. 4. p. 764.) leaves spatulate, hispid; racemes of flowers capitate ; stamens longer than the corolla. % ?. H. Native of Siberia, at Lake Baical. Stem a little longer than the radical leaves, which are obtuse and petiolate, furnished with 4-5 sessile leaves. Calyx densely woolly. Corolla tubular, hardly longer than the calyx. Stamens filiform. Carpels marginate, inclosed in the calyx. Perhaps a species of *Rindera* or *Mdttia.*

Baical Hound's-tongue. PI. i foot.

Jl C. RUGOSUM (Sestini, in Wifld. herb, ex Roem. et Schultes, syst. 4. p. *764>.)* leaves lanceolate, strigose ; carpels rugose from impressed dots.—Native of Galatia, Sestini.

Rugose-fruited Hound's-tongue. PL

Cult, All the species are coarse growing plants, but the flowers of some of them are very pretty. They are of the most easy culture, growing in any soil or situation. They are generally increased by seed, which should be sown in spring in the open border. The greater number of the species are biennial, and none are perhaps truly perennial.

XXXIV. ASPERITGO (from *asper,* rough; from the asperity of the whole plant.) Tourn. inst. t. 54. Lin. gen. no. 189. Schreb. gen. no. 249. Juss. gen. p. 131. Lam. ill. no. 264. t. 94. Schkuhr, handb. t. 31. Lehm. asper. p. 208. Schrad. comm. asper. f. 9.

LIN. SYST. *Pentdndria, Monogynia.* Calyx compressed in the fruit-bearing state, with piano-parallel, sinuately-toothed segments. Corolla funnel-shaped ; throat closed by vaulted processes. Carpels 4, 1-celled, ovate, compressed, smooth, glabrous, not perforated at the base, fixed to the central column, which is 4 winged.—An annual, rough, procumbent plant: with nearly wi \>osite, distant, oblong, obtuse leaves ; and lateral, usualljinolitary, small blue flowers, on short pedicels.

1. A'7'PROCU'MBENS (Lin. fl. lapp. 778. spec. 198.) ©. H. Native throughout Europe and Siberia, by way-sides, hedges, and on walls, and among rubbish. In Britain, at Wangford, near Brandon, and about Newmarket church ; also in Durham, as well as in Scotland, about Dunbar and near Edinburgh. Hall. helv. no. 606. All. ped. 1. no. 171. Roth. tent. fl. germ. 2. p. 217. Willd. spec. 1. p. 778. Smith, fl. grsec. t. 177. engl. bot. t. 661. OEder, fl. dan. t. 552. Fl. Bat. t. 152. Bieb. cauc. 1. p. 134. Ledeb. fl. alt. 1. p. 192. Wahl. fl. lapp. p. 57. Lapeyr. abr. p. 89. Baumg. fl. trans. 1. p. 128. A. vulgaris, Tourn. inst. p. 135.—Mor. hist. 3. sect. 11. t. 26. t. 13.—Column. ecphr. p. 183. f. 2. Stem branched, tetragonal, beset with small hooked spines or bristles. Leaves alternate, but nevertheless nearly opposite, attenuated at the base, beset with hispid pili on both surfaces, having the margin and midrib furnished with hooked hairs. Corolla with a cylindrical white tube; and obovate, roundish, blue segments. Calyx hairy, terete when in flower, deeply 5-cleft; with lanceolate, distant segments, intersected by teeth.

Procumbent German Madwort, or Great Goose-grass. FL April, May. Britain. PL procumbent.

Cult, This is a weed-like, rough plant, of no beauty. The seeds only require to be sown in the open border.

TRIBE V.

HELIOTROTEJE (this tribe contains plants agreeing with *Heliotrbpium* in the characters indicated below.) D. Don, in edinb. phil. journ. Corolla salver-shaped, or funnel-shaped, having the throat naked or bearded, and the limb plicate. Carpels 4, 1-celled, combined into a single fruit, closed at the base, not perforated, without any manifest torus or receptacle.

XXXV. HELIOTRCVPIUM (from ^*Xiog, helios,* the sun ; and *rponr), trope,* a turning; the spikes of flowers are circinnate, and face outwardly.) Tourn. inst. t. 57. Lin. gen. no. 179. Schreb. gen. no. 239. Juss. gen. p. 130. ed. Usteri. p. 145. Lam. ill. no. 253. t. 91. Gsertn. fruct. 1. p. 423. t. 68. f. 2. Schkuhr, handb. t. 29. Lehm. asper. p. 19.

LIN. SYST. *Penttindria, Monogynia.* Corolla salver-shaped ; throat usually naked, but in some bearded; segments of the limb furnished with a simple plicature, or a tooth between each. Stigma sub-conical. Carpels 4,1-celled, combined, closed at the base, without any manifest receptacle.—Strigose, annual, or shrubby plants with alternate leaves, and circinnate, secund spikes of small blue or white flowers.

SECT. I. GYROSTACHYS (from *yvpog, gyros,* curved or bent; and *ara^vQ, stachys,* a spike ; in reference to the spikes being spirally revolute.) Spikes of flowers bractless, spirally revolute in the young state.

1 H. AMPLEXICAU'LE (Vahl. symb. 3. p. 31.) stem shrubby ; leaves half stem-clasping, lanceolate, obtuse, obsoletely repand, rather canescent; spikes terminal, aggregate ; tube of corolla twice as long as the calyx. T? . S. Native of Brazil. Willd. spec. 1. p. 740. Lehm. asper. p. *25.* Habit of *H. Peruvidnum.* Branches pilosely tomentose. Leaves 2 inches long, greenish grey. Peduncles pilose, 2 or 3 times forked. Corollas large.

Stem-clasping-\ea.ved Heliotrope, or Turnsole. Shrub 1 to 3 feet.

2 H. PERUVIA'NUM (Lin. spec. p. 187.) stem shrubby ; leaves petiolate, oblong-lanceolate, wrinkled, repand ; spikes terminal, branched ; tube of corolla hardly the length of the calyx. T? . G. Native of Peru. Ruiz, et Pav. fl. per. 2. p. 2. no. 1. Willd. spec. 1. p. 740. Lehm. asper. p. 26. Curt. bot. mag. t. 141. Mill. fig. t. 144. H. odoratum, Mcench. meth. 415. Stems hairy. Leaves clothed with soft hairs above, and somewhat canescent beneath. Spikes by threes and fours rarely compound. Flowers sweet-scented, smelling like vanilla. Corolla intersected by 5 plicatures of a purple-lilac colour, with a greenish throat.

Far. ft, hybridum; flowers larger. This hybrid was raised from seed by Mr. More, of the King's Road, London.

Peruvian Heliotrope, or Turnsole. FL May. Sept. Clt. 1757. Shrub 1 to 2 feet.

3 H. CORYMBÔSUM (Ruiz, et Pav. fl. per. 2. p. 2.. no. 1. t. 107. f. a.) stem shrubby; leaves oblong-lanceolate, attenuated at the base, acute, deflexed; spikes collected into corymbs ; tube of corolla twice as long as the calyx. J? . G. Native of Peru. Bonpl. malm. t. 32. Sims bot. mag. t. 1609. H. grandifldrum, Schrank, hort. mon. fasc. 1. p. 2. t. 2. Branches downy. Leaves white from hairs beneath, and downy above, but in the cultivated plant they are hairy on both surfaces, and not white beneath. Corolla of a lilac-purple colour, with 5 plicatures, and greenish throat.

FIG. 37.



Corymbose-dowered Heliotrope, or Turnsole. Fl. May, Sept. Clt. J808. Shrub *2* to 6 feet.

4 H. OPPOSITIFÔLIUM (Ruiz, et Pav. fl. per. 2. p. 2. no. 2. t. 108. f. b.) stem shrubby ; leaves broad-ovate, acute, quite entire, clothed with retrograde asperities; spikes dichotomously corymbose. J?. G. Native *of* Peru, in arid places in Muna. Lelim. asper. p. *28.* Plant densely hispid. Branches clothed with rusty tomenturn. Calyx small. Corollas white, hispid outside, twice as long as the calyx.

Opposite-leaved Turnsole. Shrub 3 to 6 feet.

5 H. INCA'NUM (Ruiz, et Pav. fl. per. 2. p. 2. no. 4. t. 108. f. a.) stem shrubby ; leaves thick, ovate, acute, crenulated, very much wrinkled above, and lined with retrograde asperities, but softer and hoary beneath ; spikes dichotomously corymbose. *h* . G. Native of Peru, at Huanuca, on arid hills. Lehm. asper. p. 29. Branches villous, hoary. Peduncles hairy. Calyx villous. Corolla white, twice as long as the calyx, rather hispid outside. Carpels wrinkled.

Hoary Turnsole. Shrub 2 to 3 feet.

6 H. VIRIDIFL6RUM (Lehm. asper. p. 30.) stem shrubby, erect, rather hispid; leaves thickish, petiolate, ovate, quite entire, rather scabrous above, and velvety beneath ; peduncles bifid, divaricate ; spikes terminal, sub-corymbose. T? . S. Native *of* the East Indies. Lithospermum viridifldrum, Roxb. Calyx hispid. Corolla green, nearly twice as long as the calyx, densely clothed with hairs outside.

Green-jlorvered Turnsole. Shrub

7 H. LANCEOLA'TUM (Ruiz, et Pav. fl. per. 2. p. 4. no. 9. t. 111. f. a.) stem shrubby, erect; leaves on short petioles, lanceolate, wrinkled, rough ; spikes terminal, dichotomously corymbose, h • G. Native of Peru, in the groves of Pillao and Huanaco. - Lehm. asper. p. 31. Plant hispid. Corolla twice as long as the calyx, pale blue.

Lanceolate'-leaved Turnsole. Shrub

8 H. CITRIFÔLIUM (Lehm. asper. p. 32.) stem shrubby, erect, glabrous ; leaves thick, petiolate, oblong, glabrous, shining above ; spikes terminal, aggregate, disposed in sub-capitate corymbs, f? . S. Native of South America. Corolla twice or thrice as long as the calyx, hairy outside.

Citron-leaved Turnsole, or Heliotrope. Shrub.

9 H. LATIFÔUUM (Willd. herb, ex Lehm. asper. p. 33.) stem shrubby, erect, glabrous; leaves alternate, on very short petioles, ovate, acute, nearly glabrous, narrowed at the base, ciliated • spikes elongated, conjugate and solitary, terminal and lateral, J?. S. Native *oi'* Cumana, in arid places. H. scorpioides, H. B. et Kunth, nov. gen. 3. p. 89. Stem branched, angular at top, beset with adpressed hairs. Leaves nearly opposite and alternate, green above and paler beneath, beset with adpressed hairs. Peduncles and calyxes hispid. Corollas small, white. Carpels roundish, scabrous.

Broad-leaved Heliotrope, or Turnsole. Shrub 1 to 1^ foot.

10 H. STENOPHY'LLUM (Hook, et Arn. in Beech, voy. pt. bot. p. 38.) shrubby, densely leafy ; leaves in fascicles, very narrow-linear, fleshy, obtuse, with revolute edges, scabrous from short strigae; spikes conjugate, bractless, hardly longer than the superior leaves. J? . F. Native of Chili, about Coquimbo. Allied to *H. Ciirassdvicum,* but that has plane and somewhat spatulate, glaucous leaves, and is quite glabrous.

Narrow-leaved Heliotrope or Turnsole. Shrub.

11 H. CURASSA'VICUM (Lin. spec. 188.) stem herbaceous; leaves nearly opposite and alternate, narrow-lanceolate, or oblong-lanceolate, obsoletely veined, glabrous, glaucous ; spikes conjugate, compound, or solitary. ©. H. Native of South America, by the sea-side; Sandwich Islands ; North America, on the sandy banks of the great salt river, and similar situations on those of the Arkansas.—Forsk. fl. arab. p. 38. Swartz. obs. bot. p. 56. Desf. fl. atl. 1. p. 158. Ruiz. et Pav. fl. per. 2. p. 4. no. 10. Horn. hort. hafn. 1 p. 172. Willd. enum. 1. p. 175. Lehm. asper. p. 34. H. glaucophyllum, Mcench. meth. suppl. p. 147.—Sloane. hist. 1. t. 132. f. 3. —Mor. hist. 3. sect. 11. t. 31. f. 12. Plant quite glabrous, glaucous-green. Corolla a little longer than the calyx, white, with a yellowish-green bottom. Carpels ovate, rugose.

Var. (3, chenopodioides (Lehm. 1. c.) leaves lanceolate, spatulate, glaucous, glabrous, obsoletely veined, opposite and alternate; spikes conjugate. 0. H. H. chenopodioides, Humb. et Bonp. ex Horn. hort. hafn. *2.* p. *956.* Willd. enum. 1. p. 175.—Pluk. aim. t. *36.* f. 3.—Herm. par. bat. t. 138.

Curacoa Heliotrope, or Turnsole. Fl. June, July. Clt. 1731, /3, 1823. PI. procumbent, or \ to 1 foot.

12 H. CANE'SCENS (H. B. et Kunth, nov. gen. amer. 3. p. *88.)* erect, clothed with adpressed villi; leaves obovate, obtuse ; spikes terminal and lateral, by threes. %. S. Native near Cumana, Bordones, and Cumanacoa, in woody places. Plant canescent. Leaves having the veins and nerves prominent beneath. Spikes woolly. Corolla white. Very nearly allied to *H. Coromandeliana,* Retz.

Canescent Turnsole, or Heliotrope. PI. erect.

13 H. CINE^REUM (H. B. et Kunth, nov. gen. amer. 3. p. 89. t. 206.) erect ?, clothed with spreading villi; leaves petiolate, obovate, obtuse; spikes terminal and lateral by threes, bractless. 1/. S. Native on the banks of the river Apures, near Arichuna. Stem branched. Branches and leaves white from villi. Calyx hispid, unequal. Corollas small, white. Fruit hispid.

Grey Turnsole, or Heliotrope. PI. erect ?

14 H. PARTIBILCE'NSE (H. B. et Kunth, 1. c. p. 87.) erect?; leaves oblong-lanceolate, acute, hispid from pili on both surfaces ; spikes terminal and lateral, solitary or twin. *1J.*. S. Native on the shores of the Pacific Ocean, between Santa and Partibilca. Stem and branches hispid. Calyx suV ^rigose. Corolla pilose outside. Fruit bipartible, scabrous.

Partibilca Turnsole or Heliotrope. PI. erect.

15 H. LANA^TUM (H. B. et Kunth, 1. c. p. 89.) shrubby, clothed with white wool; leaves ovate, acute, nearly sessile ; peduncles lateral, dichotomously multifid, of many spikes, f? . S. Native of New Granada, near Loxa and Gonzanama, on the eastern declivities *of* the Andes, at the altitude of 1000 hexapods. H. argenteum, Willd. herb, ex Lehm. asper. p. 73. Corollas unknown. Perhaps a species *of Tournefortia.*

Woolly Turnsole, or Heliotrope. Shrub

16 H. CORIA'CEUM (Lehm. pug. 1. p. 20.) stems shrubby, erect; leaves petiolate, broad-lanceolate, acute, scabrous, canescent beneath, coriaceous ; spikes terminal, aggregate ; tube of corolla .Q times longer than the calyx. ^ • G. Native of Mexico. Stem branched. Spikes sub-corymbose, many-flowered ; flowers sessile, secund, aggregate. Calycine segments linear. Corolla lilac. Segments roundish, obtuse. Carpels 4, oblong, wrinkled.

Coriaceous-\eaved **Heliotrope. Shrub**

17 H. LINIFOLIUM (Lehm. in act. soc. scrut. hal. 3. p. 8.) stems shrubby, panicled, glabrous ; leaves linear, nearly glabrous; spikes racemose, solitary, filiform, lateral and terminal, elongated; flowers distant, pedicellate, ^i . G. Native of the Cape of Good Hope. Myosotis fruticosa, Lin. mant. p. 201. Willd. spec. 1. p. 748. Lam. ill. 1. p. *395.* no. 1773. Lehm. asper. p. 35. Leaves glaucous green, beset with minute, incumbent strigae on both surfaces. Corolla white, twice or thrice longer than the calyx. Fruit hispid. This differs from *H. Zeyldnicum,* particularly in the stem and leaves being nearly glabrous, and in the flowers being pedicellate.

Flax-leaved Heliotrope, or Turnsole. Fl. June, Sept. Clt. 1815. Shrub 1 to 2 feet.

18 H. ZEYLA'NICUM (Lam. diet. 3. p. 94. ill. p. 393. no. 1762.) stem shrubby, branched, pilose; leaves linear, scabrous above and villous beneath ; spikes terminal, filiform, solitary, elongated; flowers sessile, f? . S. Native of Ceylon and Arabia Felix. Willd. spec. 1. p. 744. Lehm. asper. p. *37.* H. Curassávicum, /3, Zeylánicum, Burm. ind. p. 41. t. 16. f. 2. H, frutiedsum, Forsk. descr. p. 38. Flowers small, white.

Ceylon Turnsole. Fl. July, Aug. Clt. 1818. Shrub 1 foot.

19 H. WILLDENOWII ; stem shrubby, erect; leaves lanceolate, narrowed at the base, mucronate at the apex, clothed with strigose down, hoary while young; spikes conjugate, or by threes, axillary. ^ • S. Native of Brazil. H. canescens, Willd. herb, ex Lehm. asper. p. 38. but not of Kunth. Stem strigose above ; young branches hoary. Corollas small, white. Carpels rather hispid.

Willdenow's Heliotrope, or Turnsole. Shrub.

20 H. INUNDATUM (Swartz, prod. p. 40. fl. ind. occ. 1. p. 343;) stem frutescent; leaves oblong, obtuse, canescent from hairs ; spikes terminal, erect, by fours. ^ • S. Native of the West Indies, Mexico, and Brazil, along the sea-shore. Willd. spec. 1. p. 741. Lehm. asper. p. 39. H. procumbens, Lehm. H. canescens, Willd. and H. cinereum, Willd. are said to be the same, ex Cham, in Linnaea, 4. p. 456. Stem and branches canescent from adpressed villi. Spikes sessile. Flowers white ?

Inundated Turnsole, or Heliotrope. Shrub.

21 H. DECUMBENS (Lehm. in act. nat. scrut. hal. 3. p. 16.) stem shrubby, decumbent; leaves elliptic, roundish-obovate, obtuse, strigose ; spikes filiform, solitary, conjugate, or by threes, lateral or terminal. ^ • S. Native of Cumana, Bardones, and Cumanocoa, in woody places, where it is called *Rava de Claras.* Lehm. asper. p. *31).* H. procumbens, H. B. et Kunth, nov. gen. amer. 3. p. 88. Stem and branches beset with incumbent hairs wi top, as well as the leaves. Calyx unequal. Flowers smallijina.nte, much crowded. Carpels rugose, hispid.

Decumbent Heliotrope, or Turnsole. Shrub decumbent.

22 H. GRACILE (R. Br. prod. p. 493.) stem erect; leaves Gbkihg-lanceolate, flat, acutish, greyish on both surfaces from adpressed hairs ; spikes conjugate or solitary ; calyxes unequal. Jj. S. Native of New Holland, and of Brazil, on the sea-shore. Lehm. asper. p. 40. The var. */3,* depressum, Cham, in Linnaea, 4. p. 457. a native *of* Brazil, may be a distinct species. Stem decumbent.

Slender Turnsole, or Heliotrope. Shrub erect.

23 H. SYENITES (Spreng. syst. 1. p. 539.) stem shrubby, branched, very villous; leaves ovate-oblong, attenuated at both ends, entire, villous, on long petioles ; spikes conjugate, lateral; tube of corolla equal in length to the calyx. *? . F. Native of Upper Egypt. H. villosum, Sieb. H. cinereum, R. Br. H. Kunzii, Lehm.

Syenite Heliotrope. Shrub.

24 H. PILOSUM (Ruiz, et Pav. fl. per. 2. p. 3. no. 7. t. 110. f. a.) stem suffruticose, procumbent; leaves broad-lanceolate, pubescently pilose ; spikes short, usually by fours. ^ • &• Native of Peru, on arid hills about Lima. Lehm. asper. p. 41. Plant canescent. Spikes lateral and terminal. Calyxes unequal. Corolla white; tube pilose outside, longer than calyx. Fruit hispid.

Pilose Turnsole, or Heliotrope. PI. procumbent.

25 H. MICROCALYX (Ruiz, et Pav. fl. per. 2. p. 3. no. 5. t. 109. f. b.) stem shrubby, erect; leaves oblong-lanceolate, subacuminated ; spikes dichotomous, opposite the leaves; calyx small, 5-toothed. h_c . G. Native of Peru, on hills. Lehm. asper. p. 42. Plant very downy. Corolla white, twice as long as the calyx.

Small-calyxed Turnsole, or Heliotrope. Shrub erect.

26 H. HUMILE (Lam. ill. p. 393. no. 1757. Lehm. in act. nat. scrut. hal. 3. p. 11.) stem sufFruticose, depressed ; leaves petiolate, lanceolate-ovate, acute, repand, villous ; spikes solitary, lateral, pedunculate. ^ • S. Native of the West Indies. Lehm. asper. p. 43. Branches pilose. Leaves green above, and paler beneath. Flowers crowded. Corolla white; tube length of calyx. Nut rugose from numerous dots.

Humble Turnsole, or Heliotrope. Fl. May, June. Clt. 1752. Shrub 1 foot.

27 H. PARVIFLORUM (Lin. mant. p. 201.) stem herbaceous, erect; leaves opposite, petiolate, oblong-ovate, hairy ; spikes solitary and conjugate; flowers small. ©. S. Native of the East Indies, and of the West Indies, in St. Thomas, by waysides. Willd. spec. 1. p. 741. enum. 1. p. 174. Horn. hort. hafn. 1. p. 172. H. angiospermum, Murr. prod, goett. p. 217. —Dill. elth. p. 178. t. 146. f. 175. Stem pilose. Lateral spikes usually solitary : terminal ones conjugate. Calyxes unequal. Corollas small, a little longer than the calyx ; tube green, ventricose ; limb white ; segments intersected by plicae ; throat pilose. Carpels rugose and hispid.

Small-flowered Turnsole, or Heliotrope. Fl. July, Sept. Clt. 1732. PI. \\ foot.

28 H. COROMANDELIANA (Retz. obs. 2. p. 9. Vahl. symb. 1. p. 13.) stems herbaceous, prostrate; leaves petiolate, obovate-oblong, canescent from incumbent hairs ; spikes solitary or conjugate, lateral or terminal; calyxes unequal. ©. S. Native of Coromandel and Bengal. Willd. spec. 1. p. 743. Lehm. asper. p. 46. Roxb. in Wall. fl. ind. 2- p. 2. Root simple, woody. Stems many from the same root, at first prostrate, then ascending, grey from adpressed hairs. Spikes and calyxes pilose. Corolla white, pilose outside ; tube longer than the calyx.

Far.fi, ovalifblium (Lehm. asper. p. 47.) leaves oval, villous, silky; spikes conjugate and simple ; calyxes unequal; stigma nearly sessile, bearded at apex ; stem erect or decumbent. 0. H. Native of Arabia Felix, and New Holland, within the tropic. H. ovalifolium, Forsk. descrip. p. 38. R. Br. prod. p. 493. This variety differs from the species in its larger stature ; in the branches and leaves being densely villous and silky; and in the carpels being pilose. Perhaps a distinct species.

Coromandel Turnsole, or Heliotrope. Fl. July, Nov. Clt. 1812. PI. prostrate.

29 H. CAPENSE (Swartz, in litt. Lehm. in act. nat. scrut. hal. 3. p. 13, asper. p. 50.) stem herbaceous, erect, branched; leaves

ovate-roundish, plicate, strigose above, and rather tomentose beneath; spikes pedunculate, solitary, and conjugate; calyx closed, with 5 short connivent segments, falling off in the fruit-bearing state. ©. H. Native of the Cape of Good Hope. Plant hoary and downy. Leaves undulately plicate. Spikes axillary. Carpels large, wrinkled, glabrous.

Cape Turnsole. Fl. June, July. Clt. 1824. PI. 1 to *2* feet.

30 H. EUROPIUM (Lin. spec. p. 187. hort. ups. p. 33.) stem herbaceous, erect; leaves ovate, flat, lined, finely tomentose; lateral spikes solitary : terminal ones conjugate ; calyx stellately spreading in the fruit-bearing state. ©. H. Native of the South of Europe, and in the regions of Caucasus. Gmel. sib. 4. p. 74. no. 11. Scop. fl. cam. ed. 2d. vol. 1. p. 120. Poll. pal. 1. p. 177. All. ped. 1. no. 187. Vill. dauph. 2. p. 450. Jacq. fl. austr. 3. p. 4. t. 207. Sabb. hort. rom. 2. t. 33. Regn. bot. 1. t. 32. Roth. tent. fl. germ. 2. p. 211. Sut. fl. helv. 1. p. 101. Bieb. fl. cauc. 1. p. 118. Lapeyr. fl. pyr. p. 84. Baumg. fl. trans. 1. p. 115. HofTm. et Link. fl. port. 1. p. 166; D. C. fl. fr. no. 2705. H. supinum, Pall. ind. taur. H. canescens, Mcench. meth. p. 415. H. erectum, Lam. fl. fr. 2. p. 281.—Hall. helv. no. 593.—Plenck. off. t. 74.—Mor. hist. 3. sect. 11. t. 31. f. 7. Tourn. inst. p. 139. Stem grey from villi. Leaves smoothish above, canescent, obtuse or terminated by a small acumen. Corolla white, plicate above, intersected by 5 teeth. Stigma bifid at top. Carpels rugose, war ted.

Var.fi; flowers larger, sweet-scented. ©. H. Native of Caucasus, Tauria, and Switzerland. Bieb. fl. cauc. 1. p. 118. Suter, 1. c. Haller, 1. c. H. Europae'um, Pall. ind. taur.

European Turnsole, or Heliotrope. Fl. June, Oct. Clt. 1562. PL j to J foot.

31 H. OBLONGIFOLIUM (Link. enum. 1. p. 163.) leaves petiolate, oblong, obtuse, quite entire, rough, beset with scattered hairs. ©. H. Native of the South of Europe. Very like *H. Euro]'ce\wi,* and hardly distinct. Corolla white.

Oblong-leaved Heliotrope, or Turnsole. Fl. June, Oct. Clt. 1824. PI. | to 1 foot.

32 H. iEGtfPTi'AcuM (Lehm. in. sem. hort. hamb. 1820. p. 8.) stem erect, branched, soft, downy, pale green; branches spreading ; leaves elliptic, or ovate, quite entire, clothed with fine tomentum ; spikes terminal, much branched. ©. H. Native of Egypt. H. pallens, Cailliaud voy. pi. meroe. no *55.* t. 3. f. 4. Habit of *H. Europium* and *H. suaveolens,* but differs in the much greater stature. Corollas large, white. Nuts glabrous, reticulated, scabrous, ex Cailliaud.

Egyptian Heliotrope. Fl. June, July. Clt. ? PI.

33 H. COMMUTATUM (Roam, et Schultes. syst. 4. p. 29.) leaves ovate, wrinkled, petiolate ;, corolline segments obtuse. ©. H. Native of Galicia. H. humile, Schultes, obs. bot. p. *27.* This is much smaller than *H. Europceum,* but otherwise much like it.

Changed Turnsole. Fl. June, Oct. Clt. 1800. PI. \ foot.

34 H. VILLOSUM (Willd. spec. 1. p. 744.) stem herbaceous, erect, very villous ; leaves ovate, flat, villous; spikes lateral and terminal, solitary and conjugate; corollas large; calyx spreading in the fruit-bearing state. ©. H. Native of the Islands in the Archipelago. Desf. ann. mus. 10. p. 427. t. *33.* Lehm. asper. p. *53.* H. hirsutissimum, Weber, pi. kil. 1783. no. 1. Heliotr. majus, flore magno inodoro, Tourn. cor. inst. p. 7. Habit of *H. Europceum.* Plant densely villous; hairs yellowish. Corollas large, white, with a yellow throat, densely villous outside. Fruit wrinkled, glabrous.

Villous Turnsole, or Heliotrope. PI. 2 feet.

35 H. BOCCONI (Guss. sem. hort. Bocc. 1825. ex Linnaea, 4. p *37*) perhaps the same as *H. suaveolens,* from Buccone's synonymes, but in Gussone's the leaves and calyxes are tomentose. 0. H. Native of the South of Europe. Calyxes not subulate, nor the stem less divaricate, and the seeds smaller than in *H. Europceum.*

Boccone's Heliotrope or Turnsole. PI. | foot.

36 H. OBOVATUM (Roxb. mss. ex D. Don. prod. fl. nep. p. 101.) herbaceous; stem decumbent, divided; leaves obovate, petiolate, nerveless, flat, silky *on both* surfaces ; spikes conjugate; calyx shorter than the tube of the corolla. ©. H. Native of Nipaul, towards the banks of the river Morshidabad.

Obovate-lewed Turnsole, or Heliotrope. Fl. May, June. Clt. 1825. PI. decumbent.

37 H. GLANDULOSUM (R. Br. prod. p. 493.) stem suffruticose ; leaves oval, obtuse, wrinkled, tomentose; spikes conjugate ; calyx glandular. J?. G. Native of New Holland, on the south coast.

Glandular-ca\yxed Turnsole, or Heliotrope. Shrub.

38 H. EROSUM (Lehm. in act. nat. scrut. hal. 3. p. 15. asper. p. 54.) stem sufFruticose, decumbent; leaves oblong, obtuse, tapering into the petioles, erosely denticulated, beset with retrograde stiff hairs ; spikes terminal, conjugate, rarely by threes. T? . G. Native of Teneriffe. Plant canescent. Spikes compact. Peduncles and calyxes hairy. Corolla white; tube longer than the calyx, pilose ; limb curled. Fruit glabrous.

Erose-leaved Heliotrope, or Turnsole. Shrub decumbent.

39 H. ERIOCA'RPUM (Dehle, in litt. ex Lehm. asper. p. *55.)* stem shrubby, erect, much branched, hoary; leaves sessile, ovate, villous, warted, with waved, repand, revolute margins ; spikes conjugate. ^ • G. Native of Egypt. Lithospermum digynum, Forsk. fl. arab. descrip. p. 40. H. lineatum, Delile, fl. segypt. p. *37.* t. 16. f. 2. but not of Vahl. Branches dichotomously divided, hoary, tomentose at top, spinescent and naked in summer. Leaves canescent. Spikes sessile, terminal. Calyx villous. Corolla glabrous, red ? ; tube ventricose above. Carpels hoary from very long villi.

Hairy-fruited Turnsole, or Heliotrope. Shrub.

40 H. UNDULATUM (Vahl. symb. 1. p. 13.) stem shrubby, procumbent; leaves lanceolate, hispid, with undulately curled margins ; spikes conjugate, axillary and terminal. T?. G. Native of Egypt, in sandy places. Willd. spec. 1. p. 743. H. crispum, Desf. fl. atl. 1. p. 151. t. 41. Lithospermum hispidum, Forsk. descr. p. 38. no. 24. Branches grey from short tomentum. Leaves rather cinereous. Calyx pilose. Corolla small, white, pilose outside, longer than the calyx, with teeth-formed plicae between the segments of the limb. Carpels clothed with white villi.

Undulated-leaved Turnsole, or Heliotrope. Fl. July, Aug. Clt. 1820. Shrub procumbent.

41 H. LINEATUM (Vahl. symb. 1. p. 13.) stem shrubby, procumbent ; leaves petiolate, elliptic, villous, flat, with revolute margins ; spikes conjugate, bracteolate, lateral and terminal. J? . G. Native of Egypt. Willd. spec. 1. p. 743. Lehm. asper. p. 58. Lithospermum heliotropioides, Forsk, descr. p. 39. no. *25.* Branches villous, tomentose above. Bracteas linear, acute. Calyx villous. Corolla glabrous, longer than the calyx, having teeth between the segments of the lim[irl]^ Carpels villous. Stigma entire.

LinedAeaved Turnsole, or Heliotrope. Shrub procumbent.

42 H. ASPE'RRIMUM (R. Br. prod. p. 493.) plant stnfose, very rough ; spikes capitate ; leaves oblong, obtuse, sessile, with revolute, undulated margins ; stem erect. J? ?. G. Native of New Holland, on the south coast. Lehm. asper. p. *56.*

Very-rough Turnsole, or Heliotrope. PI. erect.

43 H. MOROCCA'NUM (Lehm. asper. p. *56.)* stem shrubby,

erect, strict; leaves lanceolate, beset with incumbent hairs, with undulated, revolute margins; spikes conjugate and compound, lateral and terminal. J?. G. Native of the kingdom of Morocco. Stem hispid. Branches beset with incumbent pili, as well as the leaves, rather hispid. Spikes at first horizontal, ^alyx grey, hispid, with ciliated segments. Corolla large; tube nearly twice as long as the calyx, beset with white hairs above; limb undulately curled. Carpels wrinkled, glabrous. Nearly allied to *H. undulatum.*

ShS^C toJfLT^le,OrHeli0tr0Pe_ FLJune,Ju^ Clt_1823,

44 H. W . « (Fres. fl. egypt. et arab. p. 168) part * % £ ^ ^ ^ * »ie on the younger branches terminal, pedunculate

cloothed with glandular hairs; stem shrubby at the base, branched, clothed with canescent villi; leaves petiolate, ovate-lanceolate, pilose, with undulated margins; spikes almost solitary, bractless, spiral while young; tube of corolla twice as long as the calyx. Fj. G. Native of Arabia, at Thai Ambain.

Ambain Heliotrope, or Turnsole. Shrub.

SECT. II. ORTHOSTACHYS (from *OO$OQ, orthos,* straight; and *ar — — — — '" » '" " • » v"" » OÓ-ZOQ, ortnos,* straight; and *a-w-stáchys,* a spike: the spikes of flowers are straight at first, not circinnate, evolute as in the preceding section.) R. Br. prod. p. 493. Spikes generally solitary, bracteate or leafy, not spiral or circinnate in the young state. Bracteas opposite the flowers, or nearly so.

Lanu (Wall. fl. ind. 2. p. 2.) plant suffruticose, rcased greyish hairs; stems prostrate, densely -- -pproximate, sessile, narrow-linear, somewhat falcate, with recurved margins, canescent; racemes solitary terminal, slender, ex.gli*. with short, ovate bracteas, opposite to, and equalling the pedicels, linear; calyx and nuts strigose. $?. F.. Native of Nipaul, in the vicinity of Katmandu and Gosainsthan. H. compactum, D. Don, prod. fl. nep. p. 101. Plant greyish. Racemes at first slightly recurved. Corolla white, twice as long as the calyx, with a yellow tube; limb plicate; segments slightly crenulated.

Short-leaved Turnsole, or Heliotrope. Fl. June, July. Clt. 1824. PI. prostrate.

46 H. SALICOIDES (Cham, in Linnaea, 4. p. 117.) plant shrubby, canescent from silky strigae; branches terete, slender; leaves scattered, nearly sessile, oblong, ovate-lanceolate, acute, keeled from the nerve, with reflexed margins; spikes simple, terminal, revolute, sometimes lateral, and opposite the leaves, bracteolate, dense flowered; flowers sessile; calycine segments ovate, acute, nearly equal; tube of corolla equal in height to the calyx; limb strigose outside; carpels strigose, shorter than the calyx; anthers connivent and cohering at top. J?. S. Native of Brazil. A small trailing or creeping shrub, with the habit of *S'alix incubacea,* and *S. repens.* Said to be nearly allied to //. *Ottbnis* and *H.fruticosum.*

Willow-like Heliotrope. Shrub creeping.

47 H. OTTONIS (Lehm. asper. p. 59.) stem shrubby; leaves linear-lanceolate, erect, with revolute edges, canescent from somewhat silky, [illegible] hairs, or strigae; spikes solitary, terminal, elongated, bracteate. ?. S. Native of Caracoas. H. strictum, H. B. et Kunth, nov. gen. amer. 3. p. 87. Tournefórtia monostachya, Willd. rel. ex Roem. etSchultes, syst. 4. p. 610. Stem branched at top. Carpels rather hispid, Branches "near, acuminated, hispid. Calyxes unequal.

[illegible] Heliotrope. Shrub U foot.

H. FRUTICOSUM (Lin. spec. p. 187. amoen. 4. p. 394.) stem shrubby; leaves linear-lanceolate, pilose, recurved at apex • tive of South America. Lam. ill. vol. iv.

60. Tournefórtia hùmilis, Swartz. obs. bot. p. 55, exclusive of the syn. of Lin. Willd. spec. 1. p. 793. H. detnissum, Roem. et Schultes, syst. 4. p. 27.—Plum. pl. amer. t. 227. f. 2.—Sloane, hist. t. 192. f. 4. Stem much branched; branches aves with revolute edges, green above, and hoary the hairs being more copious. Bracteas linear. Flowers on short pedicels. Peduncles and calyxes pilose. Corolla Stigma capitate. Carpels rather hispid. Heliotrope. Shrub 2 feet.

49 H. TERNAW (Vahl. symb: 2. p. 21.) stem shrubby; [illegible]

«5i s prrp!t4%: k\sPlT6f f'^F Ss^- cert fm softer, i S ^ ' K ^ - ^ TM * callot; 2 ^ above. Lateral spikes, if any, usually simp f pk>w er short peicels. Calyx pilose. Corolla *Xe,* larle , ! *T* longer than the calyx, pilose above; limb plicate. g , tUbe

Vernal-leaved Heliotrope. Shrub.

50 H. HIRTUM (Willd. "herb. no. 3247. Lehm in ac. scrut. hal. 3. p. 10 asDen n fi2-\ «tom U KI i • , nat> linear-lanceolate, hairy hoary knee...rt racter soft; spikes lateral and terminal, solitary, bracteolate. ?. S. Native of Cumana, and New Andalusia, and Brazil, in sandy places. H. hispidum, H. B. et Kunth, nov. gen. amer. 3. p. 87. Branches canescent, pilose. Leaves with^revolute edges. Spikes com pact. Bracteas minute. Calyx hairy; tube of corolla long^ than the the limb. Carpels rather hispid. *Hairy*

51 H. m. l. c. p. 9. asper. p. 65.) stem shrubby, erect, or prostrate; leaves linear-lanceolate, strigosely pilose; spikes terminal, solitary, leafy, recurved at top. ?. S. Native about the Orinoco, and ^ Brazil

P. 46*. H. foli6sum, Willd. L b no/ ^ ' U 2 ; ^ gose when young canescent. Leaves very numerous in J S [illegible] Fla CT" nearly-^> opposite" thHre 'so? in r- of calyx, rat Calyx strigose, unequal. Tube of corolla length rather hispM! I Pilose; S6gment acute, acceptate. Carpels

Many-leaved Heliotrope. Shrub.

fr strigose flat; spi -- few-flowered; bracas lanceSlkte, on shon ecolate, oles, cvice as petiHolland, within Native of New

Leafy-spiked Heliotrope. PI. ascending.

55! H, AFRICA'NUM (Schum. pi. guin. p. 87.) leav... ?Vate> acuminated at both ends, glabrous; spikes solitary; corollas times longer than the calyx, with a narrow neck. ⊙. Hab Native [illegible] Stem procumbent, branched, pilose. Corollas

African Heliotrope. PI. erect

54 H. STRIGOSUM (Willd SDer 1, ^ ~AO 743. Schum. pl. guin. 6u.) stem shrubby, ascending; leaves linear-lanceolate, strigosely papillose; spikes leafy: lateral ones solitary: terminal ones conjugate. ?. S. Native of Guinea. Lehm. asper. p. 64. Root fusiform. Stem covered with adpressed white hairs, branched. Leaves on short petioles, beset with white adpressed hairs on both surfaces, which rise from papillae. Bracteas sessile, lanceolate, length of flowers, which are distant. Corolla white, with a tooth between each of the

55 H. MYOSOTOIDES (Lehm. in act. nat. scrut. hal. 2. p. 65.) stem fruticosent, erect, purplish: leaves linear,

no. 1166. Lehm. asper. p. a>pet

Heliotrope. Shrub ½ to 1 foot.

sessile, strigose ; spikes solitary, bracteate ; bracteas longer than the calyx. J? • F» Native of the Levant. Habit of *Myosotis.* Stem beset with adpressed, stiff hairs, as well as the calyx and pedicels. Young branches hoary from copious hairs. Leaves deep green. Spikes lateral and terminal. Flowers pedicellate. Carpels rather hispid.

Mouse-ear-like Heliotrope. Shrub erect.

56 H. ROTTLE'RI (Lehm. asper. p. *66.)* stem shrubby, erect; leaves oval-lanceolate, hispid ; spikes lateral and terminal, solitary ; bracteas lanceolate, nearly the length of the calyx. J? . S. Native of the East Indies. Root fusiform, woody, with horizontal fibres. Stems many from the same root, beset with small white hairs or strigae. Flowers on short pedicels. Calyx hispid, length of the tube of the corolla. Corolla pilose outside. Carpels hispid when examined by a lens.

Bottler's Heliotrope. Shrub J to 1 foot.

57 H. THYMIFOLIUM (Vahl, in litt. ex Lehm. in act. nat. scrut. hal. 3. p. 17.) stem shrubby, depressed; leaves oblong, strigose ; spikes solitary, terminal, elongated, leafy. J? . S. Native country unknown. Lehm. asper. p. 67. Stem hispid at top; branches floriferous. Bracteas lanceolate, on short petioles, length of the cauline leaves. Calyx hispid, length of the tube of the corolla. Corolla small, downy outside. Nuts rather villous.

Thyme-leaved Heliotrope. Shrub depressed.

58 H. PAUCIFLORUM (R. Br. prod. 493.) annual, erect, much branched, strigose ; hairs decumbent; leaves lanceolate, linear, shorter than half an inch, with recurved margins; spikes few-flowered ; bracteas linear, length of calyx, equalling the tube of the corolla, which is acutish. ©. H. Native of New Holland, within the tropic.

Few-flowered Heliotrope. PI. erect.

59 H. PERSICUM (Lam. diet. 3. p. 94. ill. p. 393. no. 1761.) stem shrubby, branched ; leaves linear-lanceolate, oblique, recurved, silky, hoary; spikes terminal, leafy. *? . F. Native of Persia. Lehm. asper. p. 68. Heliotropium Persicum incanum, floribus variegatis, Burm. fl. ind. p. 41. t. 19. f. 1. Branches grey from adpressed hairs. Leaves hoary from copious, prostrate hairs. Flowers on short pedicels. Carpels minute, rather hispid.

Persian Heliotrope. Shrub \ to 1 foot.

60 H. FASCICULATUM (R. Br. prod. p. 494.) suffruticose, much branched, strigose ; hairs spreading *, leaves linear, acute, sessile, with recurved margins, a line and a half long, in fascicles ; flowers scattered. J?. G. Native of New Holland, within the tropic.

Fascicled-lew ed Heliotrope. Shrub.

61 H. CAMPECHIA'NUM (Willd. herb, ex Lehm. asper. p. 69. H. B. et Kunth, nov. gen. amer. 3. p. *86.)* stem shrubby, branched, procumbent; leaves lanceolate, strigose, acute at both ends; spikes terminal, solitary, elongated, leafy; calyx subbilabiate, with unequal segments, *fy* . or %. S. Native about Campeachy. Branches filiform, strigose. Lower flowers on short pedicels: upper ones sessile. Tube of corolla length of the larger calycine segments, pilose outside; segments acutish. Carpels hispid when examined by a lens.

Campeachy Heliotrope. Shrub procumbent.

62 H. BRACTEA'TUM (R. Br. prod. p. 493.) annual, strigose from decumbent hairs; branches erect; leaves lanceolate, flat; spikes few-flowered; bracteas lanceolate, nearly sessile, a little longer than the calyx. ©. H. Native of New Holland, within the tropic, on the sea-shore.

Bracteatc-fiowered Heliotrope. PI. erect.

63 H. MARIFOLIUM (Retz. obs. 2. p. 8-9. no. 8.) stern fruticulose, procumbent, filiform; leaves petiolate, lanceolate, acute, pilose ; spikes usually solitary ; bracteas linear-lanceolate, shorter than the calyx. J?. S. Native of India. Willd. spec. 1. p. 742. Lehm. asper. p. 70. Stem beset with incumbent hairs. Leaves figure of those of *Teucrium Mdrum,* but narrower and smaller. Flowers distant, on short pedicels. Nuts hispid, or prickly at the base.

Cat-thyme-leavcd Heliotrope. Shrub procumbent.

64 H. SCABRUM (Retz, obs. 2. p. 8. no. 7.) stem herbaceous, depressed, branched; leaves linear-lanceolate, oblique, strigose, with revolute edges ; spikes solitary, lateral and terminal; bracteas lanceolate, longer than the calyx. 0. H. Native of India, in rice-fields. Lehm. asper. p. 70. Plant small. Root fusiform, simple. Stem nearly simple, strigose from adpressed hairs. Leaves nearly sessile: upper ones opposite. Flowers small, distant. Calyx hispid. Carpels villous at apex.

Far. ft, humile (Lehm. asper. p. 71.) stem more humble and more branched. Q. H. Native of India, in waste places.

Scabrous Heliotrope. PI. small.

65 H. VENTRICOSUM (R. Br. prod. p. 494.") annual, erect, branched, strigose from rather spreading hairs ; leaves linear, acute, with recurved margins ; spikes many-flowered ; bracteas equalling the acuminated calyxes ; tube of corolla exserted near the top, and ventricose. ©. H. Native of New Holland, within the tropic, on the sea-shore.

Fentricose-fiowered Heliotrope. PI. erect.

66 H. PANICULA'TUM (R. Br. prod. p. 494.) suffruticose, much branched, strigose from rather adpressed pili; leaves narrow-linear, with recurved margins ; spikes alternate, panicled; bracteas shorter than the acute calyxes. J?. S. Native of New Holland, within the tropic, on the sea-shore.

Payiicled-spiked Heliotrope. Shrub.

67 H. TENUIFOLIUM (R. Br. 1. c.) plant erect, clothed with hoary tomentum ; leaves linear-filiform ; spikes alternate or solitary; bracteas subulate, shorter than the calyx, which is silky. ©. H. Native of New Holland, on the sea-shore, within the tropic.

Thin-leaved Heliotrope. PI. erect.

68 H. GLABE'LLUM (R. Br. 1. c.) suffruticose, much branched, glabrous ; leaves linear-filiform, with recurved« margins, beset with a few hairs beneath ; spikes few ; bracteas subulate, hardly equalling the calyxes, which are ciliated ; limb of corolla shorter than the tube. ^ • S. Native of New Holland, within the tropic.

Glabrous Heliotrope. Shrub.

69 H. PROSTRA'TUM (R. Br. 1. c.) annual, prostrate, strigose from adpressed pili; leaves lanceolate, acuminated, flat, nearly sessile; bracteas hardly equal in length to the calyx. 0. H. Native of New Holland, within the tropic, on the sea-shore.

Prostrate Heliotrope. Fl. June, July. Clt. 1826. PI. prostrate.

70 H. HUMISTRA'TUM (Cham, in Linnaea, 4. p. 462.) tufted and trailing; stems simple, many from the same root, villous ; leaves densely imbricate, villous, lanceolate, acute ; racemes leafy; flowers pedicellate, extrafoliaceous, equal in length to the leaves ; pedicels length of calyx. 0. F. Native of tropical Brazil, in argillaceous soil. Habit of *Paronychia,* or *Herniaria.* Flowers *size of those of H. parviflorum.* Calycine segments equal, lanceolate, acute, rather villous. Corolla villous outside, bearded in the throat. Anthers bearded at apex.

Trailing Heliotrope. PI. trailing.

71 H. OCELLA'TUM (Cham, in Linnaea, 4. p. 463.) erect, cinereous, strigose; leaves lanceolate, bluntish, sub-cuneated, petiolate ; spikes simple, terminal, bracteate; bracteas equalling or exceeding the flowers. ©. H. Native of Brazil. The whole

plant is greyish from strigae. Leaves \ an inch long. Flowers small, size of those of //. *parvifldrum.* Calycine segments unequal, lanceolate, acute. Corolla slender, pale, strigose outside ; tube shorter than the calyx; limb with a tooth between each lobe. Carpels smooth.

Ocellate-fruhed Heliotrope. PI. | to f foot.

72 H. HUMIFU'SUM (H. B. et Kunth, nov. gen. amer. *3.* p. 85. t. 205.) plant suffruticose, creeping, leafy; leaves crowded, lanceolate-oblong, acute, 1-nerved, stiff, hispid ; flowers in the axils of the superior leaves. J?. S. Native of Cuba, near Havana, in dry places. Lithospermum humifusum, Spreng. syst. 1. p. 548. Leaves *3* lines long, on short petioles, which are dilated and sheathing at the base. Calyx hispid, rather unequal. Corollas size of those of *Myosotis arvensis,* hispid outside ; tube inflated in the middle, hardly equal in length to the calyx; limb plicate, 5-lobed. Stigma capitate, depressed. Fruit hispid. Said lo be nearly allied to *H. orientate,* Lin. Perhaps a proper genus.

Trailing Heliotrope. Shrub creeping.

73 H. FILIFORME (H. B. et Kunth, 1. c. p. 86. t. 204.) procumbent, hispid from strigae ; leaves lanceolate-spatulate, obtuse; spikes terminal and lateral, solitary and conjugate, filiform, bracteate ; bracteas minute, linear. %. S. Native on the sandy banks of the river Apures, between El Diamante and San Fernando. H. tenue, Willd. herb, ex Rcem. et Schultes, syst. 4. p. 737. Stems diffuse. Leaves \ inch long, with the petioles. Spikes revolute at top. Calyx unequal, hispid. Corolla white; tube about equal in length to the calyx. Carpels downy.

Filiform Heliotrope. PI. procumbent.

SECT. III. HELIOTROPHY'TUM (derivation the same as that of the genus, with the addition of <J>VTOV, *phyton,* a plant.) Cham, in Linnaea, 4. p. 458. Carpels 2, 2-celled, 2-seeded. This section joins this genus with *Tournefortia,*

74 H. TOMENTOSUM (Poir. suppl. 3. p. 23.) plant clothed with white tomentum; stem shrubby ; leaves ovate, obtuse, on long petioles, nerveless ; spikes lateral, twin, bracteate. J?. S. Native of the East Indies. Roem. et Schultes, syst. 4. p. 39. Stem branched from the base. Leaves 8-10 lines long. Spikes an inch long, a little revolute at apex. Calyx hispid, acute, a little shorter than the corolla, which is small.

Tomentose Heliotrope. Shrub.

75 H ?. NICOTIAN^FOLIA (Poir. suppl. 3. p. 23.) stem herbaceous, villous; leaves broad-lanceolate, nearly glabrous, with undulated margins ; spikes twin, terminal, bracteate. © ?. H. Native of Buenos Ay res. Leaves petiolate, 3-4 inches long, and 2 broad ; petioles an inch long, pilose, with usually a pair of smaller leaves in the axils of the larger ones. Peduncles compressed, pilose, length of petioles. Calyx hispid, a little smaller than the corolla, which is small. Perhaps a species of *Tiaridium.*

Tobacco-leaved Heliotrope. PI. 1 to 2 feet ?

76 H ?. ANCHUS^EFOLIUM (Poir. suppl. 3. p. 23.) stem shrubby ; leaves stem-clasping, linear-lanceolate, roughish ; peduncles terminal, solitary; spikes bifid, or trifid ; flowers spicately capitate, bracteate. ^ . S. Native of Buenos Ayres, and Brazil. Roem. et Schultes, syst. 4. p. 40. The whole plant is velvety from strigose canescent tomentum. Leaves crowded, 2 inches long, and 6-8 lines broad, obtuse. Peduncles villous. Spikes 2-3 together, crowded into a head. Calyx hispid. Corollas blue, size and form of those of *H. Peruvianum;* tube clothed with viscid villi outside. Perhaps the same as *H. amplexkaule,* Vahl. symb. 3. p. 21.

Bugloss-leavcd Heliotrope. Shrub \ to1| foot.

77 H ?. POLYSTA'CHYUM (Poir. suppl. 3. p. 23.) plant yellow ; leaves ovate-lanceolate, on long petioles, tomentose beneath ; spikes numerous, terminal. ?. S. Native of Pondicherry. Commerson in herb. Rcem. et Schultes, syst. 4. p. 40. Branches spreading, rather rose above. Leaves thickish, 1-2 inches long, Calyx hispid. Corolla small white together, unequal, very long. indurated angular calyx. Carpels involucrated by the capsular pericarp.

Many-spiked Heliotrop

78 H. SINUATUM (Cham. in Linnaea, 4. p. 460.) stem shrubby ; leaves lanceolate and ovate-lanceolate, petiolate, or bluntish ; spikes terminal, and from the axils of the leaves. ?. F. Native of Brazil. This species agrees with H. riness, inflorescence, flov es. Plant strigose. Flowers nearly sessile.- Corolla hairy outside. Very tuberculed.

Sida-leaved Heliotrope. Shrub?*> if tot

i *I* ?" TM ? oiDES (Cham. in Linnaea 4. P. 460 ^. shrubby, clothed with white villi; lower leaves ovate, acute, becc narrower as they ascend, until they are almost W ^ terminal, trifid, or twice bifid. *.*F. Native of the S ou* ? Brazil*.. Leaves with reflexed margins. Corolla havb» *th* tube Carnel" T T^ ' J ^ Wne St*ma depressed^ Z£? Carpel tubercukr. Very nearly allied to *H. anchu JfdUum,*

Phyhca-hke Heliotrope. Shrub £ to 1} foot.

f *Species hardly known.*

80 H?. ANOMALUM (Hook, et Am. in Beech, voy. pt bot „ 66.) plant suffruticose; leaves linear-lanceolate, attenuated t the base, hispid from strig* racemes glomerate . T segments very unequal; carpels 5. *h* . G. Native of th Islands* Root fusiform, fcacemes* usually *Z,* Plant strigose. Corolla 5-6 cleft, plicate. Stamens^-6, Stigma capitate, penciled. Perhaps the same as *LilhospST* calycine segments

Anomalous Heliotrope. Shrub.

81 H. TOMENTOSUM (Burm. prod. fl. cap. p. 4. Lehm. asper. p. 73.) stem shrubby; leaves linear, repand, villous- spikes lateral, conjugate. I2 . G. Native of the Cape of Good Hope.

Tomentose Heliotrope. Shrub.

82 H. ORIENTA'LE (Houtt. pfl. syst. 5. p. 402.) leaves linear, glabrous, vemless ; flowers scattered, lateral. © H Native ot Asia. Lin. spec. L p. 188. Willd. spec. 1. p. 745 T thospermum Javanicum, Spreng. syst. 1. p. 547. Plan, procumbent, creeping. Flowers nearly sessile solkarv the leaves. J coaue > solitary among

Eastern Heliotrope. PL procumbent.

S3 H. BACCIFERUM (Forsk. descrin ^\ prostrate; leaves oblong, or roui Xh, *18*) stem .fTM tescent, margins; spikes bracteatf. *J. Q* N a H ^ \ Wlth refl**ed summ- 1. p. 379. Lehm. asper p 74 " ^ of .^abia. Vfttm. *lit* V41, Corolla withavVll!:: Ay illosTM > Sp. eng. as long as the calyx ; limb white ; throat ened in the middle with a broad ring under the bifid stigma. Se«<ls contained in an umbonate 4-angled berry.

Berry-bearing Heliotrope. Shrub.

84 H. PETRARDEUM (Lour. coch. p. 103. ed. Willd. 1. p. •«) leaves ovate-lanceola labrous, opposite ; spikes crowded, terminal. Y. T of Cochinchina, among luxuriant herbs. Stems P™^ Pe, diffuse, whitish, bluntly tetragonal. Flowen reddS' T long dense spikes. Corolla campanulate, 5-cleft. Stamt's T stamens 4, about equal in length to the

corolla. Stigma bifid. Seeds 4, naked. Calyx small, 5-cleft. Perhaps a species of *Verbena.*

Tetrandrons-fiowered Heliotrope. PI. 1 foot.

N.B. In Salt's trav. *in* abys. p. 475, there are *8* species enumerated, but without any diagnosis. 1. H. cinereum, R. Br. 2. H. ellipticum, R. Br. and H. dubium, R. Br.

Cult. Several of the species of *Heliotropium,* or *Turnsole,* are valued on account of the fragrance of their blossoms, so that a few of them are to be met with in almost every collection of plants. The shrubby and perennial kinds thrive in any kind of rich, light soil ; and young cuttings of them root readily under a hand-glass. The European annual species should be treated as other hardy annuals, by sowing the seeds in the open ground : the tropical species, like other tender annuals, by being reared on a hot-bed, and afterwards planted out.

XXXVI. PIPTOCLAINA (from *TTIITTOJ, pipto,* to fall; and *kXaiva, klaina,* a cloak ; in reference to the calyx being deciduous.) Heliotropium, species of authors.

LIN. SYST. *Pentdndria, Monogynia.* Calyx tubular, 5-toothed, deciduous. Corolla salver-shaped ; throat furnished with a tooth between each of the segments. Stamens inclosed. Stigma simple. Carpels solitary, or 4, 1-celled.—Diffuse or canescent annual plants. Leaves petiolate, alternate. Flowers disposed in solitary, or twin spikes.

1 S. MALABA'RICA ; stems herbaceous, depressed ? leaves ovate, plicate, entire, clothed with hoary tomentum on both surfaces, pilose ; spikes lateral and terminal, generally solitary ; calyx large, deciduous in the fruit-bearing state. 0. H. Native of Malabar. Heliotropium Malabaricum, Retz. obs. 4. p. 24. Willd. spec. 1. p. 742. Lehm. asper. p. 48. H. Europaeum, Forsk. descr. p. 38. H. Europse'um, var. Malabaricum, Burm. ind. p. 40 ?. Plant soft to the touch. Spikes sometimes conjugate. Corolla white, longer than the calyx. Carpels rugose, glabrous. Calycine teeth short, connivent.

Malabar Piptoclaina. PI. trailing.

2 S. SUPINA ; stems herbaceous, decumbent; leaves oval, obtuse, plicate, with the margins a little reflexed, and obsoletely crenulated, hoary beneath, villous ; spikes generally solitary, seldom conjugate, usually lateral ; calyx closed, deciduous in the fruit-bearing state. ©. H. Native of Portugal, South of France, Islands of the Archipelago, Barbary, Arabia, and the Cape of Good Hope. Heliotropium supinum, Lin. spec. 187. Lehm. asper. p. 48. Gouan. hort. monsp. p. 17. t. 1. Desf. fl. atl. 1. p. 152. Sibth et Smith, fl. grsec. t. 157. Lapeyr. abr. suppl. 27. D. C. fl. fr. no. 2706. Thunb. fl. cap. prod. p. *S3,* Hoffm. et Link. fl. port. 1. p. 167. Heliotropium humifusum, flore minore, &c. Tourn. cor. p. 7. voy. 1. p. 342. t. 23.—Mor. hist. 3. sect. 11. t. 31. f. 10. Stems many from the same root, hairy, canescent. Calycine teeth linear. Corolla with a yellow tube, length of the calyx, and a short white limb ; segments of the limb reniform, intersected by teeth, which harcTly close the throat. Carpels scabrous, solitary, the other 3 being abortive.

Trailing Piptoclaina. Fl. June, July. Clt. 1640. PI. trailing.

Cult. This species of the genus being annuals, the seeds only require to be' sown on a hot-bed in spring, and about the end of May the plants should be planted out in the open border, in a"sheltered situation.

XXXVII. TIARI'DItf M (from *napa, tiara,* a Persian diadem ; and *ei£og, eidos,* like ; in reference to the form of the capsule.) Lehm. asper. p. 13. Blum, bijdr. 845.—Heliotropium species of authors.

LIN. SYST. *Pentandria, Monogynia.* Calyx 5-cleft, or 5-parted. Corolla salver-shaped; tube angular; throat coarctate, 5-rayed; segments of the limb undulated. Style very short. Stigma capitate. Carpels 4, 2-celled, mitre-formed, acuminated, cohering, closed at the base, without any manifest receptacle.—Plant with the habit of *Heliotropium.*

1 T. PNDICUM (Lehm. asper. p. 14. Blum, bijdr. p. 846.) stem herbaceous, erect, hairy ; leaves ovate-cordate, acuminated, hairy at the base; tube of corolla twice as long as the calyx. ©. H. Native of both Indies and North America, in rather dry places. Heliotropium I'ndicum, Lin. spec. 187. Swartz. obs. p. 54. Willd. spec. 1. p. 740. Willd. enum. 1. p. 174. Pursh. fl. amer. sept. 1. p. 130. Horn. hort. hafn. 1. p. 172. Michx. fl. bor. amer. 1. p. 129. Sims bot. mag. t. *1837.* Heliotropium cordifolium, Moench. meth. p. 415.—Sabb. hort. rom. 2. t. 34. —Mor. hist. *3.* sect. 11. t. 28. f. 1.—Plukn. phyt. 245. f. 4. Plant scabrous. Stem branched. Leaves running into the petioles at the base, *3* inches long, and 2 broad, subserrate. Spikes terminal, solitary, hairy, reflexed at first. Calycine segments rather unequal. Corolla with a white tube, a cream-coloured throat, and a lilac or bluish limb. In spontaneous specimens *of* this plant the leaves are nearly opposite, and the spikes terminal; but in cultivated specimens the leaves are often alternate, and the spikes conjugate. " Nuts 2-celled," ex Cham, in Linnaea.

Indian Tiaridium. Fl. June, July. Clt. 1820. PI. I to 2 feet.

2 T. ANISOPHY'LLUM ; stem branched, hardly villous ; leaves petiolate, ovate-lanceolate, glabrous, nearly entire, opposite, or alternate, unequal at the base ; spikes solitary, terminal, and axillary. ©. H. Native of Guinea, on the gold coast. Heliotropium anisophyllum, Beauv. fl. d'ow. 2. t. 94. Flowers white.

Unequal-leaved Tiaridium. Fl. June, July. Clt. 1823. PI. 1 foot.

3 T. VELUTINUM (Lehm. asper. p. 15. Blum, bijdr. 846.) stem erect, herbaceous, villous ; branches decumbent ; leaves ovate, bluntish, undulated, canescent on both surfaces, velvety ; tube of corolla a little longer than the calyx, villous outside. ©. H. Native of the East Indies. In Java this and *T. I'ndicum* are called *Bunta-tikus.* Bena-patsja, Rheed. mal. 10. p. *95.* t. 48 ?. Leaves oppos te, petiolate, obsoletely crenulated on the margins, hoary from tomentum while young, running obliquely into the petioles at the base. Spikes lateral and terminal, pilose, solitary, revolute before florescence.

Velvety Tiaridium. Fl. June, July. Clt. 1820. PI. 1 foot,

4 T. ELONGATUM (Lehm. asper. p. 18.) stem suffruticose, decumbent; leaves rhomb-lanceolate, acuminated, hairy ; tube of corolla thrice as long as the calyx, hairy outside. I?. G. Native of Brazil, in sandy places, Heliotropium elongatum, **Willd.** herb. no. 3228. Stem woody at the base, herbaceous and hairy at top. Leaves tapering into the petioles at the base, obsoletely crenulated. Spikes lateral and terminal, solitary, very long, pedunculate at first, revolute. Calycine segments incurved. Carpels 1-celled, ex Cham, in Linnaea, 4. p. 452.

Elongated-spiked Tiaridium. Shrub decumbent.

5 T. HELIOTROPIOI'DES (Cham, in Linnaea, 4. p. 453.) shrubby, beset with adpressed pili ; leaves nearly opposite and attenuate, broad, lanceolate, acute at both ends, strigose above, downy beneath ; tube of corolla exceeding the calyx. J? . G. Native of the South of Brazil, Sello. Heliotropium tiaridioides, Cham, in Linnaea, 4. p: 453. Leaves 2| to 4 inches long, and 1 to 1| broad. Spikes twin at first, terminal, bractless. Calycine segments narrow, acute. Corolla downy outside. Stigma conical. Fruit divisible into two 2-celled parts.

Heliotrope-like Tiaridium. Shrub \\ foot.

6 T. MONOSTA'CHYUM (Cham, in Linneea, 4. p. 455. under Heliotrópium) ; this species is very nearly allied to *T. heliotropioldes,* but differs in the spikes being simple and solitary, never twin ; and in the leaves not being so opposite; stem dichotomous ; strigae adpressed. T2 . S. Native of tropical Brazil. Leaves with the petioles, 4-4| inches long, and 15 lines broad. Spikes half a foot long.

One-spiked Tiaridium. Shrub \ to 1\ foot.

Cull. The three first species being annuals, the seeds of them should be sown on a hot-bed early in spring ; and the plants may be planted out in the open border, in a warm, dry, sheltered situation, about the middle of May. The rest should be treated in the manner recommended for the shrubby species of *Heliotrópium.*

XXXVIII. COLDE'NIA (named by Linnaeus in honour of Conwallades Colden, a North American botanist, who discovered many new plants; these are published in the Upsal Acts for 1743.) Lin. gen. no. 173. Schreb. gen. no. 233. Juss. gen. 130. edit. Usteri, p. 145. Lam. ill. no. 248. t. 89. Gaertn. fruct. 1. no. 424. t. 68. f. 3. Lehm. asper. p. 7.—Tiquilia, Pers. ench. 1. p. *57.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla funnel-shaped ; throat wide, naked; limb flat; segments equal. Style bifid at apex. Carpels 4, 1-celled, convex outside, coherent, closed at the base, beaked, without any manifest receptacle.—Prostrate plants, with alternate leaves, and axillary flowers.

1 C. PROCU'MBENS (Lin. fl. zeyl. p. 6'). spec. p. 182.) leaves cuneiform, petiolate, haying one of the sides shorter than the other, coarsely serrated, plicate ; flowers axillary, usually solitary ; carpels wrinkled. ©. S. Native of the East Indies. Willd. spec. 1. p. 712. Lehm. asper. p. 8. Lam. ill. t. 89.—Plukn. aim. t. 64. f. 6. Stem villous. Leaves \ to 1 inch long, beset with adpressed hairs above, except in the plicae, villous beneath. Flowers supra-axillary, sessile, white.

Procumbenl Coldenia. Fl. July, Aug. Clt. 1699. PI. procumbent.

% C. DICHÓTOMA (Lehm. asper. p. 9.) leaves lanceolate, attenuated at the base, lined, hoary; flowers crowded; carpels smooth. 1? . S. Native of Peru, in sandy places about Lima. Lithospérmum dichótomum, Ruiz, et Pav. fl. per. 2. p. 5. t. 3. f. c. Tiquilia dichótoma, Pers. ench. 1. p. 157. Plant hispid, hoary. Stems dichotomous, geniculate, hispid at top. Leaves rather plicate, pilose, with reflexed, subrepand margins. Flowers sessile, axillary, violaceous ; segments of the limb emarginate.

Dichotomous Coldenia. Shrub procumbent.

Cult. For culture and propagation see *Tiarídium* above.

XXXIX. HALGA^{X}NIA (named by Gaudichaud after Admiral Halgan, of the French navy.) Gaud, in Freyc. voy. pt. bot. p. 448. t. 59.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-cleft, regular. Corolla funnel-shaped ; tube short; segments spreading, obtuse. Stamens inclosed; anthers erect, fixed by the base, where they are cordate and cohering, drawn out each into a linear appendage at apex. Style longer than the stamens; stigma simple, obtuse. Fruit obliquely and tetragonally ovate, coriaceous, bipartible; divisions 2-celled ; cells 1-seeded ; premature seeds linear-reniform, suspended towards the middle of the inner parietes of the cell.—A branched, pilose shrub. Branches scattered. Leaves scattered, lanceolate, cuneated, a little toothed, 3-lobed at apex, and sometimes entire. Corymbs terminal, bractless. Flowers blue.

1 H. LITTORA'LIS (Gaud. 1. c. p. 449.) *fy* • G. Native of New Holland, on the western coast, along the shore in Shark's Bay.

Sea-shore Halgania. Shrub.

Cult. For culture and propagation see *Heliotrbpium,* p. 364.

XL. PRESLiE^{N}A (named after J. and C. B. Presl, of Prague, brothers, experienced naturalists.) Mart. bras. 2. p *75.* t. 164. *'

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla funnel-shaped; limb 5-cleft, with a plica between each of the segments, which are falcate and bent inwards; throat furnished with 5 fascicles of pili just above the connivent anthers. Anthers appendiculate at the base. Style from the top of the ovarium ; stigma from a conical disk. Fruit dry, divisible into 4 1-seeded parts or carpels.—A branched diffuse herb, with the habit of *Lithospermum orientdle,* clothed with simple hairs. Leaves alternate, lanceolate. Flowers axillary, solitary, on short pedicels. Corollas yellow. Perhaps *Lithospermum Orientdle* is a species of *Preslce^{K}a.*

1 P. PARADÓXA (Mart. 1. c. p. *76.)* stem much branched, diffuse, hoary and hispid; leaves narrow-lanceolate, acute. }/. G. Native of Brazil, in the province of Bahia, on the sandy banks of the river St. Francisco, near Joazeiro. Ovarium ovate. Carpels perforated at the base, fixed to the central column ? cohering.

Paradoxical Preslsea. PL diffuse.

Cult. For culture and propagation see *Heliotrópium,* p. 364.

XLI. EU'PLOCA (from *ev, eu,* well; and *TTXEKU), pleco,* to fold; in reference to the peculiar character of the corolla.) Nutt. in amer. phil. trans, n. s. 5. p. 189.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla funnel-shaped ; limb flat, plicate, 5-angled ; throat naked" Genitals inclosed. Stigma annular, bearded at apex. Carpels 4* approximate, by pairs, angular, imperforated at the base, oblique* fixed to the calyx.—Herbaceous. Leaves rough, alternate! Flowers scattered, with a plicate limb, as in *Convolvulacece.* Said by Nuttall to be allied to *Messerschmidtia* and *Argazia* but the fruit is different.

1 E. CONVOLVULA^{X}CEA (Nutt. 1. c. p. 190.) ©. H. Native of North America, on the sandy banks of the Arkansas. Stem angular, 4-6 inches high. Leaves scabrous from adpressed hairs : lower ones alternate. Flowers lateral, approximating and nearly sessile. Corolla rough, pilose outside, size of those of *Qudmoclit vulgaris.* Perhaps this plant ought to be united with *TournefSrtia Argúzia* of Siberia.

Convolvulaceous-flowered Euploca. PL \ foot

Cult. For culture and propagation see' *Tiaridium* above.

XLII. TOURNEFO'RTIA (so named by Linnaeus in memory of Joseph Pitton de Tournefort, the famous author of an elegant arrangement of plants, under the title of "Institutiones Rei Herbariae," 1694, 8vo. and 1700, in 3 vols. 4to. with figures of all the genera then known ; also author of "Corollarium Inst." &c. 1798 ; "Elémens de Botanique," 1698 ; and of the Plants about Paris," first pub-

lished in 1725.) Lin. gen. no. 192. Schreb. gen. no. 253. Gaertn. fruct. 1. p. 365. t. 7fi. Juss. gen. 129. R. Br. prod. 490. H. B. et Kunth, nov. gen'

followed rallp,l tt T , foundation of the arrangement now JuSSleuan> or Neural System.)

amer. 3. p. *78.*—Messerschmidtia species, Lin.—Pittonia, Plum, gen. 5. icon. *227.* f. *2.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla salver-shaped, or somewhat rotate, with a naked throat. Stamens inclosed. Stigma peltate, somewhat conical. Berry containing *2* nuts; nuts 2-seeded.—Twining, scandent, or erect shrubs. Leaves scabrous or tomentose, scattered, rarely by threes, petiolate. Peduncles usually terminal, rarely axillary or lateral, generally bearing many spikes, which are usually cymose. Spikes secund, revolute at top, bractless. Embryo inverted.

SECT. I. PITTONIA (see genus for derivation). H. B. et Kunth, nov. gen. 3. p. 80. Limb of corolla plicately 5-cleft. Berry more or less globose, containing *2,* 2-celled, 2-seeded nuts.

* *Species natives of America.*

1 T. CYMOSA (Lin. spec. 20g.) branches compressed, angular, glabrous ; leaves ovate, acuminated at apex, and attenuated at the base, naked, glabrous; peduncles axillary and terminal, glabrous; spikes cymose. ^ • '§. Native of Jamaica. Jacq. coll. 1. p. *96.* icon. rar. t. 31. Swartz, obs. p. *57.*—Sloane, jam. hist. *2.* p. 109. t. *212.* f. *2.* T. macrophylla, Lam. ill. p. 416. no. 1874. Poir. diet. 5. p. *356.* Pers. ench. 1. p. 165. Leaves 6 inches long, and 1-2 broad, veiny. Spikes long, pendulous. Calycine segments narrow, acute. Corolla flesh-coloured, or pale red, short, rusty or greenish-white. Berries white.

Cymose-ftowered Tournefortia. Fl. July. Clt. 1777. Shrub 8 to 10 feet.

2 T. FCETIDI'SSIMA (Lin. spec. 201. hort. cliff, p. 48.) branches angular, hairy ? leaves ovate-lanceolate ; peduncles axillary and terminal ; spikes pendulous, cymose. F2 . S. Native of Mexico, Jamaica, and other West India Islands. Willd. spec. 1. p. 792. T. cymosa, var. /3, Poir. diet. 5. p. *S36.* Pittonia raeemdsa, nicotianae foliis fcetidissimis, Plum. gen. *5.* icon. 220.—Plukn. aim. 182. Leaves 5 inches long and 2 broad, hairy on the under side, fetid when bruised. Peduncles bearing 2-3-4, or *5* pendulous spikes. Flowers dirty white, crowded. It differs principally from *T. cymosa* in the leaves being hairy or villous beneath.

Very fetid Tournefortia. Fl. July. Clt. 1739. Shrub 10 to 12 feet.

3 T. BI'COLOR (Swartz, prod. p. 40. fl. ind. occ. 1. p. 344.) branches glabrous, compressed, rather angular; leaves ovate, acuminated, glabrous, veiny, wrinkled above; peduncles terminal, glabrous; spikes erect, cymose. T? . S. Native of Jamaica, Martinico, and Guadaloupe. Willd. spec. 1. p. *793.* T. laevigata, Lam. ill. no. 1875.? Poir. diet. *5.* p. 357. Leaves rarely rather hairy above, smooth and pale beneath, 3-4 inches long. Flowers dirty white, or greenish white, crowded ; tube of corolla hairy.

Two-coloured-leaved Tournefortia. Fl. July. Clt. 1812. Shrub 5 to 6 feet.

4 T. UNDULA'TA (Ruiz, et Pav. fl. per. 2. p. 25. t. 149. f. b.) branches angular, downy ; leaves oblong-lanceolate, lined, wrinkled, rather downy, undulated ; peduncles dichotomously corymbose, lateral and terminal; spikes short, numerous, recurved. ^ . S. Native of Peru, on hills in the province of Cumana. Shrub rather downy. Corolla white, downy outside. Berry white. Nuts *cornute* at the base.

Undulated-lewed Tournefortia. Shrub 6 to 7 feet.

5 T. ANGUSTIFLORA (Ruiz, et Pav. fl. per. *2.* p. 25.) glabrous ; branches angular ; leaves ovate, unequal at the base, with an oblique acumen ; peduncles bifurcate, terminal and axillary, therefore the spikes are conjugate ; flowers somewhat pedicellate ; corollas narrow. I? . S. Native of Peru, in woods. Spikes 2 inches long, hardly recurved. Calyx small. Corolla white, very long, rather downy outside ; tube swollen at the base ; limb spreading, reflexed. Stigma nearly sessile. Anthers linear. Berry white, globose, 2-seeded. Perhaps a species *of Messerschmidtia.*

Narrow-flowered Tournefortia. Shrub 4 to 5 feet.

6 T. VIRGATA (Ruiz, et Pav. fl. per. 2. p. 25. t. 50. f. a.) stems terete, and are, as well as the branches, which are angular, hispid ; leaves ovate-oblong, acuminated, hardly petiolate, hispid; peduncles terminal, subdichotomous, cymose; spikes few ; flowers crowded. J?. S. Native of Peru, in woods. Branches attenuated. Leaves alternate, or 3 in a whorl, rather wrinkled. Corolla white.

Twiggy Tournefortia. Shrub.

7 T. MACULA'TA (Jacq. amer. p. 47. Lam. ill. no. 416. Poir. diet. 5. p. 357.) glabrous; branches twiggy, rather angular ; leaves ovate, acuminated, petiolate ; peduncles of many spikes ; spikes pendulous ; flowers few, in a single row. fj . S. Native of Carthagena, among bushes, and in hedges. Leaves 4 inches long, and 2 broad. Spikes short. Corolla yellow, with a long slender tube, and acute segments, ex Poir. Fruit yellow, with 4 roundish dark spots at the base.

Spotted-fruited Tournefortia. Shrub.

8 T. CARACCASANA (H. B. et Kunth, nov. gen. amer. 3. p. *80.)* branches terete, hairy when young, angular; leaves ovate-oblong, acuminated, narrowed at the base, strigose above, and clothed with hair-like, canescent tomentum beneath; peduncles lateral, dichotomously multifid, usually bearing 8 spikes ; calyx strigosely downy, 4 times shorter than the tube of the corolla. J?. S. Native near the town *of* Caraccas, on the banks of the river Anauco. T. acutifdlia, Willd. rel. ex Room, et Schultes, syst. 4. p. 540. Leaves 4 inches long, and 2 broad. Peduncles downy. Spikes diffuse. Segments of calyx ovate, acute. Corolla with a green, downy, angular tube, and a white, blunt limb. Stigma sessile.

Caraccas Tournefortia. Shrub.

9 T. FULIGINOSA (H. B. et Kunth, 1. c. p. 81. t. 203.) branches compressedly tetragonal, clothed with rusty tomentum ; leaves oblong, acute at both ends, wrinkled, hispid above, and clothed with rusty tomentum beneath; peduncles lateral, dichotomously tnultifid, of many spikes; calyx clothed with rusty tomentum, much shorter than the tube of the corolla; corolla also clothed with rusty tomentum ; drupes glabrous. J? . S. Native near Cumana and Bordones. T. rugosa, Willd. rel. ex Rocm. et Schultes, syst. 4. p. 540. Leaves 4-5 inches long, and 1| to 2 broad. Peduncles clothed with rusty tomentum. Spikes narrow, 4 inches long. Calycine segments ovate, acute. Limb of corolla obtuse.

Sooty Tournefortia. Shrub.

10 T. SUAVE'OLENS (H. B. et Kunth, 1. c. p. *8}.)* branches angular, hispid; leaves ovate-oblong, acute at both ends, beset with adpressed hairs above, and soft hair-like tomentum beneath ; peduncles terminal, somewhat dichotomously multifid, of many spikes; calyx, peduncles, and petioles hispid; calyx a little shorter than the tube of the corolla. *? . S. Native of Peru. Leaves canescent beneath, *3* inches long, and 1| inch broad. Spikes numerous, corymbose, short. Calycine segments linear. Corolla beset with adpressed hairs outside ; lobes ovate, acute. Fruit not seen.

Sweet-scented-Cowered Tournefortia. Shrub.

11 T. LOXE'NSIS (H. B. et Kunth, 1. c.) branches terete,

hairy; leaves ovate, acuminated, narrow at the base, strigose above, but clothed with fine tomentum beneath; peduncles terminal and lateral, dichotomous, of many spikes ; calyx and peduncles clothed with hoary tomentum; calyx one half shorter than the tube of the corolla ; drupes glabrous. J? . S. Native of Quito, in woody places between Alto de Pulla and Loxa, at the elevation of 1100 hexapods. Shrub with a very grateful scent. Leaves 3 inches long. Spikes linear. Flowers crowded, about the size of those of *Heliolropium Peruvianum.* Calycine segments ovate-oblong, acute. Corolla white, clothed with hispid tomentum outside; lobes roundish, curled. Berry 3-celled, 3-seeded.

Loxa Tournefortia. Shrub 10 to 12 *feet.*

12 T. CANE'SCENS (H. B. et Kunth, 1. c. p. 82. Willd. mss. ex Rcem. et Schultes, syst. 4. p. 540.) branches nearly terete when young, angular and villous; leaves ovate-oblong, acuminated, angular at the base, nearly sessile, strigosely villous above, but clothed with hoary tomentum beneath; peduncles terminal, dichotomously multifid, of many spikes, clothed with hoary villi; calyx hispid ; drupes glabrous. J? . S. Native near Cumana. Corolla unknown. Berry nearly globose, 4-celled; cells 1-seeded. This and the preceding species are very nearly allied to *T. polystachya,* Ruiz, et Pav., both of which are probably species of *Messerschmidtia,*

Canescent Tournefortia. Shrub.

13 T. HI'SPIDA (H. B. et Kunth, 1. c. p. 82.) branches rather angular, hispid; leaves ovate, acuminated, narrowed at the base, hispid on both surfaces, but canescent beneath; peduncles terminal, hispid, dichotomously multifid, usually of 10 spikes; calyxes hispid, much shorter than the corolla. ^ • S. Native on the shady banks of the river Magdalena, near TenerifFe. Leaves *S* inches long, and 2 broad. Spikes thick. Flowers approximate. Calycine segments roundish, obtuse. Corolla strigose outside ; lobes obtuse. Fruit unknown.

Hispid Tournefortia. Shrub.

14 T. SCA'BRIDA (H. B. et Kunth, 1. c. p. 83.) branches terete, even, clothed with adpressed hairs ; leaves oblong-elliptic, acute at both ends, scabrous above from strigae, canescent and hairy beneath, as well as the peduncles, which are terminal, dichotomous, of about 6 spikes ; calyxes and drupes strigosely pilose, T? • S. Native on the shady banks of the river Magdalena, near TenerifFe. Leaves stiif, bullated above, *S* inches long, and 20-21 lines broad.

Scabrous Tournefortia. Shrub.

15 T. CUSPIDA^TA (H. B. et Kunth, 1. c. p. 83.) branches terete, hairy; leaves oblong, acuminately cuspidate, acute at the base, pilose on both surfaces, hairy on the veins beneath ; peduncles terminal, dichotomously multifid, of many spikes, hairy. b • S. Native of Guayaquil, on the sea shore. Leaves 6£ inches long, silky and rusty while young.

Cuspidate-leaved Tournefortia. Shrub.

16 T. L^VIGA'TA (Lam. ill. p. 419. H. B. et Kunth, nov. gen. amer. 3. p. 83.) branches rather angular, and rather scabrous ; leaves ovate-elliptic, short-acuminated, rounded at the base, coriaceous, glabrous; peduncles terminal, paniculately multifid, of many spikes, beset with scattered hairs ; calyxes downy; drupes glabrous. T? . S. Native of Guadaloupe, Martinico, and on the banks of the river Magdalena, near Monpox. F. latifblia, Willd. mss, ex Rcem. et Schultes, syst. 4. p. 540. Leaves 5-6 inches long, and 3 broad. Spikes 10-12 on each peduncle, an inch long, diffuse.

Smooth Tournefortia. Shrub.

17 T. NI'TIDA (H. B. et Kunth, 1. c. p. 84.) branches angular, smooth, glabrous ; leaves somewhat elliptic, acuminated, acute at the base, coriaceous, glabrous, shining above; corymbs terminal, sessile, of many spikes ; calyx puberulous; drupes glabrous. I? • w ˢ- Native on the western declivities of the Andes of Quindiu, near Carthage, at the altitude of 500 hexapods. Leaves 4 inches long, and 2 broad.

Nitid-\eaved Tournefortia. Shrub twining.

18 T. CORNIFOLIA (H. B. et Kunth, 1. c. p. 84.) branches nearly terete, striated, beset with hairs; leaves obovate-oblong, acute, narrowed at the base, stiff, rather scabrous on both surfaces ; peduncles terminal and lateral, bifid, smoothish, with generally about 6 spikes ; calyxes rather scabrous ; drupes glabrous. T? . S. Native along with the preceding. Leaves about 3 inches long, and 1 broad.

Dogwood-leaved Tournefortia. Shrub.

19 T. LU'CIDA (Desv. herb, ex Ham. prod. p. 24.) branches twiggy, clothed with rusty tomentum; leaves ovate, acute, quite entire, shining above, and nearly glabrous beneath; flowers racemose, lateral, opposite the leaves. 1?. S. Native of the Antilles.

Shining-leaved Tournefortia. Shrub.

20 T. TERNIFOLIA (H. B. et Kunth, 1. c.) branches terete, beset with adpressed hairs; leaves 3 in a whorl, oblong, narrowed at both ends, acute, membranous, glabrous; spikes terminal, twin. T?. S. Native on the banks of the river Amazon, near Tomependa, and Jaen de Bracamoros. Leaves about *7* inches long, and 2| broad, sometimes beset with adpressed hairs on the nerves beneath. Spikes about an inch long. Flowers pedicellate. Calycine segments linear-lanceolate. Corolla strigose outside, 3 times as long as the calyx.

Tern-leaved Tournefortia. Shrub.

21 T. LEUCOPHY'LLA (H. B. et Kunth, 1. c. p. *85.)* branches terete, clothed with fuscescent tomentum ; leaves oblong-elliptic, acuminated, rounded at the base, glabrous above, and shining, but clothed with fine white tomentum beneath; peduncles terminal, dichotomously multifid, of many spikes, clothed with pale rusty tomentum ; calyxes clothed with rusty tomentum. *2 . S. Native of New Granada, near Ibague. Leaves rather membranous, 4 inches long, and nearly 2 broad. Spikes 7-8 on each peduncle, \ to 1 inch long.

White-leaved Tournefortia. Shrub.

22 T. BRASILIE'NSIS (Poir. diet. 5. p. 357.) branches terete, fuscescent, striated, with a few hairs; leaves ovate-lanceolate, subsinuated, rough on both surfaces, white beneath ; cymes short, reflexed, downy. T? . S. Native of Brazil. Leaves 2-3 inches long, and 1 broad. Calycine segments acute, a little recurved, villous.

Brazil Tournefortia. Shrub.

23 T. SUFFRUTIC6SA (Lin. spec. p. 202.) stem sufFruticose; branches downy, cinereous, twiggy ; leaves sub-lanceolate, hoary beneath ; spikes short, terminal and axillary, cymose. Jj . S. Native of Jamaica, and tropical America, near the sea. Browne, jam. p. 170. Lam. ill. no. 1880. t. 95. f. 3.—Sloane, hist. 2. p. 29. t. 162. f. 4. Leaves 2 inches long, and 1 broad, dark green above, sessile. Corollas white, twice as long as the calyx.

Suffruticose Tournefortia. Fl. June, July. Clt. 1759. Shrub 3 to 4 feet.

24 T. SCA'BRA (Lam. ill. no. 1883. Poir. diet. 5. p. 359.) branches elongated, striated, rather downy ; leaves oblong or linear-lanceolate, obtuse, reflexed, very scabrous, denticulated ; peduncles branched, terminal, scabrous, as well as the calyxes ; berry conical. I? . S. Native of St. Domingo. Leaves 1-2 inches long, and 4 lines broad, villous and wrinkled beneath. Teeth of calyx acute, spreading. Berry rufescent.

Far. ft ; leaves narrower, and very long. ^2. S. Native of St. Domingo. Leaves acute, green, acuminated, twice as long

as those of the species. Perhaps a proper species, ex Poir. 1. c.

Scabrous Tournefortia. Shrub.

25 T. MICROPHY'LLA (Desv. herb, ex Ham. prod. p. 24.) stem erect, mutic, branched, quite glabrous; leaves small, ovate, obtuse, quite entir£, almost glabrous ; flowers spicate, sub-bifid. J? . S. Native of the Antilles.

Small-leaved Tournefortia. Shrub.

26 T. SESSILIFÓLIA (Poir. diet. 5. p. 360.) stems terete, beset with stiff hairs ; leaves sessile, lanceolate, linear, villous on both surfaces ; flowers crowded, terminal. T? . G. Native of Buenos Ayres, Commerson. Leaves obtuse, half stem-clasping at the base, an inch and more long, and 3 lines broad. Peduncles divided into 2 branches, having the flowers densely glomerate on the top of each branch. Corolla tubular; limb short, dilated, obtuse. Peduncles and calyxes beset with numerous glandular pili.

Sessile-leaved Tournefortia. Shrub.

27 T. INCA'NA ; hoary, villous ; stems herbaceous ; leaves sessile, linear, with revolute edjjes. 2/. S. Native about Essequibo. Messerschmidtia incåna, Meyer, esseq. p. 92. Stems angular, woody, and rather naked at the base ; branches simple, spreading; corymbs racemose, terminal, having the branches twice bifid. Corolla hairy, coloured, funnel-shaped; throat naked. Berry corky, containing 2, 2-seeded pyrense. Said by Meyer to be the same as the preceding.

Hoary Tournefortia. PI. *h* to 1 foot.

28 T. ? FERRUGI'NEA (Lam. ill. no. 1882.) branches terete, striated, climbing a little, beset with numerous, stiff, straight, rust-coloured hairs while young, as well as the petioles and nerves ofleaves ; leaves subcordate, acute, villous beneath ; peduncles much branched, villous ; spikes short; calyx villous, scabrous. T? • ^- S. Native of St. Domingo. Leaves scabrous above, a little ciliated, deep green, 2-3 inches long, and 1 broad. Corolla short, tubular. Said to be very nearly allied to *T. volùbilis,* but is less sarmentose.

Rusty Tournefortia. Shrub climbing.

29 T. SCHIEDEAVA ; leaves elliptic-lanceolate, acuminated, attenuated at the base, glabrous ; peduncles 3-4 times dichotomous, puberulous, as well as the calyxes; tube of corolla 4 times as long as the calyx; fruit not seen. ^ • G. Native of Mexico, in the woods of Jalapa. Tourn. spec. nov. Cham, in Linnaea, 8. p. 514.

Schiede's Tournefortia. Shrub.

SO T. ? TOMENTÒSA (Mill. diet. no. 4.) stems twining; branches flexile; leaves cordate, tomentose beneath; spikes short, racemose. Tj . ^. S. Native of South America, near Carthagena. Leaves 2 inches long, and 15 lines broad, on very short petioles. Flowers small, dirty white. Berry 2-3-4-seeded. Pittònia scándens racemòsa, foliis subrotundis, subtus incanis, Plum. Perhaps a species *of Messerschmidtia.*

Tomentose Tournefortia. Shrub 10 to 12 feet, twining.

31 T. ? CARNÒSA (Mill. diet. no. 6.) leaves ovate, wrinkled, petiolate; spikes racemose, axillary. f?. S. Native about Carthagena. Pittònia frutéscens, folio carnoso hirsuto et obtuso, Plum. gen. p. 5. ? Stem and branches strong; branches pale brown. Leaves thick, 4 inches long, and 3 broad, scabrous, dark ;;reen, paler beneath. Flowers small, white. Berry containing *2-3* oblong nuts. Perhaps a species of *Misserschmidtia.*

***Fleshiy-leaved* Tournefortia. Tree 20 feet.**

**** * Species natives of the East Indies, New Holland, and Isle of France.***

***82 T.* MUTA'BILIS (Vent, choix. t. *0.)* branches roughish,** densely tomentose towards the tops; leaves ovate, lanceolate, scabrous, downy ; cymes terminal, narrow, dichotomous, downy as well as the calyxes ; lobes of corolla crenulated. \). S. Native of Java, Lahaye. Leaves 4 inches long, and 2 broad. Peduncles terminal, solitary, bifurcate. Calycine segments lanceolate, acute. Corolla greenish white, with a cylindrical tube, and obtuse limb. Berry white, containing a nut which is divided into 2, 1-seeded cells.

Changeable Tournefortia. Shrub.

33 T. SARMENTÒSA (Lam. ill. no. 1877. Poir. diet. 5. p. 835.) branches terete, striated, beset with adpressed, white hairs; leaves ovate-oblong, acute, villous, white beneath ; spikes branched, very short. J? . ^. S. Native of the Isle *of* France, Sonnerat. Leaves nearly glabrous above, but white and villous beneath, *2-3* inches long, and 1 broad. Flowers terminal, hairy. Calycine segments acute.

Sarmentose Tournefortia. Shrub climbing.

34 T. ARBORE'SCENS (Lam. ill. no. 1878. Poir. diet. 5. p. *357.)* branches angular, rough, *or* hïspid ; leaves ovate-lanceolate, attenuated at both ends, scabrous, but rather tomentose beneath while young ; peduncles rough, white ; spikes branched, very short. *fy* . S. Native *of* India, Sonnerat. Leaves 4-5 inches long, and \\ broad; petioles rather villous. Calyx divided nearly to the base, into broad, acute, firm, permanent segments. Corolla tubular, with obtuse segments.

Arborescent Tournefortia. Tree.

35 T. ARGE'NTEA (Lin. suppl. p. 133. R. Br. prod. p. 497. Blum, bijdr. 844.) erect, clothed with velvety, silky tomentum ; leaves ovate, approximate at the tops of the branches: ultimate ones obovate ; cymes decompound; corolla eampanulately rotate ; stigma sessile, semi-bifid. J? . S. ' Native of Ceylon, Java, &c, on the sea shore; Island of Carnicobar; Isle *of* France, and New Holland, within the tropic. Wall. fl. ind. 2. p. 4. Buglõssum laniigindsum, Humph, amb. 4. p. 119. t. *55.* Branches spreading, hairy. Leaves crowded in a rosulate manner at the tops of the branches, in the same way as those of *Sempervïvum Canarlense* and its allies, sessile, white on both surfaces from silky hairs. Flowers white, with a short tube and a recurved limb. This is the prettiest species of the genus.

Silvery Tournefortia. Fl. June, Nov. Clt. 1822. Shrub 5 to 6 feet.

36 T. BÍFIDA (Lam. ill. no. 417. Poir. diet. 5. p. 360.) leaves ovate, glabrous, petiolate ; peduncles axillary, bifid ; spikes divaricate. I? . S. Native of the Isle of France, Commerson. Bark cinereous, wrinkled. Leaves coriaceous, with yellowish nerves. Peduncles bearing *2* horizontal spikes. Calyx short, with 5 blunt teeth. Corolla tubular, elongated! cream-coloured.

Bifid Tournefortia. Shrub.

37 T. ORIENTALS (R. Br. prod. p. 497.) twining; leaves broad, ovate, subacuminated ; cymes dichotomous ; limb of corolla 5-cleft, with plicate sinuses; nuts cellular. T? . °\ S. Native of New Holland, within the tropic.

Eastern Tournefortia, Shrub twining.

38 T. TETRA'NDRA (Blum, bijdr. p. 843.) stem sarmentose, scabrous; leaves ovate-oblong, acuminated, quite entire, glabrous above, but rather roughish beneath; cymes terminal, dichotomous, or multifid ; flowers sccund, sessile, tetrandrous; tube of corolla tetragonal; stigma sessile, bifid. ^ . w. s! Native of Java, among bushes on the mountains, where it is called *Ojot Sisier.*

Far. ft, hirsùta (Blum. 1. c.) branches, leaves, and peduncles hairy. J? . S. Native of the Moluccas.

Tetrandrous Tournefortia. Fl. Dec. Shrub rambling.

39 T. URVILLEÁNA (Cham, et Schlecht, inLinnaea, 4. p. 465.)

twining ? branches angular, scabrous; leaves ovate, acute, oblong-lanceolate, and obovate, equal, and rounded at the base, or unequal and subcordate ; cymes bractless, many times dichotomous ; limb of corolla 5-cleft, with plicate sinuses. T? . ^. S. Native of the Island of Luçon. This species differs from *T. Orientalis* in the leaves being pilose or scabrous; from *T. tetrdndra* in the flowers being pentamerous ; and from T7. *arborescens,* Link, in the leaves being shorter and broader, and never tomentose beneath. Spikes or branches of cyme elongated, pilose. Calycine segments ovate, acute. Drupes glabrous.

Z)' *Urvillès* Tournefortia. Shrub twining ?

40 T. OVATA (Wall. cat. no. 908.) branches striated, downy; leaves ovate-elliptic, acuminated, rather strigose; cymes terminal, branched ; flowers on short pedicels, tubular. J? . S. Native of Rangoon. Very nearly allied to *Heliotrôpium viridi-Jldrum,* Lehm. ; the I7, *viridiflôrum,* Wall. ; and *Lithospermum viridiflorum*^ Roxb.

Ovate-leaved Tournefortia. Shrub.

41 T. HEYNEA^NA (Wall. cat. no. 910.) rather strigose, or nearly glabrous; leaves ovate-lanceolate or ovate, acuminated; cymes axillary, on long peduncles; flowers on short pedicels, unilateral; corollas tubular. T? , S. Native of the East Indies.

Heyne's Tournefortia. Shrub.

SECT. II. MESSERSCHMI'DTLE ANTIQUÆ. The following species have been formed by Linnaeus and others into a distinct genus. Corolla funnel-shaped; limb swollen towards the top. Berry round, depressed, girded by 5 prominent teeth in a circle, divisible into 2, 2-seeded niits.

42 T. FRUTICÔSA (R. Br. prod. p. 496. Roem. et Schultes, syst. 4. p. 539.) scabrous, branched, hairy; leaves ovate, lanceolate, petiolate ; calyx short. T? . G. Native of Teneriffe, in sterile places. Messerschmidtia fruticôsa, Lin. syst. 190. suppl. 132. Lher. stirp. 2. t. 1. Willd. spec. 1. p. 789. Desf. arbr. 1. p. 175. Hairy in every part. Spikes cymose, dichotomous, terminating the branches and stem. Corolla funnel-shaped, or salver-shaped, with a flat limb, ex Lin. Corollas white.

Shrubby Tournefortia. Fl. June, July. Clt. 1800. Shrub 5 to 6 feet.

43 T. ANGUSTIFÔLIA (R. Br. 1. c. Rcem. et Schultes, 1. c.) stems nearly glabrous ; leaves petiolate, narrow-linear-lanceolate, glabrous; spikes as in *T.fruticôsa.* T? . G. Native of the Canary Islands. Messerschmidtia angustifôlia, Lam. ill. no. 1872. Poir. suppl. 1. p. 449. Habit of *T.fruticbsa ;* but differs in the stems being nearly glabrous. Leaves scabrous on both surfaces. Flowers bluish.

Narrow-leaved Tournefortia. Fl. June, Nov. Clt. 1820. Shrub 5 to 6 feet.

44 T. TUBERCULÔSA (Cham, et Schlecht, in Linnaea, 4. p. 467.) herbaceous, erect, branched, very scabrous from strigae all over ; leaves lanceolate, sinuately undulated, acute, opaque, attenuated into the short petioles ; cymes terminal, bifid, or spikes twin; calyx small. %. G. Native of the Cape of Good Hope, at Gamka river, where it was collected by Mundt and Maire. Stems angular, a little dilated towards the ramifications. Spikes filiform, few-flowered. Calycine segments ovate, acute, callously ciliated. Corolla tubularly salver-shaped ; segments of the limb triangular, long-acuminated. Drupe nearly dry, tubercled; pyrenae tubercularly echinated on the back. Habit of a species of *Chenopôdium* or *A?triplex.* It differs from all other species in the tubercled fruit.

Tubercled-fruhed Tournefortia. PI. 2 to 3 feet ?

45 T. SIBI'RICA (Lin. spec. 202. act. petrop. 1763. p. 315. t. 11.) root creeping ; stems herbaceous, branched ; leaves sessile, ovate-oblong, hoary from tomentum ; corymbs or fascicles usually twin. %, H. Native of Dahuria, and Tauria, in gravelly places ; and of China, about Pekin,and from that to the northern limits of the empire. Messerschmidtia Argûzia, Lin. syst. p. 190. suppl. 132. mant. 42. 334. hort. ups. p. *SQ.* Argûzia montâna, Amm. ruth. *38.* Corolla white, funnel-shaped, with a naked throat. Calyx shorter than the tube of the corolla. " Corollas larger than those of *T.fruticôsa,* with a plicate limb, and membranous sides," ex Lin.

Siberian Tournefortia. Fl. June, Oct. Clt. 1780. PI. -1 to 1 foot.

SECT. III. HELIOTROPIOI^DE». The species contained in this section have been referred by authors to *Heliotrdpium,* from their habit, but they have nothing peculiar in character.

46 T. GNAPHALTOÏDES (R. Br. prod. p. 496.) frutescent; the whole plant white from tomentum; leaves linear, obtuse; peduncles terminal; spikes bifid or twin, short, f? . S. Native of Barbadoes, Jamaica, Grand Cayman Island, &c, by the sea side. Heliotrôpium gnaphalioides, Lin. spec. 189. Jacq. amer. p. 25. t. 173. f. 11. pict. t. 264. f. 97.—Mor. hist. 3. sect. 11. t. 28. f. 6.—Plukn. aim. 182. t. 193. f. 3. Shrub erect. Leaves crowded at the tops of the branches. Spikes secund, usually bifid. Corolla white, small.

Gnaphalium-like Tournefortia. Fl. July, Sept. Clt. 1824. Shrub 1 to 2 feet.

47 T. MICROSTA^CHYA (Roem. et Schultes, syst. 4. p. *538.)* stems herbaceous, procumbent; leaves ovate-oblong, flat, downy, hoary beneath ; lateral spikes nearly sessile ; terminal ones pedunculate, usually by fours, short. ©. H Native of Peru, in arid places about Tarma. Heliotrôpium microstâxhyum, Ruiz, et Pav. fl. per, 2. p. 3. t. 110. f. b. Lehm. asper. 40. Stems angular, downy. Calyx pilose, with lanceolate, acute, equal segments. Leaves petiolate. Corollas small, white, Berry containing 2 2-celled, 2-seeded nuts, as in the oiher species.

Small-spiked Tournefortia. PI. procumbent.

48 T. SYNZYSTA'CHYA (Rcem. et Schultes, syst. 4. p. 539.) plant herbaceous, procumbent; branches angularly furrowed ; leaves opposite and alternate, ovate, wrinkled, pilose; lateral spikes solitary, very long : terminal ones twin, shorter. ©. S. Native of Peru, in fields about Lima. Heliotrôpium synzyst^-chyum, Ruiz, et Pav. fl. per. 2. p. 3. no. 6. t. 109. f. a. b. ? Plant villous. Leaves petiolate. Spikes 2-3 inches long: terminal ones 1-2 inches. Calycine segments linear, acute. Corolla funnel-shaped, white ; tube longer than the calyx, villous inside above. Fruit as in the preceding species.

Twin-spiked Tournefortia. PI. procumbent.

f *Species hardly known.*

49 T. RUFE'SCENS (Willd. rel. in Roem. et Schultes, syst. 4. p. 541.) leaves ovate-oblong, rugosely veined, clothed with rufous tomentum beneath. J? . S. Native of South America. Humb. et Bonpl.

Rufescent Tournefortia. Shrub.

50 T. GLA'BRA (Aubl. guiana. 1. p. 118.) much branched, glabrous; berries white. P? . S. Plum. mss. t. 6. f. *53.* ex Vittm. summ. pi, 1. p. 402. ?

Glabrous Tournefortia. Shrub.

N.B. What are *Tournefortia lucida,* and *T. angulôsa,* Desf. tabl. de l'Ecole de bot. 1815. p. 85. ?

Cult. None of the species of *Tournefortia* are worth cultivating for ornament; therefore the species are only to be seen

in botanical gardens. They are of the most easy culture, and are readily increased by cuttings under a hand-glass, in heat. *T. Sibirica,* being a rare, nearly hardy plant, should be grown in a pot, and placed among other alpine plants.

XLIII. MESSERSCHMI'DTIA (in honour of Daniel Gottlieb Messerschmidt, a traveller in Siberia.) Roem. et Schultes, syst. 4. p. li. and p. 541.—Tournefórtia species of authors.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla funnel-shaped; throat naked, swollen; segments of the limb usually subulate. Stigma conical. Berry 4-lobed, containing 4 1-seeded nuts, but often fewer by abortion.—Shrubs with the habit of *Tournefórtia.* This genus is principally distinguished from *Tournefórtia* by the berry containing 4 1-seeded nuts, instead of *2* 2-seeded nuts. Berries generally white.

§ 1. ***Segments of corolla linear-subulate. Berry 4-lobed; each lobe containing a \-celled, I-seeded nut. Embryo arched, with the cotyledons at the back of the cell, and the radicle in the front.—Twining shrubs.***

1 M. VOLU'BILIS (Roem. et Schultes, syst. 4. p. 841.) branches strigose; leaves ovate, acuminated, nearly glabrous ; petioles and peduncles hairy ; cymes terminal; spikes much branched ; berries hairy ; segments of corolla subulate. I2 . ^. S. Native of Jamaica, St. Thomas, and Mexico. Tournefórtia volúbilis, Lin. spec. p. 201. Willd. enum. 1. p. 188. Lam. ill. t. 95. f. 2. Tourn. microphýlla, Bert, in Spreng. syst. 1. p. 644.—Sloane, hist. 1. p. 234. t. 143. f. 2.—Plúkn. aim. *389.* t. *235.* f- 6. Branches weak, rufescent. Leaves an inch long, and 3-4 lines broad. Peduncles downy. Corollas greenish-yellow.

Twining Messerschmidtia. Fl. July, Aug. Clt. 1739. Shrub tw.

2 M. SCA'NDENS (Roem. et Schultes, 1. c. p. 542.) glabrous ; leaves ovate-oblong, acuminated, reflexed ; calyx campanulate, 5-toothed ; segments of corolla subulate. T? . w. S. Native of Peru, in groves. Tournefórtia scándens, Willd. enum. 1. p. 188. Tournefortia volúbilis, Ruiz, et Pav. fl. per. 2. p. 24. t. 148. Tourn. Peruviana, Poir. suppl. 4. p. 425. Flowers greenish-yellow, or whitish, corymbosely dichotomous. Very nearly allied to the preceding, but is 4 times the size in all its parts.

Climbing Messerschmidtia. Fl. July, Aug. Clt. 1816. Shrub climbing.

3 M. PANICULA'TA; branches obsoletely angled, downy at top ; leaves ovate, rounded at the base, acuminated and acute at the apex, rather downy on both surfaces ; panicles terminal, large, bractless, pyramidal, erect, decompound. h_c. S. Native of tropical Brazil, Sello. Tournefórtia paniculáta, Cham, et Schlecht, in Linnaea, 4. p. 468. This species differs from *M. scdndens* in its downiness; in the pyrenae being 1-seeded; and in the ample panicle. Calyxes downy and ciliated, acute.

Panicled-fiowered Messerschmidtia. Shrub erect ?

4 M. SUBSE'SSILIS (Cham, in Linnaea, 8. p. 118. under *Tournefórtia)* branches obsoletely angular, or nearly terete ; leaves on short petioles, roundish or long, ovate, subcordate, acutely acuminated, glabrous and smooth above, and inconspicuously strigose beneath, with reflexed edges ; panicles clothed with rufescent, velvety strigae, composed of short, dense-flowered spikes ; calyxes sessile, somewhat immersed in the dilated rachis. *h* . ^. ? S. Native of Brazil, Sello. Nearly allied to *M. pan'culdta* and *M. scdndens.* Branches strigose at top. Calycine segments narrow, acute. Drupe glabrous ; one or two of the pyrenae usually abortive.

Subsessile-fiowered Messerschmidtia. Shrub twining ?

5 M. SERI'CEA (Roem. et Schultes, 1. c.) branches cinereous from villi at top ; leaves ovate-lanceolate, clothed with silky tomentum beneath ; spikes lateral and terminal, dichotomous, panicled; segments of corolla setaceous. *V>* • w S. Native of the Islands of Mont Serrat, St. Domingo and Jamaica. Tournefórtia sericea, Vahl, eclog. 1. p. 17. Willd. spec. 1. p. 749. Tourn. incána, Lam., and Tourn. canéscens, Willd. ex herb. Balb.—Frútex Marcgr. hist. p. *78.* Habit of *M. volúbilis.* Leaves l£ inch long, acute, glabrous above. Peduncles villous. Corollas small, villous outside.

Silky Messerschmidtia. Shrub climbing.

6 M. SYRINGJEFÒLIA (Roem. et Schultes, 1. c.) branches, petioles, ribs of leaves on both surfaces, veins beneath, and peduncles villous ; leaves subcordate-ovate, acuminated, glabrous, except the nerves and veins; peduncles terminal, many times forked ; spikes downy ; segments of the corolla very narrow, somewhat setaceous. *V>* . S. Native of Cayenne. Tournefórtia syringaefdlia, Vahl, symb. *2.* p. *23.* Willd. spec. 1. p.* 792. Leaves 2 inches long, almost like those of *Syringa vulgáris.* Corolla villous outside.

Lilac-leaved Messerschmidtia. Shrub climbing ? or erect ?

7 M. PSILOSTA'CHYA ; twining; branches terete, glabrous, but while young downy; leaves oblong, acuminated, acute at the base, strigose on both surfaces ; peduncles terminal, usually of 5 spikes; calyx strigosely downy, one half shorter than the tube of the corolla ; segments of corolla subulate. **? . rs.* S. Native on the shores of the Pacific, near the Port of Guayaquil. Tournefórtia psilostáchya, H. B. et Kunth, nov. gen. amer. 3. p. *78.* Tourn. tristáchya, Willd. herb. no. 3433. Leaves *2* or *2* inches long, and 1 broad. Peduncles downy. Spikes filiform, 1 to li inch long. Corolla downy outside, with an inflated throat; stigma subconical.

Naked-spiked Messerschmidtia. Shrub twining.

8 M. FLORIBU'NDA ; scandent; branches terete, clothed with hoary tomentum ; leaves ovate-oblong, acuminated, rounded at the base, clothed with fine pubescence above, and hoary tomentum beneath ; peduncles lateral, dichotomously multifid, of many spikes; calyx tomentose, one half shorter than the tube of the corolla ; segments of the corolla linear-subulate : berries glabrous. ^. <J, S. Native of New Andalusia, near Cumana and Cumanacoa ; also of Brazil. Tournefortia floribunda, H. B. et Kunth, nov. gen. amer. 3. p. *79.* Willd. herb. no. 3434. Peduncles tomentose, bearing 20-24 filiform spikes, which are 3-4 inches long. Calycine segments ovate-lanceolate, acuminately subulate. Corolla downy outside.

Bundle-flowered Messerschmidtia. Clt. 1828. Shrub climbing.

9 M. VELUTINA; scandent, clothed with hoary tomentum all over ; branches terete ; leaves ovate-oblong, acuminated, rounded at the base, white beneath; peduncles terminal, dichotomously panicled, *of* many spikes; calyx villous, twice shorter than the tube of the corolla ; berries hispid. J? . ^. S. Native of Mexico, near Acapulco. Tournefórtia velutina, H. B. et Kunth, nov. gen. amer. 3. p. 79. t. 201. Leaves about 3 inches long, with an obtuse acumen. Spikes about 10 on each peduncle, filiform, about 3 inches long. This is a very elegant species.

Velvety Messerschmidtia. Shrub climbing.

10 M. PUNCTA'TA (Spreng. new entd. 3. p. 2.) stem scandent; leaves oblong, attenuated at both ends, ciliated, beset with white dots above, but smootli beneath ; spikes panicled, axillary, dichotomous. 1?. ^. S. Native of Martinico. Tournefórtia punctáta, Spreng. syst. 1. p. 643. Tourn. scándens, Sieb. mart. no. *63.* Lobes of corolla unknown. Perhaps the same **as** ***Af, psilosttichya.***

Dotted-\es.ved Messerschmidtia. Shrub climbing.

11 M. UMBELLATA ; young branches angular, downy ; leaves lanceolate-oblong, acute, narrowed at the base, undulated, beset with fine strigae on both surfaces ; peduncles terminal, of about 7 spikes; spikes subumbellate ; calyxes downy, about equal in length to the tube of the corolla; segments of corolla linear, revolute. T? • *KJ'* S. Native of Mexico, near Campeaehy, along the shore. Tournefórtia umbellata, H. B. et Kunth, nov. gen, amer. 3. p. 79. Leaves 2-4 inches long. Peduncles downy. Spikes linear, *2-3* inches long, spreading. Calycine segments linear-lanceolate.

Umbellate-spiked Messerschmidtia. Shrub climbing.

12 M. LAURIFOLIA (Rcem. et Schultes, syst. 4. p. 543.) twining, glabrous; branches terete ; leaves ovate-oblong, acute, repand, glabrous; petioles geniculated ; peduncles terminal, bifurcate ; spikes cymose; calyx glabrous, twice shorter than the tube of the corolla ; segments of the corolla ovate, elongated at top, very acute. T? . ^ S. Native of Porto Rico, and the Island of St. Thomas. Tournefórtia laurifólia, Vent, choix, t. *2.* Poir. suppl. 4. p. 425. Leaves deep green above, but paler beneath, finely dotted, 4-6 inches long and % broad. Flowers pale yellow. Calycine segments very acute. Hairs on the corolla manifest. Berry glabrous, 4-furrowed.

Laurel-leaved Messerschmidtia. Fl. July. Clt. 1819. Shrub twining.

13 M. MILLE'RI (Rcem. et Schultes, syst. 4. p. 544.) twining ; leaves cordate, hairy ; spikes racemose, reflexed. J?. ^\ S. Native of Jamaica. Tournefórtia scándens, Mill. diet. no. 4. Poir. diet. 5. p. 360. Pittónia scandens racemdsa, flore fusco, Houst. mss. Leaves rather thin, 3 inches long, and 1^ broad, acute, on short petioles. Spikes slender. Flowers dirty brown. Berry small, fleshy, containing 4 1-seeded nuts.

Miller's Messerschmidtia. Shrub twining.

14 M. E'LEGANS ; leaves petiolate, from ovate-elliptic to lanceolate, attenuated at both ends, long-acuminated, downy from short scattered hairs on both surfaces ; panicles terminal, with cymose branches; lower cymes generally bifid ; the common peduncles furnished with a leaf; limb of corolla 5-cleft, expanded. T? . S. Native of Brazil, Sello. Tournefórtia élegans, Cham, et Schlecht, in Linnaea, 4. p. 469. and 8. p. 118. Branches obsoletely angular, downy at top. Calyx minute, with narrow, acute, pilose, and erectly ciliated segments. Corolla tubularly salver-shaped, downy outside, with a slender tube and expanded segments, which are narrow-acute, from a broader base; having the sinuses intraplicate. Anthers a little exserted. Drupe 4-sided, depressed ; pyrenae spheroid, chartaceous, 1-seeded.

Elegant Messerschmidtia. Shrub.

15 M. PILIÓCHROS ; stem scandent ; leaves lanceolate, petiolate, rather villous above, and clothed with white wool beneath ; spikes terminal, dichotomously panicled, divaricate ; fruit scabroils. 1? . ^. S. Native of Jamaica. Tournefórtia piliochros, Spreng. syst. 1. p. 644. Flowers white ?

Yellow-haired Messerschmidtia. Shrub climbing.

16 M. TOMENTÓSA ; stem twining; leaves cordate, oblong, green above, and very soft, but clothed with white stellate tomentum beneath ; spikes short, dichotomous, divaricate, tomentose. *2 ,^\ S. Native of America, about Carthagena. Tournefórtia tomentosa, Mill. diet. no. 4. Leaves *2* inches long. Flowers small, dirty white ; lobes of corolla unknown. Berry containing 2-3, but usually 4 nuts.

Tomentose Messerschmidtia. Shrub twining.

17 M.CORYMBÓSA; stem scandent; leaves oblong, attenuated at both ends, veiny, glabrous ; spikes paniculately corymbose, coarctate, elongated, many-flowered ; tube of corolla elongated : segments of the limb acuminated. T?. ^. S. Native of tropical America. Tournefórtia corymbdsa, Willd. rel. ex Rcem. et Schultes, syst. 4. p. 540. Spreng. syst. 1. p. 644.

Corymbose Messerschmidtia. Shrub climbing.

18 M. FERRUGI'NEA ; stem twining a little ; leaves subcordate, ovate, acuminated, acute, entire, thickish, rather villous on both surfaces, green above; spikes terminal, branched, corymbose, clothed with rusty villi: branches short; corolla short, tubular: segments unknown. ^ . ^\ S. Native of St. Domingo. Tournefórtia ferruginea, Lam. ill. no. 1882. Branches terete, striated, beset with rusty stiff hairs. Leaves *2-3* inches long, and an inch broad. Peduncles much branched, villous; spikes short. Flowers unilateral. Calyx scabrous, villous.

Rusty Messerschmidtia. Shrub twining.

§ *2. Segments of the corolla short. Berry even, roundish, containing* 4 \-*celled,* 1 -*seeded nuts. Embryo straight, with a superior radicle. Erect trees or shrubs.*

19 M. HIRSUTI'SSIMA (Rcem. et Schultes, syst. 4. p. 541.) branches terete, hispid ; leaves ovate-oblong, acuminated, narrow at the base, hispid above, strigosely pubescent beneath ; peduncles terminal and axillary, dichotomous, of many spikes ; calyx one half shorter than the tube of the corolla, and are, as well as the berries, hispid ; limb of corolla plicate, having the segments short, ovate, and acute. ^ . S. Native *of* America, especially near Cumana and Bordones ; and of the Island *of* St. Thomas. Tournefórtia hirsutissima, Swartz, obs. p. *56.* Willd. spec. 1. p. 791. H. B. et Kunth, nov. gen. amer. 3. p. 80. Tourn. corymbósa, Sieb. pi. trin. no. 439. Cordia pellita, Willd. rel. ex Rcem. et Schultes, syst. 4. p. 800. Ehretia cymósa, Willd. herb. no. 4529. Pittonia hirsutissima et ramosissima, baccis albis, Plum. gen. 5. icon. 209. Heliotropii flore frutex baccifer ramosus, folio rugoso fcetido, &c. Sloane, jam. 173. hist. 2. p. 108. t. 212. f. 1. Leaves about 4 inches long. Peduncles hispid. Spikes linear, diffuse. ^ Berry 4-celled, bipartible ; cells 1-seeded," ex Kunth, 1. c. " Ovate, containing 4 1-seeded nuts," ex R. Br. prod. p. 496. Embryo straight, with a superior radicle.

Var. /3, minus (Lam. ill. no. 1873.) smaller, hairy; spikes shorter. J? • $. Native of South America. Stems nearly terete. Leaves pale green, nearly glabrous; fruit roundish, containing 4 oval-oblong nuts.

Very haïry Messerschmidtia. Fl. May, July. Clt. 1818. Tree 10 to 20 feet.

20 M. POLYSTA^CHYA (Rcem. et Schultes, syst. 4. p. 542.) branches angular, compressed while young ; leaves ovate, acute, wrinkled, hairy; peduncles terminal and lateral, corymbosely dichotomous, composed of loose spikes, f? • S. Native of Peru. Tournefórtia polystachya, Ruiz, et Pav. fl. per. 2. p. 24. t. 149. f. a. Leaves 4-5 inches long, and 3 broad. Corollas white ; tube green, exceeding the calyx. Berry white, containing 4 1-seeded nuts.

Many-spiked Messerschmidtia. Shrub.

21 M. LONGIFOLIA (Rcem. et Schultes, syst. 4. p. 543.) branches angular, channelled ; leaves oblong-lanceolate, oblique, very veiny, with subrevolute edges ; peduncles corymbose, terminal ; spikes few-flowered. J? . S. Native of Peru, in woods. Tournefórtia longifólia, Ruiz, et Pav. fl. per. 2. p. 25. t. 150. f. b. Shrub glabrous, very like in habit a large species *of Symphytum.* Leaves a foot long. Berry containing 4 trigonal nuts.

Long-leaved Messerschmidtia. Shrub or tree.

f *Species doubtful or hardly known.'*

22 M. ? MONTÀNA (Lour. coch. p. 122. ed. Willd. 1. p. 150. under *Tournefórtia)* branches scandent, hairy; leaves ovate-lanceolate, wrinkled, glabrous ; spikes nearly simple, recurved, terminal. \> . *KJ.* G. Native of Cochinchina, in mountain woods. Leaves incurved, reflexed, on short petioles. Flowers pedicellate. Corolla white; tube urceolate at the base ; limb acutely 5-cleft. Anthers and stigma sessile. Berry inversely pear-shaped, 2-celled, 2-seeded, imperforated at top.

Mountain Messerschmidtia. Shrub climbing.

23 M. ? ROSMARINIFÓLIA (Willd. herb, ex Roem. et Schultes, syst. 4. p, 844.) stem branched, herbaceous, hispid from villi; leaves sessile, linear, with revolute edges; corollas funnel-shaped. 1/. F. Native of Siberia, Pallas. Lower leaves alternate : superior ones opposite: uppermost ones aggregate, pilose above, and clothed with white villi beneath. Cymes terminal, few-flowered. Calyx one half shorter than the corolla; calycine segments acute, villous. Tube of corolla downy; limb 5-parted, spreading. Fruit elliptic, globose, woody, striated, tomentose, 2-celled.

Rosemary-leaved Messerschmidtia. PI. \ foot.

21 M. MINOR ; stem erect; leaves lanceolate-linear, obtuse, scabrous; spikes bifid, few-flowered. T? . S. Native of Jamaica. Tournefórtia minùta, Bertero, ex Spreng. syst. 1. p. 644.

Smaller Messerschmidtia. Shrub small.

Cult, For culture and propagation see *Tournefortia,* p. *369.*

XLIV. CAN A'LA (named in honour of Joseph Count Malabaila de Canal, Chamberlain, and one of the Privy Council *to* the King of Bavaria, a promoter of botany.) Pohl, pi. bras. 2. p. 62.

LIN. SYST. *Pentdndria, Monogy'nia.* Calyx 5-parted. Corolla tubularly ventricose, 5-toothed, constricted at the base into a short tube. StJTmens inclosed ; anthers sagittate. Style inclosed ; stigma capitate, warted. Nuts 2, combined, stony, roundish. Seeds 4 in each cell.—Small shrubs. Leaves ovate or oblong, opposite, entire. Spikes axillary and terminal, unilateral, revolute at apex, bracteate. Flowers beautiful pure red or scarlet. The species have the habit of *Spigèlia.*

1 C. HELIOTROPIOI'DES (Pohl, pi. bras. 2. p. 63. t. 142.) leaves ovate, beset with stellate hairs above, and yellowish tomentum beneath; corolla 5-toothed ; calyx beset with stellate **hairs. J? . S. Native of Brazil, in the province of Minas Geraes, in fields about Villa St. Joao d'el Rey. Flowers large, scarlet.**

Turnsole-like* Canala. PI. 2 *feet.

***2* C. MACROCA'RPA (Pohl, 1. c. p. 64.) leaves oblong, acute, glabrous above, and rather pilose beneath ; corolla 5-toothed; calyxes pilose, f? . S. Native of Brazil, about Rio Janeiro.**

***Large-fruited* Canala. Shrub 2 feet.**

3 C. RUBLEFÓLIA (Pohl, 1. c. p. *65.)* leaves twin: superior ones 4 in a whorl, lanceolate, acuminated, and are, as well as the calyxes, glabrous; corolla 5-toothed. J?. S. Native of Brazil, in the province of Goyaz, on Mount Clara, and on Serra de Cristaes.

***Rubia-leaved* Canala. Shrub 2 feet ?**

***Cult.* For culture and propagation see *Tournefortia,* p. *369.* All the species are extremely elegant when in blossom.**

Additional Borageineous plants.

1 MERTE'NSIA AĹPINA ; smoothish ; stem simple, assurgent; leaves ovate-spatulate : lower ones acute : superior ones acuminated, rather pilose above, minutely ciliated on the margins ; flowers in terminal fascicles, on short pedicels; corolla hardly twice as long as the calyx ; calycine segments oblong, bluntish, ciliated. 1£. H. Native of the Rocky Mountains. Pulmonària alpina, Torrey, in ann. lye. 2. p. 224. Corolla sub-campanulate, with 5 minute scales in the throat; border 5-lobed; lobes obtuse. Stamens inclosed ; anthers linear-oblong. This species is said *to* be nearly allied to *M. parviflòra.*

Alpine Mertensia. PI. J foot assurgent.

2 MERTE'NSIA CILIA'TA f glabrous, erect? leaves ovate-lanceolate, attenuated at both ends, with ciliated margins ; flowers fasciculately-panicled, pedicellate; corolla tubularly campanulate; calyx short, 5-parted, with ovate-obtuse segments. %. H. Native of the Rocky Mountains, in the crevices of rocks along streams. Pulmonària ciliàta, James, cat. ex Torrey, ann. lye. 2. p. 224. Stems smooth, simple. Leaves dotted above. Corolla blue ; border erect, 5-lobed ; tube slightly ventricose ; throat partially closed by 5 yellowish protuberances. Stamens inclosed ; anthers linear. Allied to *M. paniculata.*

Ciliated-leaved Mertensia. PI. 1 foot.

3 MERTE'NSIA OBLONGIFÓLIA ; smooth ; stem simple, erect; leaves lanceolate-oblong, bluntish : superior ones acute; flowers panicled, pedicellate ; calyx short, with linear, acute, ciliated segments; corolla tubularly campanulate. 1/. H. Native of North America, towards the sources of the Columbia river. Pulmonària oblongifólia, Nutt. in journ. acad. nat. sc. phil. 7. p. 43. Leaves all more or less pubescent above : upper ones sessile. Panicle formed of axillary approximate clusters of flowers. Corolla bright blue, similar to those of *M. Virgmica,* except in size ; the lobes obtuse.

Oblong-leaved Mertensia. PI. \ to f foot.

4 BA'TSCHIA PILÓSA ; simple, pilosely hairy ; leaves linear, acuminated, sessile, approximate ; flowers fascicled, sessile, small, yellow ; segments of the corolla oblong, entire. %. H. Native of North America, at Flat Head river. Lithospérmum pildsum, Nutt. in journ. acad. nat. sc. phil. 7. p. 43. Leaves almost hoary, strigosely pubescent. The flowers sessile, and similar to other species of the genus. Stem clothed with brown scales at the base, which gradually become the leaves as they ascend the stem.

Pilose Puccoon. PI. \ to § foot.

5 BA'TSCHIA TORRE'YI ; plant strigosely hispid ; leaves oblong-linear, bluntish, scattered ; stem dwarf, branched ; fascicles terminal, few-flowered ; lobes of corolla oblong, entire. %. H. **Native of North America, at Flat Head river; and of the Rocky Mountains. Lithospermum decumbens, Torrey, in ann. lye. 2. p. 225, but not of Nutt. Lithospermum Torreyi, Nutt. 1. C Stem a span high, without any brown scales. Leaves less crowded than in the preceding ; the stem at length branched, and not near so hairy. Segments of the calyx linear, a little shorter than the tube of the corolla.**

***Torrey's* Batschia. PI. \ to f foot.**

6 N6NEA SÓRDIDA (Fisch. et Meyer, sem. cat. hort. petrop. 1836. p. 43.) annual, diffuse, clothed with glandular down, intermixed with stiff strigae or bristles; leaves lanceolate, acute, a little toothed; tube of corolla 3 times shorter than the calyx, and hardly longer than the campanulate limb ; carpels downy, depressed, sub-plicate at the base, and entire. ©. H. Native of the eastern shore of the Caspian Sea. Very nearly allied to *N. picta.* Corolla dirty, yellowish-red.

Dirty-flowered Nonea, " Fl. ? Clt. 1836. PI. diffuse.

7 MYOSÒTIS CALÍFORNICA (Fisch. et Meyer, sem. cat. hort. petrop. 1836. p. 42.) annual, strigose, much branched, procumbent ; leaves linear, acute, ciliated ; racemes elongated, leafy at

the base ; pedicels very short; calyxes rather longer than the corolla, spreading in the fruit-bearing state ; carpels wrinkled. ©. H. Native of New California, about the Russian colony, Ross. Corolla white, with 10 yellow glands at the throat; segments of the limb roundish, hardly emarginate. Very nearly allied to *M. Chorisiana,* Cham. ; but differs in the flowers being nearly sessile.

Californian Scorpion-grass. Fl. ? Clt. 1836. PL \ foot.

8 MYOSOTIS suFFRUTicdsA (Torrey, in ann. lye. *2.* p. *225.)* stem sufFruticose, much branched, hairy ; leaves linear-lanceolate, hispidly pilose; spikes terminal, numerous ; flowers pedicellate ; calyxes closed ; nuts smooth, depressed. ^ • H. Native of North America, in barren deserts along the river Platte. Flowers unilateral, on short pedicels. Corolla as large as that of *M. palustris,* blue, salver-shaped ; lobes obtuse, entire. This is the only frutescent species.

Suffruticose Scorpion Grass. Shrub -| to § foot.

9 ECHINOSPE'RMUM LEIOCA'RPUM (Fisch. et Meyer, cat. sem. hort. petrop. 1836. p. *36.)* annual, branched, diffuse, rather hoary from erectly spreading hairs; leaves rather linear, obtuse; racemes leafy ; fructiferous calyx closed ; carpels unarmed, very smooth. ©. H. Native of New California, about the Russian colony, Ross. Flowers minute, white, with small yellow scales in the throat. This species differs from others in habit, and the closed calyx and smooth carpels.

Smooth-fruited Echinospermum. Fl. ? Clt. 1836. PL | foot.

10 ECHINOSPE'RMUM SZOVITSIA'NUM (Fisch. et Meyer, sem. cat. hort. petrop. 1836. p. *36.)* annual, hairy from spreading pili; leaves linear-lanceolate ; racemes leafy ; calyxes oblique, spreading while bearing the fruit, shorter than the spreading thickened pedicels ; corollas length of calyx ; carpels tubercled on the disk and sides, and furnished with a single row of glochidate prickles along the margins, which are dilated at the base, and often connate. ©. H. Native of the North of Persia, on the edges of fields. Very nearly allied to *E. minimum;* but the prickles on the fruit are fewer, a little shorter, broader at the base, and often connate.

Szovits's Echinospermum. FL ? Clt. 1836. PL \ foot.

11 ECHINOSPE'RMUM PA'TENS ; strigosely pilose ; leaves oblong-linear, bluntish ; stem simple, nearly naked; floriferous branches spreading ; flowers pedicellate, loose. %. H. Native of North America, at Flat Head river. Rochelia patens, Nutt. in journ. acad. nat. sc. phil. 7. p. 43. Radical leaves on long petioles ; those of the stem remote and sessile. Flowers in all respects almost similar to those of *Myosotis scorpioides ;* rather large, and apparently red. Calycine segments small, linear, obtuse. Nuts wrinkled.

Spreading Echinospermum. PL ?

LV. P
ve£ and *Tf* P[IOB] ° —M— -Aa.o[Ct] *plagios,* trans- *ZL and S°eP^ve> hd?S,* 3 P,t; in reference to the pits at Fit h^ \°lr Carpels being transve> and not longitudinal.) tisch. et Meyer, cat. sem. hort. petrop. 1836. p. 46.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corona tunnel-shaped; throat closed by 5 inclosed plica: Stamens inclosed. Stigma capitate, 2-lobed. Carpels 4, distinct nearly ovate, 1-celled ; having the insertion of the areola lateral pertorated; receptacle elevated, hemispherical. This genus is d^t,ng Ulshed *from Lithospirmum* in the carpels being perforated and the receptacle elevated ; from *Anchusa* and *Myosotis,* in the lateral in tacle anT ^ tlle areola; as well as in the elated r. pels K« T *Cynogtissum* and *Echinospermum,* in the carrying perforated.

1 P. RUFE'SCENS (Fisch. et Meyer. 1. c.) ©. H. Native of Chili.—An annual herb, with the habit of *Lithospermum arvense* beset with spreading simple hairs. Leaves scattered, nearly linear, bluntish. Racemes terminal, conjugate, almost leafless. Flowers almost sessile, erect. Calyx beset with rufous hairs, conniving while bearing the fruit. Corolla white. Carpels very like those of *E^Kchium,* rugose, tubercled, marked by a lateral circular areola. Cotyledons flat, nearly orbicular, undivided.

Rufescent Plagiobothrys. FL ? Clt. 1836. PL 1 foot.

Cult. For culture and propagation see *Amsinckia,* below.

XLVI. CRYPTANTHA (from *KQVKTOQ, cryptos,* hidden ; and *avdog, anthos,* a flower.) Lehm. sem. hort. hamb. 1S32.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-cleft, with ovate or lanceolate segments. Corolla funnel-shaped, shorter than the calyx ; throat naked ? Stamens inclosed. Carpels 4, 1-seeded, tubercled or nearly smooth, fixed to the bottom of the calyx, imperforated at the base ?—Annual plants, with the habit of *Echinospermum.*

1 C. GLOMERA'TA (Lehm. ex Fisch. et Meyer, sem. cat. hort. petrop. 1836. p. 35.) leaves ovate-lanceolate, bluntish ; calycine segments ovate ; carpels obsoletely tubercled, or nearly smooth. ©. H. Native of Chili. Leaves pale green, broader than those of *C. microcdrpa.*

Glomerate-flowered Cryptantha. FL ? Clt. 1836. PL

2 C. MICROCA'RPA (Fisch. et Meyer, 1. c. p. 35.) leaves lanceolate, acute ; calycine segments linear-lanceolate ; carpels rough from acute tubercles. ©. H. Native of Chili. Lithospermum clandestinum, Trev. Echinospermum cynoglossoides, Hort, but not of Lehm. Herb glaucescent. Carpels minute.

Small-fruited Cryptantha. FL ? Clt. 1836. PL \ foot.

Cult. For culture and propagation see *Amsinckia,* below.

XLVII. AMSI'NCKIA (meaning unknown to us.) Lehm. defect, sem. hort. hamb. 1831-2.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted ; segments linear, gibbous. Corolla funnel-shaped ; segments of the limb equal, roundish ; throat naked. Stamens inclosed. Stigma capitate, emarginate. Nuts 4, 1-seeded, fixed to the bottom of the calyx, imperforated and ovate at the base, gibbous outside, conniving at top, wrinkled from tubercles.

1 A. LYCOPSOIDES (Lehm. 1. c. Fisch. et Meyer, sem. cat. hort, petrop. 1836. p. 26.) throat of corolla bearded; limb *3* times shorter than the tube ; stamens inserted a little above the base of the tube. 0. H. Native of America. Tube of corolla 3| lines long. Limb *2* lines in diameter.

h Lycopsis'like Amsinckia. FL June, July. Clt. 1836. PL foot.

2 A. ANGUSTIFOHA (Lehm. l r is<?o v i c) throat of corolla g[ab]ro[TM]us nakedI Lh f *£ Me[yer]> »• the tube; stamens inserted in the th^t 7 rt"* S honer tba» Native of Chili. A. parvifldra *BZT* th\Corolla- ©• H. Lithospermum calycinum Mori, ^ hort erf„ [TM]*M'* and in mem. acacK T o S, 37 n T n T Sem> hort_ Taur_ '^1, hardly 2 lines long Q' ?'S lo8.*- [TM]- Tube of corolla differs from the pre'ceW ?. ll n68 in diameter_ This Smaller flowers, and distinct insertion of the semens.

Narrow-leaved Amsinckia. Fl. *9* Clt1836 PI ' foot glabrous, nS K^^ et Meyer, L c„> throat of COrolla inserted in ft i. rather shorter than the tube 5 stamens *clZ* the throat of the Co[TM]U*- O. H. Native of New line l"13, Ui Ut the Russian c<>lony, Ross. Tube of corolla li-nes long ; hmb nearly *3* lines in diameter, orange yellow", painted with 5 deeper spots. An intermediate species between

A. lycopsoides, and *A. spectdbilis.* It differs from the first in the insertion of the stamens, and from the second in the corolla being smaller, and especially in the throat not being half closed by inclosed plicae*

Intermediate Amsinckia. Fl. ? Clt. 1836. PL ± foot.

4 A. SPECTA'BILIS (Fisch. et Meyer, 1. c.) throat of corolla glabrous, half closed by thrust-in plicae ; limb length of tube : stamens inserted in the throat of the corolla. ©. H. Native of New California, about the Russian colony, Ross. Corolla beautiful yellow; limb 6 inches in diameter, furnished with 5 plicae at the throat, which are similar to scales.

Showy Amsinckia. Fl. Clt. 1836. PL \ foot.

Cult. The seeds of these plants only require to be sown in the open ground about the beginning of May in a dry, warm, sheltered situation. None of them are worth cultivation, except in botanical gardens.

ORDER CLXVII. CORDIA'CE^E (the plants contained in this order agree with *Cordia* in the drupaceous fruit, and bifid or dichotomous style.)

Calyx 5-cleft, or 4-5-toothed. Corolla funnel-shaped ; throat naked ; limb 5-10-lobed. Stamens equal in number to the segments of the corolla, exserted or inclosed. Style semi-bifid, or dichotomous; stigmas obtuse. Berry or a drupe containing 2 2-celled, 2-seeded nuts, or 4 1-celled, 1-seeded nuts, or a 4-celled putamen, which is sometimes only 1-2-celled from abortion, partly or altogether covered by the calyx. Cotyledons plicate.—Trees or shrubs. Leaves entire, serrated, or cut. Inflorescence terminal, panicled, or corymbose, or spicate, usually bractless.

This order was formerly united with *Boraginece,* from which its habit, plaited cotyledons, and divided style, separate it. Little is known *%f* the properties of the plants contained in it, except that the flesh of the fruit is emollient and mucilaginous. The nuts of *Cordia Sebestena* are sometimes employed as laxatives.

Synopsis of the genera.

TRIBE I.

Cohdie'ae. Style dichotomous. Fruit drupaceous.

1. CORDIA. Calyx 4-10-toothed. Limb of corolla 4-10-cleft. Stigmas 4. Drupe containing a 4-celled putamen, which is sometimes 1-3-celled by abortion.

2 PATAGONU'LA. Calyx 4-parted. Limb of eorolla 4-cleft. Stigmas 4 ?. Drupe containing a 4-celled putamen.

TRIBE II.

EHRETIA'CE^I. Style semi-bifid ; stigmas 2, obtuse. Berry containing 2-4, 2-celled, 2-seeded nuts, or 4, 1-celled, 1-seeded nuts. Cotyledons plicate ?

3 EHRE'TIA. Calyx 5-cleft. Corolla funnel-shaped, with a 5-lobed limb, and a naked throat. Stamens exserted. Berry containing 2 2-celled, 2-seeded nuts.

4 BEURRE*RIA. All as in *Ehretia,* except that the berry contains 4 2-celled, 2-seeded nuts.

5 CORTE'SIA. Calyx 10-toothed. Corolla funnel-shaped ; limb spreading, 5-lobed. Stamens 5, exserted. Style bifid at apex ; stigmas peltately globose. Drupe containing 2 1-seeded? nuts.

6 CARMONA. Calyx 5-patted. Corolla campanulate, or rotate ; limb 5-6-cleft. Stamens *5-6,* inclosed. Styles 2, capillary ; stigmas simple. Drupe containing a 5-6-celled putamen.

7 LUTROSTYLIS. Calyx 5-parted. Corolla funnel-shaped, 5-cleft. Stamens a little shorter than the corolla. Styles 2, short; stigmas sub-capitate: Drupe small, containing 4 1-seeded nuts.

8 RHA'BDIA. Calyx 5-parted. Corolla campanulate, 5-cleft. Stamens inclosed. Style simple ; stigma 2-lobed. Drupe containing 4 1-seeded pyrense or nuts.

9 MORELOSIA. Calyx 5-cleft. Corolla rotate, 5-cleft. Stamens exserted. Style forked ; stigmas 2, capitate. Drupe containing a 4-celled, 4-seeded putamen.

TRIBE HI.

ERIMATA *LEJE.* Style hardly any. Stigma large, discoic^ 5-grooved. Drupe containing only one 1-seeded nut.

10 ERYSIBE. Calyx 5-parted. Corolla salver-shaped, 5-parted ; segments of the limb bifid.

f *A genus not known whether belonging to the present order.*

11 ROCHEFORTIA. Calyx 5-parted. Corolla funnel-shaped; limb spreading. Stamens inserted in the recesses between the lobes of the corolla. Styles 2, subulate ; stigmas simple. Fruit globose, 2-celled ; cells containing numerous angular seeds.

I. CO'RDIA (named after Euricius Cordius, whose true name was Henricus Urbanus, and Valerius his son, German botanists of the 16th century.) Plum. gen. 14. Lin. gen. no. 256. Schreb. gen. no. 350. Juss. gen. p. 128. ed. Usteri. p. 143. Gaertn. fruct. 1. t. *76.* R. Br. prod. p. 498. Cordana, Ruiz, et Pav. fl. per. 2. p. 47. t. 184. Sebestena, Dill. elth. t. *255.*

LIN. SYST. *Tetra-Pentandria> Tretragynia.* Calyx tubular, usually 5, rarely 3-4-6-10-toothed. Corolla funnel-shaped; limb from 4 to 10-cleft, but usually 5-cleft. Stamens equal in number to the divisions of the corolla. Style dichotomous ; stigmas 4. Drupe partly or wholly covered by the calyx, containing a 4-celled putamen, which is sometimes only 1-3-celled by abortion. Cotyledons plicate.—Trees or shrubs. Leaves quite entire, or cut. Inflorescence terminal, panicled, corymbose, or spicate, bractless.

SECT. I. SEBESTE'NJE. Calyxes and fruit smooth. Inflorescence corymbose, or panicled. Segments of calyx acute. Throat of corolla glabrous. Flowers large.

1 C. RU'MPHII (Blum, bijdr. p. 843.) leaves on long petioles, ovate-oblong, acuminated, attenuated at the base, nearly equal, somewhat repand, smoothish above, but downy in the axils of the nerves beneath ; corymbs length of petioles; segments of calyx without furrows, tridentate, tomentose inside. h_t, g_a Native of the Moluccas. Novella nigra, Rumph. amb. 2. p. *226.* t. *75.* Allied to *C. Sebestena.* Corollas orange-red.

Rumphius's Cordia. FL Aug. Sept. Tree.

2 C. DICHOTOMA (Forst. prod. no. 1J0. R. Br. 1. c.) leaves ovate, a little toothed, glabrous ; cymes opposite the leaves,

pedunculate; flowers tetramerous; calyxes campanulate, and are, as well as the fruit, smooth. *?. S. Native of New Holland, within the tropic.

Dichotomous Cordia. Clt. 1824. Tree 30 feet.

3 C. SEBESTE'NA (Jacq. amer. 42. ed. 2d. t. 44. Lin. spec, ed. 1. p. 1073.) leaves ovate, acute, or elliptic, quite entire, hispid, scabrous above; peduncles terminal, corymbose ; calyx smooth, clothed with hispid tomentum ; limb of corolla 7~cleft, with a glabrous throat. ^. S. Native of Cuba, about the Havanna, St. Domingo, &c. Andr. bot. rep. t. 157. Curt. bot. mag. t. 794. Tratt. tab. t. 354. Lam. ill. no. 1898. t. 96. f. 1. C. juglandifolia,, Jacq. amer. 43. C. speciosa, Willd. rel. ex Rcem. et Schultes, syst. 4. p. 799.—Plenck, icon. t. 115. —Plum. gen. 13. icon. 105.—Sloan, jam. 2. p. 20. t. 164. Branches glabrous in the adult state, but clothed with hispid tomentum while young. Leaves 4-5 inches long, rather unequal at the base. Calyx 2-6-toothed ; teeth bluntish. Corolla funnel-shaped, orange coloured, or tawny yellow ; limb spreading, 5-7 parted, with crenately undulated edges. Stamens exserted, glabrous. The young leaves are serrated, the full grown ones hardly repand, and the upper certainly quite entire. A small piece of the wood put on a pan of lighted coals will perfume the whole house with a most agreeable smell. The flower in Jacquin's figure is coloured like that of the bloody-wallflower. Browne says that the flower in the Jamaica plaint is scarlet. Said by Cham, to be very nearly allied to *C, Abyssinica.*

Sebestena Cordia. Fl. June, Aug. Clt. 1728. Tree 10 to *35* feet.

4 C. DILLE'NII (Spreng. syst. 1. p. 649.) leaves ovate-oblong, acutish, repandly serrated, scabrous on both surfaces ; peduncles terminal, sub-corymbose ; calyx tridentate; segments of corolla usually 7, roundish, undulated ; stigmas revolute. f? . S. Native of the Bahama Islands. C. Sebestena, Willd. spec 1. p. 1076.—Dill, elth, p. 341. t. *255.* f. *331.*—Catesb. car. p. 2. t. 91. Corolla orange-coloured or scarlet. Stamens exserted.

Dillenius's Cordia. Fl. June, July. Clt. 1728. Tree 10 to 30 feet.

5 C. LiE^Nvis (Jacq. hort. schoenbr. 1. p. 39. t. 40.) leaves ovate, acuminated, smooth, repand; racemes short, branched; calyx glabrous, tubular, smooth ; corolla wrinkled, with a *6-7*-cleftj large spreading limb ; stamens *6-7* ^ ^ . S. Native about Caraccas. Habit of *Sebestena** Leaves shining above, 9 inches long. Corolla orange-red ; segments semi-oval. Stamens exserted.

Smooth Cordia. Fl. June, Aug. Clt. 1826. Tree 14 to 20 feet.

6 C. AFRICA'NA (Lam. ill. no. 1896.) leaves roundish, oval, entire, obtuse ; panicles terminal; calyx turbinate ; drupe containing a triquetrous putamen. J? . S. Native of Abyssinia, Bruce. C. Sebestena, /3, Poir. suppl. 7. p. 45. C, Abyssinica, Salt. trav. p. 475, where there is also a species named *C. ovdlis,* but without any diagnosis. Wanzey Bruce, trav. 5. p. 54. t. 17. French, ed. p. 70. Perhaps the Sebestena of Alpini. Branches inclinate. Leaves dark green, paler beneath. Corolla white. Stigma dark, bifid or trifid. Fruit at first soft and green, but at length bony and wrinkled.

African Cordia. Tree 18 to 20 feet.

7 C. SUBCORDA^VTA (Lam. ill. 1. p. 421. no. 1699.) leaves ovate subcordate, on long petioles, repand, acute, smooth ; panicles lateral; calyx, stamens, and pistil almost like those of C. *Sebestena;* corolla campanulate; drupe ovate, dry, hid in the calyx. ^. S. Native of the East Indies, in various parts, Sandwich Islands, and of New Holland, within the tropic, &c. C. orientalis, R. Br. prod. p. 498. C. campanulata, Roxb. fl. ind. 2. p. 336. C. Rumphii, Blum, bijdr. p. 843.? C. Sebestena, Forst. prod. p. 18. no. 108. C. hexandra, Willd. herb, ex Rcem. et Schultes, syst. 4. p. 799. Novella nigra, Rumph. amb. 2. p. 226. t. *75.* ? Corolla large, white, suffused with red segments, *6-7,* roundish, spreading. Calyx like that of a species of *Dianthus.* Stamens length of the tube of the corolla.

***SubcordateAeaved* Cordia. Tree.**

. 8 C. LATIFOLTA (Wall. cat. no. 893.) leaves broad, ovate-roundish, glabrous, with 5 nerves running from the base ; panicles terminal and lateral, dichotomous; calyx smooth, cup-shaped, unequally toothed ; drupe large, ovate, acuminated, surrounded by the calyx at the base. ^ . S. Native of Silhet. Flowers large.

Broad-leaved Cordia. Tree.

9 C. DECA'NDRA (Hook, et Arn. in Beech, voy. pt. bot. p. 38. t. 10.) leaves linear-lanceolate, attenuated, scabrous, sessile, with revolute edges, hoary from down ; flowers disposed in a terminal leafy corymb; calyx 10-toothed, clothed with black down ; corolla 10-lobed; stamens 10, inclosed. ^. G. Native of Chili, about Coquimbo. Tops of branches scabrous. Flowers large, very showy white, fragrant. Stamens inclosed, pilose at the base. Capsule size of a filbert, covered by the calyx. The wood of this tree is very extensively employed in the production of charcoal, whence it is called *Carbon,* and likewise for fuel for smelting copper, as the withered stems of *Cactus* are for refining metal.

Decandrous Cordia. Shrub 8 to 10 feet.

10 C. SUPE'RBA (Cham.etSchlecht in Linnsea, 4. p. 474. and 8. p. 123.) leaves cuneate-oblong, to oblong-elliptic, acuminated, acute, toothed in front, glabrous above, except the nerves, which are strigose, but beset with short hairs beneath ; cymes at first terminal, then lateral, pedunculate ; calyx clavately tubular, irregularly cut at top, or with lacerated lobes, smooth ; corolla campanulately funnel-shaped, 5-lobed : lobes roundish and acuminated. T? • S. Native of Brazil, within the tropic, Sello. Young branches angular, scabrous from dense stiff short hairs. Leaves form of the leaflets of the horse-chestnut, firm and opaque, the largest 6| inches long, and 2| broad. Branches of cyme angular, compressed, and are, as well as the calyxes, scabrous from short dense stiff hairs. Flowers large, showy. Corolla glabrous, having the tube length of calyx, and the limb campanulate. Stamens 5, inclosed, hairy at the base. Stigmas lamellate.

Far. a, *cunedta* (Cham, et Sehlecht, 1. c.) leaves cuneate, oblong.

Far. /3, *elliptica* (Cham, et Sehlecht, 1. c.) leaves elliptic, obtuse at the base, and rounded, 8j inches long, and 4j broad.

Superb Cordia. Tree.

11 C. GLA'BRA (Cham, in Linnaea, 8. p. 124.) tops of branches, inflorescence, and petioles scabrous from small bristles, or stiff hairs, the rest glabrous ; branches cinereous, terete ; leaves scattered, opposite, and 3 in a whorl, on short petioles^ lanceolate, narrowed at both ends, somewhat acuminated, acute' 6 inches long, membranous, flat; cymes scorpioid, terminal' but at length lateral; corolla campanulately funnel-shaped' glabrous. *?. S. Native of Brazil, Sello. Leaves truncate and semi-erose, or sinuated on the margins. Cymes bifid or trifid. Corolla \\ inch long. Drupe inclosed, truncate at top.

Glabrous Cordia. Tree.

12 C. MOLUCCA^NNA (Roxb. fl. ind. 2. p. 337.) leaves on long petioles, ovate-cordate, obtuse, entire, smooth ; panicles axillary and terminal, shorter than the leaves ; calyx gibbous, hairy inside; drupe pointed, and nearly hid in the calyx, containing a 4-celled nut. f? . S. Native of the Moluccas, This species is often tetrandrous. The filaments are short and very hairy

as is also the rim round the mouth of the gibbous tube of the corolla where they are inserted. Size of flowers not mentioned by Roxburgh.

Moluccas Cordia. Tree.

13 C. TOMENTOSA (Wall, in Roxb. fl. ind. 2. p. 339.) leaves round-ovate, more or less cordate at the base, repand, entire, smooth above, but very soft and tomentose beneath; calyx ovate, villous within. J? • S. Native of the East Indies. C. obliqua, var. Heyne, herb. The densely tomentose, soft, acute leaves distinguish this species from *C, Myxa,* of which *C. obliqua,* Willd. is probably only a variety. *C. domestica,* Roth, comes very near to this, but differs in the figure and comparative smoothness of the leaves. The flowers are largish.

Tomentose Cordia. Tree.

14 C. COLLOCOCCA (Lin. spec. 274.) leaves oblong-ovate, quite entire; corymbs loose, terminal, somewhat panicled; calyx tomentose inside. F? . S. Native of Jamaica. C. glabra, Lin. spec. ed. 1st. p. 191. Collococcus foliis rugosis, &c. Browne, jam. p. 167.—Sloane, jam. p. 169. hist. 2. p. 95. t. 203. f. 2.—Plukn. phyt. t. 158. f. 1.? Leaves attenuated at the base, acuminated, wrinkled, nearly glabrous. Branches of corymb unequal. Corolla middle-sized, with deep green segments. Drupe red, clammy, villous, containing a wrinkled, lacunose putamen. Turkeys and other poultry feed much upon the fruit; the pulp is sweetish, and of a clammy consistence. In Jamaica it has the name of *Clammy-cherry* and *Turkey-berry tree,* ex Browne.

Neck-fruited Cordia. Fl. ? Clt. 1759. Tree 20 to 50 feet.

15 C. TETRAPHY'LLA (Aubl. guian. 1. p. 224. t. *88,)* leaves obovate, narrowed at the base, 4 in a whorl, entire, glabrous; corymbs lateral, pedunculate; calyx smooth, with *5* acute teeth; drupe olive-formed, containing a 1-celled putamen. Tj . S. Native of Guiana, by the sea-side. Lam. ill. no. 1908. Willd. spec. 1. p. 1076. Branches nodose. Leaves nearly sessile, acutish. Corolla white, funnel-shaped: lobes 5, roundish, acutish. Stamens 5, exserted. Drupe yellowish, fleshy, size of an olive.

Four-leaved Cordia. Shrub 6 to 7 feet.

16 C. NODOSA (Lam. ill. no. 1905.) branchlets nodose, hispid; leaves ovate-oblong, acuminated, pilose, usually 3 in a whorl; calyx turbinate, villous, or bearded; corymbs terminal and axillary, hairy, pedunculate; drupe containing a 2-celled putamen. - T? . S. Native of Guiana and Cayenne, in woods. C. collococcus, Aubl. guian. 1. p. 219. t. 86, but not of Willd. C. hirsuta, Willd. spec. 1. p. 1076. Meyer esseq. p. 114. Leaves sessile, green, pilose on both surfaces. Corymbs beset with rufescent hairs. Calyx 5-toothed, teeth very short. Corolla white, having the tube thickened at the throat. This species differs from *C. collococca* in the characters given above, and in the narrower leaves; coarctate subumbellate corymbs, not dichotomous and divaricate; and in the white, oblique, acuminated fruit. The stamens are exserted.

Knotted-bramhed Cordia. Fl. June, July. Clt. 1803. Shrub 6 feet.

17 C. ELLIPTICA (Swartz. prod. p. 47* fl. ind. occ. 1. p. 461.) leaves petiolate, oblong, entire, attenuated at apex, rather coriaceous, glabrous; racemes terminal, dichotomous, compound, diffuse; calyx coriaceous, tubular, glabrous, 2-5-toothed; drupe acuminated, nearly inclosed. f?. S. Native of Jamaica and St. Domingo. Leaves shining above. Flowers rather large. Corolla white; tube hardly longer than the calyx, gibbous at the base; segments of the limb linear-lanceolate, reflexed. Filaments bearded in the tube of the corolla; anthers glandular at top. Putamen wrinkled.

Elliptic-leaved Cordia. Clt. 3 804. Tree SO to 50 feet.

18 C. ASPERRIMA (Spreng. syst. 1. p. 649.) leaves ovate-oblong, obtuse, crenulated, rough from dots above, and hispid and tomentose beneath: floral ones obovate, entire, clothed with fulvous' tomentum; peduncles cymose, panicled; calyx campanulate. J? . S. Native of Brazil.

Very-rough Cordia. Shrub or Tree.

19 C. STRIGOSA (Spreng. syst. 1. p. 649.) leaves rhomboid, coarsely toothed, strigose on both surfaces; peduncles cymose, elongated; calyx strigose, campanulate, with subulate segments. J? . S. Native of St. Domingo.

Strigose Cordia. Shrub or Tree.

SECT. II. MICRA'NTH^ (from *pucpog, micros,* small; and *avdoq, anthos,* a flower. The flowers are small compared with those of the preceding section.) Cham, et Schlecht in Linnaea, 4. p. 476. and 8. p. 124. All as in the preceding section, but the flowers are small.

* *Species natives of America.*

20 C. MAGNOLIIFOLIA (Cham, et Schlecht in Linnaea, 4. p. 476.) leaves on short petioles, cuneated at the base, elliptic, acuminated, acute, mucronate, entire, rarely furnished with an accessary tooth near the acumen, rather coriaceous, with reflexed margins, quite glabrous in the adult state, but when young rather strigose, as well as the buds and branches of inflorescence; inflorescence terminal, sessile; panicle subfastigiate, composed of 3-5 tri-dichotomous branches; calyx pilose outside; corolla salver-shaped, glabrous: tube length *of* calyx: segments narrow-elliptic, obtuse, one-half longer than the tube; drupe size of a cherry. *?. S. Native of the south of Brazil, Sello. Branches densely leafy, bluntly, many angled from the decurrent insertion of the petioles, pilose at the internodes. Calyx irregularly 3-4-lobed. Stamens much exserted. Stigmas lanceolate. Leaves 9 inches long, and *2* broad, sometimes somewhat tricuspidate at apex.

Magnolia-leaved Cordia. Tree.

21 C. DIOSPYRIFOLIA (Cham, et Schlecht, 1. c. p. 477.) leaves on short petioles, elliptic or obovate, sometimes oblong, attenuated at the base, and acute, undulated on the margins, bluntly acuminated at the apex, mucronate, rather coriaceous, beset with a few scattered hairs on botli surfaces, shining beneath, and more opaque above; panicles expanded, convex, on short or long peduncles, more pilose towards the top; calyx pilose outside and inside, usually 5-cleft; tube of corolla cylindrical; stamens shorter than the segments of the corolla. ^ • S. Native of the south of Brazil, Sello. This species is nearly allied to the preceding, but differs from it in the leaves being smaller, elliptic, or obovate, beset with scattered hairs on both surfaces; in the stamens being about equal in length to the segments *of* the corolla, not exceeding them.

Date-plum-leaved Cordia. Tree.

22 C. SELLOWIANA (Cham, et Schlecht, 1. c p. 478.) leaves on short petioles, ovate, entire, bluntly cuneated at the base, and attenuated at the apex, acuminated, at first downy, in the adult state scabrous and shining above, but clothed with velvety tomentum beneath; inflorescence lateral; cymes large, 3-6 trichotomous and dichotomous, tomentose: calyx campanulate, 5-toothed: teeth acute; corolla salver-shaped, glabrous; stamens much exserted. I? . S. Native of the south of Brazil. Very nearly allied to C. *macrophylla,* Lin. and *C. pubescens,* Willd. herb. Roem. et Schultes, syst. 4. p. 803. See Desf. ann. mus. 1. p. 205. Branches terete, clothed with rufescent tomentum. Leaves 10 inches long. Corolla having the tube length of calyx; segments shorter, obtuse, reflexed. Stamens villous at the base, as well as the tube of the corolla at their insertion. Ovarium globose, glabrous; style hairy.

Sello's Cordia. Tree.

23 C. HETEROPHY'LLA (Willd. herb. 5474. Cham, et Schlecht, 1. c. p. 480.) leaves form of those of *C. pubescens,* tomentose, as in the preceding species ; cymes pedunculate, terminal, lateral, and extra-axillary ; calyx narrow, clavate, not globose; corolla narrower : segments short, exceeding the calyx a little ; stamens rarely equal in length to the segments of the corolla ; throat of corolla and filaments glabrous ; ovarium oblong-elliptic, hairy on the top, as in C. *Sellowwna.* ^ • s- Native of Cayenne.

***Farious-kaved* Cordia. Tree.**

24 C. OBSCU'RA (Cham, et Schlecht, in Linnsea, 4. p. 480.) very nearly allied to the preceding, but is distinguished by the nearly sessile, pergamaceous, less silky leaves, which are furnished on both surfaces with more numerous stiff short hairs, with the vascular rete finer, and more prominent on the upper surface ; cymes smaller, on shorter peduncles, terminal, lateral, and axillary. J? . S. Native of Brazil, within the tropic, Sello. Young branches angular, beset with brown hairs, as well as bark. Leaves 2 inches to J foot long, and 2-| inches broad. Cymes fastigiate. Calyx downy. Segments of the corolla obtuse, a little shorter than the tube. Stamens exserted, hardly the length *of* the segments of the corolla, inserted in the throat, where it is very villous.

Obscure Cordia. Tree.

25 C. SALICIFOLIA (Cham, et Schlecht in Linnaea, 4. p. 481.) leaves thin, firm, hardly pellucid, lanceolate, acuminated, acute, tapering into the petioles ; cymes lateral, on short peduncles, nearly sessile, or on long peduncles, erect, sub-fastigiate, beset with short hairs ; flowers pedicellate ; calyx short, campanulate, irregularly lobed, glabrous outside, but pilose inside ; corolla salver-shaped ; tube length of calyx ; limb 5-cleft; segments reflexed, narrow-elliptic, obtuse, one-half the length of the tube, or a little longer ; stamens much exserted, twice as long as the segments of the corolla, *fy* • S. Native of the south of Brazil, Sello. Besides the buds, the tops of the inflorescence and branchlets are glabrous. Leaves 5 inches long, and an inch broad.

***Willow-leaved* Cordia. Tree.**

26 C. AMBIGUA (Cham, in Linnaea, 8. p. 125.) beset with stiff hairs all over, the upper surfaces of the leaves scabrous, and the inflorescence tomentose; branches angular and furrowed ; leaves nearly opposite and scattered, 6-8 inches long, firm, membranous, flat, elliptic, drawn out into the petioles at the base, acute, obtuse and few-toothed at the apex, or acuminated, acute, and nearly entire; cymes small, terminal; calyx closed, clavate at first, at length obconically tubular, irregularly 5-toothed; corolla salver-shaped, having the tube dilated upwards, and the segments oblong, length of tube, a little dilated, and undulately plicate at top; drupe half-closed in the calyx. T?. S. Native of Brazil, Sello. Cordia Anabaptista, Cham. Very like *C. superba, var. elliptica,* but the flowers are much smaller. Stamens exserted. Drupe containing a 3-celled, 3 or 1 seeded putamen.

Ambiguous Cordia. Tree.

27 C, PUBE'SCENS (Willd. herb, ex Roam, et Schultes, syst. 4. p. 803. Cham, in Linnaea, 8. p. 127, and 4. p. 479.) leaves on short petioles, ovate, or ovate-oblong, somewhat unequal-sided, rounded at the base, and subcordate, drawn out at apex into a fine tail-like acumen ; others are nearly orbicular, acutely acuminated on very short petioles, all are entire and discoloured, wh«n young rather silky and shining above, and strigulose and velvety beneath, when old strigulose above and downy beneath ; inflorescence cymosely panicled, sub-fastigiate, loose ; calyx with 5 acutish, erect teeth, clothed with velvety tomentum inside; corolla salver-shaped : tube length of calyx : segments obtuse, reflexed ; filaments bearded at their insertion, hardly exceeding the segments of the corolla; ovarium hairy at top ; stigmas not dilated. J? . S. Native of Brazil. Branches angular, tomentose, or villous. Leaves 10-12 inches long, and 4-5 broad. Calyx downy outside.

Downy Cordia. Tree.

28 C. CORDIFOLIA (H. B. et Kunth, nov. gen. 3. p. 70.) leaves oblong, obtuse, cordate, quite entire, glabrous above, and pubescent beneath ; corymbs terminal, dichotomous, diffuse ; flowers sessile, glomerate ; calyx campanulate, downy, smooth, with acute teeth ; limb of corolla 5-cleft, with linear, reflexed segments ; stamens pilose at the base. Tj . S. Native of the islands in the river Apures, near El. Diamante and Arichuna. Willd. rel. ex Rcem. et Schultes, syst. 4. p. 800. Branches terete, glabrous, white. Leaves 3-4 inches long, and 2 or more broad. Flowers sessile, size of those of *Mybsotis scorpidides.* Corollas white. Stamens much exserted. Style inclosed.

Heart-leaved Cordia. Tree or Shrub.

29 C. EHRETIOIDES (Lam. ill. no. 1902.) leaves oblong-ovate, acute at the base, quite entire, glabrous ; panicles lateral, shorter than the leaves. J? . S. Native of Jamaica. C. collococca, /3, Poir. diet. 7. p. 42. ?—Sloane, hist. 2. t. 203. f. 2. Flowers small. This differs from *C collococca* in the leaves not being cordate at the base. Said to be the same as *C.jlavescens,* by Sppeng.

Ehretia-like Cordia. Tree.

30 C. FLAVE'SCENS (Aubl. guian. 1. p. 226. t. 89.) leaves oblong, acuminated, quite entire, glabrous ; racemes simple, axillary ; peduncles very long; calyx deeply divided into *5-6* rounded, acute segments ; drupe dry, greenish-yellow, cherry-formed. J? . S. Native of Guiana and Cayenne, on the edges of fields. C. sarmentosa, Lam. ill. no. 1907. Stems many, sarmentose. Leaves sub-petiolate, *6-7* inches long, and 3 broad. Corolla yellowish, with rounded lobes. Stamens 5-6, exserted; anthers sagittate.

Yellowish-fruited Cordia. Clt. 1823. Shrub sarmentose, 8 to 9 feet.

31 C. TETRA'NDRA (Aubl. guian. 1. p. 222. t. 87.) leaves ovate, acute, somewhat cordate at the base, rough beneath, and glabrous above; corymbs or cymes terminal; calyx turbinate, with 4 rounded, acute teeth ; limb of corolla of 4 rounded, acutish segments ; stamens 4, inserted under the divisions of the limb, exserted; drupes small, containing 4 1-seeded nuts. \/ . S. Native of Guiana and Cayenne, on the banks of rivers, and on the sea-shore. Leaves 8-10 inches long, and 3-4 broad, subundulated. Cymes like those of *Sambitcus;* peduncles dichotomous. Corolla small, funnel-shaped, green ; tube short,

Tetrandrous Cordia. Tree 40 to 50 feet.

32 C. TOQUE^VE (Aubl. guian. 1. p. 228. t. 90.) leaves cordate-ovate, acuminated, entire, villous ; corymbs panicled, terminal, racemose ; calyx tubular, 5-toothed; corolla with a short tube, and 5 roundish, spreading lobes. T?. S. Native of Guiana, in woods near Sinemari. The whole plant villous, much branched. Leaves 4-6 inches long, and 3-4 broad. Common peduncles long and villous. Corolla white. Stamens exserted. Drupe oblong, 1-seeded, yellowish. *Toqueve* is the Guiana name of the shrub, ex Aublet.

Toqueve Cordia. Shrub 5 to 6 feet.

33 C. MACROPHY'LLA (Lin. spec. p. 273. Mill. diet. no. 3. Willd. spec. 1. p. 1075.) leaves ovate-oblong, villous, entire, or a little denticulated ; racemes corymbose, small, villous; calyx villous, cup-shaped, with 5 obtuse teeth ; corolla having the tube villous inside, and the segments of the limb deflexed and curled; drupe reddish, containing a 2-celled, 2-seeded putamen. T? . S. Native of the Antilles, Jamaica, Porto Rico, St.

Domingo, &c. Lam. ill. no. 1901. Desf. ann. mus. 1. p. 205. Red. pict. mus. par. Prunus racemosa, &c. Sloane, jam. p. 184. hist. 2. p. 130. t. 221. f. 1. Branches inclinate, bitrifurcate, cinereous, downy, or villous. Leaves on short petioles, 1^ foot long. Racemes girded by 2-3 small leaves from the forks. Drupe size of a pea.

Long-leaved Cordia. CIt. 1752. Tree 40 to 60 feet.

34 C. SALVIFOLIA (Juss. ex Poir. diet. 7. p. 46.) leaves ovate-lanceolate, obtuse, wrinkled, very rough, coriaceous ; racemes lateral, small, with villous divisions. J? . S. Native country unknown, but most probably of some part of tropical America. Branches cinereous, or yellowish, striated, rather downy while young. Leaves petiolate, very firm, beset with copious white dots above, 2 inches long, and 1 inch broad.

Sage-leaved Cordia. Tree or Shrub.

35 C. DOMINGE'NSIS (Lam. ill. no. 1900.) leaves ovate, entire, scabrous on both surfaces, whitish beneath; panicles terminal, downy; calyx tubular, with obtuse teeth, rufescent. I?. S. Native of St. Domingo. Branches angular, very rough, blackish brown, downy at top. Leaves dark green above : upper ones 8-10 inches long, and 4-5 broad. Racemes shorter than the leaves, with short terete scabrous branches. Corolla unknown.

St. Domingo Cordia. Tree or Shrub.

3* C. ? BL'XIFOLIA (Juss. ex Poir. diet. 7. p. 45.) leaves coriaceous, ovate-cuneated, entire, nearly sessile, obtuse, scabrous ; panicles corymbose, downy, lateral and terminal; calyx short, ovate, tubular, with 5 obtuse lobes. F? . S. Native country unknown, but probably of some part of tropical America. Habit of *Ehretta buxijblia.* Branches terete, grey, glabrous. Leaves numerous, hardly an inch long, beset with copious white dots above. Corolla funnel-shaped, having the tube cylindrical and longer than the calyx, and the limb middle-sized and spreading. Style bifid, each division bearing a solitary capitate stigma, and is therefore probably a species of *Lutrostylis.*

Box-leaved Cordia. Shrub.

37 C. EXALTA TA (Lam. ill. no. 1910. Poir. diet. 7. p. 47.) leaves ovate, acute at the base, rough, entire, coriaceous, on very short petioles ; corymbs a little longer than the leaves, glabrous, terminal; calyx small, glabrous, campanulate, with 5 small acute teeth ; limb of corolla 5-cleft. I? . S. Native of Guiana, Richard. Branches glabrous, striated. Leaves almost shining above, and paler beneath, 4 inches long, and 2 broad. Branches of corymb diffuse. Pedicels thick, very short, 1-flowered. Drupe globose, size of a pea, containing a 2-celled, 2-seeded putamen.

Tall Cordia. Tree 60 feet.

38 C. NERVOSA (Lam. *ill.* no. *1906.* Poir. diet. 7. p. 47.) leaves alternate and opposite, ovate-oblong, acuminated, shining and dark green above, but pale yellow, and rather downy beneath, on short petioles ; corymbs glabrous, short; bracteas subulate ; calyx glabrous, with short, ovate, bluntish teeth. J? . S. Native of Guiana, Richard. Nearly allied to *C.flavescens,* Aubl. Branches scabrous, cinereous, angular. Leaves nearly glabrous, 8-10 inches long, and 4 broad; petioles nodose at the base. Corymb having the first branches somewhat dichotomous, the rest short and thick, rather woody. Corolla and *fruit* unknown.

Nerved-leaved Cordia. Clt. 1820. Shrub or tree.

39 C. RETICULA'TA (Vahl. eclog. amer. 3. p. 5.) leaves ovate-oblong, long-acuminated, reticulated, shining, scabrous beneath, and smooth above ; racemes terminal, erect, branched, dichotomous, and are, as well as the calyxes, clothed with rusty tomentum; flowers 4-5 at the top *of* each peduncle, hardly pedicellate; calyx smooth, not striated, campanulate in the fruit-bearing state, trifid, with oblong, obtuse segments ; stamens length of corolla ; segments of the limb of the corolla oblong, bluntish. *Yl.* S. Native *of* Montserrat, Ryan. Branches terete, glabrous, but clothed with rusty tomentum at top. Leaves petiolate, glabrous, shining on both surfaces. Branches of raceme twice dichotomous. Tube of corolla length of calyx. Stigmas dilated, transverse. Drupe obovate, glabrous, larger than a pea.

Reticulated-\eaved Cordia. Tree.

40 C. CALOPHY'LLA (Vahl. eclog. amer. 3. p. 5.) leaves elliptic-lanceolate, acuminated, quite entire, glabrous, rather coriaceous, smooth above, and rather scabrous beneath; corymbs axillary; calyx smooth, campanulate, 5-toothed. I?. S. Native of Cayenne, Rohr. Branches angular, glabrous, dichotomous, yellowish. Leaves petiolate, 6-8 inches long, yellowish beneath. Corymbs at the sides of the forks and tops of the branches, with *opposite leaves, 3 times longer than the* petioles.

Beautiful-leaved Cordia. Tree.

41 C. FORMICA'RUM (Roem. et Schultes, syst. 4. p. 800.) leaves oblong, acuminated, quite entire, scabrous; branches ventricose ; corymbs pilose, coarctate. J? . S. Native of Brazil, in the province of Para. Branches terete, smooth, dilated at the ramifications, hollow in the axils, and forming nests for ants, whence the tree is called *Pao de Formige* by the natives. Leaves nearly sessile, a foot long, and a hand wide, ciliated.

Ants[1] Cordia. Tree.

42 C. A'SPERA (Forst. prod. no. 109. Willd. spec. 1. p. 1074.) leaves ovate, acuminated, rough ; flowers cymose, wrinkled. J? . G. Native of the Island of Tongatabu. Forster does not mention the size of the flowers.

Rough Cordia. Tree.

* * *Species natives of Asia.*

43 C. LATIF6LIA (Roxb. fl. ind. 2. p. 230.) leaves roundish, cordate, entire, repand, 3-nerved, smooth above and scabrous beneath ; panicles terminal and lateral ; flowers polygamous; calyx villous, campanulate, leathery, witl an unequally-toothed mouth; corolla short, campanulate, with 5 linear-oblong segments ; drupes oblately globose, on a smooth calyx, containing a 1-4-seeded nut. I?. S. Native of Hindostan. Trunk short, generally crooked, as in C *Myxa.* Branches spreading and drooping; young shoots smooth and angular. Leaves 3-7 inches long, and rather less in breadth. Panicles roundish. Flowers numerous, small, white. Stamens as long as the segments of the corolla, inserted immediately under the fissure. Drupe about an inch or more in diameter, yellow when ripe; pulp soft, clammy, and is eaten by the natives. Mr. Colebrooke says that the writers on Indian Materia Medica notice two sorts of Sepistan. The first as large as a prune, with its nut immersed in mucilaginous pulp, and separable from it. The second smaller, with its nut adhering to the pulp, (as described by the writers on Materia Medica in Europe,) but with less mucilage, and sweeter than the large one. The rest of the description, he observes, is common to both kinds, the fruit growing in clusters; when ripe yellow, but afterwards turning black. The first, or large sort, is, no doubt, the fruit of the present tree; and the small sort that of *C. Mijxa,* which has hitherto been considered in Europe as the only tree that produces this drug. The Arabic and Persian names of *Sepistan* and *Pistan* are applicable to both sorts. Dr. Wallich proposes to give this species the specific name of *C. Scpistana,* and the West Indian species, now called *Sebestena, C. coccinea,* Wai), in Roxb. fl. ind. 2. p. *332.*

Broad-leaved Sepistan. Tree 8 to 12 feet.

44 C. MY'XA (Lin. spec. 273. syst. p. 161. mat. med. t. 67.) leaves oval, ovate, or obovate, repand, smooth above, but rather scabrous beneath ; panicles terminal and lateral, globular ; flowers polygamous ; calyx tubular, widening towards the mouth, and torn as it were into *3-5* divisions ; divisions of corolla revolute. h_c . S. Native of the Circars, chiefly in gardens, hedges, &c. near villages ; and of Nipaul on Bheempedi. Delile, fl. egypt. p. 47. t. 19. f. 1—2. Vidi-Marum, Rheed. mal. 4. t. *37.* Sebestena officinalis, Gsertn. fruct. 1. p. 363. t. 76. Cornus sanguinea, Forsk. descr. p. *33.* ex Vahl. symb. 1. p. 19. Sebestena domestica, or C. officinalis, Lam. ill. p. 420. no. 1895. t. 96. f. 2. Myxa, Commel, hort. 1. p. 139. Prunus Sebestena, &c. Plukn. aim. 306. t. 217. f. 3. C. domestica, Roth. Sebestena domestica, Prosp. Alp. aegypt. p. 30. Bauh. hist. 1. p. 198. Prunus Sebestena Mathioli, Plukn. aim. p. 306. t. 217. f. 2. Trunk generally crooked. Branches numerous, spreading, and bent in every direction, forming a dense shady head. Leaves 2-3 inches long, and from 1^ to 2 broad. Bracteas none. Calyx not in the least striated. Drupe globular, smooth, size of a cherry, yellow ; pulp transparent, viscid, containing a sub-tetragonal, 4-celled nut, which is cordate at both ends ; the cells rarely all fertile. The smell of the nut when cut is heavy and disagreeable, the taste of the kernels like that of fresh filberts. The fruit is not used medicinally among the Circars, but when ripe is eaten by the natives: the pulp is of a sweetish taste. The dried fruit is the *Sebestena* of the Materia Medica. The Telinga name of the tree is *Neckra,* the Hindoostan one *Lusora* or *Lesoora,* and the Bengal name is *Bohoori.* Linnaeus erroneously describes this plant as having a 10-striped calyx.

Myxa Sepistan. Clt. 1644. Tree 10 to 15 feet.

45 C. SWAVE OLENS (Blum, bijdr. p. 843.) leaves alternate, ovate, or ovate-oblong, bluntish, a little attenuated at the base, nearly equal, quite entire, or somewhat repandly angled, glabrous above, but tomentose in the axils of the nerves beneath; corymbs terminal; flowers spicate, secund ; tube of corolla inclosed in the calyx, which is campanulate, without furrows, and downy outside^*fy*. S. Native of Java, on the west side, in mountain woods. Allied to *C. I'ndica,* and *C. domestica.*

Sweet-scented Cordia. Fl. Oct. Tree 40 feet.

46 C. BANTAME'NSIS (Blum, bijdr. p. 843.) ultimate leaves 3 in a whorl, oval, bluntish, almost quite entire, coriaceous, glabrous above, and tomentose beneath ; corymbs terminal, dichotomous, divaricate; calyx without a furrow, 3-5-toothed. J? . S. Native of Java, near Tjikandie, where it is called *Kandal.*

Bantam Cordia. Fl. Dec. Tree 30 feet.

47 C. WALLICHII ; leaves broad, ovate-roundish, triple-nerved, acute, glabrous above, and densely clothed with tomentum beneath ; corymbs lateral and terminal, dichotomous ; calyx campanulate, downy, irregularly toothed ; genitals exserted. Jj . S. Native of the East Indies. Cordia tomentdsa, Wall, cat. no. 897, but not of Cham. Allied to *C. Myxa.*

Wallich's Cordia. Shrub.

48 C. POLY'GAMA (Roxb. fl. ind. 2. p. 337.) leaves ovate-cordate, entire, scabrous; panicles terminal, in the male more divided; flowers polygamous; the male ones generally tetrandrous ; the hermaphrodite ones often pentandrous ; filaments in the male flowers as long as the corolla, in the hermaphrodite flowers shorter ; calyx narrow, campanulate, 4-5-toothed, villous; corolla funnel-shaped, 4-5-cleft, with linear revolute segments. h_c . S. Native of the mountains of Coromandel. Trunk short. Young shoots terete, scabrous. Leaves from ovate to cordate, entire, or slightly scollop-toothed, when young soft and villous, 1-6 inches long, and about 3-fourths of that broad. Panicles pubescent. Flowers small, white. Drupes oval, size of a black currant, smooth, when ripe yellow, containing a 4-celled putamen ; pulp mucilaginous, as in *C. Myxa.*

Polygamous-flowered Cordia. Tree middle-sized.

49 C. MONOICA (Roxb. cor. 1. p. 43. t. 58. Willd. spec. 1. p. 1072.) leaves ovate, toothed, scabrous; corymbs axillary and terminal, with many male flowers; drupe pointed, containing a 4-celled nut; calyx, corolla, and genitals as in the genus. T?. S. Native chiefly in the Circar forests. Small tree. Leaves about 3 inches long, and 2 broad. Panicles dichotomous, composed of short, recurved, one-ranked spikes. Flowers white. Drupe size of a cherry, yellow, pulpy. Stigmas bifid, acute.

Monoscious-ftowered Cordia. Fl. March, April. Clt. 1799. Tree small.

50 C. SERRATA (JUSS. ex Roxb. fl. ind. 2. p. *333.)* tender parts hairy ; leaves ovate-cordate, acuminated, serrated ; corymbs lateral; flowers usually octandrous, with from 7 to 9-cleft corolla ; calyx sub-cylindrical, 3-5-toothed. f?. S. Native of Travancore. Branches numerous, spreading in every direction. Leaves rather harsh, with few hairs, 4-6 inches long, and from 2 to 4 broad. Corymbs dichotomous. Flowers white, middle-sized. Corolla with a cylindrical tube, length of calyx ; limb about 8-cleft; segments oblong, recurved. Filaments hairy, inserted in the tube of the corolla below its middle. Perhaps the same as *C. serrata,* Juss. ex Poir. diet. 7. p. 41.

Serrated-leaved Cordia. Tree.

51 C. GRANDIS (Roxb. fl. ind. 2. p. 335.) leaves round-cordate, obtuse, entire, scabrous, somewhat triple-nerved; panicles terminal, drooping; flowers tetramerous, tetrandrous ; drupe containing a 4-celled nut, 2 or 3 of the cells usually abortive. 1? . S. Native of Chittagong. Cordia obliqua, Herb. Madr. Leaves rounded, or retuse at the base ; the apex acute or obtuse, often remotely toothed. Ramifications of the panicle many times dichotomous, those with the petioles and young leaves are beset with rusty villi. Calyx with an even surface, and 4-toothed mouth. Drupe dirty yellow, smooth, slightly-depressed at apex, half an inch long, supported by the enlarged, many-toothed, striated calyx ; pulp gelatinous. Leaves often a foot long. Perhaps belonging to section *Gerascdnthus.*

Great-leaved Cordia. Tree.

52 C. ANGUSTIFOLIA (Roxb. fl. ind. 2. p. 238.) leaves nearly opposite, lanceolate, obovate-lanceolate, obtuse, or emarginate, scabrous ; panicles terminal, corymbose; flowers tetramerous and tetrandrous ; calyx campanulate, obscurely 4-toothed; corolla having the tube longer than the calyx, and the limb of 4 linear revolute divisions. *fy* • S. Native of Mysore. C. reticulata, Roth. nov. spec. 124. Trunk short; branches numerous, spreading in every direction, often drooping. Leaves 4 inches long by one broad. Flowers small, white. Stamens 4, inserted just below the divisions of the corolla. Drupe size of a large pea, round, smooth, yellow ; when ripe the pulp is yellow, gelatinous, and pellucid ; putamen 4-celled, though seldom more than one of the cells comes to maturity.

Narrow-leaved Cordia. Clt. 1820. Tree 12 to 15 feet.

53 C. ACUMINATA (Wall, in Roxb. fl. ind. *2.* p. 339.) glabrous, smooth ; leaves oblong-ovate, acuminated, entire ; corymbs terminal, short, dichotomous ; flowers with funnel-shaped corollas, and deeply divided calyxes. T?. S. Native *of* Silhet, where it is called *Ramutti.* Cordia reflexa, Rcem. et Schultes, syst. 4. p. 800. Leaves about 5 inches long, smooth. Corymbs oval, rather downy, composed of unilateral spikes of small white flowers. Corolla having the tube twice as long as the calyx ; segments of the limb lanceolate, ciliated, recurved, or bent backwards. Stamens elevated above the throat.

Acuminated Cordia. Tree middle-sized.

54 C. OBLIQUA (Willd. phyt. 1. p. 4. no. 16. t. 4. f. 1.) leaves roundish-cordate, nervosely veined, oblique. I? . S. Native of the East Indies. Willd. spec. 1. p. 1072. C. Myxa, y, Poir. diet. 7. p. 40. Nearly allied to *C. Myxa,* and probably only a variety of that species. Leaves quite entire, not repand. Calyx not striated. Stamens exserted.

Oblique-leaved Cordia. Clt. 1818. Tree.

55 C. SPINE'SCENS (Lin. mant. 206. syst. *230,)* leaves ovate, serrated, scabrous above, and tomentose beneath ; old petioles permanent, spinescent; racemes axillary, simple or bifid, filiform, length of leaves ; calyx campanulate, obsoletely 5-toothed ; corolla campanulate, 5-toothed, twice as long as the calyx ; stigmas acute. ^ . S. Native of the East Indies. Branches strict, tomentose, rusty. Leaves size of those of the cherry-tree. Fruit sessile, black, size *of* currants.

Spinescent-pet\o\ed Cordia. Clt. 1824. Tree 40 to 60 feet.

56 C. SINE'NSIS (Lam. ill. no. 1914. Poir. diet. 7. p. 49.) leaves oblong, obtuse, villous in the axils of the veins; panicles lateral and terminal, shorter than the leaves; calyx glabrous, hardly striated, campanulate, with 4-5 short, obtuse lobes; corolla funnel-shaped, twice as large as the calyx ; drupe small, ovate, containing a 2-celled putamen. J? . G. Native of China. Leaves elliptic, entire, 2-3 inches long. Branches of panicle glabrous, divaricate, dichotomous, usually recurved. Corolla white.

China Cordia. Tree or shrub.

57 C. IN'DICA (Lam. ill. no. 1913. Poir. diet. 7. p. 49.) leaves ovate, naked, obtuse, or acutish, entire, membranous ; panicles terminal and lateral, elongated, composed of short pendulous racemes ; flowers on short pedicels ; calyx campanulate, with a torn mouth ; tube of corolla inclosed ; drupe containing a 2-celled nut. f? . S. Native of the East Indies, Sonnerat. Branches terete, glabrous. Leaves 2-4 inches long, and 2 broad, paler beneath ; petioles 1^ inch long. Corolla small, with a short spreading limb. Drupe small, ovate.

Indian Cordia. Tree or shrub.

58 C. PANICULA'TA (Roth. nov. spec. p. 124.) leaves roundish-ovate, somewhat emarginate at the base, and rather unequal, pilose above on the midrib and veins, entire; panicle terminal, composed of alternate, sub-corymbose branches ; flowers sub-secund; calyxes smooth. T?. S. Native of the East Indies. Leaves obtuse at both ends, quite glabrous beneath. Calyx beset with minute pili. Like most of the species of *Cordia* the calyx increases much in size after florescence, but in substance is coriaceous, and its form more campanulate, inclosing the fruit in the manner of the cup in acorns.

/Wc/ee/-flowered Cordia. Tree.

* * * *Species natives of Africa,*

59 C. CRENA'TA (Delile, fl. segypt. p. 51. t. 20.) leaves ovate or rhomboid, glabrous on both surfaces, crenately serrated at the apex ; cymes terminal; stigmas filiform. F? . S. Native of Egypt. Cordia Myxa, Forsk. arab. p. *63,* no 136. Sebestena sylvestre, Nep. egypt. 17. t. 8. Branches twiggy. Leaves same colour on both surfaces. Flowers scent of Jasmine. Calyx tubular, 4-5-toothed. Putamen 2-celled ; cells 1-seeded.

Crenated-leaved Cordia. Shrub or tree.

60 C. SENEGALE'NSIS (JUSS. ex Poir. diet. 7. p. 47.) leaves membranous, ovate, acuminated, glabrous on both surfaces, quite entire, reticulately veined ; panicles with short branches, which are hardly longer than the petioles; flowers on short pedicels, tetrandrous; corolla 4-cleft; calyx trifid. T?. S. Native of Senegal, Adanson. A quite glabrous shrub, with slender, black, terete branches. Leaves alternate, 4-5 inches ong, and 3 broad. Probably a distinct genus.

Senegal Cordia. Tree 20 *feet.*

SECT. II. GERASCANTHUS (from *yrjpa<ric(o, gerasco, to* grow old ; and *ardoç;, anthos,* a flower ; probably in reference to the hoary appearance of the flowers.) Calyx 10-striped, or 10-ribbed. Flowers large, corymbose. Cerdana, Ruiz, et Pav.

61 C. GERASCA'NTHUS (Jacq. amer. p. 43. t. 175. f. 16. pict. t. 259. f. 12. Swartz. obs. *86,* Lin. spec. 273.) leaves ovate-oblong, acute, quite entire, glabrous ; racemes terminal, aggregate; flowers verticillate, sessile; calyx 10-furrowed, 10-striped, downy, 5-toothed ; limb of corolla 5-cleft; throat villous ; stamens length of corolla. J? . S. Native of the West Indies, in woods ; and of Mexico, near Acapulco. Lam. ill. t. *96,* f. 2.— Brown, jam. p. 107. t. 29. f. 3. Leaves unequal at the base, 3-4 inches long. Racemes usually 4 together, 3-4 inches long. Flowers verticillate ; whorls distant. Corolla funnel-shaped, white ; tube longer than the calyx; lobes *of* limb roundish. Stamens hardly exserted. There is a variety of this species with hexamerous hexandrous flowers. This is esteemed one of the best timber trees in Jamaica, of which it is a native. The wood is of a dark brown colour, and gently striped ; it is tough and elastic, of a fine grain, and easily worked. It is called Spanish elm or Prince wood by the English, and *Bois de chyjire* by the French. The leaves of the Jamaica tree are said to be rather scabrous. The plant of Jacquin differs from that of H. B. et Kunth, nov. gen. 3. p. 54. Poir, ency. 7. p. 42. t. *96,* f. 2, and Browne, jam. 170. t. 29. f. 3, in the leaves, young branches, and inflorescence being beset with stellate hairs, not glabrous ; in the leaves being lanceolate-oblong, acute at both ends, not obtuse at the base ; in the stamens being equal in length to the segments of the corolla, not inclosed. We therefore propose *to* call the plant *of* Kunth *C, Kunthei,* should it prove distinct.

Spanish-elm>, or Grey Cordia. Fl. May. Clt. 1789. Tree 30 feet.

62 C. GERASCANTHOIDES (H. B. et Kunth, nov. gen. amer. 3. p. 69.) leaves oblong-lanceolate, acuminated at both ends, quite entire, glabrous, shining above ; panicles terminal, spreading ; flowers pedicellate, solitary ; calyx 10-furrowed, 10-striped, hispid, 2-4-toothed: teeth acute ; limb of corolla sub-quinquefid, with a glabrous throat, and roundish lobes. 1?. S. Native of Mexico, about Acapulco. Branches wrinkled, white, glabrous. Panicle clothed with fuscous tomentum. Corolla funnel-shaped, white. Genitals exserted.

Gerascanthus-Uke Cordia. Tree 30 feet.

63 C. LU'TEA (Lam. ill. no. 1897. Poir. diet. 7. p. 45.) leaves ovate, obtuse, crenated above ; corymbs lateral and terminal ; calyx 10-furrowed, 10-striped, ovate-cylindrical: with 4 ovate, short teeth, having white, scarious margins ; corolla funnel-shaped, having the tube length of the calyx, the limb rather large, of *6-8* segments ; stamens 8, villous at the base ; drupe ovate, acute, containing a 2-4-celled nut. T?. S. Native of Peru, about Lima and Huanaca. C. Myxa, Lin. spec. 273. syst. p. 230. mat. med. *67,1* Branches glabrous, but downy towards the top. Leaves scabrous on both surfaces, beset with white dots above, when young downy beneath. Corymbs small, clothed with cinereous or yellowish tomentum; peduncles very short. Corolla yellow. Drupe white.

Yellow-Roweved Cordia. Tree.

64 C. ROTUNDIFOLIA (Ruiz. et. Pav. fl. per. 2. p. 24. t. 148. f. a. H. B. et Kunth, nov. gen. 3. p. 70.) leaves roundish-elliptic, obtuse at both ends, a little denticulated, scabrous above, and clothed with hoary tomentum beneath ; peduncles dichotomously corymbose, many-flowered ; flowers sessile; calyx furrowed, downy ; limb of corolla 6-cleft; throat rather

pilose. J? . S. Native of Peru, in flats at the bottom of the Andes, near Santa and Chala. G. lutea, Lam. ill. 1. p. 421. no. 1897.? Pavonia lutea, Dombey, herb. ?—Prunus Sebestena, Plukn. aim. p. 306.? phyt. t. 217. f. 2. ? Young branches villous. Flowers large, sessile, yellow. Corolla funnel-shaped ; tube length of calyx; segments ovate, acute. Stamens *5-8,* villous at the base. Drupe half inclosed, ovate, acuminated, containing a 5-furrowed, 2-celled putamen. Leaves 2-3 inches long, and 2 broad. Teeth of calyx acute.

Round-leaved Cordia. Tree 15 to 20 feet.

65 C. CERDA'NA (Rcem. et Schultes, syst. 4. p. 467.) clothed with stellate down in all parts ; leaves oblong and ovate ; panicles terminal; stamens equal in length to the segments of the corolla. *2 • S. Native of Peru, in the woods of Pozuzo and Munna. Cerdana alliodora, Ruiz et Pav. fl. per. 2. p. 47. t. 184. Pers. ench. 1. p. 167. A tall tree, with fetid bark, smelling of garlic.

Cerdana Cordia. Tree.

66 C. SELLOWIA'NA ; leaves large, narrow, ovate, or elliptic, or rather oblong, obtuse, or subcordate at the base; acute, or acuminated at apex, very much wrinkled, scabrous above, and hairy along the midrib, but clothed with soft hairs or pubescence beneath, having the margins reflexed and unequally subsinuated ; cymes or corymbs sessile, smaller than the leaves, composed of 3 main branches ; branches 2-3 times forked ; spikes dense-flowered ; calyx tubular, obconical, 10-striped ; corolla salver-shaped : tube length of calyx: limb 5-cleft: divisions narrow, elliptic, obtuse, one-half as long as the tube. J? . S. Native of tropical Brazil, Sello. C. grandis, Cham, et Schlecht in Linnaea, 4. p. 473, but not of Roxb. Branches terete, but clothed with fuscescent hairs, and rather angular and striated while young. Largest leaves almost a foot long, and 4| inches broad, on short petioles. Calyx 3-5-toothed ; teeth roundish, mucronate. Stamens exserted, villous at the base. Fruit not seen. *

Sellers Cordia. Tree.

67 C. TOMENTOSA (Cham, et Schlecht. in Linnaea, 4. p 472.) leaves ovate, or elliptic, to ovate and obovate, rarely oblong, acuminated, acute, usually acute at the base, and drawn out a little into the petioles, rarely obtuse, generally unequal, clothed beneath with dirty, canescent, adpressed tomentum, as well as the young shoots, inflorescence, and calyxes, but beset with a few starry hairs on the upper surface ; calyx 4 lines long; limb of corolla 5-cleft: segments rounded at top; stamens about a third part shorter than the segments of the corolla. *J2* • S. Native of the South of Brazil, Sello. This species is said to differ from *C. Cerdana,* in the larger flowers, in the stamens being shorter than the corolla, in the hairs being stellate and much more crowded, in the leaves being broader and shorter, &c. There is also a variety of this with narrower leaves.

Tomentose Cordia. Tree.

68 C. INSIGNIS (Cham, in Linnaea, 8. p. 122.) leaves elliptic and obovate, acuminated, glabrous above, clothed with simple fuscous tomentum beneath, on short petioles; panicles terminal, sub-fastigiate, tomentose; calyx nearly sessile, cylindrical, deeply 10-furrowed, nearly an inch long : teeth unequal ; corolla funnel-shaped, with a 5-cleft limb, and rounded, obtuse segments ; stamens inclosed in the throat. I?. S. Native of Brazil, in the province of Minas Geraes, Lhotzky and Sello. Branches irregularly many-angled, smoothish ; angles obtuse; bark separating. Largest leaves 7-J- inches long, and *3}* broad. Inflorescence somewhat cymose, smaller and denser than in *C. Gerascdnlhus,* hardly exceeding the leaves. Calyx clothed with velvety tomentum both inside and outside. Corolla with a short tube and wide limb. Stamens villous at the base. Ovarium obpyramidal, with a flattish top.

Showy Cordia. Tree.

69 C. CALYPTRA'TA (Bertero ex Spreng. syst. 1. p. 649.) leaves roundish, sub-attenuated at the base, toothed, rough from dots above, scabrous beneath, veiny ; calyx furrowed, truncate ; corolla sub-rotate, wide ; flowers polygamous. ^ • S. Native of South America, at St. Martha.

Calyptrate Cordia. Shrub or Tree.

70 C. TINIFOLIA (Willd. herb. no. 457. Rcem. et Schultes, syst. 4. p. 799.) leaves obovate-lanceolate, glabrous ; inflorescence capitate ; calyxes clothed with simple tomentum ; tube of corolla twice as long as the calyx; limb funnel-shaped, 5-lobed : lobes dilated, short, somewhat emarginate ; stamens short, inclosed in the throat. F?. S. Native of South America. Leaves 4 inches long, and 1| broad. Heads of flowers dense, globose, size of a walnut. Diameter of the limb of the corolla 9 lines. Perhaps only a variety of *C. Gerascdnthus.*

Tinus-leaved Cordia. Tree.

71 C. ? DUBIOSA (Blum, bijdr. 844.) leaves elliptic-oblong, bluntly acuminated, acutish at the base, setaceously serrated; serratures bearded, smooth above, and beset with a few hairs beneath; fructiferous calyx striated, tubular. f? . S. Native of Java, in the province of Bantam, in the woods of Tjiangassa.

Dubious Cordia. Tree.

72 C. CUJABE'NSIS (Manso et Lhotzky, fl. matto-grosso cujab. 2. no. 13.) leaves larger than those of *C, Gerascdnthus,* Jacq. ; elliptic-lanceolate, acuminated, acute at both ends, clothed with stellate down or tomentum beneath, and rather scabrous above ; inflorescence, flowers, and the rest, as in *C. Gerascdnthus,* Jacq.; of which it is perhaps only a mere variety. 1? . S. Native of Brazil.

Cujabo Cordia. Tree or shrub.

73 C. CHAMISSONIA'NA ; leaves petiolate, large, broad-ovate, acute, rather wrinkled, scabrous above, and hairy beneath; panicles axillary, sessile, decompound, exceeding the leaves, having the rachi clothed with fuscous tomentum ; calyx short, tubular, subglobose, rather velvety and canescent, obscurely 10-striped, 5-toothed: teeth short, bluntish, beset with silky hairs inside at top ; corolla glabrous, salver-shaped, equal in length to the tube of the calyx, with narrow, spreading, or rather reflexed segments; stamens exserted, inserted in the throat of the corolla, which is villous. T? . S. Native of Brazil, Sello. C. latifdlia, Cham, in Linnaea, 8. p. 126, but not of Roxb. Very nearly allied to *C. grandis,* Cham, in Linnaea, 4. p. 473.

Chamissd[1] s Cordia. Tree.

74 C. DENTA'TA (Vahl. eclog. amer. 3. p. 5. Poir. diet. 7. p. 48.) leaves ovate-elliptic, acute, denticulated, scabrous above, and downy beneath ; corymbs terminal, dichotomous, diffuse ; flowers glomerate, sessile ; calyx downy, 4-toothed, sulcately striated, with bluntish teeth ; limb of corolla 5-cleft; throat pilose. J? . S. Native of New Andalusia, near Cumana and Bordones, in open places ; and of Mexico, near Actopan. H. B. et Kunth, nov. gen. amer. 3. p. 70. Tree much branched; branches terete, hoary. Leaves 2-3 inches long; petioles warted. Corymb downy. Flowers nearly sessile. Corolla funnel-shaped,, white. Stamens hardly exserted. Drupe oblong, girded by the calyx at the base, size of a grain of Indian corn, containing a 4-celled putamen, 3 of which are abortive.

ToothedAewed Cordia. Tree 20 feet.

75 C. SCABE'RRIMA (H. B. et Kunth, nov. *gen.* amer. 3. p. 71.) leaves oblong, acuminated at both ends, wrinkled, serrated, scabrous on both surfaces; corymbs terminal, dichotomous; flowers sessile, glomerate ; calyx striated ? hispid. *h* . S. Native of Peru, between Lucarque and Ayavaca, at the altitude of 1300 hexapods. Branches terete, glabrous, but while

young tetragonal and scabrous. Corymb strigose. Corolla white.

Very scabrous Cordia. Tree.

76 C. MICRA'NTHA (Swartz, prod. p. 47. fl. ind. occ. 1. p. 460.) leaves elliptic, acute, entire, membranous, hairy beneath; racemes compound, loose ; calyx short, glabrous, striated; stamens exserted. fj . S. Native of Jamaica, in woods on the mountains. Nearly allied to *C. collocócca;* hut the leaves are less attenuated at the base and apex, hispid beneath ; racemes small, and flowers much smaller. Branches glabrous, wrinkled, grey. Leaves dark green, and shining above, paler beneath, attenuated at the base, obtuse or acuminated.

Small-flowered Cordia. Fl. ? Clt. 1822. *Tree SO* feet.

77 C. L^VIGA^VTA (Lam. ill. no. 1912. Poir. diet. 7. p. 46.) leaves ovate, veiny, shining, rather scabrous ; panicles lateral and terminal, longer than the leaves, glabrous ; calyx glabrous, or rather scabrous, striated ; corolla salver-shaped, or subcampanulate; stamens villous at the base, shorter than* the corolla. *h* • S. Native of the Antilles ?, Richard. Branches slender, nodose, grey, terete. Leaves roundish, entire, obtuse, or acute, attenuated at the base, rather small, coriaceous, pale beneath. Corollas like those of *Ehrétia tlmfblia ;* with the lobes of the limb ovate, obtuse. " Cymes many times dichotomous. Drupe globose/' ex Cham.

Smooth Cordia. Shrub or tree.

SECT. III. VARRONIA (SO named by Browne, from Marcus Tarrentius Varro, a learned Roman, author of a treatise de Re Rustica. He died in the year *27.)* Flowers small, glomerate, capitate or spicate, always pentamerous, pentandrous, and herniaphrodiate. Throat of corolla pilose. Calycine segments acute, or subulately setaceous. Leaves on short petioles.— Varrónia, Browne, jam. t. 13. f. 2. Lin. gen. no. *258.* Jacq. amer. p. 40.

§. I. CYMOS*:. Cymes glomerate at the time of florescence, but evolute in the fruit-bearing state. Calycine teeth acute.

78 C. DI'SCOLOR (Cham, et Schlecht, in Linnsea, 4. p. 482.) leaves nearly opposite, ovate, obtuse at the base *to* ovate-lanceolate, acute at the base, or all acute, unequally and coarsely toothed, or almost entire, strigose on both surfaces : the hairs beneath tomentose, fine, adpressed, and of a lurid rust-colour, mixed with strigae; cymes *2-3* times bifid, nearly capitate ; spikes secund, dense; flowers usually pentamerous, rarely tetramerous ; calyx obconically campanulate : teeth acute, erect, glabrous inside; corolla campanulately funnel-shaped, bluntly 5-lobed, glabrous outside, villous inside ; stamens inclosed. ^. S. Native of Brazil, within the tropic, at Rio Janeiro, Sello. Branches terete; young shoots tomentose. Largest leaves 2 inches long, and 10 lines broad, equal to the internodes. Cymes strigose. Calyx tomentose outside. Ovarium globose, inclosed in the calyx, 2-celled, having the calycine teeth conniving over its vertex.

Two-colour edAeaved Cordia. Shrub.

79 C. URTICIFOLIA (Cham, et Schlecht, in Linnsea, 4. p. 483.) leaves ovate, subacuminated, acute, obtuse at the base, coarsely, simply, and doubly serrated, hairy beneath, and beset with fewer, shorter pili above, scabrous from short pili along the margins ; cymes 2-3 times bifid ; calyx cup-shaped or campanulate, hairy, ciliated, glabrous inside, 5-toothed : teeth acute, erect, acuminated ; corolla tubularly campanulate ; limb bluntly 5-lobed, glabrous outside, and villous inside ; stamens inclosed. *h* . S. Native of the South of Brazil, Sello. Young shoots and inflorescence beset with spreading rufescent hairs. Leaves on short petioles, longer than the internodes, 3 inches long, and \\ broad. Branches axillary, alternate, cymiferous, forming a leafy panicle at the tops of the branches. Corolla 2 lines long. Drupe ovate, inclosed in the calyx, with the top alone free; putamen of drupe usually 1-celled, 1-seeded from abortion.

Nettle-leaved Cordia. Shrub.

80 C. HERMANNIEFOLIA (Cham, et Schlecht, 4. p. 484.) leaves nearly opposite, elliptic or ovate-lanceolate, with the base sometimes obtuse, and sometimes acute ; sometimes bluntish, and sometimes acute at the apex, simply, or obsoletely doubly serrated on the margins; serratures acute or obtuse, granular above, and beset with short white strigae between the nerves, scabrous along the margins, but clothed with longer, softer hairs beneath ; cymes terminal, nearly sessile ; calyx sub-campanulate, 5-toothed : teeth erect, acute, thicker, and acuminated at apex, glabrous inside; corolla tubularly campanulate, glabrous outside : tube villous inside : limb length of tube, bluntly 5-lobed; stamens villous at the base, inclosed. J? . S. Native of Brazil. Shrub much branched. Leaves on short petioles, 1^ inch long, and \ inch broad, larger than the internodes. Branches axillary, cymiferous, each furnished with a leaf. This species comes very near C. *discolor,* but the tomentum and hairs are larger.

Far. /3, *calycma* (Cham, et Schlecht, 1. c. p. 486.) habit more slender and loose ; leaves usually alternate, longer and broader, shorter than the internodes; inflorescence more loose; flowers a little larger ; teeth of calyx more prolonged ; tube of corolla smoothish inside ; anthers exserted, exceeding the corolla. ^ • S. Native of Brazil, in humid places; and of Mexico, at Hacienda de La Laguna. Perhaps a proper species.

Hermannia-leaved Cordia. Shrub.

81 C. BIFURCA TA (Rcem. et Schultes, syst. 4. p. 466.) leaves alternate, and nearly opposite, ovate-lanceolate, acute, serrated upwards ; peduncles umbellately cymose, composed of unilateral, few-flowered, small racemes or spikes; calyx 5-toothed. f?. S. Native of Peru, in stony places. Varrónia bifurcata, Ruiz, et Pav. fl. per. 2. p. 24. t. 146. f. a. Desv. journ. hot. 1. p. 280. no. 26. Branches rather angular while young. Leaves on short petioles. Peduncles axillary and terminal. Corolla white, about half the length of the calyx. Stigmas 4, spreading. Drupe ovate, scarlet, half inclosed in the calyx; nuts 1-celled by abortion. Genitals inclosed ?

Bifurcate-coxymhed Cordia. Shrub 3 to 4 feet.

82 C. I'ARVIFLORA ; leaves ovate-oblong, serrated ; peduncles opposite the leaves, and alternating with them; spikes globose. J? . S. Native of Peru ? Varrónia parvifldra, Ort. dec. 7. p. *86.* Pers. ench. 1. p. 167. Perhaps the same as C. *bifurcata.*

Small-flowered Cordia. Shrub or tree.

83 C. LOURE'IRI (Rcem. et Schultes, syst. 4. p. 466.) leaves on short petioles, ovate-lanceolate, quite entire, opposite and alternate, shining ; peduncles lateral and terminal, many-flowered ; calyx short, 5-cleft; stamens about equal in length to the corolla, inserted in the mouth of the tube. ^ • G. Native of China. Varrónia Sinensis, Lour. coch. p. 138. ed. Willd. 1. p. 171. Desv. journ. bot. 1. p. 280. no. 27. Calyx subcampanulate. Corolla white, campanulate, with a short thick tube, and a 5-parted limb; segments ovate, spreading, equal. Drupe small, ovate, glabrous, red, acid, edible, containing a 4-celled nut.

Loureiro's Cordia. Tree middle-sized.

84 C. A'LBA (Rcem. et Schultes, syst. 4. p. 466.) leaves ovate, toothed, subcordate at the base ; cymes \ a foot in diameter ; calyx entire, bursting from which the corolla lies in a horizontal manner; stigmas obtuse. *h* . S. Native of Cura-

90a, and about Carthagena. Varrônia álba, Jacq. amer. p. 41. ed. pict. p. 25. Desv. journ. bot. 1. p. 280. no. 28.—Commel. hort. 1. p. 155. t. 86.—Calabùra álba, Plukn. phyt. t. 152. f. 4. A tree with a tufted head; trunk half a foot in diameter; but shrubby in the hedges. Leaves 4-5 inches long, ovate, or roundish-ovate. Flowers white. Limb of corolla campanulate. Drupe large, oblong, whitish, subpellucid ; pulp white, sweet, clammy ; nut striated, oblong, blackish, Jacq.

White-fruited Cordia. Clt. 1820. Tree 30 feet.

§ 2. DASYCE'PHALJE. Spikes capitate, globose. Throat of corolla pilose.

Calycine teeth acute.

85 C. MARIQUITE'NSIS (H. B. et Kunth, nov. gen. amer. 3. p. 75.) leaves nearly sessile, lanceolate, remotely and crenately serrated towards the apex, wrinkled, scabrous above, and clothed with rusty tomentum beneath ; spikes subglobose, lateral, pedunculate ; calyx strigose ; throat of corolla pilose ; stamens exserted. ^ . S. Native of New Granada, betwixt the towns of Honda and Mariquita, in rocky places. Varrônia lanceolàta, Willd. herb. no. 4546. fol. 2. Branches terete, glabrous, brown. Leaves on short petioles, nearly opposite, acuminated, acute at the base, 1 to 1 \ inches long. Spikes sometimes bifid, size of a pea. Corolla funnel-shaped, twice as long as the calyx. Drupe ovate-obtuse, half covered by the calyx, glabrous.

Marlquito Cordia. Shrub.

86 C. PA'TENS (H. B. et Kunth, nov. gen. amer. 3. p. 75.) leaves ovate, acuminated, rounded at the base, remotely and sharply denticulated, scabrous from strigse above, but clothed with fuscescent tomentum beneath ; spikes globose, axillary and terminal, on long peduncles, spreading ; calyx hispid from strigae ; throat of corolla villous ; stamens exserted. 7?. S. Native of New Andalusia, in temperate places betwixt Guanaguana and the monastery of Caripe, at the altitude of 400 hexapods; as well as of Brazil. Young branches terete, densely clothed with fuscescent hairs, as well as the petioles and peduncles. Leaves 3 inches, and longer, on short petioles. Corolla funnel-shaped, white, twice as long as the calyx; limb nearly entire. Spikes size of a sloe. Drupe unknown.

Var. a, monocephala (Cham, et Schlecht, in Linnaea, 4. p. 486.) head of flowers always solitary, *fy .S,* Native of Brazil, within the tropic, Sello.

Var. fi, polycephala (Cham, et Schlecht, 1. c.) heads of flowers usually by threes, the lateral 2 approximating the terminal one, on short peduncles. J? . S. Native of tropical Brazil, Sello. Stamens hardly exserted. Drupe glabrous, covered by the calyx, but with the vertex free.

Spreading Cordia. Tree 15 feet.

87 C. SERRATIFOLIA (H. B. et Kunth, 1. c. p. 76.) leaves oblong, acuminated, narrowly cuneated at the base, sharply and coarsely serrated, scabrous above, pubescent and canescent beneath; spikes globose, lateral, pedunculate;'calyx strigose; throat of corolla pilose; stamens exserted. P?. S. Native of Mexico, near Campeche. Branches terete, clothed with hair-like down. Leaves petiolate, about 3 inches long. Spikes size of a pea. Peduncles downy. Corolla funnel-shaped, white. Drupe not seen.

Serrated-leaved Cordia. Tree or shrub.

88 C. LANCEOLA'TA (Desv. in journ. bot. 1. p. 277. under *Varrònia,* H. B. et Kunth, nov. gen. 3. p. 75.) leaves nearly sessile, lanceolate, crenately-serrated, wrinkled, hispid above, but clothed with hoary pubescence or tomentum beneath ; spikes globose, pedunculate, lateral; calyx strigose ; stamens exserted ? T?. S. Native of New Granada, near the city of Honda. Branches terete, hispid from strigae. Leaves on short petioles, entire at the base, 1 inch long, and 2-3 lines broad. Spikes globose, size of a large pea. Peduncles downy. Calyx campanulate, clothed with hoary tomentum. Drupe globose, glabrous, inclosed in the calyx, 1-celled, 1-seeded.

LanceolateAeaved Cordia. Tree or shrub.

89 C. LIMA (Desv. journ. bot. 1. p. 278. no. 24. under *Varrònia)* leaves ovate, obscurely toothed, scrobiculate, pubescent beneath; spikes capitate, few-flowered, on short peduncles. *2. S. Native of St. Domingo.

Rasp-leaved Cordia. Tree or shrub.

90 C. LINEA'TA (Desv. 1. c. p. 278. no. 23. under *Varrònia)* leaves lanceolate-linear, acuminated, serrated, tomentose beneath, scabrous above ; spikes pedunculate, lateral and axillary ; peduncles elongated, adnate to the petioles, naked, *fy* • S. Native of Jamaica. Varrònia linedta, Lin. amcen. acad. 5. p. 394. Swartz, obs. p. 87. Varrònia polycéphala, Lam. ill. no. 1887.? ex Poir. diet. 4. p. 263. no. 2. Varrònia corymbdsa, Desf. tabl. jard. par. 171. Lantàna corymbdsa, Lin. spec. p. 628. —Plukn. aim. p. 395. t. 328. f. 5. Branches rather pilose. Leaves on short petioles, serrated by some crenatures. Spikes globose. Peduncles rather villous. Corolla funnel-shaped.

Lined Cordia. Clt. 1793. Shrub or tree.

91 C. HU^MILIS ; leaves roundish, equal; fruit 2-seeded. f? . S. Native of Carthagena. Varrònia hùmilis, Jacq. amer. p. 41.—Brown, jam. p. 172. t. 13. f. 2. This is a very doubtful species. Corolla tubular.

Dwarf Cordia. Shrub 4 feet.

92 C. VILLÒSA (Spreng. syst. 1. p. 654.) leaves oblong, obtuse, lined with veins, clothed with white villi on both surfaces, undulately crenated; heads terminal, few-flowered, on short peduncles. J?. S. Native of St. Domingo, Bertero.

Villous Cordia. Shrub or tree.

93 C. RA'DULA (Spreng. syst. 1. p. 654.) leaves oblong, obtuse, attenuated at the base, stiff, wrinkled, hispid, shining above ; heads few-flowered, nearly sessile, axillary; calyx hispid. I? . S. Native of Hispaniola. Varrònia scaberrima, Bertero.

RaspAe&xed Cordia. Shrub or tree.

94 C. GUAzuMiEFoLiA (Roem. et Schultes, syst. 4. p. 463.) hairy ; leaves ovate-lanceolate, on short petioles, acute, toothed, entire at the base, and rather oblique, hairy beneath, wrinkled, and very veiny ; heads pedunculate, few-flowered, sub-corymbose. I?. S. Native of Brazil. Varrònia, Desv. in journ. bot. 1. p. 276. no. 20. Branches alternate, terete, downy. Corolla tubularly funnel-shaped. Teeth of calyx very short.

Guazuma-leaved Cordia. Shrub or tree.

95 C. CRENA'TA (Roem. et Schultes, syst. 4. p. 463.) stem much branched, fuscous ; leaves ovate-roundish, crenated, veiny, wrinkled, canescent beneath, rather hairy on both surfaces, but most so beneath ; peduncles lateral, generally 4-flowered ; flowers capitate, loose; stamens exserted? ^ • S. Native of Peru. Varrònia crenàta, Ruiz, et Pav. fl. per. 2. p. 22. t. 146. f. b. Desv. journ. bot. 1. p. 276. no. 19. Cordia lantanoides, Spreng. syst. 1. p. *653.* Habit of a species of *Lantàna.* Branches spreading, terete, rather hairy while young. Leaves obtuse, on short petioles. Peduncles a little longer than the leaves. Calyx downy, blackish outside, and white inside. Corolla white, plicate, a little longer than the calyx. Stigmas elongated. Drupe red, ovate, girded by the calyx to the middle, containing a 1-celled, rarely 2-celled putamen.

CrenatedAeaved Cordia. Shrub 6 feet.

96 C. CORYMBOSA; scabrous; leaves ovate-lanceolate, sca-

brous, entire at the base, serrated at top ; spikes globular, few-flowered, disposed in a corymbose or cymose manner ; calyx villous, elongated ; corolla campanulate; stamens inclosed. J? • S. Native about Caraccas. Varrdnia corymbosa, Desv. in journ. bot. 1. p. 275. no. 18. Schrad. new journ. 4. p. 80. Varrónia monospérma, Jacq. hort. schoenbr. 1. t. 39. Willd. spec. 1. p. 1081. Varrónia ulmifólia, Dum. Cours. bot. cult. 2. p. 148. Córdia monospérma, Rcem. et Schultes, syst. 4. p. 463. Varrónia polycéphala, Lam. ex Spreng. Córdia ulmifólia, Spreng. syst. 1. p. 653. Branches terete, brownish-green. Leaves on short petioles, acute, deep green, 4 inches long. Peduncles terminal, bifid, trifid, about an inch long. Corolla dirty white, twice as long as the calyx ; limb unequal, divided into many teeth. Stamens usually 6. Stigmas elongated, flat. Drupe roundish, size of a pea, shining, deep red, containing an ovate, rough, brown 1-celled nut, ex Jacq.

Corymbose-flowered Cordia. Clt. 1800. Shrub 12 feet.

* * *Calycine teeth long, subulately setaceous. Throat of corolla pilose**

97 C. DASYCE'PHALA (Rcem. et Schultes, syst. 4. p. 462.) leaves ovate-oblong, acuminated, narrowed at the base, coarsely serrated, hispid from strigae on both surfaces ; heads terminal, pedunculate ; calyx tubular, glabrous: with subulately setaceous pilose teeth ; throat of corolla pilose ; stamens exserted ? *? . S. Native of New Andalusia, near Bordones and Cumana, in humid places, where it is called by the natives *Bretonica.* Varrónia dasycéphala, Desv. journ. bot. 1. p. 274. no. 15. Córdia sphaerocéphala, Humb. in Rcem. et Schultes, syst. 4. p. 801. Branches terete, warted, strigose while young. Leaves petiolate, 2 inches long. Heads of flowers round, size of a cherry. Corolla funnel-shaped, with emarginate lobes. Very nearly allied to *C. globósa.*

Thick-headed Cordia. Shrub or tree.

98 C. GLOBÓSA (Rcem. et Schultes, syst. 4. p. 464.) leaves ovate-oblong, obtuse, de^ly serrated, stiff, hispid from strigae on both surfaces, but softer beneath ; heads globose, pedunculate, lateral ; calyx strigose : with subulately-setaceous teeth ; corolla funnel-shaped; throat of corolla pilose ; stamens exserted. *2 . S. Native of Cuba, near Regla and Havana; as well as of Jamaica, and other of the West India Islands. H. B. et Kunth, nov. gen. amer. 3. p. 76. Varronia globósa, Lin. spec. 274. Jacq. amer. p. 41. Lam. ill. no. 1889. t. *95. f.* 4. exclusive of var. /3. Varronia bullata, Lin. spec. 274. Jacq. amer. pict. 4. t. 43. Swartz, obs. 48. Desv. journ. bot. 1. p. 274. no. 14. Cordia bullata, Roem. et Schultes, syst. 4. p. 462. Córdia pilulifera, Rcem. et Schultes, syst. 4. p. 801. Varrónia pilulifera, Willd. herb.—Sloane, hist. 2. t. 194. f. 2. Varrónia fruticósa, Browne, jam. t. 13. f. 2. " Stems dichotomous. Peduncles naked from the forks of the stem," ex Lin. According to Jacquin, it agrees with *C. Martinicénsis* in many points, but differs from it in the globosity of the heads of flowers; in the segments of the corolla being emarginate, and in the blunt quadruple stigma.

Globose-headed Cordia. Fl. Aug. Clt. 1818. Shrub.

99 C. MIRABILOI[X]DES (Rcem. et Schultes, syst. 4. p. 465.) leaves ovate-oblong, on short petioles, hispid from strigee on both surfaces, serrated ; petioles inflexed and articulated at the base ; heads of flowers roundish, simple or compound, pedunculate ; calycine segments ovate at the base, ending each in a long setaceous point; corolla salver-shaped; stamens exserted. *2 • S. Native of St. Domingo, in hedges, in the vicinity of Porto Prince. Varrónia mirabiloides, Jacq. amer. p. 41. t. *33.* Lam. ill. no. 1886. Swartz, prod. p. 48. fl. ind. occ. 1. p. 465. Varrónia genicul&ta, Pers. ench. 1. p. 167. Varrónia bullàta, Cent. amer. 1. t. *55.* ex Desv. journ. bot. 1. p. £78. no. *25.* Tournefórtia serràta, Lin. spec. 201.—Plum. gen. 5. icon. 228. f. 1. and *ft.* gen. 5. t. 228. f. 2. Leaves *2* inches long. Flowers size and figure of *Mirdbilis Jdlapa,* white. Limb of corolla flat, 5-rayed. Drupe size *of* a pea, covered by sweet clammy pulp. Stigmas subulate, obtuse. Perhaps the same as *C. globbsa,* or a variety of it.

MirabiUs4ike Cordia. Fl. Sept. Clt. 1798. Tree *3-6 feet.*

100 C. BONPLANDIA[V]NA (H. B. et Kunth, nov. gen. amer. 3. p. 77.) leaves ovate, acuminated, narrowed at the base, doubly crenated, scabrous from papillae above, but pilosely tomentose and hoary beneath ; heads on short peduncles, axillary and lateral, crowded at the tops of the branches ; calyx hairy; calycine teeth subulately setaceous ; stamens exserted. ^ . S. Native of the shore of Caraccas, near Porto Cabello. Varrónia globulifera, Willd. herb. no. 4541. C. Bonplándii, Rcem. et Schultes, syst. 4. p. 462. Varrónia Bonplándii, Desv. journ. bot. 1. p. 275. no. 16. Branches hispid, terete. Leaves petiolate, 3-4 inches long. Heads of flowers size of a small cherry. Peduncles hispid. Calyx campanulate. Corolla funnel-shaped, white ; limb nearly entire. This is a very elegant plant.

Bonjiland's Cordia. Tree.

101 C. ORANDIFLORA (H. B. et Kunth, nov. gen. amer. 3. p. *77.* Rcem. et Schultes, syst. 4. p. 461.) leaves ovate, acuminated, narrowed at the base, serrated, clothed with silky strigae above, and dense fuscescent pili beneath ; heads globose, on long peduncles, lateral ; calyx clothed with silky strigae, with subulately setaceous teeth ; stamens inclosed. J? . S. Native of tropical America, on the sandy banks of the river Apures, near St. Fernando and Arichuna, in the province of Varinas. Varrónia grandiflóra, Desv. journ. bot. 1. p. *27S.* no. 12. Varrónia lantanoides, Willd. herb. no. 4543. Branches terete, strigose. Leaves petiolate, *2* inches long, having the serratures erect and mucronate. Heads globose, size of a cherry. Calyx fuscescent. Corolla campanulate, tapering into a tube at the base, white, 1| inch; with an entire, revolute limb, and pilose throat ? This is a very elegant species.

Great-flowered Cordia. Shrub.

102 C. MICROPHY'LLA (Rcem. et Schultes, syst. 4. p. 463.) leaves small, nearly sessile, entire, tridentate or 3-lobed at apex ; heads few-flowered, sessile. ^ • S. Native of New Spain. Varronia microphylla, Desv. journ. bot. 1. p. *275.* no. 17. Calycine teeth elongated. Corolla funnel-shaped or tubular.

Small-leaved Cordia. Shrub.

103 C. MACROCE'PHALA (H. B. et Kunth, nov. gen. amer. 3. p. *77.* Rcem. et Schultes, syst. 4. p. *462.)* leaves ovate-oblong, narrowed at both ends, acutish, crenated, clothed with hoary tomentum on both surfaces, but most so beneath; heads globose, pedunculate, terminal and lateral; calyx clothed with rusty tomentum, with subulately setaceous teeth; throat of corolla rather pilose ; stamens exserted ? T? . S. Native of the Andes of Peru,# near Cascas, ex H. B. et Kunth ; Brazil and Mexico, ex Desv. Varrónia macrocéphala, Desv. journ. bot, 1. p. 274. no. 13. Branches clothed with hoary tomentum when young, rather angular. Leaves petiolate, *2* inches long. Heads of flowers size of a walnut. Peduncles clothed with hoary tomentum, somewhat quadrangular. Corolla funnel-shaped, white, twice as long as the calyx. Drupe containing a 1-celled, 1-seeded nut.

Large-headed Cordia. Shrub or tree.

104 C. CALOCE'PHALA (Cham, et Schlecht, in Linnaea, 4. p. 488. and 8. p. 129.) leaves broad, lanceolate, subcordate, obtuse, crenated, canescent above and hoary beneath ; heads on short peduncles, lateral and terminal, clothed with fuscescent

hairs ; calycine teeth setaceous, hairy. T?. S. Native of tropical Brazil, Sello. Leaves petiolate, 3 inches long and 2\ broad. Branches obscurely angular, clothed with hairy tomentum. Peduncles 2 inches long. Drupe inclosed in the calyx. Corolla smaller than those of *C. macrocephala,* to which species it comes nearest. In both the tomentum is stellate, according to Cham. 1. c. Rachis of the head of flowers clavate.

***Beautiful-headed* Cordia. Shrub.**

105 C. SESSILIFOLIA (Cham, et Schlecht, 1. c.) leaves sessile, lanceolate, acute, simply serrated, but sometimes the lower ones are doubly and deeply serrated, so as to be almost pinnatifid, hairy on both surfaces, softer beneath; heads pedunculate, terminal and lateral, nearly globose; calyx obconical, with somewhat setaceously acuminated teeth, hairy; segments of the corolla 2-lobed : lobes arched, blunt; stamens shorter than the limb. V>. S. Native of tropical Brazil, Sello. A rough hairy shrub. Stems 10 inches high bearing 1 head of flowers, or 2 feet high bearing many heads of flowers, thickness of a hen's quill. Leaves 2\ inches long, and about \ an inch broad. Hairs strigose. Peduncles a little shorter than the upper leaves, about an inch long, having the rachis hardly thickened, and beset with hairs between the calyxes, which are glabrous in their lower part. Corolla funnel-shaped, with a large 5-lobed limb. Stigmas slender, as in the congeners. Drupe partly covered by the calyx, containing a 2-celled nut, one of which is abortive.

Sessile-leaved Cordia. Shrub 1 to 2 feet,

§. 3. SricA^TiE. Spikes of flowers elongated. Calycine teeth short, acute. Throat of corolla pilose.

106 C. RIPA'RIA (H. B. et Kunth, nov. gen. amer. 3. p. 71. t. *9,07.)* leaves ovate-oblong, acuminated, denticulated, scabrous above, and clothed with rusty tomentum beneath ; spikes cylindrical, dense, disposed in a panicle ; calyx, peduncles, and branches clothed with rusty hairs ; throat of corolla pilose ; stamens exserted. J?. S. Native of New Granada, on the banks of the river Magdalena, near Monpox, in humid places. Leaves petiolate, 3-4 inches long. Spikes 2-3 inches long. Calyx campanulate, 5-6-toothed ; teeth smooth. Corolla campanulately funnel-shaped, white, size of those of *Myosotis scorpioides;* limb 5-cleft ; lobes rounded. Stigmas subclavate. Drupe unknown.

River-side Cordia. Shrub.

107 C. FERRUGI'NEA (H. B. et Kunth, nov. gen. amer. 3. p. 71. Rcem. et Schultes, syst. 4. p. 458.) leaves ovate, acute, denticulated, pilose above, and clothed with rusty tomentum beneath ; spikes terminal and axillary, interrupted; calyx hairy ; throat of corolla pilose. 1?. S. Native of New Granada, near Gonzanama and Loxa. Varrdnia ferruginea, Lam. ill. p. 418. no. 1888. Desv. journ. bot. 1. p. 266. no. 1. t. 9. Varronia Martinicensis, Desf. tabl. de l'ecole. p. 71. but not of Lin. ex Desv. 1. c. Cordia pyrifdlia, Rcem. et Schultes, syst. 4. p. 802. Varronia pyrifolia, Willd. rel. Floriferous leaves alternate, the rest opposite. Spikes an inch long. Calyx 5-toothed, length of corolla, which is yellowish.

Rusty Cordia. Shrub.

108 C. LAXIFLORA (H. B. et Kunth, nov. gen. 3. p. 72.) leaves broad-ovate, very shortly acuminated, denticulated, scabrous above, and clothed with rufescent down beneath ; spikes axillary, interrupted ; calyx hairy ; throat of corolla pilose ; genitals exserted. ^ • $• Native of New Granada, in hot places between Monpox and Morales, in the valley of the river Magdalena. Branches terete, clothed with fuscescent hairs, as well as the petioles and peduncles. Leaves subalternate, petiolate, 2-3 inches long, and 1J to 2 inches broad. Corolla somewhat campanulate, white. Drupe girded by the calyx, size of hemp-seed. Very nearly allied to *C. ferruginea.*

***Loose-flowered* Cordia. Shrub.**

109 C. LANA^TA (H. B. et Kunth, 1. c. p. 72.) leaves ovate-oblong, acute, serrated, woolly on both surfaces, but most so beneath ; spikes terminal and axillary, panicled, dense ; calyx hairy ; throat of corolla pilose ; genitals exserted. *2 . S. Native of New Granada, near the town of Santa Fe de Bogota. Branches terete, hairy, angular while young, and clothed with rusty hairs, as well as the peduncles. Leaves subalternate, petiolate, 3 inches long, hairy above, and clothed with fuscescent tomentum beneath. Calyx campanulate, with smooth teeth. Corolla funnel-shaped, white ; tube length of calyx. Stigmas clavate. Very nearly allied to *C. tomenlbsa.*

Woolly Cordia. Shrub.

110 C. TOMENTOSA (Rcem. et Schultes, syst. 4. p. 459.) leaves ovate, serrated, acute, tomentose; spikes thick, short, obtuse, forming a terminal panicle ; peduncles dichotomons, axillary and terminal. ^ . S. Native of Cayenne, Richard. Varronia tomentosa, Lam. ill. p. 419. no. 1892. Desv. journ. bot. 1. p. 266. no. 3. The whole plant is clothed with tomentum, or very hairy. Leaves white beneath ; petioles villous.

Tomentose Cordia. Shrub.

111 C. SALVLEFOLIA (H. B. et Kunth, nov. gen. amer. 3. p. 72.) leaves lanceolate-oblong, narrowed at both ends, crenately serrated, wrinkled, scabrous from strigse above, but clothed with hoary tomentum beneath ; spikes terminal and lateral, dense, disposed in a panicle ; calyx hairy ; throat of corolla rather pilose; genitals exserted. ^ • S. Native along with *C. landta.* Cordia Humboldtii, Rcem. et Schultes, syst. 4. p. 801. C. floribunda, Spreng. syst. 1. p. *652.* Varronia floribunda, Desv. journ. bot. 1. p. *267.* no. 2. Branches terete, glabrous, but when young hairy, and rather angular. Leaves petiolate, 2-3 inches long, and \ to 1 inch broad ; petioles hairy. Spikes I to \\ inch long. Flowers densely glomerate. Peduncles clothed with fuscescent hairs. Calyx campanulate. Corolla funnel-shaped, yellow ? twice as long as the calyx. Stigmas capitately clavate.

Sage-leaved Cordia. Shrub.

112 C. CYLINDRISTA'CHYA (Roem. et Schultes, syst. 4. p. 459.) leaves ovate, acute, densely serrated, wrinkled, hispid above, and tomentose beneath; spikes oblong, bifid and trifid, supra-axillary and terminal, dense-flowered ; calyx hairy ? genitals exserted ? T?. S. Native of Peru, in hedges. Varronia cylindristachya, Ruiz, et Pav. fl. per. 2. p. 23. Desv. journ. bot. 1. p. 269. no. 5. Varronia macrostachya, Ruiz, et Pav. fl. per. 2. p. 23. t. 147. f. a. Cordia macrostachya, Spreng. syst. 1. p. 652. Branches terete, hairy, angular while young. Leaves alternate, hardly petiolate, rough beneath, 4-6 inches long. Spikes densely cylindrical. Calyx greenish yellow. Corolla white. Drupe white, inclosed in the calyx, containing a 1-2-celled nut.

***Cylindrical-spiked* Cordia. Shrub.**

113 C. PORTORICE'NSIS (Spreng. syst. 1. p. 651.) leaves lanceolate, attenuated at the base, dentately serrated, mucronate scabrous, of the same colour on both surfaces; spikes terminal' solitary. I?. S. Native of Portorico.

Portorico Cordia. Shrub or tree.

114 C. CANE'SCENS (H. B. et Kunth, nov. gen. 3. p. 73.) leaves lanceolate, acute, serrated, wrinkled, scabrous above, but clothed with hoary tomentum beneath : spikes terminal and lateral, rather dense ; calyx clothed with hoary down; throat of corolla pilose ; stamens exserted. J?. S. Native of New Granada, on the eastern declivities of the Andes of Quindiu, near the town of Ibaque, at the altitude of 760 hexapods. Varronia rugosa, Willd. herb. no. 4550. C. rugosa, Rcem. et Schultes, syst. 4. p. 801. Branches terete, clothed with hoary down of hairs. Leaves petiolate, 2-3 inches long, and ^ an inch broad

Spikes 2 inches long, clothed with hoary down. Calyx campanulate. Corolla somewhat campanulate, white, twice as long as the calyx. Drupe ov,ate, inclosed in the calyx, size of a hempseed ; nut 1-celled, 1-seeded by abortion.

Canescent Cordia. Shrub.

115 C. POLYSTA'CHYA (H. B. et Kunth, 1. c.) leaves obovate-oblong, acutish, cuneate,Jy narrowed at the base, remotely-toothed, scabrous and shining above, but clothed with fine hoary tomentum beneath ; spikes terminal and axillary, disposed in panicles, a little interrupted ; calyx downy ; throat of corolla rather pilose ; stamens exserted. I? . S. Native on the banks of the river Orinoco, near the cataract of Maypure. C. can£scens, Willd. ex Roem. et Schultes, syst. 4. p. 799. Branches terete, clothed with hoary down. Leaves subalternate, petiolate, often obtuse, 3 inches long, and lj broad. Spikes cylindrical, 1^ to *2* inches long. Flowers glomerate. Calyx campanulate, 4-6-toothed. Corolla campanulately funnel-shaped, white. Very nearly allied to *C. ob/lqua.*

Many-spiked Cordia. Shrub.

116 C. GRAVE'OLENS (H. B. et Kunth, 1. c. p. 74.) leaves oblong, acute, narrowed at the base, toothed, scabrous above, but clothed with hoary down beneath; spikes lateral, elongated ; calyx downy ; throat of corolla rather pilose ; stamens exserted? *? ." S. Native in woods of the Orinoco, between Villa Farrera and the town of Angostura. C. spicata, Willd. rel. ex Rcem. et Schultes, syst. 4. p. 799. Branches a little compressed, striated, scabrous, rather angular while young. Leaves alternate, petiolate, 2-3 inches long. Spikes on long downy peduncles, cylindrical, 2-3 inches long. Flowers dense, glomerate. Calyx campanulate. Corolla white ; margins of the segments crenulated. This and the preceding are probably only varieties of the following.

Strong-scented Cordia. Shrub 6 feet.

117 C. OBLI^UA (H. B. et Kunth, 1. c. p. 74.) leaves ovate-oblong, acute, cuneately-narrowed at the base, serrately toothed, scabrous from strigae above, but clothed with hoary pubescence beneath ; spikes lateral, elongated; calyx clothed with strigose down ; throat of corolla pilose ; stamens exserted ? J? . S. Native of Peru ; and of Mexico, on the sea shore, near Campeachy. Varronia obliqua, Ruiz, et Pav. fl. per. 2. p. 24. t. 147. f. b. Desv. journ. bot. 1. p. 268. no. 4. Cordia Peruviana, Roem. et Schultes, syst. 4. p. 459. Branches terete, rather scabrous, but clothed with hoary down in the young state. Leaves nearly 3 inches long, on short petioles. Spikes 4 inches long ; flowers rather distant, ex Kunth ; dense, ex Ruiz, et Pav. Corolla white, ex Ruiz, et Pav.

ObliqueAehYed Cordia. Shrub *5 to 6* feet.

118 C. GUIANE'NSIS (Roem. et Schultes, syst. 4. p. 460.) leaves ovate-oblong, running into the petioles at the base, sharply serrated : serratures erectish ; flowers loose, on the spikes, minute, very few towards the base of the spikes. J?. S. Native of Guiana, and Cayenne, near towns. Varronia Guianensis, Desv. journ. bot. 1. p. 270. no. 7. Varronia Martinicensis, Aubl. guian. 1. p. *232.* but not of others. Leaves large, *5-7* inches long; petioles short.

Guiana Cordia. Shrub.

119 C. DIVARICA^TA (H. B. et Kunth, nov. gen. 3. p. 74.) leaves oblong-lanceolate, obtuse, cuneated at the base, crenated, wrinkled, scabrous above, but clothed with fuscescent tomentum beneath; spikes lateral, dense-flowered; calyx downy; throat *of* corolla pilose ; stamens exserted ? T? . S. Native of New Andalusia, *in* woods near Cumana, Cariaca, and Quetepe. Cordia dentata, Vahl, eclog. 3. p. *5.* C. corylifolia, Willd. herb, ex Rcem. et Schultes, syst. 4. p. 801. C. corymbosa, Schlecht, in Willd. herb, no. 4566. Roem. et. Schultes, syst. 4. p. 801. Branches terete, glabrous, fuscous, downy while young. Leaves on short petioles, hardly an inch long, and 3-4 lines broad. Spikes pedunculate, 1 inch long, cylindrical. Calyx campanulate. Corolla subcampanulate, 6-cleft. Drupe ovate, glabrous, half covered by the calyx, size of a hempseed ; nut 1-celled, 1-seeded by abortion.

Divaricate Cordia. Shrub 5 to 10 feet.

120 C. ANGUSTIFOLIA (Room, et Schultes, syst. 4. p. 460.) leaves linear, subdentate, bluntish, with revolute edges, scabrous above, and rather tomentose beneath ; spikes linear-oblong, terminal; calyx villous; stamens almost length *of* the corolla. *?. S. Native of the Island of Santa Cruz. Varronia angustifolia, West, St. Croix, p. 202. Willd. spec. 1. p. 1081. Desv. journ. bot. 1. p. 271. no. 8. Varronia Curassavica, Lam. diet. 4. p. 264. Branches rusty. Leaves petiolate, crowded. Spikes dense, 2-3 inches long, length *of* peduncles. Calyx inflated, with *5* setaceous teeth, which are the length *of* its tube. Corolla white; tube length of calyx; lobes of limb short, emarginate. Style short; stigma simple, capitate ? Drupe small, red. Poir. diet, suppl. 3. p. 729. under *F.. Curassavica.*

Narrow-leaved Cordia. Clt. 1808. Shrub 12 *feet.*

121 C. MARTINICE'NSIS (Roem. et Schultes, syst. 4. p. 461.) leaves broad-ovate, acuminated, serrated, very much wrinkled, scabrous above, and downy or tomentose beneath ? spikes terminal and axillary, dense-flowered ; calyx downy ? large, inflated; stamens exserted. F? . S. Native of Martinico, on the edges of fields. Varronia Martinicensis, Jacq. amer. p. 41. t. 32. pict. t. 42. Willd. spec. 1. p. 1080. Gaertn. fruct. 3. p. 171. t. 212. f. 5. Desv. journ. bot. 1. p. *272.* no. 10. Leaves 3 inches long. Spikes an inch long, oblong, ex Jacq. Habit of C. *macrostachya* and *C. Curassdvica.*

Martinico Cordia. Fl. Aug. Sept. Clt. 1795. Shrub 5 to 6 *feet.*

122 C. MULTISPICVTA (Cham, et Schlecht, in Linnaea, 4. p. 490.) leaves ovate, acuminated, acute, toothed at top, bluntly cuneated, and running into the petioles at the base, scabrous from strigae above, and downy beneath ; spikes oblong-clavate, subcylindrical, terminal and axillary, forming the panicle, exceeding the leaves ; calyx downy, 5-toothed: teeth acute, thicker, and somewhat acuminated at apex ; corolla subcampanulate, with an almost entire limb, exceeding the calyx a little; stamens various in length, sometimes shorter than the limb of the corolla, and sometimes longer. F?. S. Native *of* Brazil, within the tropic. Young branches, peduncles, and petioles, clothed with short hairs, which are less adpressed than those in *C. Martinicensis;* and the petioles are combined with the peduncular, axillary branches at the base. Larger leaves 6 inches long and 3 broad. Style and ovarium glabrous. Drupe ovoid, loosely covered by the rather inflated calyx ; putamen I-celled, 1-seeded by abortion. This is probably a variety of *C. Martinicensis,* or a very nearly allied species. It differs in the spikes being more slender, 3 J inches long, loose at the base ; in the terminal ones being by threes, and the axillary ones solitary, the whole forming panicles at the tops of the branches. The calyx is very similar, but smaller; having the teeth acute and shorter, or less acuminated.

Many-spiked Cordia. Shrub 6 to 8 feet.

123 C. MACROSTA^CHYA (Rcem. et Schultes, syst. 4. p. 461.) leaves oblong-lanceolate ; spikes oblong. *? • S. Native of tropical America, about Carthagena. Varronia macrostachya, Jacq. amer. p. 41. Desv. journ. bot. 1. p. 272. no. 11. Shrub much branched. Leaves narrow, 6 inches long, length of spikes. The rest as in C. *Curassdvica.* Calycine teeth ending in setaceous points.

Long-spiked Cordia. Shrub 12 feet.

124 C. INTEGRIFOLIA (Rcem. et Schultes, syst. 4. p. 461.) shrub quite glabrous ; leaves sublanceolate, obtuse, quite entire,

glabrous ; spikes at first subglobose, then elongated and linear ; calyx almost globose, downy, 5-toothed : teeth short, ovate, acute. *2 • S. Native of Hispaniola. Varrònia integrifòlia, Desv. journ. bot. 1. p. 271. no. 9. t. 10. Poir. suppl. 3. p. 729. Leaves on short petioles, 1| inch long, and 3-4 lines broad, beset with white dots above, paler beneath. Peduncles and calyxes downy. Corolla a little longer than the calyx; with roundish segments.

***Entire-leaved* Cordia. Tree.**

125 C. CURASSA'VICA (Roem. et Schultes, syst. 4. p. 460.) leaves sublanceolate, acute, serrated, wrinkled, scabrous above, and clothed with white down beneath ; spikes terminal, oblong, dense-flowered; calyx tubular, inflated, downy ? 5-toothed : teeth ovate at the base, and ending each in a setaceous point; stamens a little shorter than the limb of the corolla, f? . S. Native of Curaçoa, in hedges, and among trees. Varrònia Curassàvica, Jacq. amer. p. 40. ed. 2. p. 25. Desv. journ. bot. 1. p. 269. no. 6. Swartz. obs. p. 88. Cordia Martinicensis, Link, enum. 1. p. 162. Sieb. pi. trin. no. 42. Varrònia Martinicensis, Lam. diet. 4. p. 264. ex Desv. 1. c. Cent. amer. t. *56,* according to Desv. 1. c. and probably of Swartz. Lantàna Curassàvica, Lin. spec. ed. 1. p. 627. Mill. diet. no. 7. Varrònia assùrgens, &c. Browne, jam. p. 172.?—Sloan, hist. 2. p. 81. Branches terete, scabrous, when old rusty. Spikes 2-3 inches long, pedunculate; flowers small. Corolla white ; tube length of calyx ; limb short, with the lobes short and emarginate. Drupe small, red. " Leaves alternate, elliptic-lanceolate, or oblong, obtuse or acutish, crenated or serrated, densely clothed with canescent down beneath, but scabrous above ; spikes solitary, terminal and lateral, slender, loose-flowered ; lower flowers abortive, gland-formed ; calyx downy, 5-toothed : teeth acute, thickened, and a little acuminated at apex ; corolla campanulate, 3 times as long as the calyx; with a 5-lobed limb, and elliptic, obtuse segments ; stamens exserted, length of the segments of the corolla ; style hardly higher than the insertion of the filaments, divided into 4 branches at top, as in the rest of the genus. ^ . S. Native of Brazil, in the island of St. Catharine, in gardens. Branches angular, striated, clothed with adpressed down at top. Calyx short, campanulate, glabrous inside. Corolla glabrous outside, villous downwards from the insertion of the filaments inside. Ovarium glabrous." Cham, et Schlecht, 4. p. 489. 490.

Curaçoa Cordia. Shrub 15 feet.

*** * *Doubtful species belonging to Sect.* III. *Varrònia,***

126 C. NI'TIDA (Willd. herb, ex Roam, et Schultes, syst. 4. p. 800.) leaves elliptic, quite entire, petiolate, obtuse, shining, reticulately veined; flowers cymose. J? . S. Native country unknown.

Shi?iing-\eave& Cordia. Shrub or tree.

127 C. ALNIFOLIA (Roem. et Schultes, syst. 4. p. 801.) leaves ovate-oblong, downy, sharply and equally serrated. J? . S. Native country unknown. Varrònia alnifòlia, Horn. hort. hafn. 1. p. 227. Very nearly allied to C. *parviflòra,* the *Varrònia parviflora,* of Ortega, but differs in the form of the leaves.

Alder-leaved Cordia. Clt. 1818. Tree or shrub.

128 C. CHAMJEDRYOI^DES (Roem. et Schultes, syst. 4. p. 801.) clothed with tomentose down; leaves ovate, doubly serrated, and cordate; peduncles axillary, cymosely capitate. J? . S. Native country unknown. Varrònia chamaedryoides, Willd. herb.

***Germander-like* Cordia. Shrub.**

129 C. MICROCE'PHALA (Roem. et Schultes, syst. 4. p. 801.) leaves lanceolate-oblong, serrated, scabrous ; spikes ovate. *2 . S. Native of Caraccas. Varrònia microcèphala, Willd. herb.

Small-headed Cordia. Shrub.

130 C. PARVIFLORA (Desf. hort. par. ex Link, enum. 1. p. 162.) leaves oblong, acute, serrated, attenuated, and quite entire, scabrous, hairy; petioles downy. *fy* • S. Native country unknown. Flowers cymose, as in C. *mirabiloides.*

Small-flowered Cordia. Clt. 1819. Shrub or tree.

131 C. GRANDIFLORA (Lindl. bot. reg. 1491.) leaves alternate, serrated; flowers large, white, terminal, corymbose. J?. S. Native of tropical America. ? This is a very doubtful shrub.

Great-flowered Cordia. Fl. Aug. Clt. 1827. Shrub.

Cult. All the species of tin's genus are very pretty while in blossom, and are of the most easy culture. They thrive best in a mixture of loam, peat, and sand, or any light rich soil; and cuttings strike root readily when planted in sand, with a hand-glass placed over them in heaU

II. PATAGO'NULA (so called because a native of Patagonia.) Lin. gen. and Lam. ill. t. 96. Patagònica, Dill. elth. p. 304. t. 226. f. 293.

LIN. SYST. *Pentdndria, Monogynia.* Calyx small, deeply 4-6-cleft, but usually 5-cleft, at length increasing much as the fruit comes to maturity. Corolla rotate, about 2 lines in diameter ; limb 5-cleft, with acutish, elliptic segments ; tube very short. Stamens 5, glabrous, shorter than the segments of the corolla, inserted in its throat. Ovarium and style glabrous. Style and stigmas as in *Cordia.* Drupe globose, acute, beaked by the permanent base of the style, dry, surrounded by the calyx as an acorn in its cup, containing a 1-celled, 1-seeded putamen by abortion. Embryo pendulous; cotyledons plicate.—A much branched shrub, with pale green, alternate or nearly opposite leaves, serrated towards the top. Inflorescence terminal, bractless, panicled, composed of few-flowered cymes. Flowers white.

1. P. AMERICA^NA (Lin. spec. 212.) 1?. G. Native of Patagonia and the South of Brazil, Sello. Cordia Patagònula, Ait. hort. kew. 1. p. 259. ed. 2d. vol. 2. p. 10. Patagònica foliis partim serratis partim enteàris, Dill. hort. elth. p. 304. t. 226. f. 293. Branches terete. Buds and tender parts of branches beset with longer hairs. Leaves glabrous on both surfaces, lanceolate, or oblong-lanceolate, tapering into the short petioles, and sub-cuneated at the base, generally acute, rarely obtuse at the apex : younger ones cuneately obovate, entire or serrated towards the top: largest ones 2| inches long, with the consistence and smoothness of those of *Laùris nòbilis,* margined, when young furnished with cilia at the base. Flowers small, pedicellate, cymose, white, or greenish white, smelling like those of elder. Limb of corolla from 4 to 5-cleft, with an equal number of stamens.

Var. /3, glàbra (Cham, in Linnaea, 4. p. 492.) shrub perfectly glabrous in every part, f? . S. Native of the South of Brazil.

American Patagonula. Fl. June, Aug. Clt. 1732. Shrub 10 to 12 feet.

Cult. For culture and propagation see *Còrdia,* above.

***Tribe* II.**

EHRETIA^CEJE. (The plants contained in this tribe agree with *Ehrètia* in the characters given below.) Style semi-bifid ; stigmas 2, obtuse. Drupe containing 2-4 2-celled, 2-seeded nuts, or 2-4 1-celled, 1-seeded nuts, rarely a 5-6-celled, 5-6-seeded nut. Cotyledons plicate. ? This tribe differs from Tribe I. *Cordidcece,* in the stigmas being 2, not 4, and in the

drupe containing generally more than one nut. Mart, in pi. bras. 1. p. 134. has made a distinct order of *Ehretiacece.*

III. EHRE[X]TIA (so named in memory of the ingenious artist and botanist, G. D. Ehret, in French Cabrillet.) Browne, jam. t. 1C. Lin. gen. no. *275.* Schreb. gen. no. 352. Jacq. amer. 45. Juss. gen. p. 128. ed. Usteri, p. 143. R. Br. prod. p. 497. Lam. ill. t. 96.

LIN. SYST. *Pentdndria, Monogynia.* Calyx deeply 5-parted. Corolla funnel-shaped, with a naked throat, and a 5-cleft limb. Stamens exserted. Style semi-bifid ; stigmas obtuse. Berry containing 2 2-celled, 2-seeded pyrenae or nuts.—Trees or shrubs. Leaves petiolate, altern^e, opposite, or 3 in a whorl, entire or serrated Flowers terminal or axillary, panicled or corymbose.

* *Species natives of Asia.*

1 E. SERRA'TA (Roxb. fl. ind. 2. p. 240.) leaves alternate, broad-lanceolate, serrated, 5-pointed, glabrous; panicles terminal, and from the upper axils, with numerous short, spreading, compound, and simple ramifications. f? • S. Native of the East Indies, at Bhotan ; it is also a native in the eastern part of Bengal. Leaves 2-5 inches long, and 1-2| inches broad ; petioles short. Flowers small, numerous, collected into small, somewhat remote, nearly sessile fascicles, some of them hexandrous. Bracteas small, ovate, pressed *to* the calyx. Corolla having the tube as long as the calyx, and the segments of the limb oblong and spreading. Stamens inserted in the mouth of the tube of the corolla, rather shorter than the limb. Drupes round, pulpy, about the size of a pea, red when ripe. This is one of the commonest trees in Nipaul, where it is called *Nuhhima.* The flowers spread a honey-like, powerful smell. In Silhet, where it is indigenous, and there called *Kala Oja.* The fruit is not esteemed like those of most of the species, there being little pulp.

Serrated-\e<ixed Ehretia. Fl. ? Clt. 1823. Shrub or Tree.

2 E. MACROPHY'LLA (Wall, in Roxb. fl. ind. 2. p. 343.) arboreous ; leaves alternate, coriaceous, ovate, ac.ute, sharply-toothed, harsh, strigose above, and downy beneath ; panicle terminal, composed *of* racemose branches. J?. G. Native of Nipaul, on Chundragiri. Branches terete, with ash-coloured, dotted bark, rather villous while young. Leaves 5-10 inches long; nerves uniting in sub-marginal arches. Drupes round, ovate, obscurely 4-furrowed, slightly clothed, the size of a gooseberry, supported at the base by a 5-cleft calyx, whose segments are lanceolate, ciliated, and spreading. Embryo erect. ? Cotyledons parallel.

Long-leaved Ehretia. Tree large.

3 E.? UMBELLULATA (Wall, in Roxb. fl. ind. 2. p. 344.) arboreous ; leaves ovate, nearly entire, glabrous ; umbellets scattered, round, small, downy; stigma deeply and almost equally 4-lobed. j? . S. Native of Silhet, where it is called *Kunuka.* Branches like those of *E. macrophylla.* Leaves repand, slightly undulated, *3-5* inches long, generally with a retuse apex ; nerves uniting into sub-marginal arches, elegantly reticulate. Flowers very small, white, fragrant, crowded together in lateral, simple, or corymbose heads. Calyx supported by an oval bractea ; segments of the calyx round, ciliated. Corolla rotate, with reflexed lobes, shorter than the stamens. This seems to connect *Ehretia* with *Cordia,* from the sho t style and deeply 4-lobed stigma, but the fruit is unknown.

Umbellate-dowered Ehretia. Shrub.

4 E. WIGHTIA[X]NA (Wall. cat. no. 7013.) glabrous; leaves oblong-lanceolate, or obovate-oblong, entire, coriaceous ; peduncels terminal, corymbose ; flowers secund, pedicellate. 1?. S. Native *of* the East Indies. Nearly allied to *E. umbellulata.*

Wight's Ehretia. Shrub.

5 E. PYRIFOLIA (D. Don, prod. fl. nep. p. 102.) leaves ovate, acute, serrated, glabrous, rounded at the base : floral ones oblong ; panicles terminal; flowers crowded. Tj . G. Native of Nipaul. Flowers small, disposed in an ample, crowded panicles. Nearly allied to *E. serrata,* Roxb., but the leaves of that plant are acute at the base.

Pear-leaved Ehretia. Tree or shrub.

6 E. JAVA'NICA (Blum, bijdr. p. 842.) leaves alternate, oval, attenuated at both ends, quite entire, glabrous ; corymbs lateral and terminal, divaricate ; calyx deeply 5-cleft, with acuminated segments. f? . S. Native of Java, on the declivities of mountains on the west side, where it is called *Sikup Burrum.*

Java Ehretia. Fl. Nov. Tree 60 feet.

* * *Species natives of New Holland.*

7 E. ACUMINA'TA (R. Br. prod. p. 497.) leaves oblong, acuminated, serrated, quite glabrous ; panicles decompound, having the branches and branchlets quite glabrous. J? . G. Native of New South Wales, about Port Jackson.

Acuminated-leaved Ehretia. Fl. July. Clt. 1823. Tree *15* feet?

8 E. SALIGNA (R. Br. 1. c.) leaves linear-lanceolate, subfalcate, elongated, quite entire, glabrous, *3-5* inches long; cymes panicled, dichotomous ; flowers polygamous. ^ . G. Native of New Holland, within the tropic, on the sea-shore.

Willowy-leaved Ehretia. Shrub or tree.

9 E. MEMBRANIFOLIA (R. Br. 1. c.) leaves long-lanceolate, quite entire, and quite glabrous, strict, membranous, \\ to *2*\ inches long; cymes dichotomous. J?. S. Native of New Holland, within the tropic. The fruit being unknown the genus is doubtful.

Membrane-leaved Ehretia. Shrub or tree.

• * * *Species natives of America.*

10 E. TINIFOLIA (Lin. spec. 273. amoen. acad. 5. p. *595.* Jacq. amer. p. 45. Swartz. obs. p. *87.)* leaves oblong-ovate, or ovate, obtuse, quite entire, glabrous ; panicles terminal, oblong; calyx 5-cleft, obtuse. J?. S. Native of Jamaica, and Cuba.—Trew. ehret. t. 24.—Browne, jam. p. 168. t. 16. f. 1.—Sloan, jam. 2. p, 94. t. 203. f. 1. A tree with a dense, oblong head. Leaves about 4 inches long, on short petioles. Flowers numerous, small, white, strong-scented. Corolla a little longer than the calyx ; with obovate, acute, reflexed segments, which exceed the tube in length. Stamens a little longer than the corolla. Stigma bifid. Drupe containing 4 nuts, ex. Jacq., 2 nuts, ex Lin., globular, at first yellow, then black, size of currants. They serve to feed poultry, and are sometimes eaten by the poorer sort of people. The tree is known in Jamaica by the name of *Bastard Cherry-tree.*

Tinus-leaved Ehretia. Fl. June, July. Clt. 1734. Tree 16 *to* 28 feet.

H E . ? INTERNODIS (Lehr. stirp. 1. p. 47. t. 24.) leaves alternate, oblong-ovate, quite entire, acute, glabrous; panicles intra-foliaceous ; flowers corymbose, panicled ; corolla campanulate, with reflexed segments. J? . S. Native of the Antilles. E. petiolaris, Lam. diet. 1. p. 527. no. 5. ex Poir. suppl. 2. p. I. Cordia petiolata, Desf. hort. par. Branches loose, grey, tubercled. Leaves 4 inches long. Style simple. Stigma *2*-lobed. Berries round, containing 4 1-seeded nuts.

Var. ft, Subria (Commers. herb, ex Lam. diet. 1. c.) very like the species ; flowers hardly a line long, with acute segments; stamens inserted in the tube of the corolla ; stigma capitate; panicles terminal and axillary. *h* . S. Native of the Mau-

ritius. E. intern6dis, Roxb. fl. ind. 2. p. 343. This, as well as the species, are very doubtful from the form of the stigma.

Interhnotted Ehretia. FL ? Clt. 1819. Shrub 5 to 8 feet.

12 E. GRANDIFLÒRA (Poir. suppl. 2. p. 3.) leaves alternate, ovate, smooth, with unequal sides, glabrous, quite entire, obtuse ; flowers corymbose; calyx rather tubular, downy, grey, with 5 acute teeth ; segments of corolla roundish, spreading. T? . S. Native of St. Domingo. Branches terete. Leaves on short petioles, *2* inches long, and \\ inch broad. Tube of corolla red, length of calyx. Stigma bifid, obtuse. Fruit unknown.

Great-flowered Ehretia. Shrub or tree.

13 E. ? DU'BIA (Jacq. obs. 1. p. 19. Gmel. syst. 1. p. 394. Vittm. summ. *2,* p. 15.) leaves alternate, oval-oblong, acute, quite entire, glabrous; peduncles 1 -flowered, aggregate ; calyx bilabiate : lower lip campanulate : superior one roundish, concave, spreading, at length not half the size of the lower one; segments of the limb of the corolla flat, ovate, obtuse. J?. S. Native of Jamaica, about Kingston. Leaves *3-6* inches long, petiolate. Tube of corolla funnel-shaped, hairy inside. Stamens short, inserted in the upper part of the tube. Anthers didymous. Style subulate, semi-bifid at apex ; segments bifid, inflexed. Stigmas acute. This is probably a species of *Córdia,* from the twice bifid style, or a new genus belonging to section *Cordiàcece.*

Doubtful Ehretia. Clt. 1825. Tree *20* feet.

14 E. TOMENTÔSA (H. B. et Kunth, nov. gen. amer. 3. p. 64. t. 208.) branches angular, clothed with hoary tomentum; leaves opposite, elliptic-oblong, acute, entire, glabrous above, and clothed with downy tomentum beneath, and hoary ; flowers axillary, corymbose, about equal in length to the petioles; calyx clothed with hoary tomentum, almost entire, rather angular, loose. *2 • S. Native of New Granada, near Santa Fe de Bogota. Ehretia Bogotensis, Spreng. syst. 1. p. 648. Leaves running into the petioles at the base, 5 inches long. PedunciB^xillary, short, many-flowered. Calyx turbinately campanulate. Corolla campanulate, glabrous ; tube twice as long as the calyx; limb spreading, with ovate, oblong, obtuse segments. Stamens a little exserted, glabrous. Anthers *2* lobed at the base. Stigmas acute. Drupe depressed, globular, smooth, size of a sloe, surrounded by the calyx, which is warted at the base, and irregularly lobed, 4-celled ; cells 1-seeded.

Tomentose Ehretia. Shrub or tree.

15 E. TEiiNiFOLiA (H. B. et Kunth, nov. gen. amer. 3. p. *66.)* branches nearly terete, smoothish ; leaves 3 in a whorl, oblong, obtuse, quite entire, glabrous, rather powdery ; corymbs axillary, about equal in length to the petioles ; calyx clothed with hoary powder, irregularly 4-lobed. T? . S. Native of the province of Venezuela, near Los altos de San Pedro, at the altitude of 850 hexapods. Branches white. Leaves petiolate, furnished with minute, canescent atoms, pale beneath, 4-5 inches long, and 2\ broad. Petioles powdery. Flowers the size of those of *Lycium bdrbarum.* Calyx turbinately campanulate. Corollas white, funnel-shaped, glabrous ; tube hardly equal in length to the calyx : limb spreading, with ovate-oblong, obtuse segments; throat puberulous. Stamens exserted. Stigmas acute. Drupe like that of the preceding.

Tern-leaved Ehretia. Tree 15 to 20 feet.

Cult. N.B. The following names occur in Salt. trav. abyss, append, p. 475, but without any definition. 1 E. obovàta, R. Br. 2 E. Abyssinica, R. Br.

Cult. For culture and propagation see *Córdia,* p. 387.

IV. BEURRE^XRIA (named by P. Browne, after Mr. Beurrer, an apothecary of Nuremberg, who was a great promoter of natural history.) Brown, jam. p. 168. r. 15. f. 2. Jacq. amer. 45. t. 173. H. B. et Kunth, nov. gen. amer. 3. p. 67.—Ehretia species of other authors.

LIN. SYST. *Pentdndria, Monogynia.* Calyx campanulate, 5-toothed, or 5-cleft. Corolla funnel-shaped ; limb 5-parted ; throat naked. Stamens a little exserted. Style usually bifid, rarely undivided ; stigmas 2, sub-capitate. Drupe containing 4 pyrenae or nuts ; nuts 2-celled ; cells 1-seeded.—Small trees or shrubs. Leaves alternate, nearly entire, or quite entire. Corymbs sub-terminal. Flowers white.

* *Species natives of America,*

1 B. EXSTTCCA (Jacq. amer. p. 45. t. 173. f. 17. ed. pict. t. 259. f. 13.) branches and leaves downy ; leaves ovate, acute, or obovate and obtuse, quite entire ; corymbs dichotomous ; calyx downy, irregularly bifid or trifid ; fruit dry, tetragonal, divisible into 4 parts. fj. S. Native of South America, in hot places near Cumana, St. Thomas de la Guyana, and New Barcelona ; and of Mexico, near Actopan, &c. H. B. et Kunth, nov. gen. amer. 3. p. *67.* Ehrètia exsùcca, Lin. spec. p. 275. Lam. diet. 1. p. 527. Rhàmnus Cumanénsis, Loefl. itin. p. 182. Guatacare of the natives of Cumana. Branches terete, hoary, glabrous, when young rather downy. Leaves \\ to 2 inches long, petiolate, clothed with strigae on both surfaces, sometimes nearly glabrous ; petioles downy, glabrous, or ciliated. Flowers white, sweet-scented. Corolla white, salver-shaped ; tube longer than the calyx ; limb spreading, with roundish, cordate segments. Stamens length of corolla, villous at the base. Style bifid. Jacquin mentions his plant as glabrous, while that of Kunth is downy. They are, however, probably identical.

Dry-fruited Beurreria. Clt. 1804. Tree 20 feet.

2 B. REVOLUTA (H. B. et Kunth, nov. gen. amer. 3. p. *67.)* branches and leaves glabrous, ovate, obtuse, with entire revolute margins; corymbs dichotomous; calyx downy, 5-toothed. J?. S. Native of New Spain, in temperate places near Hacienda de Regla. Shrub much branched. Branches terete. Leaves acute at the base, 1-2 inches long, petiolate. Corymbs terminal, downy. Calyx tubularly campanulate. Drupe red, size of a sloe, nearly globose, the rest as in the genus.

Revolute-leaved Beurreria. Shrub 5 to 6 feet.

3 B. DIVARICA^TA ; leaves oblong, entire, scabrous above, ancK downy beneath ; flowers terminal, corymbosely racemose ; calyx 5-cleft, downy. ^2 • S. Native of Cuba, about the Havana.- Ehrètia divaricàta, D. C. hort. monsp. 1813. p. 108. icon, ined.j t. 4. Branches divaricate. Leaves firm. Flowers white.* Drupe orange-coloured, globose ; the rest as in the genus.

Divaricate Beurreria. Clt. 1820. Tree.

4 B. VIRGA'TA ; branches filiform ; leaves oblong, entire, obtuse, hardly petiolate, scabrous above, and downy beneath ; peduncles terminal, scattered, 1-flowered; calyx tubular, hairy, with 5 short, ovate, acuminated segments. J? . S. Native of New Spain, in deserts. Ehrètia virgàta, Swartz. prod. p. 47. fl. ind. occ. 1. p. 463. This plant differs from *B. succulènta,* in being more twiggy, in the leaves being more scabrous, and in the inflorescence. Corolla white, twice as long as the calyx. Berry roundish, red ; the rest as in the genus.

Twiggy Beurreria. Shrub 6 to 8 feet.

5 B. SUCCULENTA (Jacq. amer. p. 44. ed. pict. p. *28.* t. 45. obs. 2. p. 2. t. 26.) leaves oblong, quite entire, obtus?, or acute, smooth, or rather scabrous to the touch ; corymbs loose, terminal, composed of irregular dichotomous cymes; calyx tubular,

glabrous, with ovate, acute segments. T? . S. Native of Jamaica and Antilles, &c. Ehretia Beurreria, Lin. spec. *275.* Mill. diet. no. 2. Willd. spec. 1. p. 1078. Desf. ann. mus. 1. p. 1>79 Cordia Beurreria, Lin. amoen. acad. 5. p. 395.—Brown,'jam. p. 1G8. t. 15. f. 2—Sloane, jam. 2. p. 96. t. 204. f# i.__Comm. hort. 1. p. 153. t. 79.—Pittonia similis, Catesb. carol. 2. p. 79. Leaves 3 inches long, running into the short white petioles. Flowers white, sweet-scented. Segments *of* corolla obovate, with deflexed sub-undulated margins. Stigma green, depressed, 2-lobed. Drupe globose, smooth, size of a pea, orange-coloured, 4-angled ; the rest as in the genus. The berry being sweet and succulent is eaten by children and natives. In Jamaica it is called *Poison-berries,* The French name is *Bois Cabril Batard.*

Succulent-fruited Beurreria. Clt. 1758. Tree *20* to 45 feet.

6 B. TOMENTOSA ; leaves ovate, scabrous above, and tomentose beneath, obtuse, tapering into the short petioles at the base; calyx short, with 5 deep obtuse segments ; tube of corolla twice as long as the calyx, f? . S. Native of Jamaica and St. Domingo. Ehretia tomentosa, Lam. ill. no 1919. Poir. suppl. 2. p.]. no. 7.—Sloane, jam. hist. 2. t. 204. f. 1.? Branches striated, rather nodose. Flowers white. Berry yellowish, roundish, containing 4 nuts; but the nuts are not said to be 2-celled and 2-seeded.

Tomentose Beurreria. Tree.

7 B. RA^DULA ; leaves coriaceous, obovate, obtuse, scabrous from dots ; corymbs loose, terminal; calyx whitish grey, with dilated segments. f? . S. Native *of St.* Domingo. Ehretia radula, Poir. suppl. 2. p. 2. Leaves quite entire, attenuated at the base, 1-2 inches long, and *6-9* lines broad, beset with white dots above, and cinereous beneath : uppermost ones narrower, and nearly lanceolate. Corolla white, a little longer than the calyx. Berry containing 4 nuts; but it is not said whether these nuts are 1 or 2-celled, or 1 or 2-seeded.

Rasp-\ea\ed Beurreria. Shrub.

* * *A species native of the Isle of Bourbon,*

8 B. LA'XA ; branches reclinate; leaves ovate, obtuse, or acutish, quite entire, or a little sinuated, glabrous ; panicles corymbose, loose, terminal ; calyx 5-cleft : segments of corolla ovate, obtuse, with reflexed margins. T? . S. Native of the Island of Bourbon. Ehretia laxa, Jacq. hort. schoenbr. t. 41. fragm. >jio. 31. t. 5. f. 2. Leaves petiolate, scattered, dark green, about *i&* inches long. Flowers greenish white. Corolla twice as long aas the calyx, with ovate, obtuse, reflexed segments. Berry efleshy, red, size of a pea, containing 4 nuts ; but the nuts are not said to be 2-celled or 2-seeded.

Loose-Lowered Beurreria. Clt. 1826. Shrub 6 to 10 feet.

* * * *Species natives of Asia. Drupe containing* 4 *1-celled, l-seeded nuts. Perhaps a distinct genus.*

9 B. *LJE^V\S*; arboreous; leaves ovate, smooth, entire, or sometimes scalloped; corymbs lateral and axillary, composed of dichotomous, recurved, secund spikes ; drupe containing a 4 partible nut, or 4 l-seeded, 1-celled nuts. T? . S. Native of the Circar mountains, and Bengal, and on the banks of the Irawaddy. Ehretia affinis, Wall. cat. no. 900. Ehretia lae%vis, Roxb. cor. 1. p. 42. t. 56. Seregada of the Telingas. Branches erect. Leaves on short petioles, pretty smooth, 3-4 inches long, and *2-3* broad. Flowers small, white. Nuts wrinkled outside. The wood of this tree is used by the hill people for many purposes.

Smooth Beurreria. Clt. 1823. Tree 12 to 20 feet.

10 B. A'SPERA; shrubby; leaves ovate, scabrous above, and downy below, entire ; corymbs terminal, dichotomous ; calycine segments ovate; drupe containing a 4-celled nut, or a nut divisible into 4 1-celled l-seeded parts. J?. S. Native of the East Indies. Ehretia aspera, Roxb. cor. 1. p. 41. t. *55.* Willd. spec. 1. p. 1077. E. tomentosa, Roth, nov. spec. p. 126. Ehretia Heynii, Roem. et Schultes, syst. 4. p. *532.* Bark of the larger branches rust coloured; young shoots downy. Corymbs globular, composed of dense, recurved, naked, secund spikes *of* pedicellate flowers. Flowers very small, white. Stigmas simple. Drupe red, size of a grain of pepper, somewhat tetragonal. Nuts smooth outside.

Bough Beurreria. Clt. 1795. Shrub.

11 B. SETOSA (Roxb. fl. ind. 2. p. 342.) tender parts bristly; leaves ovate-cordate, acuminated, entire ; panicles terminal, composed of dichotomous, secund, recurved spikes; calycine segments lanceolate, as long as the corolla ; drupe containing 4 1-celled, 1-seeded nuts. F? . S. Native of the Island of Hamoa.

Bristly Beurreria. Shrub or tree.

12 B. RETU'SA ; leaves small, obovate, retuse or acute, downy, as well as the young branches and peduncles ; peduncles simple, terminating the short stiff branches, few-flowered. J? • ®* ^a'' tive on the banks of the Irawaddy. Ehretia retusa, Wall. cat. no. 903. A stiff, stunted, branched shrub. Nut containing 4 l-seeded nuts.

Retuse-leaved Beurreria. Shrub 3 to 4 feet.

13 B. UNIFLORA (Roxb. fl. ind. 2. p. 342.) shrubby, twiggy; leaves crowded, nearly sessile, oblong, entire, hairy ; flowers solitary, nearly sessile; drupe containing 4 1-celled, l-seeded nuts. J?. S. Native of the Moluccas.

One-flowered Beurreria. Shrub.

14 B. PUNCTA'TA ; leaves oval, entire, glabrous on both surfaces, beset with dots towards the margins, which are excavated beneath, but elevated, and rather wrinkled above; corymbs terminal, dichotomous, divaricate, downy, composed of secund spikes of flowers, *h* . S. Native of the East Indies. E. punctata, Roth, nov. spec. p. 126. Dots at the margins of the leaves, as in *Coffea Ardbica,* but more copious, and appear like secreting pores. It differs from *B. Icevis,* in dots only being on the margins of the leaves, not throughout its surface as in it, and the leaves themselves are less coriaceous, and the corymbs and calyxes more hairy.

Dotted-leaved Beurreria. Shrub of tree.

15 B. DICHOTOMA (Rottl. herb. Blum, bijdr. 842, under *Ehretia,)* leaves oblong, acuminated, quite entire, coriaceous, glabrous ; corymbs terminal, dichotomous; flowers secund; segment of calyx bluntly toothed. ^ • S. Native of Java, in the higher woods on mount Burangrang.

Dichotomous-corymbed Beurreria. Fl. June, July. Tree.

16 B. GLA'BRA ; leaves oval-roundish, glabrous, quite entire ; corymbs terminal, dichotomous, divaricate, composed of secund racemes or spikes of pedicellate flowers; calyx membranous in the fruit-bearing state, obovate, sub-inflated, 5-cleft, downy inside. J?. S. Native of the East Indies. E. glabra, Roth, nov. spec. p. 126. This species differs from all others in the calyx being membranous and somewhat inflated, and less divided.

Glabrous Beurreria. Shrub or tree.

Cult. For culture or propagation see *Cordia,* p. *387.*

V. CORTE'SIA (so named in honour of Ferdinando Cortesio, of New Spain, who collected many specimens of plants, which he sent to Cavanilles.) Cav. icon. 4. p. *53.* t. *377.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx truncate, 10-

toothed. Corolla funnel-shaped; tube length of calyx; limb 5-parted, spreading, with rounded lobes. Stamens 5, exserted; anthers ovate. Style bipartite at top; stigmas peltately globose. Drupe ovate, containing 2 1-seeded? nuts.—A much branched shrub, with alternate, sessile, cuneiform, glabrous leaves, which are trifid at apex; and terminal, sessile, solitary flowers. Calyx surrounding the drupe at the base.

1 C. CUNEIFOLIA (Cav. 1. c.) ^ • G. Native of Buenos Ayres, in the plains called Pampas. Leaves tubercular; tubercles white, with a deciduous white hair rising from the centre of each. Calyx villous, turbinate, hemispherical in the fruit-bearing state. Flowers yellowish white.

Wedge-leaved Cortesia. Shrub 4 to 5 feet.

Cult. For culture and propagation see *Cordia,* p. 387.

VI. CARMO'NA (named by Cavanilles, after Brunond Salvatori Carmona, a painter, and companion of Lcefling in his travels up the Orinoco.) Cav. icon. 5. t. 438.—Ehrëtia species of Roxb.

LIN. SYST. *Pentdndria, Monogijnia.* Calyx 5-parted. Corolla campanulate, or rotate; limb 5-6-cleft. Stamens *5-6,* inclosed, shorter than the corolla. Styles capillary; stigmas simple. Drupe succulent, small, containing a 5-6-celled nut.—Branched shrubs. Leaves alternate, on the older branches fascicled, coriaceous, stiff. Peduncles rising from the fascicles of leaves, 2-6 flowered; flowers pedicellate, small, white.

1 C. HETEROPHY'LLA (Cav. icon. 5. t. 438.) leaves alternate or in fascicles, cuneiform, tridentate at the apex, sessile, very scabrous from callous dots; peduncles racemose; flowers on short pedicels; calycine segments lanceolate, as long as the corolla. P? . S. Native of the East Indies, in barren lands and forests. Ehrëtia heterophylla, Spreng. syst. 1. p. 648. Cordia retusa, Vahl. symb. 2. p. 42. Ehretia buxifolia, Roxb. cor. 1. p. 4^. t. 57.?—Plukn. aim. p. 159. t. 31. f. 1. Bapanabooree of the Telingas. Leaves very hard, shining above, \ to 1 inch long, and \ to | inch broad. Corolla campanulately rotate, 5-6-cleft. Stamens *5-6.* Drupe size of a pea, red, containing a 5-6-celled nut. *Ehrëtia buxifblia,* Roxb. is probably a true species of *Beurreria.*

Variable-leaved Carmona. Clt. 1823. Shrub 5 to 8 feet.

2 C. MICROFHY'LLA; leaves cuneiform, obtuse, quite entire, scabrous above, dotted, 4-5 in a fascicle; peduncles short, axillary, 1-flowered, shorter than the leaves; calycine segments linear, scabrous. T? . S. Native of the East Indies. Ehrëtia microphylla, Lam. ill. 1. p. 425. no. 1921.—Plukn. phyt. t. 31. f. 1.? Plant glabrous. Berry dry? globose, size of a grain of pepper, somewhat mucronate.

Small-leaved Carmona. Fl. June, Aug. Clt. 1818. Shrub 5 to 8 feet?

3 C. LYCIOI'DES; branches numerous, short, ending in a spine; leaves in fascicles, small, obovate-lanceolate, entire, glabrous. T? . S. Native of Pegamew. Ehrëtia lycioides, Wall, mss.

Lycium-lihe Carmona. Shrub 4 to 6 feet.

4 C. VIMINEA; leaves alternate, cuneate-lanceolate, entire, mucronate, downy, as well as the branches and peduncles, which are terminal, few-flowered, corymbose; segments of the calyx long, linear, acuminated. Tj . S. Native of Martaban, on the banks of the Attran, and on the Pundua mountains. Ehrëtia viminea, Wall. cat. no 906.

Twiggy Carmona. Shrub.

Cult. For culture and propagation see *Cordia,* p. 387.

VII. LUTRO'STYLIS (from *Xvrpioaig, lutrosis,* a freeing; and *(TTVKOQ, stylos,* a column; the styles are free to the base, not combined at the base as the other genera belonging to the present order.) Ehrëtia species of authors.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla funnel-shaped, ? 5-cleft. Stamens a little shorter than the corolla. ? Styles 2, short; stigmas sub-capitate. Drupe globose, usually containing 4 1-seeded nuts.—Much branched, glabrous shrubs. Leaves rather coriaceous, fascicled. Corymbs terminal, dichotomous. Flowers small, white, or yellowish.

1 L. INE'RMIS; glabrous, unarmed; leaves fascicled, obovate-oblong, obtuse, quite entire, finely ciliated; corymbs terminal, dichotomous; calyxes ciliated. I? . S. Native of America, near Cumana. Ehretia fasciculata, H. B. et Kunth, nov. gen. amer. 3. p. 66. Shrub much branched; branches terete, white. Leaves usually 3 in a fascicle, on the tops, of very short branches, petiolate, acute at the base, deep green above, pale beneath, 2 inches long. Corymbs downy, with angular branches. Flowers sessile. Segments of the calyx ovate, acute, ciliated. Corolla and stamens hardly seen. Drupe size of a grain of pepper, somewhat tetragonal.

Unarmed Lutrostylis. Shrub 6 to 8 feet.

2 L. SPINO'SA; spinose, glabrous; leaves fascicled, oblong attenuated at the base, sometimes sub-repand; corymbs racemose, short, terminal; calycine segments lanceolate, acute. J? . S. Native of South America. Ehrëtia spindsa, Jacq. amer. 46. t. 80. f. 18. edit. pict. t. 259. f. 14. Spines on the branches short, and sub-axillary; those on the trunk strong, woody, and very thick. Leaves 3-4 inches long, usually *5-6* in a fascicle. Stipulas subulate, rising from the centre of the tubercles in the branches. Flowers small, numerous, yellowish. Corolla length of calyx; segments of the limb ovate, obtuse, reflexed, length of tube. Stamens a little shorter than the corolla. Styles subulate; stigmas simple. Drupe red, small.

Spinose Lutrostylis. Shrub 4 to 10 feet.

3 L. ? MONTEVIDE'NSIS; leaves oblong, bluntish, quite entire; when young serrated a little at the apex, coriaceous, shining above, and of a different colour beneath, having the axils of the veins villous; spines opposite the branches, supra-axillary; racemes lateral, simple, opposite the leaves. ^ • S. Native of Montevideo, Sello. Ehretia Montevidensis, Spreng. syst. 1. p. 647.

Monte-video Lutrostylis. Shrub.

Cult. For culture and propagation see *Cordia,* p. 387.

VIII. RHA'BDIA *(pafttoQ, rhabdos,* a twig; in reference tc the shrub being twiggy.) Mart. pi. bras. 2. p. 136. t. 195.

LYN. SYST. *Pentdndria, Monogynia,* Calyx 5-parted. Corolla campanulate, 5-cleft, with a naked throat. Stamens 5^ from the base of the corolla, inclosed. Style simple; stigma 2-lobed. Berry or drupe usually containing 4 1-seeded pyrense.—*I* Branches downy. Leaves alternate, sessile. Flowers axillary^ or in few-flowered, bracteate corymbs.

1 R. LYCIOI'DES (Mart. 1. c. p. 137. t. 195.) leaves oblong-lanceolate, obtuse, undulated, adpressed to the stem, downy beneath, and pale green; inflorescence corymbose; peduncles trifid, 3-flowered, or bifid, 2-flowered; drupe ovate, globose, scarlet. h_c . S. Native of Brazil, in the province of Bahia, on the inundated banks of the river St. Francisco, near Joa Siero. Leaves sessile, green above, and glaucous beneath. Corolla small, of a rose-purple colour, with a white tube.

Lycium-lihe Rhabdia. Shrub 5 to 6 feet.

Cult. For culture and propagation see *Cordia,* p. *387.*

IX. MORELOSIA (meaning unknown to us.) La Lave et Lexarza, rtov. veg. mex. p. 1.

LIN. SYST. *Pentdndria, Digynia.* Calyx adherent, ventricose, rather coriaceous, 5-cleft. Corolla rotate; with rounded segments. Stamens 5, exserted. Style forked; stigmas 2, capitate. Drupe tetragonal, containing a 4-seeded, 4-celled nut.—A moderate-sized tree, with a scabrous trunk, and twisted, angular, green branches. Leaves quite entire. Flowers terminal, corymbose, articulated to the extremities of the peduncles, sweet-scented, falling spontaneously before fecundation.

1 M. HUANI'TA (La Lave, ex Lexarz. 1. c.) T? . S. Native of Mexico. Branches difformed at the extremities. Leaves 3-4 inches long.

Huanita Morelosia. Tree.

Cult. For culture and propagation see *Cordia,* p. *387.*

Tribe III.

ERIMATALIE'iE (this tribe only contains the genus *Erysibe.)* Style hardly any; stigma large, 5-groved. Drupe pulpy, containing only one 1-seeded nut.

X. ERYSFBE (probably the East Indian name of *E. iianiculata.)* Roxb. cor. 2. t. 159. fl. ind. 2. p. 284. Blum, bijdr. p. 1046. Erimatàlia, Lam. diet. 2. p. 348.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted, or 5-toothed; segments obtuse, imbricate. Corolla with a short tube, tomentose outside; limb spreading, 5-parted: lobes bifid, induplicate in aestivation. Ovanum 1-celled, 3-4-ovulate; ovula attached to the bottom of the cell. Stigma sessile, discoid. Berry 1-seeded, ex Roxb.—Climbing shrubs, with alternate leaves, and axillary and terminal panicles of flowers. This genus is nearly allied to *Moorcroftia* and *Maripa,* on the one hand, and *Apocynece* on the other.

1 E. PANICULA'TA (Roxb. cor. 2. t. 159.) leaves oblong, pointed, glabrous; panicles large, terminal. J? . ^\ S. Native of the Circars, and the eastern borders of Bengal. Branches and panicles clothed with rust-coloured farinae. Leaves 4-5 inches long, and about 2 broad. Flowers small, rust-coloured: border yellow. Berry size of a cherry, black. On the mountains bordering on Silhet, the shrub blossoms in October, and is called there *Luta-Bichutti.*

Panicled-flowered Erysibe. Shrub tw.

2 E. RIIEE^DII (Blum, bijdr. p. 1047.) leaves elliptic-oblong, bluntly acuminated, coriaceous, glabrous; panicles axillary and terminal. f? . $^{rs}{}_{m}$ S. Native of the Malabar coast; and of lava, on the Salak mountains, where it is called *Mugmale-aroy.* Erima-Tàli, Rheed. mal. 7. p. *73.* t. 39. Lam. diet. 2. p. 348. Erimatàlia Rhe&dii, Room, et Schultes, syst. 5. p. 331.

Rheede's Erysibe. Fl. July. Shrub tw.

3 E. GLOMERA'TA (Blum, bijdr. p. 1047.) leaves elliptic-oblong, acuminated, coriaceous, glabrous; flowers axillary, glomerate. \? . ^\ S. Native of Java, in woods, on mount Salak, where it is called *Kisimutti.*

Far. /3, longifblia (Blum. 1. c.) leaves cuneate-oblong, bluntly acuminated. I? . ^. S. Native of the Island of *Nusce-Kambanga.*

Glomerate-dowered Erysibe. Fl. Nov. Shrub tw.

4 E. TOMENTÒSA (Blum, bijdr. p. 1048.) leaves ovate, acute, glabrous above, and tomentose beneath; racemes axillary, very short. J? . ^. S. Native of Java, on the mountains of Parang.

Tomentose Erysibe. Fl. July, Aug. Shrub tw.

5 E. EXPA'NSA (Wall. cat. no. 1331.) young branches, racemes, calyxes, petioles, and undersides of young leaves clothed with rusty tomentum, as in *E. paniculata;* leaves coriaceous, elliptic, acuminated, mucronate, shining, entire; panicles axillary and terminal, many-flowered, solitary or aggregate; flowers racemosely fascicled. *? . ^ S. Native of Martaban, Moalmeyne, and Tavoy.

Expanded Erysibe. Shrub climbing.

6 E. SUBSPICA^NTA (Wall. cat. no. 1332.) young branches, &c. as in the last; leaves obovate-oblong, acuminated, tapering to the base, or oblong-lanceolate; racemes spicate, solitary, terminal; flowers aggregate, crowded. J?. ^,. S. Native of the Burman Empire, on Mount Taong-Dong.

Subspicale-flowered Erysibe. Shrub climbing.

7 E. PRI'NCEI (Wall. cat. no. 1335.) young branches, &c. as in the two last species; leaves oblong, acuminated, on very short petioles, almost sessile; racemes axillary and terminal, solitary or twin, simple, short; flowers aggregate. T? . $_{w}$. S. Native of Singapore, J. Prince.

Prince's Erysibe. Shrub climbing.

8 E. *FRA GRANS* (Wall. cat. no. 1336.) racemes and calyxes clothed with rusty tomentum; leaves large, coriaceous, glabrous, acuminated; racemes usually aggregate, panicled or simple, axillary, very short. F? . ^. S. Native of the Burman Empire, at Amherst. Flowers aggregate.

Fragrant Erysibe. Shrub climbing.

9 E. L,EVIGA'TA (Wall. cat. no. 1333.) glabrous, except the outside of the inner calyxes; leaves coriaceous, oblong-lanceolate, acuminated, entire; calyxes ciliated; racemes short, axillary and terminal, panicled; flowers aggregate. J? • $_{w}$. G. Native of China and Silhet, Corollas white; anthers brown.

Smooth Erysibe. Shrub climbing.

10 E. GLAUCE'SCENS (Wall. cat. no. 1334.) pedicels and calyxes clothed with velvety brownish down; leaves glabrous, glaucescent, but perfectly glaucous beneath, broad-elliptic, acuminated; racemes panicled, axillary and terminal, usually solitary, elongated, the whole forming a diffuse, terminal panicle; flowers aggregate. T? . ^. S. Native of Moalmyne.

Glaucescent Erysibe. Shrub climbing.

Cult. The species of *Erysibe* are well fitted for training up rafters or pillars in stoves; they are of easy culture, will grow well in any rich light soil, and are readily propagated by young cuttings in sand, in heat, with a hand-glass placed over them.

f *A genus not known whether belonging to the order or not.*

XL ROCHEFORTIA (named in honour of M. De Rochefort, author of Histoire naturelle et morale des Isles Antilles de 1' Amerique; Rotterdam, 1039.) Swartz, prod. p. 54. fl. ind. occ. 1. p. 552. icon. t. 10.

LIN. SYST. *Pentdndria, Digynia.* Calyx 5-parted; with ovate-oblong segments. Corolla funnel-shaped, with a short tube and open throat; segments of the limb ovate-oblong, spreading. Stamens 5, inserted in the plicse of the throat of the corolla. Styles 2, subulate; stigmas simple. Fruit globose, 2-celled. Seeds numerous, angular.—Branched shrubs, with alternate leaves; and corymbose, dichotomous, terminal, and axillary inflorescence.

1 R. CUNEA'TA (Swartz, fl. ind. occ. 1. p. 552. icon. t. 10.) leaves cuneiform, obovate, entire, alternate, fascicled; peduncles terminal and axillary, subdichotomous, cymose. F?. S. Native of Jamaica, in stony mountain places. Branches flexuous, terete, spinose, smooth; spines close to the petioles, long. Leaves fascicled, 1-3 together, rarely more, rather emarginate at top, glabrous, of an obscure, shining, greenish brown colour above, and paler beneath. Cymes shorter than the leaves. Flowers small, greenish white. Calyx downy. Tube of corolla pentagonal. Stamens subulate, inserted in the recesses, between the lobes of the corolla. Stigmas villous, rather plumose. Seeds angular.

Cuneate-lcnved Rochefortia. Shrub *3 to 4 feet.*

2 R. OVA'TA (Swartz, fl. ind. occ. 1. p. 554.) leaves ovate, emarginate, entire, villous; peduncles many-flowered, twin]

shorter than the leaves. I? . S. Native of Jamaica, among bushes in stony places. Branches terete, glabrous. Leaves an inch long. Segments of calyx erect, incumbent, with villous margins. Tube of corolla campanulate, open, length of calyx, or a little shorter ; segments oblong. Stamens shorter than the segments of the corolla. Stigmas acute.

Ovate-leaved Rochefortia. Shrub 3 to 4 feet.

3 R. BRASILIE'NSIS (Hoffm. in Willd. herb, ex Roem. et Schultes, syst. 6. p. 210.) leaves ovate, acuminated, coriaceous, remotely subserrated ; corymbs racemose. *2 • S. Native of Brazil.

Brasilian Rochefortia. Shrub.

Cult, For culture and propagation see *Cordia,* p. 387.

N.B. Varrônia mollis, Desf. tabl. de jard. par p. 220. is a species of *Meldchia,* according to Desvaux.

Cordia aspérrima, Spreng. syst. 1. p. 649. does not belong to the order, but is a plant of the order *Labidtce.*

ORDER CLXVIII. HYDROPHY'LLEJE (this order contains plants agreeing with the genus *Hydrophyllum* in important characters.) R. Br. in bot. mag. vol. 50. t. *2373.* append, to Frankl. journ. Benth. in Lin. trans. 17. p. 267. Boragineae, sect. II. Juss. gen. 129. ed. Usteri, p. 144.

Calyx inferior, permanent, deeply 5-cleft; the recesses between the segments often furnished with reflexed appendages. Corolla monopetalous, hypogynous, regular, shortly 5-cleft, rotately campanulate, rarely somewhat funnel-shaped. Stamens 5, perigynous, alternating with the lobes of the corolla, inflexed in aestivation ; anthers versatile, 2-celled ; cells parallel, dehiscing lengthwise. Ovarium superior, simple, 1-celled. Style elongated, bifid ; stigmas 2, terminal. Placentas 2, free to the back, or adnate to the parietes of the fruit; their inner surface bearing 2 or many ovula. Fruit capsular, dehiscing by 2 valves; sometimes 1-celled, from the large placentas filling the capsule ; but sometimes the dissepiment is hardly complete, therefore the capsule is half 2-celled. Seeds reticulated outside. Albumen copious, cartilaginous. Embryo conical, with the radicle looking to the hilum.—Elegant herbs, natives of America ; hispid, like those of *Boraginece.* Leaves usually lobed, alternate, or the lower ones are opposite. Flowers disposed in unilateral, subdichotomous spikes or racemes, which are at first circinately scorpioid; rarely axillary, solita y, pedunculate. Corollas blue or pink, elegant.

This order is distinguished from *Boraginece,* and its nearest allies, by the capsular fruit, copious, cartilaginous albumen, placentation of the seeds, and generally by the compound, or deeply lobed leaves.

Synopsis of tig genera.

1 HYDROPHY'LLUM. Corolline processes 5, linear, adnate by the back, but with the top and margins free. Stamens exserted. Placentas large, biovulate.

2 ELLI'SIA. Calyx without appendages. Corolline processes 10, short, or wanting. Stamens rather shorter than the corolla. Placentas large, biovulate.

3 NEMOPHILA. Sinuses of the calyx furnished with reflexed teeth. Corolline processes 10, short or wanting. Stamens rather shorter than the corolla. Placentas large, 2-12-ovulate.

4 EiRROCA. Corolla deciduous. Ovarium pilose. Placentas linear, 4, or many-ovulate. Capsule half 2-celled.

5 PHACE'LIA. Corolla deciduous. Ovarium pilose. Placentas linear, 2-ovulate. Capsule falsely 2-celled.

6 EMMENA'NTHE, Corolla permanent. Ovarium clothed with glandular pubescence. Placentas linear, adnate by the back. Capsule falsely 2-celled.

I. HYDROPHY'LLUM (from *bZwp bSarog, hydor hydatos,* water ; and *tyvWov, phyllon,* a leaf. Miller supposes that Morinus gave it the name of *Water-leaf,* because the spring water stands in the cavity of the leaves, and not from its growing in water, as Tournefort conjectures.) Tourn. inst. t. 16. Lin. gen. p. 83. no. 284. Schreb. gen. no. 267. Juss. gen. p. 129. ed. Usteri, p. 144. Gaertn. fruct. 2. p. 133. t. 110. Lam. ill. t. 97. f. 1—2. Benth. in Lin. trans. 17. p. 272.—Nemophila species, Spreng.

LIN. SYST. *Pentdndria, Monogynia.* Corolline scales 5, linear, adnate by the back, but with the margins and top free. Stamens much exserted. Placentas large, free on the back, filling the ovarium, biovulate.—Radical leaves numerous : cauline ones few, alternate, broad, pinnately or palmately cut. Racemes bractless, scorpioid, dichotomous. Corollas blue or white.

1 H. APPENDICULA'TUM (Michx. fl. bor. amer. 1. p. 134.) lower leaves pinnate : cauline ones palmately lobed ; racemes very loose; calyx very hispid : the sinuses furnished with reflexed appendages.]/. H. Native of Virginia, near Harper's Ferry, Tennessee, Alleghanies, &c. on shady rocks near springs. Pursh, fl. amer. sept. 1. p. 134. Benth. 1. c. p. 272. Nemophila, paniculata, Spreng. syst. 1. p. 569. Plant very hairy. The radical leaves are like those of *H. Virginica ;* and the upper ones like those of *H. Canadénsis.* Pedicels almost twice as long as the fructiferous calyx. Calyx of *Nemophila,** but with the habit of the genus. Calyx almost tke length of the corolla. Corollas pale blue. Fascicles of flowers panicled.

Appendiculate-caUyxed Water-leaf. Fl. May, June\ Clt. 1813. PI. | to 1 foot.

2 H. CANADE'NSE (Lin. spec. p. 208.) leaves palmately-lobed or angular ; cymes of flowers loose ; calyx glabrous. 3/. H. Native from Canada to Pennsylvania, on wet rocks and shady mountains. Lam. ill. t. 97. f. *2.* Ker. bot. reg. t. 242.. Pursh, 1. c. Benth. 1. c. p. 273. Plant smoothish, or a little hispid. Leaves broad, roundish, glabrous on both surfaces, or hispid from a few hairs, hardly divided to the middle into lobes, having the margins furnished with a few sharp teeth. Pedicels usually shorter than the calyx. Corollas white, tinged with blue or purple.

Canadian Water-leaf. Fl. June, July. Clt. 1759. Shrub \ to 1 foot.

3 H. VIRGI'NICUM (Lin. spec. 208.) leaves pinnate: segments deeply cut; cymes of flowers rather loose ; calycine segments narrow-linear, ciliately hispid. %. H. Native from Canada to Carolina, in shady, rocky situations. Lam. ill. t. 97. f. 1. Ker. bot. reg. t. 331. Schkuhr, handb. 1. p. 114. t. *35.* Pursh, fl. 1. p. 134.—Sabb. hort. rom. 1. t. 15.—Mor. hist. 3. p. 599. sect. 15. t. 1. f. 1.—Dod. pempt. 77. t. 77. Benth. 1. c. Plant smoothish. Leaves hispid from a few scat-

tered pili above, pale and glabrous beneath, with *2-3* pairs of segments : lower segments on short petioles : upper ones usually combined with the terminal one. Corollas beautiful blue.

Virginian Water-leaf. Fl. May, June. Ck. 1739. PI. 1 *to* 1 foot.

4 H. MACROPHY'LLUM (Nutt. in journ. acad. nat. scienc. phil. 7. p. 111.) leaves pinnate; segments or leaflets deeply toothed ; cymes of flowers very dense; calycine segments lanceolate, ciliately hispid. 3/. H. Native of North-west America, in fissures of moist rocks, in the interior *of* Columbia, Douglas, 1826; in the forests of Kentucky, Mr. Short, ex Nutt, I.e. H. capitatum, Dougl. mss. ex Benth. 1. c. p. 282. H. caelestinum, Dougl. mss. The specimens collected on moist rocks in the interior of Columbia, (H. capitatum, Dougl. mss.,) have the leaves hispid on both surfaces ; the segments or leaflets but little divided, and not narrowed at their base. The other specimens gathered in shady moist woods (H. caelestinum, Dougl. mss.) have the leaves larger, with broader segments, much more cut, and the flowers fewer. The same plant also occurs in *California,* but with the leaves much more hispid on the upper surface, and clothed with whitish down beneath, ex Benth. All these differences are perhaps attributable to locality. Corollas blue.

Large-leaved Water-leaf. PI. 1 foot ?

f' *A doubtful species.*

5 H. LINEAGE (Pursh, fl. 1. p. 134.) pilose; leaves linear; racemes elongated. *11.* H. Native on the banks of the Missouri.

Linear-leaved Water-leaf. Fl. April. PL?

Cult. Plants of the most easy culture. They thrive best in a shady moist situation, and are readily increased by dividing at the root in spring or autumn.

II. ELLISIA (so named by Linnaeus, in memory of his correspondent John Ellis, F.R.S., author of a Treatise on Corollines.) Lin. gen. p. 83. no. 244. Schreb. gen. no. *268.* Juss. gen. p. 129. ed. Usteri, p. 144. Benth. in. Lin. trans. 17. p. £74.

kj, LIN. SYST. . . *Pentdndria, Monogynia.* Calyx without appendages at the sinuses. Corolline processes 10, short or wanting. ^Stamens rather shorter than the corolla. Placentas large, free the back, filling the ovarium, biovulate___North American ill annual herbs. Leaves pinnately cut : lower ones opposite. Lower peduncles opposite the leaves: superior ones disposed in simple, unilateral, loose racemes.

1 E. NYCTELE'A (Lin. gen. 97. syst. 195. mant. p. *336.)* ^petioles without appendages ; leaves pinnatifid, with cut lobes; jalyx increasing much after florescence. ©. H. Native of Virginia, on the banks of the Potomac river, and on theiSfnks of the Missouri. Gaertn. fil. carp. 3. t. 184. f. 6. Lam. ill. t. 97.- Benth. 1. c. p. 274. Polen onium Nyctelea, Lin. spec. 231. Ehret, nov. act. ups. 1. p. 97. t. 5. f. 5. Trew. pi. sel. p. *56.* t. 99. Planta Lithosperma aflinis, Act. eph. nat. cur. 1761. p. 330. t. 7. f. 1.—Mor. hist. 3. p. 451. sect. 11. t. 28. f. 3. Segments *of* the fruit-bearing calyx ovate-lanceolate, acute, foliaceous, half an inch long. Stem dichotomous. Peduncles 1-flowered, opposite the leaves. Leaves downy. Flowers drooping. Corolla white, with minute, purple dots inside the divisions.

FIG. *38.*



Nyctelea or Cut-leaved Ellisia. Fl. July, Aug. Clt. 1755. PI. ^ foot.

2 E. AMBI'GUA (Nutt. gen. 1. p. 118.) plant decumbent, branched ; stem glabrous, rather glaucous ; leaves hairy, lyrately pinnatifid, almost sessile : segments nearly lanceolate, angularly toothed or lobed; racemes opposite the leaves, lateral and terminal; corolla small, hardly longer than the calyx : with emarginate segments. ©. H. Native on the banks of the Missouri, in alluvial soils. Corolla white ?

Ambiguous Ellisia. PI. decumbent.

3 E. MICROCAXLYX (Nutt. in amer. phil. soc. trans, n. s. 5. p. 191.) smoothish, decumbent; leaves lyrately pinnatifid, on long petioles ; segments few *(3-5)* : lateral ones oblique, deeply toothed : middle one trifid and obtuse ; flowers solitary, minute. ©. H. Native of the Arkansas, Alabana, &c. Hydrophyllum pusillum, Muhl. herb. Leaves slightly hairy; lateral segments half reniform ; the terminal division nearly entire, but trifid. Catyx minute. Corolla very small, subcampanulate; with 5 shallow lobes.

Small-calyxed Ellisia. PI. decumbent.

4 E. RANUNCULA'CEA (Nutt. 1. c.) rather hairy; stems procumbent ; leaves pinnatifid, somewhat 5-lobed : superior ones tripartite, deeply toothed, obtuse, on long petioles; racemes secund, few-flowered. 0. H. Native of the Arkansas, *in* shady, alluvial, humid forests. Lateral segments of the superior leaves toothed on the lower side; the central segment trifid. Corolla pale blue, cylindrically campanulate, naked. Ovarium hairy. Nearly allied to *E. ambigua,* from which it differs in the less compound leaves, on conspicuous petioles.

Crowfoot-like Ellisia. PI. procumbent.

5 E. MEMBRANA'CEA (Benth. in Lin. trans. 17. p. 274.) quite glabrous ; petioles exappendiculate ; leaves pinnatifid: segments quite entire ; calyx hardly increasing after florescence. ©.?H. Native of California, Douglas. Leaves thin; lobes divaricate, broad-lanceolate, obtuse. Flowers small, pedicellate, loosely racemose. Corolla white.

Membranous-leaved Ellisia. PI. ?

6 E. CHRYSANTHEMIFOLU (Benth. 1. c.) hispid ; petioles auriculately dilated at the base ; leaves subr-bipinnatifid: lobes deeply toothed, obtuse; calyx increasing a little after florescence. ©.?H. Native of California, Douglas. Flowers similar to those of *E. membrandcea.* Processes of corolla toothed.

Chrysanthemum-leaved Ellisia. PI. ?

Cult. The seeds of these plants only require to be sown in the open ground ; and if allowed *to* scatter their seeds, will maintain themselves.

III. NEMO'PHILA (from *refioc, nemos,* a grove ; and 0(Xfw, *phileo,* to love ; the plants delight in shady situations.) Barton, fl. amer. p. 61. Nutt. journ. acad. nat. scienc. phil. vol. *2.* p. 179. Benth. in Lin. trans. 17. p. 272.—Phacelia species, Juss. gen. p. 144. Pursh, fl. amer. sept. 1. p. 140.

LIN. SYST. *Penthidria, Monogynia.* Sinuses between the lobes of the calyx appendiculated by reflexed teeth. Corolline processes 10, short or wanting. Stamens rather shorter than the corolla. Placentas large, free on the back, filling the ovarium, 2-12-ovulate.—Diffuse, brittle, annual herbs. Lower leaves^opposite ; all pinnatifid. Peduncles sometimes axillary, 1-flowered; sometimes few at the tops of the branches, disposed in short racemes. Flowers usually blue.

1 N. PARVIFLORA (Dougl. mss. ex Benth. 1. c. p. 275.) leaves pinnatifid : lobes few, broad, a little toothed ; sinuses of calyx with short appendages; corolla hardly exceeding the calyx ; placentas 2-ovulate. ©. H. Native of Columbia, on the west coast of America, Douglas and Scouler. Flowers small. Appendages of calyx usually very short, sometimes hardly evident, rarely elongating after florescence. Processes of corolla small, narrow.

Small-flowered Nemophila. Fl. ? Clt. 1826. PI. 1 foot.

2 N. PEDUNCULATA (Dougl. mss. ex Benth. 1. c.) leaves pinnatifid ; sinuses of the calyx furnished with short appendages ; corolla hardly exceeding the calyx ; placentas 6-ovulate. ©. H. Native of North-west America, on the Columbia, Douglas. Habit, calyx, and corolla, almost as in *N. parviflora.* Leaves narrower, on longish petioles; and the lobes more entire and distinct.

Pedunculate Nemophila. PI. 1 foot ?

3 N. PHACELIOIDES (Bart. fl. amer. bor. p. 61.) petioles without appendages ; corolla exceeding the calyx a little ; sinuses of the calyx furnished with lanceolate appendages, which equal in length one half the calyx ; placentas biovulate. ©.or $. H. Native of North America. Sweet, fl. gard. 1. t. 32. Sims, hot. mag. 2373. N. Nuttallii, Coll. hort. rip. append, t. 5. Corollas blue. This plant is nearly related to *N. parviflora ;* but differs in the flowers, which are twice the size, and the larger or longer appendages of the calyx.

Phacelia-like Nemophila. Fl. July, Aug. Clt. 1822. PI. 1 foot.

4 N. AURITA (Lindl. bot. reg. t. 1601.) petioles auriculately dilated at the base ; sinuses of the calyx furnished with elongated appendages; corolla twice as long as the calyx ; placentas biovulate. ©. H. Native of California, Douglas. Leaves while opposite connate at the base ; lobes lanceolate, quite entire, divaricate, or tending to the base of the leaf. Peduncles somewhat racemose at the tops of the branches. Corolla nearly an inch in diameter, purple. Benth. 1. c. p. 275.

£araJ-petioled Nemophila. Fl. May, Aug. Clt. 1831. PI. prostrate.

5 N. INSIGNIS (Dougl. mss. ex Benth. 1. c. p. 275. Lindl. bot. reg. 1713.) petioles without appendages; corolla twice as long as the calyx; placentas 10-12-ovulate. ©. H. Native of California, Douglas. D. Don, in Sweet, fl. gard. n. s. t. 329. N. phacelioides, Ker. bot. reg. t. 740. ? Herb deep green. Leaves with 3-4 lobes on each side, quite entire or cut. Peduncles longer than the leaves. Corolla blue, with a white centre, more than an inch in diameter. Processes of the corolla villous at the base.

Showy Nemophila. Fl. July, Aug. Clt. 1822. PI. 1 foot.

6 N. ATOMARIA (Fisch. et Meyer, cat. sem. hort. petrop. p. 42.) leaves opposite, pinnatifid: lobes 5-9, almost entire; peduncles axillary, elongated ; corolla rotate, with a very pilose bottom, and obovate segments; placentas about 10-ovulate; seeds strophiolate, smooth. ©. H. Native of New California, about the Russian colony, Ross. Very like *N. insignis,* but the herb is pale green ; the flowers white, ornamented with violaceous spots. Seeds yellowish, beset with minute scales, as in A[r]. *imignis.* Corollas nearly an inch in diameter.

Atom Nemophila. Fl. ? Clt. 1836. PI. 1 foot.

7 N. MENZIE'SII (Hook, et Arn. in Beech, voy. pt. bot. p. 152.) leaves all pinnatifid, scabrous: segments approximate, ovate, obtuse, ciliated, somewhat tridentately lobed; peduncles twice as long as the leaves, and opposite them ; calyx with lanceolate segments, and minute appendages to the sinuses. ©. H. Native of Chili ? Capsule many-seeded. Corollas blue ?

Menzies's Nemophila. PI. 1 foot?

Cult. These are all pretty plants, and worth cultivating. The seeds may be reared on a hot-bed, if the plants are wanted to flower early ; but if otherwise, they may be sown in the open ground. They delight in a moist, shady situation, and peat or vegetable soil.

IV. EUTOCA (from *EVTOKOQ, eutocos,* fruitful; in reference to the number of seeds in each capsule.) R. Br. in append, to Frankl. trav. ed. 2. p. 51. t. 27. Dougl. in bot. reg. t. 1180. Benth. in Lin. trans. 17. p. 276.—Phacelia species, Pursh.

LIN. SYST. *Pentdndria, Monogynia.* Corolla deciduous. Ovarium ovoid-globose, hispid from pili. Placentas linear, adnate by the back to the parietes of the ovarium, 4 to many-ovulate. Capsule half 2-celled, from the dissepiment being incomplete.—Annual herbs, usually erect, with the habit of *Phacelia*^ rarely diffuse or divaricate. Flowers racemose, dense and sessile, or loose and pedunculate. Cymes unilateral, simple or dichotomous.

1 E. DOUGLA'SII (Benth. in Lin. trans. 17. p. 276.) diffuse; leaves all pinnatifid: with ovate, almost entire lobes ; placentas 12-20-ovulate. 0. H. Native of California, Douglas. Leaves nearly all radical, hispid ; with 4-6 lobes on each side. Floriferous stems ascending, furnished with a few leaves at the base, naked and many-flowered at the apex. Peduncles elongated. Flowers as large as *Nemophila insignis,* to which plant the habit is referrible.

Douglas's Eutoca. PI. 1 foot.

" -2 E. CUMINGII (Benth. in Lin. trans. 17. p. 276.) erect, clothed with scabrous pubescence ; leaves elongated, pinnate : lobes or leaflets oblong, obtuse, cut a little ; placentas 6-8-ovulate. ©. H. Native of the Andes of Chili. The corolla appears to be shorter than the calyx. Very nearly allied to *E. hrachyloba,*

Cuming's Eutoca. PI. 1 foot ?

3 E. BRACHYLOBA (Benth. 1. c. p. 277.) erect, beset with scabrous pubescence ; leaves long, pinnatifid: lobes ovate, obtuse, a little cut; placentas 6-8-ovulate. ©. H. Native of California, Douglas. Leaves petiolate, 2-3 inches long, with 6 lobes on each side. Pedicels short. Racemes dichotomous, almost as in *Phacella circinata.*

Short-lobed-lesLxed Eutoca. PI. 1 foot ?

4 E. MEXICA^NA (Benth. 1. c.) diffuse ; leaves ovate-oblong,' deeply pinnatifid : lobes ovate or oblong, glabrous on both surfaces ; placentas, 6-8-ovulate. ©. H. Native of Mexico, in the neighbourhood of the mines of Tlalpuxahua, and between that place and the city *of* Mexico, G. J. Graham. Racemes elongated, simple. Flowers pedicellate, twice as large as those of *E. parviflora,* to which the present species is nearly allied ; the filaments are pilose as in it, and the processes of the corolla are wanting.

Mexican Eutoca. PI. diffuse.

5 E. PARVIFLORA (R. Br. append, to Frankl. trav. ed. 23. p. 51. Benth. 1. c.) diffuse; leaves pinnatifid or trifid : the superior ones sometimes undivided, and the lobes of the lower ones are ovate, or oblong, quite entire, hispid on both surfaces; placentas 6-8-ovulate. ©.H. Native of Pennsylvania, Schweinitz; Alleghanies, Drummond ; on rocks near Harper's Ferry on the Potomac, Pursh. Phacelia parviflora, Pursh, fl. amer. sept. 1. p. 140. Polemonium dubium, Willd. spec. 1. p. 887. —Polemonium, foliis inferioribus hastatis, superioribus lanceolatis, Gron. virg. p. 29.—Plukn. aim. t. 245. f. 5. Flowers small, pale blue.

Small-flowered Eutoca. Fl. May. Clt. 1826. PI. 1 foot ?

6 E. LOAS^EFOLIA (Benth. in Lin. trans. 17. p. 277.) erect,

very hispid ; leaves ovate, pinnatifid : lobes broad, acute, deeply-toothed ; corolla hardly exceeding the calyx; stamens exserted ; placentas 6-8-ovulate. 0. H. Native of California, Douglas. Habit almost of *Phacelia.* All parts of the plant very hairy from long stiff pili, intermixed with clammy down.

Loasa-leaved Eutoca. PI. 1 foot ?

7 E. FRANKLINII (R. Br. in append, to Frankl. trav. p. *52.* Benth. 1. c.) erect; leaves pinnatifid, or bi-pinnatifid ; ovula 20 or more to each placenta. ©. H. Native of North America. Hook. bot. mag. 2985. Corollas with a blue limb and white tube.

Franklin's Eutoca. FL April, July. Clt. 1827. PI. 1 foot.

8 E. MEKZIE'SII (R. Br. 1. c.) erect, hispid ; leaves linear, or lanceolate, quite entire, sometimes trifid or pinnatifid ; placentas 20, or many-ovulate. 0. H. Native of North West America, on dry sandy soils, and California, Douglas. E. multiflora, Dough in bot. reg. t. 1180. Lehm. pug. *2.* p. 19. E. echioides, and E. glomerata, Dough mss. E. congesta, Dough mss. Lehm. pug. *2.* p. 18. Plant variable in the breadth of the leaves and stature. Corollas blue.


FIG. 36.

Menziess Eutoca. FL May, July. Clt. 182G. PL 1± foot.

9 E. SERICEA (Graham, in edinb. phil. journ. July 1830. p. 172.) erectish; leaves silky on both surfaces, pinnatifid ; segments cut outwardly ; superior leaves linear, entire ; stamens *3* times as long as the corolla ; placentas many-ovulate, several *of* which are abortive. ©. H. Native of North America. Hook, bot. mag. t. 3003. E. pulchella, Lehm. pug. *2.* p. 18. Flowers blue.

Silky Eutoca. Fl. May, July. Clt. 1827. Ph 1 foot.

10 E. GUANDIFL6RA (Benth. in Lin. trans. 17. p. *278.)* ascending ; leaves broad, ovate, toothed, sub-cordate at the base; jplacentas above 50-ovulate. 0. H. Native of California, Douglas. Stem or branches nearly simple. Leaves \\ inch bllong, and almost as broad, wrinkled, hispid, as well as stems t^and calyxes. Racemes numerous, at the top of the stem circi- ^nate. Calyxes nearly sessile. Corolla l| inch in diameter, fivvithout any processes. Filaments glabrous.

Great-flowered Eutoca. PI. 1 foot ?

H E . DIVARICA'TA (Benth. 1. c.) stems dichotomously divaricate; leaves all ovate, undivided; placentas 12-20-ovulate. ©. H. Native of California, Douglas. Lindh bot. reg. t. 1784. "Leaves all alternate. Racemes many-flowered, unilateral. Flowers almost sessile. Calyx increasing much after florescence. Corolla pale blue, exceeding the calyx a little.

Divaricate Eutoca. Ph decumbent.

12 E. PHACELIOIDES (Benth. 1. c. p. *279.)* erect, branched ; leaves all ovate, undivided, quite entire; placentas 4-ovulate. 0. H. Native of California, Douglas. Habit of *Phacelia circinata,* but much smaller. Leaves all alternate, petiolate. Racemes many-flowered. Flowers nearly sessile. Calyxes very hispid. Corolla somewhat funnel-shaped, exceeding the calyx a little. Stamens inclosed within the tube.

Phacelia-like Eutoca. Ph 1 to *2* feet.

13 E. WRANGELIAVA (Fisch. et Meyer, cat. sem. hort. petrop. p. *37.)* diffuse, downy; leaves ovate, acute, quite entire; corollas about twice as long as the calyx, and about equal in length to the stamens ; placentas 8-10-ovulate. ©. H. Native of New California, about the Russian colony, Ross. Herb canescent, much-branched. Corollas an inch in diameter, bluish-violet.

}Vrangers Eutoca. Fh ? Clt. 1836. Ph diffuse.

14 E. VI'SCIDA (Benth. in bot. reg. t. 1808.) clothed with clammy pili ; stem erect, branched ; leaves cordate-ovate, a little angular, serrated ; racemes elongated, forked and simple ; placentas many-ovulate. ©. H. Native of California. Corolla fine blue ; tube rose-coloured.

Viscid Eutoca. Fl. June, Aug. Clt. 1834. Ph *2* feet.

Cult. All the species are elegant and hardy. They succeed best on rockwork, in dry, sandy, or gravelly soil. They are raised from seeds, which are produced sparingly.

V. PHAC£XLIA (from 0a/ce\oc, *phakelos,* a fascicle; in reference to the fascicles of flowers.) Juss. gen. p. 129. ed. Usteri, p. 144. Michx. fl. bor. amer. 1. p. 134. t. 16. Benth. in Lin. trans. 17. p. *279.*

LIN. SYST. *Pentdndria, Monogynia.* Corolla deciduous. Ovarium ovoid-globose, hispid from pili. Placentas linear, usually adnate by the back to the parietes of the ovarium, biovulate. Capsule falsely 2-celled, from the dissepiment being almost complete.—Annual or perennial, erect or diffuse herbs, natives of America. Flowers racemose, dense, sessile, or loose, pedicellate. Cymes unilateral, simple, or forked.

1 P. MALVJEFLORA (Cham, in Linnaea, 4. p. 495.) hispid ; leaves broadly cordate-ovate, lobed; calycine segments linear-spatulate, hispid: outer one large; stamens exserted. *$.* H. Native of California. Corolla campanulate, a little longer than the calyx ; limb unequally 5-lobed. Plant beset with glandular and simple hairs.

Mallow-flowered Phacelia. Ph \\ foot.

2 P. BRACHYA'NTHA (Benth. in Lin. trans. 17. p. *279.)* leaves ovate, quite entire, undivided, or furnished with *1-2* lobules at the base; corolla hardly exceeding the calyx ; stamens inclosed. *$* . H. Native of the Andes of Chili, at the baths of Collina. Habit of *P. circinata.* Flowers almost like those of *Eutoca phacelioides,* but the placentas are constantly biovulate.

Short-flowered Phacelia. Ph l| foot.

3 P. CIRCINA'TA (Jacq. fih eclog. 1. p. 135. t. 91.) leaves usually pinnate, but sometimes undivided : lobes oblong or ovate, quite entire, unequal; corolla more than one-half longer than the calyx; stamens exserted. *$* . or *If..* H. Native of Chili, Straits of Magellan, Commerson ; Peru, Ruiz, et Pavon ; Mexico, on Mount Orizaba, Schiede and Deppe ; California, Chamisso, Douglas, &c.; on the Columbia, Dough and Scouler; on the banks of the Kooskoosky, Lewis. P. Peruviana, Spreng. syst. 1. p. 584. Cham, in Linnsea, 4. p. 494. P. California, Cham. 1. c. P. heterophylla, Pursh. fl. amer. sept. 1. p. 140. P. rudis, Dough mss. P. hastata, Dough mss. ex Lehm. pug. *2.* p. *20.* Heliotrdpium pinnatum, Vahh symb. 3. p. 21. Hydrophyllum Magellanicum, Lam. journ. d'hist. nat. 19. p. *373.* H. Aldea, Rccm. et Schultes, syst. 4. p. 114. Aldea pinnata, Ruiz, et Pav. fl. per. 2. p. 8. t. 114. Aldea circinata, Willd. enum. suppl. p. 9. Leaves ternate, or pinnate, with 5 leaflets; leaflets unequal. Spikes glomerately capitate, circinate. Plant hispid, canescent from villi and pubescence. There are several varieties of this plant, differing in the pubescence, which variation is probably owing to locality. Flowers pale blue, or purplish. Floral leaves simple. Spikes dichotomous.

Cmoinate-spiked Phacelia. Fh June, July. Clt. 1817. Ph 1 to *2* feet.

4 P. INTEGRIFÒLIA (Torrey, in ann. lye. new york, 2. p. 222. t. 3.) leaves ovate, undivided, crenately serrated ; stamens exserted. %.? H. Native of the banks of the river Platte.

Entire-leaved Phacelia. PL 1| foot ?

5 P. CILIVTA (Benth. in Lin. trans. 17. p. 280.) clothed with scabrous pubescence; leaves pinnate : leaflets oblong, obtuse, somewhat pinnatifid; calycine segments ovate, rather membranous, reticulated, ciliated on the margins ; stamens about equal in length to the corolla. %. 1 H. Native of California, Douglas. Leaves almost like those of *Eutoca Cumingii,* and with the habit of *Eutoca brachtfloba,* but the placentas are biovulate.

Ci/wted-caiyxed Phacelia. PI. 1 to 2 feet.

6 P. RAMOSÍSSIMA (Dougl. mss. ex Lehm. pug. 2. p. 21. Benth. 1. c.) clothed with scabrous glandular pubescence or hispid; leaves pinnate: leaflets ovate, obtuse, somewhat pinnatifid ; calycine segments oblong, green, hispid ; stamens exserted. %. ? H. Native of California, and on the Columbia, Douglas. Branches elongated, divaricately-branched, few-leaved. Flowers rather smaller than those of *P. circinata.* Corolla and ovarium glabrous. Calyx ciliated with glandular hairs.

Much-branched Phacelia. PL 1 to 2 feet ?

7 P. TANACETIFÒLIA (Benth. 1. c.) clothed with scabrous pubescence, or hispid; leaves bi«pinnatifid : leaflets oblong, dentately pinnatifid; calycine segments oblong-linear, hispid ; stamens exserted. 7£.? H. Native of California, Douglas. Lindl. bot. reg. t. 1696. Stem branched at the base. Flowers blue, a little smaller than in *P. circinata.*

Tansy-leaved Phacelia. PL 1 to 1\ foot.

8 P. BIPINNATÍFIDA (Michx. fl. bor. amer. 1. p. 134. t. 16.) erect; leaves pinnatifid: segments deeply lobed; spikes for the most part bifid, oblong, many-flowered ; lobes of corolla entire. %. H. Native of the Western counties, principally on the Alleghany mountains, and in Kentucky, and on the Missouri, and from Pennsylvania to Virginia. Pursh. fl. 1. p. 140. P. pubéscens, Poir. diet. 5. p. 239. Plant pubescent. Corollas blue.

BipinnatifidAezved Phacelia. FL June, July. Clt. 1824. PL 1 to 2 feet.

9 P. FIMBRIA'TA (Michx. fl. bor. amer. 1. p. 134. t. 16.) assurgent, pilose ; leaves pinnate, or pinnatifid : leaflets entire; racemes loose; corolla fringed; ovaries seated on a very thick base. !£. H. Native on high mountains in Carolina, Michx. ; near Harper's Ferry on the Potomac, Pursh ; in Kentucky, Torrey. Habit of *Eiltoca Mexicdna.* Leaves sessile, or on short petioles; leaflets lanceolate, acute, glabrous beneath, but hispid from pili above. Racemes solitary; pedicels elongated. Flowers beautiful blue, ex Pursh; white, ex Michx.

Fringed-flowered Phacelia. PL 1 foot.

10 P. GLA'BRA (Nutt. 1. c. p. 192.) erect; leaves pinnatifid; superior ones stem-clasping, ciliated : segments almost entire ; calycine segments ovate ; lobes of corolla entire, naked; filaments bearded at the base. 0 or £. H. Native of the Arkansas, in humid and elevated woods, on the edges of rivulets, near the Dardanelle settlement. Very like the following, growing, however, not more than *5-6* inches high. Segments of the lower leaves 3-4 pairs, somewhat incisely toothed, and obtuse; the upper leaves pectinately pinnatifid. Calycine segments ovate, ciliated. Corolla lilac-blue, campanulate, rather large and pilose externally; the lobes sub-oval, having 10 purplish spots at the base of the corolla. Stamens a little exserted. Capsule smooth, 4 to 8-seeded.

Glabrous Phacelia. Fl. April. PL \ foot.

I I P . HIRSXJTA (Nutt. in amer. phil. soc. trans, n. s. 5. p. 191.) stem erect, branched; leaves pinnatifid: superior ones sessile : segments nearly entire ; calycine segments linear, spreading ; lobes of corolla entire, naked ; filaments bearded at the base. ©. £ . H. Native of the Arkansas, in sylvan prairies ; common from the Cadron to the garrison at Belle Point. The whole plant hairy. Upper leaves pectinately pinnatifid; the segments of the lower leaves sparingly toothed; those of the upper ones linear and entire. Spikes simple, rarely bifid ; pedicels longer than the calyxes. Calycine segments linear. Corolla campanulate, purplish blue, 5-grooved, the grooves naked and melliferous. Capsule ovate, hairy, 4-8-seeded, the ovarium 8-10-ovulate.

Hairy Phacelia. FL April, May. PL f to 1 foot.

12 P. CONFE'RTA (Hook. bot. mag. t. 3452. D. Don, in Sweet, fl. gard. n. s. t. 327.) clothed with hoary down, intermixed with bristly hairs; leaves bi-pinnatifid: segments ovate-oblong, acute, deeply serrated; calycine segments linear-lanceolate, acute; stamens exserted. Q. H. Native of Texas. Racemes terminal, many-flowered, cymose, often forked, bractless. Corolla campanulate, pale blue. Placentas biovulate.

Crowded-flowered Phacelia. Fl. July, Oct. Clt. 1835. PL 1 to 1\ foot.

Cult. Some of the species of *Phacèlia* are pretty when in blossom. They all require a sheltered situation, and as they are apt to rot in the winter, the situation in which they are grown should also be dry. A few duplicate plants of each should be grown in pots, in order that they may be sheltered in winter. AU are increased by seeds.

VI. EMMENA'NTHE (from t/z/zcwjcj *emmenes,* permanent; and *CLVQOQ, anthos,* a flower; in allusion to the corolla being permanent.) Benth. in Lin. trans. 17. p. 281.

LIN. SYST. *Pentdndria, Monogynia** Corolla permanent. Ovarium oblong compressed, clothed with glandular pubescence. Placentas linear, adnate by the back, 8-ovulate. Capsule falsely 2-celled, from the half complete dissepiment, which is thickened at the axis.—An elegant, erect, branched herb, clothed with rather clammy villi. Leaves alternate, pinnatifid, half stem-clasping, not auricled at the base. Racemes numerous, erect, slender, circinate before florescence; pedicels slender, longer than the flowers. Flowers pendulous, 5 lines long. Calyx pubescent, rather clammy. Corolla campanulate, white or yellowish ? spotted with purple inside at the base; corolline processes 10, minute, at the base of the corolla. Stamens shorter than the corolla. The capsule is somewhat 4-celled from the placentas being thickened at the axils.

1. E. PENDULIFLORA (Benth. 1. c.) 1/.? H. Native of California, Douglas.

Pendulous-flowered Emmenanthe. PL erect.

Cult. For culture and propagation see *Phacèlia,* above.

N.B. Phacèlia furcàta, Dougl. mss. is a Polemoniaceous plant allied to Gilia, and probably a new genus, ex Benth. Convólvulus platycárpus, Cav. and a few others may be Hydrophyllaceous plants.

ORDER CLXVII. SOLANACEiE (this order contains plants agreeing with *Solanum,* or the potatoe tribe, in particular characters.) Solanese, Juss. gen. p. 124. ed. Usteri, p. 138. R. Br. prod. p. 443. ed. Nees, p. 299. Bartl. ord. nat. pp. 122. 193.

Calyx usually 5-cleft, rarely 4-cleft, permanent, inferior.

Corolla monopetalous, hypogynous ; limb 5-cleft, rarely 4-cleft, regular, or a little unequal, deciduous, with the aestivation plicate in the legitimate genera ; but imbricate in the spurious ones. Stamens epipetalous, equal in number to the segments of the corolla, and alternating with them, one of which is sometimes abortive. Ovarium 1-2-3-4-celled, many-seeded. Style one ; stigma obtuse, rarely lobed. Fruit or pericarp 2-4-celled ; a capsule with a parallel or duplicate dissepiment; or a berry having the placentas adnate to the dissepiment. Seeds numerous, sessile. Albumen fleshy. Embryo inclosed, more or less arched, usually excentrical, with the radicle tending to the umbilicus.—Herbs or * shrubs. Leaves alternate, undivided or lobed: floral ones placed nigh together, often twin. Inflorescence variable, usually extra-axillary ; pedicels bractless.

This order is distinguished from *Scrophuldrince,* particularly in the arched or spiral embryo ; in the plicate aestivation *of* the corolla, and in the flowers being generally regular, and the stamens equal.—Perhaps those genera, having the aestivation of the corolla not plicate, and the embryo straight, should be excluded, or combined into a separate order with those having the aestivation of the corolla imbricate, the embryo arched, and the stamens didynamous.

The *Deadly Nightshade* represents this order, which participates very generally in its qualities, although they are very frequently hidden beneath a fairer form, and often much mitigated. Many of the *Solanums* are very handsome. The root of *S. tuberosum* is the common potatoe. The *Verbdscums, Daturas, Soldndras,* and *Brunfelsias,* &c. are all plants of great beauty, although the former, on account of their frequency, are despised in gardens. *Capsicums* are famous for their pungent fruits and seeds ; the Cayenne pepper being the pulverized fruit of several species ; *Brunfelsias* for their fragrance and beauty ; and *Nicotianas* or *Tobacco* for their fetor. The leaves of the whole order have a disagreeable smell. The usual effect of solanaceous plants is narcotic ; but it is thought that this has been exaggerated on account of the intense and deleterious properties of *A'tropa Belladonna.* These, according to the observations of Vauquelin, depend upon the presence of a bitter, nauseous matter, which is soluble in spirits of wine, forming with tannin an insoluble compound; and giving out ammonia when decomposed by fire. Notwithstanding the narcotic power of the roots of *Mandrake,* the *Belladonna,* and others, those of the potatoe are found to contain an abundant fecula, which is among the most valuable food for man. The leaves of many Solanaceous plants are exciting and narcotic, but in very unequal degree, as in *Tobacco, Physalis, Henbane, &cc.* ; those of the *Nightshade* excite vertigo, convulsions, and vomiting. The juice *of Stramonium* is given in North America in doses of from 20 to 30 grains, in cases of epilepsy. The fruit of *Physalis Alkekengi* is a veterinary diuretic ; those of *P. edulis, pubescens,* and others, are used in tarts; that of *Lycopersicum vulgare,* and that of the *Solanum Melongena,* are served at tables in various forms, under the name *of Tomatoes* and *Aubergines.*

Synopsis of the genera.

TRIBE I.

SOLA'NE*:. Limb of corolla plicate in aestivation. Stamens equal in number to the segments of the corolla. Anthers dehiscing lengthwise, except in the genus *Solanum.* Embryo much curved. Fruit baccate. Placentas usually adnate to the dissepiment.

1 SOLA'NUM. Calyx 5-cleft, rarely 4-cleft. Corolla rotate, rarely campanulate, usually 5-cleft. Anthers connivent, dehiscing by pores at apex. Berry 2, rarely 4-celled.

2 LYCOPE'RSICUM. Calyx 5-6-parted. Corolla rotate, 5-6-cleft. Anthers conniving, membranous at top, dehiscing lengthwise. Berry 2-3-celled. Seeds villous.

3 PELTANTHE'RA. Calyx 5-parted. Corolla rotate. Anthers hamately-sagittate, dehiscing lengthwise, furnished each with a peltate, sessile appendage on the back.

4 CA'PSICUM. Calyx 5-toothed. Corolla rotate. Anthers conniving, dehiscing lengthwise. Berry *2,* rarely 3-celled, chartaceous, hollow, naked.

5 PHYSA'LIS. Calyx 5-toothed. Corolla campanulately rotate. Anthers connivent, dehiscing lengthwise. Berry 2-celled, hidden by the inflated calyx.

6 SARA'CHA. Calyx 5-cleft. Corolla campanulately rotate, reflexed. Stamens bearded. Anthers separate, dehiscing lengthwise. Berry 2-celled, covered by the calyx to the middle.

7 WITHERI'NGIA. Calyx 4-5-cleft. Corolla rotate, 4-5-cleft. Anthers connivent, dehiscing lengthwise. Berry 2-celled, propped by the calyx.

8 NETOU'XIA. Calyx 5-parted. Corolla salver-shaped ; throat furnished with an entire, tubular, short corona. Anthers dehiscing lengthwise.

9 MANDRA'GORA. Calyx turbinate, 5-cleft. Corolla campanulate. Stamens dilated at the base, and connivent. Ovarium biglandular at the base. Berry solid, 1-celled.

10 A'TROPA. Calyx loose, 5-cleft. Corolla campanulate, ventricose. Stamens usually exserted. Stigma depressed. Berry 2-celled ; placentas free.

• 11 ANISODUS. Calyx campanulate, unequally 5-lobed. Corolla campanulate. Stamens straight. Berry 2-celled, inclosed in the inflated calyx, operculate.

12 NICA'NDRA. Calyx 5-parted, inflated; segments sagittate. Corolla campanulate. Stamens incurved. Berry fleshy, dry, 3-5-celled, covered by the calyx.

13 LY'CIUM. Calyx 5-toothed, or 3-5-lobed. Corolla funnel-shaped or tubular. Stamens usually exserted. Stigma depressed. Berry 2-celled.

14 ACNISTUS. Calyx 5-toothed. Corolla funnel-shaped ; limb imbricate in aestivation, reflexed. Stamens exserted. Stigma funnel-shaped. Berry 2-celled.

15 JABAROSA. Calyx 5-cleft. Corolla campanulate or tubular; limb induplicate in aestivation. Stamens short, inserted towards the top *of* the tube. Berry 2-3-celled.

TRIBE II.

NICOTIA'NE^. Limb of corolla plicate in sestivation. Stamens equal in number to the segments of the corolla, rarely fewer. Fruit capsular, 2-celled, usually 2-valved ; valves bifid at apex. Calyx and corolla 5-cleft. Embryo much curved.

16 NICOTIA'NA. Calyx tubular. Corolla funnel-shaped, or salver-shaped ; limb equal. Stamens rather unequal, inclosed or exserted. Capsule dehiscing by 4 parts at apex ; placentas free.

17 SAIRA'NTHUS. Calyx campanulately ventricose, unequal. Corolla funnel-shaped; tube ventricose above, a little curved ; limb subringent, rather unequal. Stamens unequal, a little exserted. Capsule as in *Nicotiana.*

18 LEHMA'NNIA. Corolla ringent, with a narrow, incurved tube ; limb campanulate. Stamens exserted, unequal, recurved. Capsule covered by the calyx ; placentas free.

19 PETU NIA. Segments of calyx foliaceous, spatulate. Corolla with a short tube, and a dilated, rather unequal limb. Stamens unequal, inclosed. Placentas adnate.

20 NIEREMBE'RGIA. Calycine segments foliaceous, lanceolate, or spatulate. Corolla with a long slender tube ; and an equal, dilated limb. Stamens exserted ; filaments combined at the base. Stigma transverse or peltate. Placentas adnate.

21 SALPIGLOSSIS. Calyx 5-angled, 5-cleft. Corolla funnel-shaped, 5-lobed; lobes 2-lobed. Stamens didynamous, with the rudiment of a fifth between the 2 longer ones. Style tongue-shaped at apex; stigma truncate, transverse.

22 SCHIZA'NTHUS. Calyx 5-parted. Limb of corolla 4-parted, lobed, irregular. Stamens 4, 2 upper ones sterile. Stigma compressed, obtuse.

23 SCOPOLIA. Calyx and corolla both campanulate, equal. Stamens approximate, bent towards the* lower side of the corolla. Capsule operculate ; placentas adnate.

24 PHYSOCLGE'NA. Calyx ventricose. Corolla campanulate, regular. Stamens inclinate. Capsule hidden by the calyx, operculate ; placentas adnate.

25 HYOCY'AMUS. Calyx ventricose. Corolla campanulately funnel-shaped ; limb unequal, with one of the segments larger than the rest. Stamens inclinate. Capsule immersed in the calyx, operculate ; placentas adnate.

TRIBE III.

DATU'REJE. Limb of corolla plicate in sestivation, repandly 5-toothed. Stamens equal in number to the teeth of the corolla. Capsule coriaceous, succulent, 2-celled, 4-valved at apex. Placentas septiform, free. Seeds reniform. Stamens inclosed.

26 DATU'RA. Calyx angular, 5-toothed, deciduous. Corolla conically funnel-shaped. Stigma 2-lobed. Capsule smooth, or echinated.

27 BRUGMA'NSIA. Calyx ventricose, angular, 2-3-cleft, or entire, spathaceous, bursting lengthwise, on one side. Corolla clavately funnel-shaped. Stigma thickened, 4-furrowed. Capsule smooth.

28 SOLA'NDRA. Calyx tubular, angular, 3-5-cleft, bursting on one side. Corolla clavately funnel-shaped; lobes fringed. Capsule smooth, 4-cefled.

29 ULLOA. Calyx inflated, large, 5-parted, permanent. Corolla clavately funnel-shaped, gibbous under the throat, and contracted above, short; limb small, with roundish, spreading segments. Berry girded by the calyx.

TRIBE IV.

FRANciscE^s. Limb of corolla plicate in aestivation, 5-lobed, rather unequal. Stamens 4, didynamous, that is, 2 long and 2 short, without any rudiment of a fifth, inclosed. Ovarium girded by a cupulate disk. Capsule 2-celled, 2-valved ; valves bipartible at top. Placentas inserted into the dissepiment. Seeds numerous, angular. Embryo terete, straight.

30 BRUNFE'LSIA. Calyx 5-toothed- Corolla salver-shaped ; imbricate ? Stigma bilabiate. Fruu ^cate; dissepiment contrary, placentiferous.

31 FRANCISCEA. Calyx 5-toothed. -olla salver-shaped. Stigma 2-lobed. Capsule 2-celled; disst ^ent parallel with the valves, separating from the parietes at the base.

32 BROWA'LLIA. Calyx 5-toothed. Corolla salver-shaped, resupinate. Stigma 2-lobed, 4 tubercled. Capsule 2-celled. Dissepiment contrary ; placentas fleshy.

TRIBE V.

ANTHOCE'RCEJE. Corolla regular, not plicate. Stamens 4, didynamous, with the rudiment of a fifth. Embryo arched. Pericarp capsular, or baccate, 2-celled, 2-valved.

33 ANTHOCE'RCIS. Calyx 5-cleft. Corolla campanulate; limb equal. Stamens inclosed. Fruit capsular, having the margins of the valves bent in, and inserted in the parallel placentas. Seeds reticulated.

34 DUBOISIA. Calyx bilabiate. Corolla campanulately funnel-shaped ; limb 5-parted, nearly equal. Stamens inclosed. Fruit baccate. Seeds sub-reniform.

TRIBE VI.

NOLANIE^£:. Corolla plicate in aestivation, 5-lobed. Stamens equal in number to the lobes of the corolla. Ovaria 1 to 5, or more, crowded, seated on a fleshy annular disk. Stigma capitate. Drupe solitary, or 5 together, containing each a 2-4-celled bony nut, marked by 3-4 grooves, and 3-4 little holes beneath. Embryo filiform, gyrate, somewhat perepheric.

35 NOLA'NA. Calyx 5-cleft. Corolla campanulate, regular. Drupes Visually 5, containing each a 3-4-celled bony putamen. Seeds roundish,

36 TRIGUERA. Calyx 5-cleft. Corolla campanulate ; limb somewhat bilabiate, the 2 superior segments sub-reflexed. Drupe solitary, containing a 4, rarely a 2-celled putamen. Seeds ovate, 2 in each cell, compressed,

37 CRABOWSKIA. Calyx 5-toothed. Corolla funnel-shaped ; lihR> convolute in aestivation, reflexed. Drupe solitary, containing £* 2-celled bony putamens; cells 1-seeded.

TRIBE VII.

CESTRINEA:. Limb of corolla plicate, valvate, or induplicate in aestivation. Calyx 5-toothed. Corolla funnel-shaped, 5-lobed, regular; tube elongated ; limb usually spreading. Stamens equal in number to the lobes of the corolla. Anthers dehiscing lengthwise. Ovarium seated on a cupulate disk. Pericarp capsular, or baccate, 2-celled. Placentas adnate to the dissepiment, or free. Embryo nearly straight.

§ 1. *Fruit baccate,*

38 CE'STRUM. Limb of corolla conduplicate in aestivation, ex Schotte, plicate, ex Kunth. Stamens inclosed. Berry 1-celled, few-seeded. Placentas central, free.

39 DUNA'LIA. Limb of corolla plicate in aestivation. Stamens inclosed ; filaments tripartite. Berry 2-celled ; placentas adnate. Seeds many, lenticular.

40 MEYE'NIA. Corolla clavately tubular; limb 5-toothed, contracted, conduplicate in aestivation. Stamens inclosed. Berry 2-celled ; seeds irregularly ovate. Embryo straight.

41 DA'RTUS. Calyx 5-cleft. Corolla with a globose tube, and a 5-cleft limb. Stamens inclosed. Stigma 5-lobed. Berry excoriate, diaphanous, 1-celled, many-seeded. Seeds small, unequal.

§ 2. *Fruit capsular.*

42 VE'STIA. Limb of corolla valvate in aestivation. Stamens exserted, bearded at the base. Capsule 2-celled, 4-valved, many-seeded. Placentas adnate. Embryo straight.

43 SE'SSEA. Limb of corolla plicate in aestivation; tube globose. Stamens villous, curved at the base. Capsule cylindrical, 2-celled, 4-valved at apex. Seeds oblong-compressed, with membranous edges.

44 FABIA'NA. Limb of corolla short, revolute, plicate in aestivation. Stamens unequal, 2 longer. Capsule 2-celled, 2-vaiWed. Seeds dotted.

45 LAURE'RIA. Calyx 5-parted, alately pentagonal. Limb of corolla plicate? short, straight. Stamens inclosed, villous at the base. Capsule 2-celled, 2-valved. Seeds copious, full of impressed dots; placentas adnate, lamelliform. Embryo cylindrical, incurved.

46 LAMA'RKIA. Calyx tubular, pentagonally-prismatic, half 5-cleft. Corolla somewhat funnel-shaped ; limb spreading, equal, blunt. Stamens equal in length to the tube. Capsule oblong, terete, coarctate at top, many-seeded.

Tribe I.

SOLA'NEJE. Limb of corolla plicate in aestivation. Stamens equal in number to the segments of the corolla. Embryo curved. Fruit baccate.

I. SOLA'NUM (a name given by Pliny, but the derivation is uncertain, some derive it from *Sol,* the sun ; others say it is *Sulanum,* from *Sus,* being serviceable in disorders of swine ; and others from *Solor,* to comfort, from its soothing narcotic effects; all these conjectures are, however, improbable.) Tourn. inst. p. 149. t. 62. Lin. gen. no. 251. Schreb. gen. no. *837.* Juss. gen. 126. ed. Usteri, p. 141. Gaertn. fruct. t. 131. Moench. meth. p. 473. R. Br. prod. 444. Dunal. mon. sol. 115.—Melongena, Tourn. inst. p. 151. t. *65.*—Pseudo-capsicum, Moench. meth. p. 476.—Nycterium Vent. jard. malm. p. 85.—Aquartia Jacq. amer. p. 15. t. 12.

LIN. SYST. *Pentdndria, Monogynia.* Calyx permanent, 5 rarely 4-cleft. Corolla rotate, rarely campanulate, 5 rarely 4-cleft. Anthers oblong, connivent, dehiscing by 2 pores at the apex. Berry almost globose, 2-3-4-celled, but usually 2-celled.—Herbs or shrubs, unarmed, or prickly, rarely spiny. Leaves undivided, sinuated, lobed, impari-pinnate, or decompound, usually alternate, but in many species twin, rarely tern. Peduncles solitary or numerous, simple or multifid, axillary, or extra-axillary, 1, or many-flowered, opposite the leaves, or scattered, or terminal. The pedicles in *Sol. tuberosum* are articulated under the flower. The fruit of *S. esculentum* is large and 5-celled. In some species the flowers are sometimes 6-9-cleft.

SECT. I. INE'RMJS^ Unarmed shrubs or herbs.

SUBSECT. 1. POTATOE. *Leaves impari-pinnate, pinnatifid, ternate or entire. Flowers corymbose or racemose, terminal, lateral, and axillary.*

§ 1. *Leaves impari-pinnate. Racemes corymbose, terminal.*

1 S. TUBEROSUM (Lin. spec. ed. 1st. p. 185.) root bearing tubers; stems herbaceous ; leaves unequally pinnate ; leaflets entire ; pedicels articulated. %. H. Native of South America, on the west coast every where. Bergeret, phyt. 1. p. 231. icon. Blackw. t. *523.* Lycopersicum tuberosum, Mill. diet. Sol. tuberosum esculentum, Bauh. pin. 167. Tourn. inst. 149. Papas Americanum, Bauh. hist. 3. p. 621. icon. Batata Peruviana, Park, theatr. ger. hist. 927. Papas Peruanorum, Besl. hort. eyst. 3. p. 1. f. 1. Clus. hist. 2. book. 4. p. 79. icon. The common potatoe varies much in the leaves, colour of the flowers, shape and colour of the roots, &c.

The potatoe is called *Pomme de Terre* in France, *Cartoffel* in Germany, *Porno de Terra* in Italy, *Openauk* in Carolina, and *Papas* in Peru. It has been found wild in Chili, on the mountains near Valparaiso and Mendosa ; and also near Lima, Quito, and Santa Fe de Bogota; and lately in Mexico, on the Pic d' Orizaba, by Deppe and Schiede. Sir Joseph Banks considers that the potatoe was first brought into Europe from the mountainous parts in the neighbourhood of Quito, where they were called *Papas,* to Spain in the early part of the 16th century. From Spain, where they were called *Batatas,* they appear to have found their way first to Italy, where they received the same name with the truffle, *Taratoufli.* The potatoe was received by Clusius, at Vienna, in 1598, from the governor of Mons, in Hainault, who had procured it the year before from one of the attendants of the Pope's legate, under the name of *Taratoufli,* and learned from him that it was then in use in Italy. In Germany it received the name of *Cartoffel,* and spread even rapidly in the time of Clusius. To England the potatoe found its way by a different route, being brought from Virginia by the colonists sent out by Sir Walter Raleigh in 1584, and who returned in July, 1586, and "probably," according to Sir Joseph Banks,

"brought with them the potatoe." Thomas Herriot, in a report on the country, published in De Bry's collection of voyages, vol. 1. p. 17, describes a plant called *Openawk*, with "roots as large as a walnut, and others much larger: they grow in damp soil, many hanging together, as if fixed on ropes; they are good food either boiled or roasted." Gerarde in his herbal, published in 1597, gives a figure of the potatoe, under the name of the potatoe of Virginia, whence he says he received the roots; and this appellation it appears to have retained, in order to distinguish it from the Batatas, or sweet potatoe (the *Batatas edilis*), till the year 1640, if not longer. "The sweet potatoe," Sir Joseph Banks observes, "was used in England as a delicacy long before the introduction of our potatoes; it was imported in considerable quantities from Spain and the Canaries, and was supposed to possess the power of restoring decayed vigour. The kissing comfits of Falstaff, and other confections of similar imaginary qualities with which our ancestors were duped, were principally made of these said eryngo roots." It appears from Gough's edition of Camden's Britannia, that the potatoe was first planted by Sir Walter Raleigh on his estate at Youghall, near Cork, and that it was "cherished and cultivated for food in that country long before its value was known in England, for though they were soon carried over from Ireland into Lancashire, Gerarde, who had this plant in his garden in 1597, under the name of *Batata Virginiana*, recommends the roots to be eaten as a delicate dish, not as common food. Parkinson mentions that the tubers were sometimes roasted, and steeped in sack and sugar, or baked with marrow and spices, and even preserved and candied by the comfit makers. In 1663 the royal society took some measures for encouraging the cultivation of the potatoe, with the view of preventing famine. Still, however, although their utility as a food was better known, no high character was bestowed on them: in books of gardening, published towards the end of the 17th century, a hundred years after their introduction, they are spoken of rather slightingly. "They are much used in Ireland and America as bread," says one author, "and may be propagated with advantage to poor people." "I do not hear that it hath been yet essayed," says another author, "whether they may not be propagated in great quantities for food for swine or other cattle." Even Evelyn seems to have entertained a prejudice against them. "Plant potatoes," he says, writing in 1699, "in your worst ground. Take them up in November for winter spending, there will enough remain for a stock, though ever so exactly gathered." The famous nurserymen, London and Wise, did not consider the potatoe as worthy of notice in their complete gardener, published in 1719; and Bradley, who about the same time wrote so extensively on horticultural subjects, speaks of them as inferior to skirrets and radishes. But the use of potatoes gradually spread, as their excellent qualities became better understood. It was near the middle of the 18th century, however, before they were generally known over the country; since that time they have been most extensively cultivated. In 1795 it was found that in the county of Essex alone about 1700 acres were planted with potatoes for the supply of the London market. This must form, no doubt, the principal supply; but many fields of potatoes are to be seen in other counties bordering on the capital, and many ship-loads are annually imported from a distance. In every county in England it is now more or less an object of field culture.

The cultivation of potatoes in gardens in Scotland was very little understood till about the year 1740, and it was not practised in fields till about 20 years after that period. It is stated in the general report of Scotland, vol. 2. p. 111, as a well ascertained fact, that in the year 1725–6 the few potatoe plants then existing in gardens about Edinburgh were left in the same spot of ground from year to year, as recommended by Evelyn; a few tubers were perhaps removed for use in the autumn, and the parent plants were then well covered with litter to save them from the winter's frost. Since the middle of the 18th century, the cultivation of potatoes has made rapid progress in that country, so that they are now to be seen in almost every cottage garden, and fields of them on every farm. "The potatoe is now considered the most useful esculent that is cultivated, and who," Neill asks, "could *a priori* have expected to have found the most useful among the natural family of the *Luridæ* (Solanaceæ) most of which are deleterious, and all of which are forbidding in their aspect."

Use.—The tubers of the potatoe, from having no peculiarity of taste, and consisting chiefly of starch, approach nearer to the nature of flour, or farina of grain, than any vegetable root production, and for this reason it is the most universally liked, and can be used longer in constant succession by the same individual without becoming unpalatable than any other vegetable, the seeds of grasses excepted. "So generally is it relished, and so nutritious is it accounted," Neill observes, "that on many tables it now appears almost every day in the year. It is commonly eaten plainly boiled, and in this way it is excellent. When potatoes have been long kept, or in the spring months, the best parts of each tuber are selected and mashed before going to table. Potatoes are also baked, roasted, and fried. With the flour of potatoes puddings are made nearly equal in flavour to those of millet. With a moderate proportion of wheat flour bread of excellent quality may be formed of it, and potatoe starch, independently of its use in the laundry, is considered an equally delicate food as sago or arrow-root."

Varieties.—These are very numerous, not only from the facility of procuring new sorts by raising from seed, but because any variety cultivated for a few years in the same soil and situation, as in the same garden or farm, acquires a peculiarity of character or habit which distinguishes it from the same variety in a different soil and situation. The varieties being so numerous, we shall only mention those generally cultivated. They may be distinguished in regard to precocity, largeness, form, size, colour, and quality. The earliest varieties are, 1. Hogg's early frame, a small watery potatoe, fit only for very early forcing. 2. Royal dwarf, a mealy potatoe, much grown at Perth. 3. Early Manchester, waxy and red. 4. Common early frame, waxy. 5. Fenn's yellow seedling, similar to the last, but rather larger, waxy. 6. American early, much esteemed at Edinburgh. 7. Early dwarf, waxy. 8. Early ash-leaved, dry. 9. Earl champion, large. 10. M'Leod's early, dry. None of the above sorts, when true, produce blossoms; they are roundish in form, small sized, white, and not of the best quality.

The latest sorts are, 1. The round purple. 2. The oblong purple. 3. The speckled purple or tartan, commonly grown on mossy soils in Scotland. 4. The American red, grown to a great extent in Scotland.

The form of potatoes is either round, oblong, or kidney shaped; of the round the most esteemed are, 1. The champion, late and early varieties. 2. The oxnoble, very large, and of a peculiar flavour, not generally esteemed. 3. The round-red, middle-sized, smooth. 4. The round-rough red, or Lancashire. 5. The small American. 6. The leather-coat, with a rough, brownish coat. Of the oblong the most esteemed are, 1. The red-nosed oval, often confounded with the red kidney. 2. The oblong-red, variegated with white. 3. The oblong white. 4. The American red, long and thick. 5. The Irish red, or pink, oblong and entirely red, with hollow eyes. 6. The bright red, blood-red, or apple potatoe, ovate, with small full eyes, much grown in Cheshire and Lancashire. The kidney-shaped sorts are as follow. 1.

The Swinton white kidney, of a peculiar flavour, esteemed by many. 2. The red kidney, reckoned somewhat more hardy. 3. The black kidney.

In size the early sorts are the least, and the ox-noble and the champion the largest. In colour the earliest sorts are in general white, the oblong sorts red, and the latest sorts purple.

In quality potatoes are either watery, as the very early sorts; waxy, as the American and Irish reds; or mealy, as the ash-leaved early, the champion, the kidney, &c.

The following sorts for forcing in frames, or for the first crop in the open garden are recommended by London nurserymen.

1. Pease's seedling. 2. Early mealy. 3. Early mule. 4. Brazelton dwarf.

For general cultivation in the open garden or field.

1. Early kidney, good flavour and very early, keeps well. 2. Norwich, early, prolific. 3. Early straw, good early sort for general use. 4. Small American, small white, much esteemed.

For main crops the following sorts are arranged in order of their ripening.

1. Early champion, very generally cultivated, prolific and hardy. 2. Red-nose-kidney. 3. Large kidney. 4. Bread-fruit, prolific, white, and mealy. 5. Lancashire pink-eye, good. 6. Black skin, mealy, white, and good. 7. Purple, very mealy, productive, and keeps well. 8. Red apple, keeping the longest of any. 9. Red American, keeps well.

In general every town and district has its peculiar and favourite varieties, so that, excepting as to the best early kinds, and the best for a general crop in all soils, any list, however extended, could be of little use. Dr. Hunter, in his geological essays, has limited the duration of a variety to fourteen years, and Knight, Hort. trans. vol. 1, concurs with him in opinion. There are some excellent sorts of party coloured potatoes in Scotland, which degenerate when removed from one district to another; and most of the Scotch and Irish varieties degenerate in England. The best mode, therefore, to order potatoes for seed is to give a general description of the size, colour, form, and quality wanted, and whether for an early or late crop.

Propagation.—The potatoe may be propagated from seed, cuttings or layers of the green shoots, sprouts from the eyes of the tubers, or portions of the tubers containing a bud or eye. The object of the first method is new, or improved varieties; of the second little more than curiosity, or to multiply as quickly as possible a rare and excellent sort; and of the third to save the tubers for food. The method by portions of the tubers is the best, and that almost universally practised for the general purposes both of field and garden culture. One good eye to each set is sufficient, and in making the sets reject the extreme watery end of the tuber, as apt to run too much to haulm; reject also the extreme portion of the dry end, as more likely to be tardy in growth, and produce the curl. The middle portion is therefore the best.

When grown from seed the quality of the kinds cannot be ascertained till the end of the second summer. The earliest varieties of potatoes, it has been already remarked, do not produce flowers or seed. T. A. Knight, desirous of saving seed from one of these sorts took a very ingenious method of inducing the plants to produce flowers. "I suspected the cause," he says, "of the constant failure of the early potatoe to produce seeds to be the preternaturally early formation of the tuberous root, which drawn off for its support that portion of the sap which in other varieties of the same species affords nutriment to the blossoms and seeds, and experiment soon satisfied me that my conjectures were perfectly well founded. I took several methods of placing the plants to grow in such a situation as enabled me readily to prevent the formation of the tuberous roots, but the following appeared the best. Having fixed strong stakes in the ground I raised the mould in a heap round the bases of them, and in contact with the stakes; on their south sides I planted the potatoes from which I wished to obtain seeds. When the young plants were about 4 inches high, they were secured to the stakes with shreds and nails, and the mould was then washed away by a strong current of water from the bases of their stems, so that the fibrous roots only of the plants entered into the soil. The fibrous roots of this plant are perfectly distinct organs from the runners which give existence, and subsequently convey nutriment to the tuberous roots; and as the runners spring from the stems only of the plants, which are, in the mode of culture I have described, placed wholly out of the soil, the formation of tuberous roots is easily prevented; and whenever this is done numerous blossoms will soon appear, and almost every blossom will afford fruit and seeds." Knight considering that the above facts, which are more fully explained in the philosophical transactions for 1806, were sufficient to prove that the same fluid or sap gives existence alike to the tuber, and the blossom, and seeds, and that, whenever a plant of the potatoe affords either seeds or blossoms, a diminution of the crop of tubers, or an increased expenditure of the riches of the soil, must necessarily take place, succeeded in producing varieties of sufficiently luxuriant growth and large produce for general [illegible] which never produced blossoms. The paper from which we quote is concluded by some excellent observations on this subject, chiefly relative to field culture, and which ought to be studied carefully by whoever intends to attempt producing new varieties from seed.

Quantity of sets.—Abercrombie directs "for a plot of early and secondary crops 8 feet wide by 16 in length, planted in rows 15 inches asunder by 9 inches in the row, a quarter of a peck of roots or cuttings. For full-timed sorts, and main crops, a compartment 16 feet wide by 32 in length, planted in rows 2 feet distant, by 12 inches in the row, half a peck of roots or cuttings will be required."

Soil and Manure.—The best soil for the potatoe is light, fresh, unmixed loam, where they can be grown without manure. Here they have always the best flavour. In a wet soil they grow sickly, and produce watery tubers, infected with worms and other vermin. To a poor soil dung must be applied; fittery dung will produce the earliest and largest crop, but mellow dung, rotten leaves, or vegetable earth, will least affect the flavour of the tubers.

Season for Planting.—"The last fortnight of March, and the first fortnight of April, is the most proper time for planting the main crops, a little earlier or later as the spring may be forward, the ground dry or wet. Occasional plantings may be made in May, or even the beginning of June."—Abercrombie.

Methods of Planting.—The sets of whatever kind, or the plants forwarded in pots to be turned out with their balls entire for producing an early crop in the open air, should always be inserted in regular rows, the object of which is to admit with greater facility the stirring the earth between, and the earthing up of the plants. The rows may be 15 inches apart for the small early sorts, and for the larger 20 inches, or 2 feet, according to the poorness or richness of the soil. In the lines traced make holes for the sets at 8, 12, or 15 inches distance, letting their depth not be less than 3, nor exceeding 5 inches. In light soil it is performed by a dibble with a blunt end, and a short cross iron shoulder, about 4 or 5 inches from the bottom, as a guide to make the holes of an equal depth; one person making the holes, and another dropping a set into each hole. Strike the earth in upon them fully with a dibble, hoe, or rake, either as each row is planted, or when the whole planting is finished. On strong heavy land the planting ought to be on raised beds, with alleys, or in drills on the crown or parallel

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ridges. The beds may either be raised by previous digging, throwing on good earth till the terrace rise to the desired height, or in the different method described below. To plant in drills trace them at the medium distance above specified ; form them to a proper depth with a narrow spade, or large hoe; in these place the sets a foot, or 15 inches apart, and earth over. In wet ground, however, potatoes are hardly worth growing.

Subsequent culture.—" From the March or April planting the stems generally rise fully in May : after the plants have appeared, give an effectual hoeing on dry days, cutting up all the weeds, and stir the ground about the rising stalks of the plants. When advanced from 6 to 12 inches high, hoe up some earth to the bottom of the stems, to strengthen their growth, and promote the increase below; continue occasional hoeing to eradicate weeds till the plants cover the ground, when but little farther care will be required. Permit the stalks to run in full growth, and by no means cut down, as is sometimes practised ; the leaves being the organs for transmitting the beneficial influence of the rain and air to the roots, which is most necessary to the free and perfect growth of the tubers." Abercrombie. It is now generally admitted, that a certain advantage in point of produce is obtained by pinching off the blossoms as they appear on the plants. The fact has been repeatedly proved and satisfactorily accounted for by Mr. Knight, who imagines that it may add an ounce in weight to the tubers of each plant, or considerably above a ton per acre.

Taking the crop.—Clusters of roots in the early planted crops will sometimes by June or July be advanced to a sufficient size for present eating, though still small. Only a small portion should be taken up at a time, as wanted for immediate use, as they will not keep good above a day or two. In August and September, however, they will be grown to a tolerable good size, and may be taken up in larger supplies, though not in quantities for keeping a length of time. Permit the main crops to continue in growth till towards the end of October or beginning of November, when the stalks will begin to decay, an indication that the potatoes are fully grown, then wholly dig them up, and house them for winter and spring use before severe frosts set in.

Housing and Preserving the Crop.—Abercrombie recommends housing potatoes in a close, dry, subterranean apartment, laid thickly together, and covered well with straw, so as to exclude damps and frosts. There they are to be looked over, and any that are decayed picked out. In spring, when they begin to shoot, turn them over, and break off the sprouts or shoots from each tuber perfectly close, in order to retard their future shooting as much as possible. Potatoes so stored will continue good all the winter and spring till May and June. Pieing as it is called in some places is a good method of preserving potatoes in winter. They are piled on the surface of the ground in a ridged form, of the width and length at pleasure, according to the quantity, but commonly *5-6* feet wide. This is done by digging a spit of earth, and laying it round the edge a foot wide, (if turf the better,) filling the space up with straw', and then laying on a course of potatoes ; dig earth on the outside, and lay it upon the first earth. Put straw a few inches along the inside edge, then put in more potatoes, and so on, keeping a good coat of straw all the way up between the potatoes and the mould, which should be about 6 inches thick all over ; beat it close together, and the form it lies in with the trench all round will preserve the potatoes dry, and the sharpest frost will hardly affect them, in a severe time of which the whole may be covered thickly with straw. In the spring look over the stock, and break off the shoots of those designed for the table, and repeat this business to preserve the potatoes the longer good."

Curl disease,—The disease called curl has in many places proved extremely troublesome and injurious. It has given rise to much discussion, and to detail all the various opinions would be a useless task. It may, however, be remarked, that the experiments of J. Dickson (Caled. hort. mem. 1. p. 55.) show, that it arises from the vegetable powers in the parts of the tuber planted having been exhausted by over ripening, he has shown that cuts taken from the waxy end of the potatoe produce healthy plants, while those from the dry or best ripened end either did not vegetate at all, or produced curled plants, John Shirreff (Caledon. hort. mem. 1. p. 60.) takes a general and philosophical view of the subject, applying to the potatoe the doctrine by which Mr. Knight had accounted for the disappearance of the fine cedar fruits of the seventeenth century. " The maximum of the duration of the life of every individual, vegetable as well as animal, is pre-determined by nature, under, whatever circumstances the individual may be placed : the minimum, on the other hand, is determined by these very circumstances. Admitting, then, that a potatoe might re-produce itself from tubers for a great number of years in the shady woods of Peru, it seems destined sooner to become abortive in the cultivated champaign-of Britain, insomuch that not a single healthy plant of any sort of potatoe that yields berries, and which was in culture 20 years ago, can now be produced." Mr. Shirreff concludes, therefore, that the potatoe is to be considered as a short-lived plant, and that though its health or vigour may be prolonged by rearing it in elevated or in shady situations, or by cropping the flowers, and thus preventing the plants from exhausting themselves, the only sure way to obtain vigorous plants, and to ensure productive crops, is to have frequent recourse to new varieties raised from seed. The same view, it may be remarked, had occurred to Dr. Hunter. The fact ascertained by Mr. Knight deserves to be noticed, is that by planting late in the season, perhaps in June, or even in July, an exhausted good variety may in a great measure be restored ; that is, the tubers resulting from the late planting when again planted at the ordinary season produce the kind in its pristine vigour, and of its former size. Mr. Crichton (Caled. mem. 1. p. 440.) who has made a variety of experiments on the effects of exposure to the air in hampers and open floors, and on exclusion of the air by covering with earth, concludes, " That the curl in the potatoe may often be occasioned by the way the potatoes are treated that are intended for seed. I have observed wherever the seed stock is carefully pitted, and not exposed to the air, in the spring the crop has seldom any curl, but where the seed stock is put into barns and out-houses for months together, such crop seldom escapes turning out in a great measure curled; and if but few curl the first year, if they are planted again it is more than probable the half of them will curl next season."

Forcing the Potatoe.—The potatoe is forced in a great variety of ways; but for a fair crop of tubers, which shall be somewhat dry and floury, and of the size of hens' eggs, plant sets of the ash-leaved variety in single pots, filled one-third with light earth, in January. Place them in a hot-house or hot-bed, earth them up as they appear, and about the middle or end of February, transplant them, with their balls entire, into a pit prepared as for asparagus. Distance from plant to plant 1 foot each way. Give water occasionally, and admit as much air as possible at all times. Potatoes so managed will produce a fair crop the end of March or beginning of April.

Forcing potatoes in hot-beds.—Abercrombie says, " A $ ..g crop is easily obtained soon in spring, by planting the early dwarf, or the sort called mules, on a slight hot-bed. Put in the sets pretty thickly, at 6 or 8 inches square distance, as the potatoes are not to grow large. If planted successively in January and February, they will produce young crops for use early in

April and May, to be taken up in small portions as wanted for present eating. During the growth of the plants, open the lights fully in the middle of fine dry days, but shut at night, to guard against frost. Water attentively, as the mould and weather may require. Nicol's plan is the same as that of Abercrombie. Mr. Hogg, a market-gardener in the neighbourhood of London, prepares an old cucumber or melon-bed, by removing the earth from its surface, and laying on instead an inch deep of fresh mould, on which he sets the potatoes, in rows 6 inches apart, and the potatoe sets the same distance from each other, which are then covered 4 inches deep with mould, and the frames and glasses placed upon the bed, and carefully protected from frost. At the end of the fifth day, the outside of the old dung should be cut away close to the frame, in a slanting direction inwards ; and strong linings of hot dung applied instead, which should be renewed if necessary at the end of three weeks. Air and water must be carefully given. The potatoes grown in this way are generally ready for use seven weeks nfter planting. The variety thus cultivated by Mr. Hogg is *Foxe's yellow seedling,* Mr, Knight's mode is to plant the potatoes in pots 6 inches in diameter, in January, one set in each pot ; and the pots are then set in the ground and covered with litter, to protect them from frost, and in this situation they remain till the hot-bed is ready to receive them, in which the pots are afterwards plunged.

Forcing potatoes in pots or boxes.—This is sometimes attempted in stoves. One set is placed near the bottom of a large pot, and gradually earthed up. When nearly full grown, it is taken to the cherry or peach-house, for the sake of more air. Another mode of planting in pans or boxes is thus described by Abercrombie: " Plant potatoes of the growth of the season before the last^ that is, the produce of 181G to be planted in December, 1817, or January, 1818. Potatoes so kept will appear as if surrounded by a brood of new potatoes in contact with the seed or parent potatoe. The leaf buds are removed, and the potatoes planted in a circle, and in layers, in earthen pans or wooden boxes, with alternations of fine loose earth. Such pans or boxes may be put into sheds or in shelves in the kitchen. By this treatment no leaves will emerge above the soil, and young potatoes may be reared at any required period. A similar mode has been described by Mr. Sherbrook. The boxes, containing alternate layers of light earth, and potatoes of the preceding year, are placed in a dry, covered place, free from frost; they receive no water, and produce " good, fine, young potatoes in December/' For a succession, the process is to be repeated.

Incidental forcing of potatoes.—" Small young spring potatoes are likewise obtained from some of the winter store of old potatoes, as they lie in the house ; especially where they have been mixed with sand, and permitted to shoot as they lie, when ^they produce a few small button potatoes in spring, some of which are occasionally brought to market, but only for immediate use. T. Moffat grows early potatoes thus : " A compost consisting of equal quantities of loam, sand, and coal ashes, with an addition of lime in powder, equal to about one-fifth of the whole, was formed into a bed four feet wide, and four inches deep, on the floor of a dark fruit room. Upon this bed, early in September, large potatoes, *of* the preceding year's growth, were laid, *3* inches apart every way, with their best eyes downwards ; these produced young potatoes, which became fit for use about Christmas."

Forwarding to raise a crop in the open garden.—for this purpose some spread a layer of sets on hot dung, or in boxes placed In anv warm situation, whether in the light or in the dark. After'they have sprung 3 or 4 inches, they are to be transplanted into the open ground, which should not be sooner than May, unless they have some protection at night ; such as iromis of fern, spruce-fir branches, &c. But the best method is to grow the sets one in each pot, and to plant them out with the balls entire, in May.

Substitutes for forcing potatoes. — Dr. Nochden describes the mode by leaves and layers of earth at length (in Hort. trans. 3. p. 48.), and subjoins a method of preserving young potatoes as such for winter use ; but this method we consider not worth farther notice, as it appears of no practical utility.

Field culture of the potatoe.—Notwithstanding the value of the potatoe as an article of human food, it is doubtful vvhether they can be placed so high in the scale as several other articles of produce, when the profit and loss account of the agriculturist- is to be ascertained. They require a great deal of manure from the farmer, while, generally speaking, little is returned by them ; they are a bulky unhandy article, troublesome in the lifting and carrying processes, and interfering with the seed season of wheat, the most important one to the farmer. After all, from particular circumstances they cannot be vended unless when raised in the vicinity of large towns ; hence they are, in most respects, an unprofitable article to the agriculturist. To him the real criterion is the profit which potatoes will return in feeding beasts ; and here we apprehend the result will be altogether in favour of turnips and ruta-baga, or Swedish turnip, as the most profitable articles for that purpose, although potatoes are admitted to be more nutritious, and to fatten cattle much quicker.

The varieties of potatoes cultivated in fields are innumerable. The early fiejd varieties are: 1. The early kidney. 2. The nonsuch. 3. The early straw. 4. The early Champion. The last is the most generally cultivated round London. Early varieties with local names are cultivated near most large towns. The late field varieties in most repute are : 1. The red-nose kidney. *2.* Large kidney. 3. Bread-fruit, an excellent white, mealy, good-tasted sort, raised from seed in 1810. 4. The Lancashire pink-eye, good. *5.* The black-skin, white interior, and good. 6. Purple, very mealy, productive, and keeps well. 7. The red apple, mealy, keeps the longest of any. 8. The Tartan, or purple and white-skinned, an esteemed Scotch potatoe, prolific, mealy, exceedingly well tasted, and keeps well. The varieties grown exclusively as food for live stock are : 1, The Yam or Surinam potatoe, large, red and white-skinned, and the interior veined with red ; flavour disagreeable, and not such as to admit of its being used as human food. It succeeds best on heavy lands. This is a most valuable sort for the farmer; as, with this variety *he* has an excellent assistant to his turnip crop, or rather a succedaneum, which is of material benefit when turnips are consumed, in feeding live stock ; its produce is 12-15 tons per acre. *2.* The oxnoble ; large, yellow without and within, very prolific, unfit for human food. 3. The late Champion ; large and prolific, white-skinned, and may be used as human food.

The soil in which the potatoe thrives best is a light loam, neither too dry nor too moist; but if rich it is so much the better. They are, however, grown on many other kinds of soil, where they are free from stagnant moisture, with a reasonable portion of manure added. The best flavoured table potatoes are almost always produced from a newly broken-up pasture ground, not manured, or from any new light soil. Repeated on the same soil, they very generally lose their flavour.

In preparing the soil for field potatoes, it is of much importance to free the soil as much as possible from weed roots; both because the horse-hoe must be excluded altogether when the vegetation is vigorous, and because at no period of their growth is it safe to work so near the plants, especially after they have made some progress in growth. The first ploughing is given

soon after harvest; and a second, and commonly a third, early in spring; the land is then laid up into ridglets, from 24 to 30 inches broad, as for turnips, and manured in the same manner.

The best manure for the potatoe appears to be littery farm-yard dung; and the best mode of applying it, immediately under the potatoe sets. Any manure may be applied ; and no plant will bear a larger quantity *of* it, or thrive in coarser or less prepared manure.

The season of planting early potatoes in the fields depends much on the soil. Where the soil is very dry, the potatoe sets may be planted in March ; but for a full crop April is the best time. Potatoes, indeed, are often planted in the end of May, or even in June; but the crops, although often as abundant, are neither so mellow or mature as when the sets are planted in April or in the first 8 or 10 days in May.

The time of cutting the sets should always be some days before planting, that the wounds may dry up; and no harm will result from performing the operation several weeks beforehand, provided the sets are not exposed too much to the drought. The sets ought to be large, rarely smaller than the fourth part of the potatoe. At all events, rather err in giving over large than in making them too small; because by the first error, ^reat loss can be sustained, whereas, by the other, a feeble J. late crop may be the consequence.

The modes of planting the potatoe are various; but the best are either to plant them by dibber on a plane surface in 1 or by spade in digging, or in drills, in the manner of

after culture of potatoes consists in harrowing, hoeing, lim'g> and earthing up. All potatoes require to be earthed or ^tending 6 or 7 inches round their stem. The reason of ^IS, that the tubers do not, properly speaking, grow under -\ soil, but rather on, or partially bedded in its surface. The oh may be thrown up by a spade, draw-hoe, or with a small ugh, drawn by one horse. Pinching off the whole of the po-oe blossoms is a part of after culture not unworthy of the ention of the farmer, for the reasons given by Mr. Knight.

A mode of taking part of the crop suited to cottagers and thers, especially in years of scarcity, deserves to be mentioned. Taving ascertained that some of the tubers have attained an table size, go along the rows, and loosen the earth about each lant with a blunt stick, taking 2 or 3 of the largest tubers from ach plant, and returning the earth carefully. By this means the tubers which remain will increase in size, having now the lourishment destined to complete the growth of those re-noved.

Potatoes intended for seed should be taken up a fortnight or 3 'eeks before fully ripe, for the reasons already given under arden culture.

Potatoes are stored and preserved in houses, cellars, pies, and imps. Whatever mode is adopted, it is essential that the tbers be perfectly dry, otherwise they are certain of rotting; md a few rotten potatoes will contaminate a whole mass. Put-"ng them into close houses, and covering them well up with sudw, is the most effectual mode, and that which is generally adopted. In some parts of Scotland, it is a common practice to dig pits in the potatoe-field, when the soil is dry and light, and putting in potatoes to the depth of *3* or 4 feet, to lay a little dry straw over them, and then cover them up with earth, so deep that no frost can affect them. Another method, which is prac-:ised in England as well as in Scotland, is to put them together n heaps, and cover them up with straw, and afterwards cover *ith earth, and so closely packed together as to exclude frost. Dry weather is absolutely necessary in storing potatoes, as they do not keep well when stored in a wet state ; and all cut potatoes should be carefully picked out. Pieing is also a good means of preserving potatoes, which is described under garden culture. Several other modes of preserving potatoes are in use in different places. Capping is a method similar to pieing.

The produce of the potatoe varies from 5 to 8, and sometimes 10 or 12 tons per acre ; the greatest produce is from the yam, which has been known to produce 12 tons, or 480 bushels per acre. The haulm is of no use but as manure, and is very generally burned for that purpose, being slow of rotting.

The application of the potatoe crop is of the greatest importance as human food ; and is the only root grown in Britain which may be eaten every day in the year, without satiating the palate ; they are, therefore, the only substitute that can be used for bread, with any degree of success, and indeed they often enter largely into the composition of the best loaf bread, without at all either injuring its nutritive qualities or flavour.

Among the extraordinary applications of the potatoe may be mentioned cleansing woollens, and making an ardent spirit.

Cleansing rvoollens.—The refuse of potatoes used in making starch when taken from the sieve, possesses the property of cleansing woollen cloths, without hurting their colour ; and the water decanted from the starch powder is excellent for cleansing silks without the smallest injury to the colour.

Wine of considerable quality may be made from frosted potatoes, if not so frosted as to have become soft and waterish.

Ardent spirits.—Potatoes that have been injured by the frost produce a greater quantity of spirit, and of a much finer quality than those that are fresh ; they require a proportion of malt-wash to promote the fermentation. About one-fourth part of malt-worts, or wash, ought to be fermented at least 6 hours before the potatoe-wash is joined to it; otherwise the potatoe-wash, having an aptitude to ferment, will be ripe for the still before the malt-wash is ready ; hence the effect will be to generate an acid which renders the spirit coarse, and when diluted with water, of a milky or bluish colour. When the spirit is strong, the acid is held in solution, but appears as above when diluted with water. (Farmer's Mag. 17. p. 325.)

In the application of potatoes as food for live stock, they are often joined with hay, straw, chaff, and other similar matters ; and have been found useful in many cases, in the later winter months, as food for horses, cows, and other sorts of live stock. With these substances, as well as in combination with other materials, as bean or barley-meal, and pollard, they are used in the fattening of neat cattle, sheep, and hogs. Potatoes are most nutritious when boiled ; they were formerly cooked in this way, but are now very generally steamed, especially in the North. The practice has been carried to the greatest extent by Curwen in feeding horses. He gives to each daily 1^ stone of potatoes, mixed with a tenth of cut straw. An acre of potatoes, he considers, goes as far in this way as four of hay. 120 stones of potatoes require *2*\ bushels of coals to steam them. The baking of potatoes in an oven has also been tried with success. They°are also given raw to stock of every description, to horses and hogs washed, but not washed to cows or oxen. Washing was formerly a disagreeable and tedious business ; but it is now rendered an easy matter, whether on a large or small scale, by the use of the washing machine.

Frosted potatoes may be applied to various useful purposes ; for food by thawing in cold water, or being pared, then thawed, and boiled with a little salt. Salt and saltpetre, chaff, or bruised oats, boiled with them, will render them fit food for cattle, swine, poultry, &c. Starch and paste for weavers, book-binders, and shoemakers, may be made from them, when too sweet to be rendered palatable.

The diseases of potatoes are chiefly the scab, the worm, and the curl. The scab, or ulcerated surface of the tubers, has never been satisfactorily accounted for. Some attributing it to the ammonia of horse-dung, others to alkali, and some to the use of coal ashes. Change of seed, and of ground are the only resources known at present for this malady. The worm and grub both attack the tuber; and the same preventative is recommended. The only serious disease of the potatoe is the curl ; and this is now ascertained to be produced by the concentration of the sap in the tuber ; and this concentration, or thickening, is prevented by early taking up. This discovery was first made by the farmers near Edinburgh observing that seed potatoes procured from the moors, or elevated cold ground, never suffered from the curl ; and it consequently became a practice, every 3 or 4 years, to procure a change of seed from these districts. On inquiry, it was found that potatoes of these upland grounds continued in a growing state till the haulm was blackened by the first frosts of October. They were then taken up, when, of course, they could not be ripe. Subsequent experiments has established the fact, that the curl is prevented by using unripe seed. It is also a safe practice frequently to change the seed, and also to change the variety.

Tw6erous-rooted Nightshade, or Common Potatoe. FI. May, Sept. Clt. 1597. PL 1 to 2 feet.

2 S. ETUBERÒSUM (Lindl. hot. reg. 1712.) rhizoma thick, subterraneous, without tubers ; stem herbaceous; leaflets unequal, complicate, much undulated, approximate : alternate ones minute; pedicels articulated ; calyxes and corollas 5-angled, glabrous. %. H. Native *of* Chili. Habit *of S. tuberbsum;* but the roots are without tubers: the flowers larger, on shorter pedicels ; the calyx glabrous and shining, not hispid. Corollas purple. There is a variety of *S. tuberbsum* with long, creeping rhizoma, without tubers, and white flowers, in the botanic garden of Chelsea, from Chili, which renders the present rather doubtful as a species. We suspect that this and *S, Commersbnii* are only varieties of *S. tuberosum.* The *S. stolomferum*, Cham, in Linnaea, 8. p. 255. a native of Mexico, also appears to be a variety *of S. tuberòsum.*

Tuberless Nightshade, or Potatoe. Fl. July, Oct. Clt. 1833. PL 1-2 feet.

3 S. COMMERSÒNI (Poir. suppl. 3. p. 746. Dun. sol. ed. 2d. ined. t. 133. syn. p. 5.) herbaceous; leaves pinnate, sublyrate, pilose; pedicels articulate ; corollas 5-cleft. 2/. H. Native of America, about Monte Video, Commerson. Hort. trans. 5. t.] 0. Very nearly allied to *S. tuberòsum;* but the root is unknown ; it differs, however, from that plant, in the leaves being more profoundly pinnatifid ; but the leaflets are sessile, and not alternate, unequal; the terminal leaflet very large ; and the corolla is 5-cleft, not 5-angled.

Commerson's Nightshade, or Potatoe. FL May, Oct. Clt. 1822. PL 1 to 2 feet.

4 S. APPENDICULÀTUM (Dun. syn. p. 5. H. B. et Kunth, nov. gen. 3. p. 19.) shrubby? or herbaceous? scandent; leaves quinately impari-pinnate, stipulate at the base; leaflets oblong, acuminated, beset with adpressed hairs above, but downy on the veins beneath; corymbs terminal, few-flowered. J? . ? *sj.* G. Native of Mexico, near La Puente de La Madre de Dios, between Totonilco el Grande and Actopan. Branchlets puberulous. Leaflets opposite, terminal one large. Corymbs puberulous. Corolla 5-cleft, white, glabrous, with oblong, acute segments. Calyx half globose, 5-lobed.

4ppendiculate-\eavet Nightshade. FL June, Aug. Clt. 1823.

S_r S ^ S u M (Cav. icon. 5. p. 23. t. 439. f. 1.) stem herbaceous, furrowed; leaves impari-pinnate; leaflets decurrent; flowers terminal, corymbose. *11.* II. Native of Chili, near Coquimbo. Stem almost winged from the decurrent leaves. Leaves with 3 pairs of leaflets. Branches *of* corymbs dichotomous. Corollas deep yellow. Berry glabrous, black, size of a pea.

Pinwate-leaved Nightshade. PL 2 feet.

§ 2. *Leaves impari-pinnate. Racemes corymbose, lateral.*

6 S. CALDAXSII (Dun. syn. p. 6. H. B. et Kunth, nov. gen. amer. 3. p. 19.) herbaceous; leaves impari or unequally pinnate, soft from tomentum, whitish beneath ; racemes dichotomous, cymose. %. H. Native of Quito, near Chillo. Dun. sol. ed. 2d. ined. t. 85. f. 2. This species differs from *&. ochrdnthum,* which it is very like ; in the stem being herbaceous ; in the leaves being smaller; the leaflets being 3-pair ; and in the racemes being spreading and cymose above; in the cymes being longer; and in the flowers being larger.

Caldass Nightshade. PL climbing ?

7 S. JAMÉsn (Torrey, in ann. lye. 2. p. 227.) herbaceous, rather pilose; stem unarmed, erect ; leaves impari-pinnate; leaflets ovate-lanceolate, abruptly narrowed at the base, obsoletely sinuated ; racemes extra-axillary, few-flowered. ©. H. Native of the Arkansas ? Racemes about 4-flowered. Flowers white.

James's Nightshade. PL \ to f foot.

8 S. OCHRA'NTHUM (Dun. syn. p. 6. sol. ed. 2d. ined. f. 1. H. B. et Kunth, nov. gen. 3. p. 20.) shrubby, scat leaves interruptedly pinnate, hairy above, but clothed white tomentum beneath; leaflets oblong, nearly entire, rymbs lateral, subdichotomous, on long peduncles, about in length to the leaves. J? . ^. G. Native of Quito, Chillo. Leaflets opposite, 4 pairs. Corymbs hairy. C 5-cleft, yellow, hairy outside ; segments acutish, rather equal.

Ye I low-flowered Nightshade. Shrub climbing.

9 S. JUGLANDIFÒLIUM (Dun. syn. p. 6. sol. ed. 2d. ined 86.) shrubby, scandent ; leaves impari-pinnate, rough frd hairs above, but clothed with soft hairs beneath ; lean oblong, subcordate, quite entire; corymbs lateral, dichotomof divaricate. J?. ^. S. Native of New Granada, in the pr vince of Pasto, in humid places near Tusa et Cuesaca. H. et Kunth, nov. gen. 3. p. 20. Leaflets opposite, 3 pairs, short petioles : terminal one rather the largest. Corym pilose. Corolla 5-parted, white ? pilose outside.

Walnut-leaved Nightshade. Shrub climbing.

§ 3. PTEROI'DEA (from *7CT£pov, pteron,* a wing; and *etSog, eidos,* form; in reference to the pinnate leaves.) *Leaves impari-pinnate or ternale; leaflets quite entire, acuminated. Pedunclk axillary, aggregate, racemose.*

10 S. MI'TE (Ruiz, et Pav. fl. per. 2. p. *38.* t. 173. f. r stem herbaceous, radicant; leaves impari-pinnate; leaflets ol long; racemes axillary, aggregate; berries globose. ©. H Native of Peru, in the province of Panatahua, in forests at Pozuzo and Chincao, in humid places. Glabrous. Sterr, bluntly angular. Flowers small, secund, white. Berry white, size of a pea. Leaves 8-10 inches long.

Mild Nightshade. PL *2* feet, creeping.

11 S. CONICUM (Ruiz, et Pav. 1. c. t. 172. f. b.) stems herbaceous ; leaves impari-pinnate ; leaflets oblong-lanceolate ; peduncles axillary, usually 3 together, spicate ; berry conical ©. H. Native of Peru, in groves at Chincao and Cuchero Stem pilose, and angular at top. Peduncles solitary, twin oi tern, almost the length of the petioles, recurved at top.

Flowers small, secund, whitish-blue. Corolla 5-lobed, Berry white, size of an olive.

CowicaZ-fruited Nightshade. PL 2 feet.

12 S. DIFFU^SUM (Ruiz, et Pav. 1. c. p. *37.* t. 171. f. b.) stem suffruticose; branches twiggy, diffuse; leaves impari-pinnate; leaflets oblong; racemes axillary, few-flowered. T?. S. Native of Peru, in groves in the province of Huanuco. Plant with the habit of *Jasmine.* Stem branched, angular. Petioles and peduncles downy. Corollas violaceous, 5-lobed.

Diffuse Nightshade. Shrub.

13 S. SEAFORTHIA'NUM (Andr. bot. rep. t. 504. Dun. syn. p. 7.) suffruticose, scandent; leaves pinnate, undulated : superior ones simple, lanceolate; racemes racemosely-panicled, sometimes longer than the petioles. ^ ; w- S- Native of Barbadoes. Flowers pink. Leaves sometimes ternate.

SeafortKs Nightshade. Fl. July, Sept. Clt. 1804. Shrub climbing.

14 S. TERNA'TUM (Ruiz, et Pav. 1. c. p. 38. t. 172. f. a.) stem suffruticose, tetragonal, scandent, radicant; leaves ternate; peduncles few-flowered. ^ . *yj,* S. Native of Peru, in humid parts of woods. Plant glabrous. Leaves on long petioles. Leaflets oblong-lanceolate : middle one large. Peduncles many together. Flowers sub-umbellate. Calyx 5-crenated, small. Corolla purplish-violet. Deeply 5-parted.

Ternate-leaved Nightshade. Shrub climbing.

§ 4. *Leaves pinnatifid and entire.*

15 S. LACINIA'TUM (Ait. hort. kew. 1. p. 247.) shrubby or herbaceous, quite glabrous ; leaves pinnatifid ; segments linear-lanceolate : terminal one elongated ; or the leaves are entire, linear-lanceolate, elongated; racemes lateral, corymbose, simple or bipartite, shorter than the leaves ; calyx half 5-cleft; segments of corolla emarginate ; berry oval. %. G. Native of New Zealand ; New South Wales, about Port Jackson ; and of Van Diemen's Land. Curt. bot. mag. t. 349. R. Br. prod, p. 445. S. pinnatifidum, Lam. diet. 4. p. 292. Poir. diet. 4. p. 287. but not of Ruiz, et Pav. S. aviculare, Pers. syn. 1. p. 225. Forst. prod. no. 107. ? pi. esc. no. 12.? S. reclinatum, Hort. Plant quite glabrous, as in *Lactuca perennis.* Stem juicy. Racemes corymbose. Corollas blue, size of those of *Geranium pratense.* Anthers separated, not cohering, as in the rest of the species. Berry nearly globose, depressed, greenish-yellow, edible, size of a plum.

Far. a ; shrubby ; leaves pinnatifid.

Var. /3 ; shrubby ; leaves undivided.

Var. y ; herbaceous ; leaves pinnatifid.

Jagged-leaved Nightshade. Fl. July, Aug. Clt. 1772. PI. 2 t j 3 feet.

16 S. QUERCIFOLIUM (Lin. spec. p. 264.) stem sub-herbaceous, angular, flexuous, scabrous ; leaves pinnatifid; racemes corymbose or cymose. 2£. H. Native of Peru; and of Chili, about Valparaiso. Dun. sol. 139. Pers. ench. 1. p. 225. exclusive of the syn. of Fl. per.—Feuill. obs. 2. p. 722. t. 15. ? Habit of *S. Dulcamhra.* Stem erect. Branches angularly winged ; wings minutely toothed. Leaves ciliated a little, with usually 5 ovate segments, scabrous beneath, pilose in the young state. Corolla violaceous, with 2 green marks at the base of each segment. Berry ovate. Feuille's figure is referred to *Witheringia multifida* by Poir. in his encyl. 4. p. 287. and suppl. 3. p. 739. According to Dunal, S. runcinatum, Ruiz, et Pav. fl. per. 2. p. 36. agrees well with this species, but is perhaps distinct.

0ak4eaved Nightshade. Fl. June, July. Clt. 1787. PI. 3 to 5 feet.

17 S. TRIFLORUM (Nutt. gen. amer. 1. p. 128.) stem unarmed, herbaceous, procumbent; leaves denticulately-pinnatifid, glabrous ; segments acute, subundulated, having the margins more or less revolute ; peduncles opposite the leaves, 2-3-flowered. ©. H. Native near Fort Mandan, and elsewhere ; and on the banks of the river Platte, commencing near the Pawnee village, and continuing to the mountains. Flowers small, white, revolute. Fruit size of a cherry, green in the mature state. Stems very hairy, diffuse. Leaves subruncinate.

Three-flowered Nightshade. PI. procumbent.

18 S. RADI'CANS (Lin. fil. dec. 1. t. 10. Dun. sol. p. 140.) stem herbaceous, smooth, nearly terete, prostrate, radicant; leaves deeply pinnatifid; racemes cymose, about equal in length to the petioles. 1/. S. Native of Peru. S. quercifdlium, Ruiz, et Pav. fl. per. p. 36. exclusive of the syn. of Lin. and Feuille. Stems at length ascending, and angularly winged from the decurrent petioles. Leaves with 5 ovate, acute, or lanceolate segments. Racemes sometimes opposite the leaves, but not always. Corollas small, violaceous. Berry globose, size of a pea, red.

Rooting-stemmed Nightshade. Fl. July, Aug. Clt. 1771. PI. creeping.

19 S. GLABE'RRIMUM (Dun. sol ed. 2d. ined. t. 133. syn. p. 9.) stem quite glabrous, furrowed ; leaves rarely entire, usually pinnatifid: the terminal segment elongated ; racemes aggregate, many-flowered ; segments of corolla acute. %. S. Native of the Island of Timor. Habit of *S. Iaciniatum ;* but differs in the racemes being larger; in the flowers being more copious ; in the calyxes being 5-parted; and in the segments of the corolla being acute, not emarginate.

Quite glabrous Nightshade. PL 2 to 3 feet.

20 S. RECLINA'TUM (Lher. ined. ex bot. cult. ed. 2. vol. 3. p. 168. Dun. syn. p. 8.) stem quite glabrous, thick, juicy ; leaves pinnatifid, sometimes entire ; racemes lateral, shorter than the leaves ; corolla semiquinquefid, with emarginate segments. h_c . S. Native of Peru, Dombey. S. pinnatifidum, Lam. ill. t. 115. f. 4. Cav. descr. 111. S. Iaciniatum, Dun. sol. p. 139. exclusive of the syn. Stem furrowed. Leaves tapering into the petioles ; segments linear. Peduncles 2-3-flowered. Calyx deeply 5-toothed. Corollas azure-blue. Berry green, globose, edible, an inch in diameter.

Reclinate Nightshade. Shrub 3 feet.

21 S. SEPTE'MLOBUM (Bunge, in mem. acad. petersb. 2. p. 122.) stem herbaceous, erect, angular; leaves pinnatifid; lobes ovate-oblong, obtuse, entire, or deeply toothed, downy on both surfaces ; panicles dichotomous, divaricate, lateral, exceeding the leaves; corollas 5-cleft. %. H. Native of China, in waste places about Pekin. Leaves obscure, green, with usually 7 lobes. Corollas deep violet, like those of *S. Dulcamara.*

Seven-lobed-leaved Nightshade. PL 1 to 2 feet.

§ 5. *Leaves ternate or simple. Leaves and leaflets ovate or ovate-lanceolate.*

22 S. HEBE'PHORUM (Dun. syn. p. 7. H. B. et Kunth. nov. gen. 3. p. 21.) herbaceous, much branched; branches angular, puberulous; leaves ternate, clothed with silky down on both surfaces; leaflets oblong, acute, entire; peduncles long, lateral? flowers subracemose. *1J.* H. Native of Peru, near Caxamarca, in frigid places, at the altitude of 460 hexapods. Leaflets about 2 inches long. Flowers subumbellate, ex Bonpl. Calyx 5-parted. Corolla quinquefid. The hairs in this and the 4 following species are simple.

Down-bearing Nightshade. PL 2 feet.

23 S. MURICA^TUM (Ait. hort. kew. 1. p. 250. Dun. sol. p.

162. syn. p. 8. H. B. et Kuntb, nov. gen. 3. p. 21.) stem suffruticose, radicant, ascending ; young branches rouricated ; leaves oblong-lanceolate, entire, downy, but sometimes ternate; racemes terminal, bifid. J? . G. Native of Peru, common in cultivated places, ex Feuille; Teneriftē, in gardens, ex Broussonet; near the city of Mexico, ex Bonpl. S. scābrum, Lam. ill. no. 2344. S. variegatum, Ruiz, et Pav. fl. per. 2. p. 32. t. 162. f. a. Melongena laurifolia, fructu turbinato variegato, Feuill. per. 2. p. 735. t. 26. The plant is called *Pepo,* and *Pepino de la Tierra,* in Peru. Branches trigonal. Leaves 15-24 lines long, furnished with 2 small stipulas at the base. Racemes extra-axillary. Corollas size of those of *S. Dulcamara,* white, painted with violaceous veins, puberulous outside; segments ovate, roundish. Calyx 5-parted, silky. Berry ovate, variegated with purple, drooping, edible ; sarcocarp yellow, very thick.

Muricated Nightshade. Fl. July, Aug. Clt. 1785. Shrub 2 to 3 feet.

24 S. DIVERSIFŌLIUM (Dun. syn. p. 8. sol. ed. 2d. t. 88. H. B. et Kunth, nov. gen. 3. p. 22.) shrubby ; branches puberulous ; leaves impari-pinnate, ternate or entire, downy ; leaflets sessile, oblong, acuminated, entire : terminal one large ; racemes extra-axillary, simple ; calyx large, equal in length to the corolla. ^2 • S. Native near Caraccas. Branches glandular and hairy. Racemes shorter than the leaves. Corolla rotately subcampanulate, 5-cleft, white, size of those of *Borago qfficindlis;* segments ovate, acute.

Diverse-leaved Nightshade. Fl. June, July. Clt. 1825. Shrub 2 to 8 feet.

25 S. CARIPE'NSE (Dun. syn. p. 8. sol. ed. 2d. ined. t. 89. H. B. et Kunth, nov. gen. amer. p. 22.) shrubby, scandent; branches villous; leaves simple and ternate, elliptic-oblong, acutish, rounded at the base, quite entire, clothed with silky hairs, biauriculate at the base; racemes extra-axillary, and nearly terminal, simple, or bifid. 7? . *KJ.* S. Native of the province of Cumana, near the monastery of Caripe. Leaves 1| to 2 inches long. Flowers unilateral, size of those of *Verātrum r.igrum.* Pedicels articulated. Calyx 5-parted, pilose. Corolla rotate, white, ? sinuately 5-lobed.

Caripe Nightshade. Shrub climbing.

26 S. BULBOCA'STANUM (MOC. et Sesse. fl. mex. icon. Dun. syn. p. 8. sol. ed. 2d. ined. t. 3.) root tuberous; stems herbaceous ; leaves ovate, repand, auricled ; peduncles 1-flowered, subumbellate. %. H. Native of Mexico. Root solitary, globose, like that of *S. tuberbsum,* mucronate below, without any other radicle. Stem terete. Leaves undulated. Petioles auricled, from *2* sessile leaflets. Peduncles villous, violaceous. Corolla white, with lanceolate, bluntish segments.

Bulbocaatanum Nightshade. PI. 1 foot ?

27 S. OLIGA'NTHUM (Dun. syn. p. 8. vol. ed. 2d. ined. t. 90.) shrubby, scandent ? ; branches clothed with hoary tomentum ; leaves perhaps always simple, unequal, and cordate at the base, quite entire, glabrous above, but clothed with soft, yellowish, hoary tomentum beneath, auricled at the base ; peduncles terminal, few-flowered. F? . ©. ? S. Native near Maypure, on the banks of the Orinoco. H. B. et Kunth, nov. gen. amer. 3. p. *23.* Hairs on the plant stellate. Leaves 2 inches long. Auricles sessile, obliquely ovate-sublunate, similar to the leaves.

Few-flowered Nightshade. Fl. ? Clt. 1824. Shrub 3 feet.

§ 6. PACHYPHY'LLA (from Trax^C, *pachys,* thick ; and <*j*>*v*\-*ov* , *phyllon,* **a leaf.)** ***Leaves pinnate, pinnatifid, or entire, /eaves and leaflets cordate, acute, thick, beset with short simple hairs. Racemes cymose, pendulous. Corollas 5-parted. Berries oval.***

28 S. PENDULUM (Ruiz, et Pav. fl. per. 2. p. *39.* t. 174. f. a.) stem shrubby; leaves simple and irregularly pinnate ; leaflets 2-6, obliquely cordate ; racemes pendent, forked. *ḥ* . S. Native of Peru, in the province of Panatahua, particularly in shady places about Munna. Dun. sol. p. 168. syn. p. 7. Branches hairy, dichotomous. Leaves pubescent on both surfaces. Corolla elongated, downy, purple, with acute, reflexed segments. Berry large, ovate, yellow, *size of* a middling pear.

Pendulous-racemed Nightshade. Shrub 10 feet.

29 S. OBLĪQUUM (Ruiz, et Pav. fl. per. 2. p. 35. t. 165. f. a.) stem suffruticose; leaves cordate, oblique, acute ; racemes cymose, revolute, secund. T? • $• Native of Peru, in groves at Chincao. Shrub glabrous. Leaves shining above, and downy beneath. Peduncles lateral. Calyx 5-cleft. Corolla purplish violet. Berry oblong, acutish at both ends.

Oblique-leaved Nightshade. Shrub 5 to 10 feet.

30 S. VIRIDIFLŌRUM (Ruiz, et Pav. fl. per. 2. p. 38. t. 173. f. b.) shrubby ; leaves cordate-ovate, simple, villous ; racemes dependent, about equal in length to the leaves. ^ . S. Native of Peru, in groves. Dun. sol. p. 169. Plant villous. Calyx semiquinquefid. Corolla green, almost 5-parted, with reflexed segments. Berry large, oblong, turbinate, villous, yellowish.

Green-flowered Nightshade. Shrub 6 feet.

31 S. BETA'CEUM (Cav. icon. 6. p. 599. t. 524. ann. d'hist. nat.* 1. p. 44.) shrubby; branches and stem thick, succulent; leaves large, cordate, ovate-oblong, rather downy on both surfaces, with undulated margins ; racemes cymose, pendulous, about equal in length to the petioles. fj . G. Native of New Spain. Dun. sol. 169. Andr. bot. rep. t. 511. S. crassifōlium, Ort. dec. p. 117. Leaves a foot long. Petioles spotted. Racemes axillary and supra-axillarvi many times bifid, sometimes simple and trifid. Calyx 5-cleft, spotted at top. Corolla white, tinged with red, small, thick, 5-parted. Anthers yellow. Berry ovate, size of a walnut, 2-celled at first, yellowish green, marked with longitudinal brown spots, afterwards reddish. The whole plant has an ungrateful scent, like that of *Stramonium* **or** ***Henbane.***

^eMeaved Nightshade. Fl. June, July. Clt. 1803. Shrub 3 to 5 feet.

SUBSECT. ***2. Leaves lobed, sinuated, angular, toothed, or entire.***

§ 1. ***Leaves lobed, and entire.***

32 S. LEPTA'NTHUM (MOC. et Sesse. icon. mex. ined. Dun. syn. p. 9. Sol. ed. 2d. ined. t. 28.) stem terete, herbaceous, glabrous ; leaves oblong, undulately repand, running into the petioles; racemes dichotomous, cymose at top; corolla pentagonal. %. G. Native of Mexico. Flowers small. Teeth of calyx acute. Berry small, globose, from red to violet. Allied to *S. corymbbsum.* Piant glabrous, erect, or procumbent.

Far. j3, parvifblium (H. B. et Kunth, nov. gen. *3.* p. 24.) leaves smaller, nearly sessile; racemes and pedicels shorter; corollas pale violet, not white. %. S. Native of Peru, between Caxamarca and Magdalena.

Slender-flowered Nightshade. PI. procumbent.

33 S. LĪNKII ; leaves lanceolate, sub-sinuated, rather tomentose, green ; peduncles few-flowered ; calycine segments ovate, acute. *V}* . S. Native country unknown. S. oligānthutn, Link, enum. 1. p. 182, but not of Dun. Branches glabrous; petioles clothed with minute, stellate hairs. Leaves undulated, acute, with 1-3 deep recesses, beset with stellate hairs on both surfaces, which are most dense beneath. Pedicels drooping, and are, as well as the calyxes, rather tomentose. Corolla semi-quinquefid, sub-plicate, white.

Link's Nightshade. Fl. ? Clt. 1824; * Shrub 3 to 4 feet.

34 S. CORYMBOSUM (Jacq. colL 1. p. 78. icon. rar. t. 40.) stem suffruticose ; leaves ovate-lanceolate, entire, or a little lobed ; racejnes cymose, opposite the leaves ; corollas 5-parted. T? . S. Nsaive of Peru, in cultivated places, through the provinces of Lima and Chancay. Dun. mon. 142. S. corymbiferum, Gmel. syst. 384. S. parvifldrum, Nocca, in Usteri, ann. 6. p. 61. Vittm. summ. suppl. *283.* Habit of *S. Dulcamara.* Branches some erect, and some weak and procumbent, angular. Leaves glabrous, fetid. Racemes 2-3-4-cleft. Corolla small, blue, or violaceous, 5-cleft. Berry of a reddish orange colour, size of a pea.

Corymbose-ftovteredi Nightshade. Fl. July, Aug. Clt. 1786. Shrub 2 to 3 feet.

*35'*S* CIRRHOSUM (Dun. syn. p. 9. sol. ed. 2d. ined. t. 91. H. B. et Kunth, nov. gen. 3. p. 24.) shrubby, scandent, tendrilled ; leaves oblong, entire, or 3-Iobed, acuminated, glabrous : middle lobe large; racemes terminal, panicled. F? . vy. S. Native near Cumana, in shady places. S. salignum, Willd. rel. ex Rcem. et Schultes, syst. 4. p. *663.* Habit of *S. Dulcamara.* Shrub glabrous. Tendrils spirally revolute, extra-axillary. Leaves entire, ternate, or 3-lobed.' Flowers rose-coloured, size of those of *S. nlgrum.* Calyx small, angularly 5-toothed. Stamens sometimes 6.

Tendrilled Nightshade. Shrub climbing.

36 S. DULCAMA'RA (Lin. spec. p. 264.) shrubby, scandent, flexuous ; leaves ovate-cordate : superior ones jagged ; corymbs almost opposite the leaves. Tj . y. H. Native of Europe, Asia, and North America, in hedges and among bushes; plentiful in Britain. Smith, engl. bot. t. *565.* Pursh. fl. amer. sept. 1. p. 156. Curt. fl. lond. 1. t. 14. FL dan. t. 607. Bull, herb. t. 23. Reit. et Abel, t. 72. Dreves et Heyne, t. 60. Guimpel. t. 12. Plenck, off. t. 119. Svensk. bot. t. 20. Woodv. med. bot. *97.* t. *33.* Sav. mat. med. p. 47. t. 14. Stev. et Church, med. bot. icone. S. scandens, Neck, gallob. 119. Dulcamara flexudsa, Mcench. meth. p. 514. Sol. scandens seu Dulcamara* Tourn. inst. p. 149. Amara dulcis, Gerard, emac. 350. Dfilcis amara, Trag. 816. Glycipicros seu Dulcamara, Bauh. hist. 2. p. 109. icone. La Morelle. Grimpante, Regnault bot. icone. Shrub glabrous. Leaves cordate : superior ones hastate, all quite entire. Corymbs panicled. Corolla violaceous, with reflexed segments, each segment furnished with 2 green spots at the base. Berries elliptic, red. The roots and stalks of this, the *Woody Nightshade,* upon being chewed, first cause a sensation of bitterness, which is soon followed by a considerable degree of sweetness ; whence it has oV ^iined the names of *Dulcamara,* or *Bittersweet.* The berr excite vomiting and purging. Floyer says, thirty of them killed a dog in less than 3 hours, remaining undigested on the stomach. As they are common in hedges, and may be mistaken by children for red currants, this circumstance is the more worthy of notice. In such a case it is advisable to pour down as much warm water as possible, to dilute the poison, and provoke vomiting. The old botanists recommend the plant as a medicine in many diseases. Ray informs us, that the inhabitants of Westphalia make use of a decoction of the whole plant as their common drink with success against scurvy. Boerhaave says, it is a medicine far superior to China and Sarsaparilla, as a sweetener and restorative : and Linnaeus, that an infusion of the young twigs is an admirable medicine in acute rheumatisms, inflammations, fevers, and suppression of the lochia. Dr. Hallenberg advises it in ischiatic and rheumatic pains, jaundice, scurvy, and lues venerea. They direct a pint of boiling water to be poured upon 2 drachms of the stalks, sliced and dried; after standing half an hour it must be boiled 10 or 15 minutes. The dose is 2 tea-cups full or more morning and evening. Murray and Bergius regard it as promoting all secretions. Dr. Cullen says, " We have only employed the slender twigs, but some parcels of these were very mild, and most others considerably acrid. In the latter state we have employed a decoction of these in the cure of rheumatism sometimes with advantage, but at other times without effect. The *Dulcamara* is inserted in the catalogue of diuretics, but this property it hardly, if at all, possesses. The twigs when gathered in autumn or spring will be most powerful ; if used dry a somewhat larger dose must be taken. The plant is generally given in decoction or infusion, and to prevent it exciting vomit it should be diluted with milk : small doses also are recommended at the beginning, for large ones have been found to produce convulsion, delirium, and palsy of the tongue, ex Woodv.

Far. a, violdceum; corollas violaceous.—Hort. eyst. p. *385.* t. 384. no. 3.

Far. /3, *album;* corollas white.—Lin. fl. suec. p. *66.*

Far. y, *cdrneum;* corollas flesh-coloured.—Cels. ups. 32. Lin. fl. suec. 1. c.

Far. S, plenum; corollas double.—Tourn. inst. 149. Hort. eyst. 1. c.

Far. e, variegdtum ; leaves variegated.—Munt. fig. 156. Tourn. inst. 149.

Far. TJ, *hirsiitum;* plant hairy, or downy. Flowers violaceous. —On the sea-coast.

Far. t, rupestre (Schmidt, fl. boh. p. *96,)* stem erect; leaves ovate, quite entire ; racemes few-flowered, dichotomous.—Native of Bohemia.

Bitter-sweet, or Woody Nightshade. Fl. June, July. Britain. Shrub climbing.

37 S. KIESERILZKII (Meyer, verz. pfl. p. 113.) stem shrubby, unarmed, erect; leaves nearly glabrous, scattered, petiolate, ovate-oblong, quite entire, acuminated, attenuated at the base ; racemes lateral, few^flowered; segments of corolla 5, reflexed, each marked with 2 spots at the base. *? . H. Native of Caucasus, in woods near Lenkeron.

Kieserilzki's Nightshade. Shrub.

38 S. PE'RSICUM (Willd. mss. Ledeb. fl. alt. 1. p. 237.) stem terete, scandent; leaves rather downy, ovate-lanceolate, cordate, quite entire; racemes cymose, lateral, glabrous; corolla *6*-parted ; berries ovate. ^ . w. H. Native of Persia, and of Siberia, frequent on the banks of rivers and rivulets, in humid places near Uimon and Barnaoul. S. Dulcamara, Patrin, fl. barn. ined. Similar to *S. Dulcamara* in habit, inflorescence, flowers, and berries; but the leaves are always entire, never hastate or auricled. Calyx 5-toothed. Corolla pale violet. Berries red.

Persian Woody Nightshade. Shrub climbing.

39 S. TEGORE (Aubl. guian. 1. p. 212. t. 84.) shrubby, very hairy ; lower leaves pinnatifidly sinuated: upper ones cordate. J?. S. Native of Guiana, in cultivated places near the habitations of the natives. Dun. sol. p. 142. syn. p. 10. . Lower leaves large, with acute lobes : upper ones smaller. Flowers small, greenish, corymbose in the forks of the branches. Berry yellowish, globose, size of a filbert. *Tegore* is the native name.

Tegore Nightshade. Fl. June, July. Clt. 1823. Shrub 5 to 6 feet.

40 S. LYRA'TUM (Thunb. jap. p. 92.) stem herbaceous, erect, tomentose, as well as both surfaces of the leaves : lower leaves lyrate : superior ones hastate. %. G. Native of Japan, near Nagasaki, where it is called *Fijodori Diogo* by the natives. Dun. sol. p. 143. Segments of the leaves nearly opposite, 4 or more, entire : the terminal one larger. Flowers panicled, axillary, and terminal. Panicles sub-dichotomous.

LyrateAewed Nightshade. PI.

41 S. PYGMXUM (Cav. icon. 5. p. 23. t. 439. f. 2.) stem herbaceous, an inch in height; leaves ovate, 3-lobed : middle lobe elongated, obtuse. ©. H. Native of Buenos Ayres, in the plains called Pampas. Dun. sol. p. 145. Stem simple, usually terminating in two flowers. Leaves small. Peduncles at first erect, but afterwards deflexed. Corolla pale blue, 5-parted. Berry small, villous, globose.

Pygmy Nightshade. Fl. June, July. Clt. 1819. PI. 1 inch.

§ 2. *Leaves sinuated, angular, or toothed.*

42 S. GRANDIFL6RUM (Ruiz, et Pav. fl. per. *2.* p. *35.* t. 168. i. b.) stem arboreous, woolly ; leaves ovate, sinuated, or quite entire, hispid above, and woolly beneath; racemes cymose, recurved, short; flowers secund. J?. S. Native of Peru, in groves at Pozuzo. Dun. sol. p. 143. t. 30. syn. p. 10. Stem clothed with stellate fulvous wool. Calyx increasing after florescence. Corolla large, violaceous, 5-parted, with 5 woolly zones outside. Berry large, woolly, yellowish, dependent.

Great-flowered Nightshade. Tree 15 to 30 feet.

43 S. QUITOE'NSE (Lam. ill. no. 2326. Poir. encycl. 4. p. *285.)* stem suflfruticose ; leaves subcordate, sinuately angular, tomentose on both surfaces ; racemes lateral, very short, hairy. £. S. Native of Peru, in the gardens of Quito and Lima, where it is oalled *Narangtas de Quito* by the natives. Dun. sol. p. 144. ed. 2d. ined. t. 92. f. 6. syn. p. 10. Hook. bot. mag. t. 2739. S. angulatum, Ruiz, et Pav. fl. per. 2. p. *36.* t. 170. f. b.—Feuill. obs. 3. p. 61. t. 46.—Burm. pi. amer. 219. t.^224. f. 2. ? exclusive of the syn. of Dill, and Lin. Lycospermum arborescens foliis angulatis, fructu aureo, Plum. cat. p. 4. Tourn. inst. p. 150. Plant very hairy. Leaves large, with acute segments, and having the petioles and nerves purplish. Calycine segments acute. Corolla large, white inside, and violaceous outside. Berry globose, size and colour of a small orange, when young clothed with short wool. The natives of Peru call this species *Narangitas de Quito,* and some drops of the juice are mixed with the drink called matte.

Quito Nightshade. Fl. June, Aug. Clt. 1825. Shrub 6 feet.

44 S. TWEEDIA'NUM (Hook. bot. mag. 3385.) plant clothed with clammy down; leaves cordate, angularly-toothed at the base, on long petioles; racemes umbellate; flowers nutant. %. G. Native of Buenos Ayres, Tweedie. Corollas 5-cleft, large, pale blue. Peduncles opposite the leaves.

Tweedie's Nightshade. Fl. June, July. Clt. 1833. PI. ½ foot.

45 S. SANDWICE'NSE (Hook, et Arn. in Beech, voy. pt. bot. p. *92.)* stem shrubby ; branches terete; branchlets canescent; leaves angularly sinuated, ovate, glabrous above, clothed with hoary down beneath ; racemes corymbose, terminal or lateral; corolla minute, 5-cleft ; stamens equal. J?. G. Native of the Sandwich Islands.

Sand?vich-ls\and Nightshade. Shrub.

46 S. TOPIRO (Dun. syn. p. 10. sol. ed. 2d. t. 92. f. 1. H. *B.* et Kunth, nov. gen. amer. 3. p. 25.) stem herbaceous, tomentose ; leaves somewhat ovate, acute, sinuately angular, unequal at the base, beset with adpressed pili above, and fine hoary tomentum beneath; flowers extra-axillary, aggregate ; berry ovate. %- S. Native in humid places on the banks of the Orinoco, near San Fernando de Atabapo, &c, where it is called *Topiro** Leaves 9-10 inches lon^, and 6 broad, with acute angles. Calyx tomentose. Corolla greenish, with rather unequal ovate-oblong, acute segments, clothed with stellate tomentum outside. Berry 4-celled, edible, propped by the calyx.

Topiro Nightshade. PI. 6 feet.

47 S. MACROCA'RPUM (Lin. mant. p. 205.) stem herbaceous, glabrous ; leaves cuneated at the base, sinuajed, quite glabrous ; peduncles few-flowered, short. %. S. Native of Peru. Mill, fig. t. 294. Willd. spec. 1. p. 1033, exclusive of the syn. of Feuill, and Plum. Lam. ill. no *2325.* Dun. sol. p. 144. syn. p. 10.—Plum. spec. 4. icon. t. 224. f. 2.*? Leaves large, repandly sinuated, sometimes obtuse, and sometimes acute. Calycine segments very long. Corollas large, blue, sub-campanulate, half 5-cleft, many sterile. Berry fleshy, globose, yellow, size of an apple.

Large-fruited Nightshade. Fl. May, Sept. Clt. 1759. PI. 1 to *2* feet.

48 S. PENTADA'CTYLUM (G« Don, in Loud. hort. brit., p. *72.)* stem erect, orilexuous, glabrous; leaves runcinately sinuated, with acute segments, glabrous, shining above ; corymbs short, terminal, or in the forks of the stem ; fruit large, ovate, furnished with 5 regular protuberances at the base. T?. S. Native of Trinidad, about St. Ann's and the Port of Spain. Leaves large. Fruit large, yellow. Flowers middle-sized, blue.

Five-fingercd-fruited Nightshade. Fl. June, Aug. Clt. 1818. Shrub 2 to 3 feet.

49 S. CALYCINUM (Moc. et Sesse. icon. mex. ined. Dun. syn. p. 10. sol. ed. 2d. t. 29.) stem twisted, glabrous, thick; leaves sinuately repand ; peduncles short, 1-flowered, solitary; calyx increasing after florescence. %. *G.* Native of Mexico. Habit of *S. macrocdrpum.* Plant glabrous. Calycine segments with many sinuated nerves. Corolla blue, 5-angled. Berry globose, yellow, size of a small apple.

Large-calyxed Nightshade. Fl. June, July. Clt. 1820. PI. 1 foot.

50 S. BAUERIAVUM (Endl. fl. norf. p. 54. Bauer, icon. t. 158.) stem shrubby; leaves oblong, acuminated, angularly-toothed, glabrous; corymbs terminal, rather loose ; peduncles drooping. ^. G. Native of Norfolk Island. Leaves^ 1-2 inches long. Corollas white, size of those of *S. tuberosum.* Berry ovate-oblong, of a vermilion colour.

Bauer s Nightshade. Shrub 1 to 2 feet.

§ 3. PSEUDO-CAPSICA (false capsicums.) *Leaves angularly repand, or entire. Corollas somewhat 5-parted. Berries spherical, torulose, or smooth.*

51 S. RACEMIFLORUM (Dun. *sp\.* 147. syn. p. 11.) stem herbaceous, scabrous ; leaves ovate, repandly angular, scabrous ; racemes lateral; berries furrowed. ©. H. Native country unknown. S. scabrum, Jacq. schcenbr. 3. p. 45. t. *333,* but not of Vahl. Plant scabrous from numerous pungent hairs or strigae. Stem green, suffused with purple. Leaves thickish. Racemes many-flowered, more or less than an inch long. Calyx scabrous. Corolla white, rose-coloured beneath. Berry like that of *S. Mthiopicum,* but smaller.

Raceme-flowered Nightshade. Fl. July, Sept. Clt:s 18. Plant 2 feet.

52 S. MTHIOPICUM (Lin. amoen. 4. p. 307.) stem herbau*>us ; leaves ovate, repandly angular, glabrous ; peduncles usually 1-flowered, drooping; berries torulose. ©. H. Native of iEthiopia, China, and Japan. Jacq. hort. vind. t. 12. Thunb. jap. p. *92.* Dun. sol. p. 148. syn. p. 11. Pseudo-capsicum torulosum, Mcench. meth. p. 477. Lycopersicum iEthiopicum, Mill. diet. no. 3.—Barrel, icon. 1108. Nussubi, or Ka and Kja of the Japanese ex Kcempf. amcen. p. 810. Fokke, or Fokkes of the Dutch, ex Thunb. Leaves a hand long. Fruit large, red, depressed. Corymbs few-flowered. Corollas white. One of the pedicels in each corymb bears a fertile flower, the rest are usually sterile.

Far. (3, violdceum; unarmed ; flowers violaceous ; berries white, or purple. ©. H. Native of China. S. Mthiopicum, Lour. coch. 1. p. 130. The name is *Ca Tien* in China. Flow-

ers solitary. Calyx and corolla 6-cleft. Berry spheroid, 6-lobed, large, edible. Perhaps a proper species.

Var. y, aculeatum (Dun. sol. p. 148.) ©. H. Native of Europe, in gardens. Stem prickly. Leaves rather tomentose beneath; umbels axillary. Calyx unarmed. S. integrifolium, Lam. diet. 4. p. 301. Poir. suppl. 3. p. 740. Mala iEthiopica, Ray. hist. 673.—Dod. pempt. p. 459. icon. S. pomiferum herbariorum, Lob. icon. 264.—Mor. hist. sect. 3. p. 525. sect. 13. t. 2.—Plukn. phyt. t. 226. f. 4. Lycopersicum fructu striato duro, Tourn. inst. p. 150. Perhaps a species. Berries small, yellow, size of peas.

.Ethiopian Nightshade. Fl. July, Sept. Clt. 1597. PL | to 1 foot.

53 S. ZUCCAGNIA'NUM (Dun. sol. p. 149. t. 11. syn. p. 11.) stem* sub-herbaceous ; leaves ovate, angularly repand, glabrous, unequal at the base; peduncles usually 1-flowered, drooping; berries nearly globose. 1/ . H. Native country unknown, but cultivated in the gardens of Florence and Montpelier. S. scabrum, Zuccag. cent. no. 50, but not of Vahl. or Jacq. Plant green, beset with minute crystalline warts when examined by a lens. Corolla 5-parted, white, with acute segments. Berry cherry shaped, round, sub-umbilicate, mucronate, red when ripe. Peduncles* solitary, or twin, 1 rarely 2-flowered. Habit of *S. /Ethiopicum,* from which it differs in the leaves being minutely warted, in the berries being much smaller, smooth, or deeply furrowed. It also comes near to *S. racemiflorum.*

Zuccagni's Nightshade. Fl. June, July. Clt. 1823. PI. 2 feet.

54 S. TRIQUETRUM (Cav. icon. 3. p. 30. t. 259. descr. p. 110.) stem frutescent, triquetrous ; leaves cordate-deltoid, acuminated, glabrous ; umbels opposite the leaves, pedunculate. J? . S. Native of New Spain. Dun. sol. 147. syn. p. 11. Stems slender, sometimes erect, and sometimes trailing, triquetrous in the young state. Peduncles very short; pedicels 3-4 umbellate,*drooping. Corollas small, white, somewhat 5-parted, with linear curled segments. Berry nutant, globose, red, size of a pea.

Triquetrous-stemmed Nightshade. Fl. June, July. Clt. 1820. Shrub 2 to 4 feet.

55 S. MICROCA'RPUM (Vahl, symb. 2. p. 40.) stem shrubby ; leaves oblong-lanceolate, somewhat repand ; racemes lateral. J?. G. Native of Egypt. Dun. sol. p. 149. t. 10. S. pseudo-capsicum, var. microcarpum, Pers. ench. 1. p. 224. S. diphyllum, Forsk. pi. cat. aegypt. p. 63. no. 134. Leaves 3-4 inches l°ng> green, glabrous. Racemes extra-axillary, 1 inch long. Flowers sub-cymose. Corolla white, 5-parted, pilose outside. Berries smooth, red, size of pepper berries.

Small-fruited Nightshade. Shrub 2 to 3 feet.

56 S. PSEUNDO-CA'PSICUM (Lin. spec. p. 263.) stem shrubby ; leaves lanceolate, or oblong-lanceolate, sub-repand ; peduncles generally 1-flowered, extra-foliaceous. \/ . G. Native of Madeira ; and in gardens almost every where. Dun. sol. 150. syn. p. 11. Pseudo-capsicum undulatifolium, Mcench. meth. p. 477,—Sabb. hort. rom. p. 12. t. 59. S. fruticosum baccifera, Tourn. inst. 149. Mor. hist. 3. p. 526. S. arborescens, Ceesalp. p. 215. Strychnodendros, Bauh. hist. 3. p. 614. Besl. hort. eyst. p. 317. t. 316. Pseudo-capsicum, Dod. pempt. 718. icon. S. Americanum, Dalech. lugd. p. 599. icone. In Spain the fruit is called *Guindas de las Indias* ; in France *Morelle cerisette, petit ceresier d'hiver, Amome des Jardiniers;* in England *Winter Cherries,* or *Tree Nightshade.* Plant glabrous. Corolla small, white, 5-parted. Berry globose, red, or scarlet, size of a cherry.

Var. /3, luteum ; berries yellow, ex Poir. encycl. 4. p. 281.

False-Capsicum, or Tree Nightshade. Fl. June, Sept. Clt. •1596. Shrub 3 to 4 feet.

57 S. PSEUWQUINA (St. Hil. pi. usuell. bras. t. 21.) stem arboreous, unarmed; leaves lanceolate-oblong, narrow, acute, quite entire, glabrous above, but with fascicles of villi in the axils of the nerves beneath ; racemes extra-axillary, short, bearing 1, or few-fruit; calyx glabrous. Tj. G. Native of Brazil, in the district of Curitiba in St. Paul, without the tropic. The bark is very bitter, and the inhabitants use it with great success in the cure of fevers, and for that reason is called by them *Quina,* from considering it the same as the Quina of Peru.

False-qidna Nightshade. Shrub.

§ 4. MORE'LLA (Morelle is the generic name of *Solanum* in French ; and is from the Celtic word *mor,* black. In old French *mor* is the root of many names, expressing dark or black things.) *Stem herbaceous, or sub-herbaceous. Leaves acuminated at both ends. Racemes short, panicled, intra-foliaceous; pedicels subumbellate, or panicled, drooping. Flowers small, white, or pale violet. Berries small, globose.*

58 S. NODIFLORUM (Jacq. coll. 2. p. 288. icon. rar. 2. t. 326.) stem suffruticose; branches terete, and are, as well as the leaves, glabrous; leaves ovate, quite entire; flowers sub-umbellate. J? . S. Native of India, Lin. ; Guiana, Aubl.; Brazil, Piso ; Mauritius, Jacq. &c. Dun. sol. 151; S. strictum, Zucc. cent. 1. p. 49. S. nigrum, /3, patulum, Lin. spec. p. 267. Willd. spec. 1. p. 1035. Branches thickened at the nodi. Leaves halfea foot long. Calycine segments oblong, obtuse. Corollas white, with a yellow base ; segments lanceolate, acute. Berry small, black.

Knot-flowered Nightshade. Fl. June, July. Clt. 1822. PL 10 feet.

59 S. DESVA'UXII (Hamilt. prod. p. 26.) stem about *2* feet high, erect; leaves ovate-lanceolate, quite entire, or sub-repand ; berries small, globose, black. ©. H. Native of the Island of Nevis. S. nodiflorum, Desv. herb. Stem herbaceous.

Desvauxs Nightshade. PI. 2 foot.

60 S. DILLE'NII (Schultes, oestr. fl. ed. 2d. 1. p. 393. Roam, et Schultes, syst. 4. p. 586.) stem and branches terete, glabrous ; leaves ovate, spreading horizontally, glabrous; peduncles filiform; fructiferous cymes erectly spreading. 0. H. Native of Hungary, in the woods of Matra, Kitaibel. S. nigrum, /3, patulum, Willd. spec. 1. p. 1035. Roth, catalect. 2. p. 23.—Dill. elth. *367.* t. 275. f. *S55.* Nearly allied to *S. patulum,* Ruiz, et Pav. Flowers white, much smaller than those of *S. nigrum.* Berry marked with small white dots before maturity.

Dillenius's Nightshade. Fl. June, Sept. Clt. 1818. PI. 2 feet.

61 S. MICROSPE'RMUM (Dun. syn. p. 12. sol. ed. 2d. t. 93. ined.) stem terete, herbaceous, glabrous; leaves solitary, or twin ovate, subcordate, entire, glabrous, shining ; racemes subumbellate. 0. H. Native country unknown.

Small-seeded Nightshade. PI. 1 to *2* feet.

62 S. GUINEF/NSE (Lam. ill. no. 2339. Mill, diet.) stem herbaceous ; branches glabrous, angularly-toothed ; leaves ovate, glabrous, quite entire ; flowers numerous, somewhat umbellate. 0. H. Native of Guinea. Dun. sol. p. 152. syn. p. 12. S. nigrum, 5, Guineense, Lin. spec. p. 266 Willd. spec. 1. p. 1035.—Dill. elth. 360. t. 274. f. 354.—Boerh. lugdb. 2. p. 68. Bross. icon. t. 13. S. Memphiticum, Mart, mss. Nearly allied to *S> nigrum.* Angles of the stem toothed. Corolla whitish, or pale violet. Berry globose, size of a small cherry, black and shining at maturity.

Guinea Nightshade. Fl. June, Sept. Clt. 1817. Pl.^1J to 3 feet.

63 S. NIGRUM (Lin. spec. p. *266.* mat. med. *66,)* stem herbaceous, angular ; leaves ovate, toothed, nearly naked ; flowers sub-umbellate. ©. H. Native throughout Europe; a weed in cultivated ground ; as well as of Africa and Asia, in like situations. Dun. sol. p. *152.* syn. p. 12. Willd. enum. 1. p. *236.* S. nigrum, a, vulgatius, Lin. 3pec. 266. Smith, engl. bot. t. *566.* Curt. lond. fasc. *2.* t. 14. Plench, icon. t. 120. Oed. fl. dan. t. 460. Bull. herb. t. 67. Sturm, fl. germ. fasc. 1. icon. Hayne, term, bot. t. *28.* Schkuhr, handb. t. 46. S> officinàrum acinis nigricantibus et acinis luteis, Tourn. inst. p. 148. S. officinárum, Zanich. venez. t. *268.* S. hortênsis, Blackw. t. 107. &c—-Mor. hist. 3. p. 520. sect. 13. t. 1. f. 1. —Lob. icon. 262.—-Tab. icon. 577. *Yerba mora* of Brazil, Peru, and Spain. *Morelle a frutts noir* and *Morelle creve chien* of the French. Plant downy. Stem branched, and is, as well as the branches, angular-toothed. Common peduncles short. Flowers few, *5-6* together, white. Berries size of currants, black, rarely yellow. The herb is fetid, and diuretic ; it also promotes perspiration. Too large a quantity occasions violent sickness, with headache, giddiness, drowsiness, and other dangerous symptoms, in short its effects on the nervous system are so uncertain, and sometimes so considerable, that it must ever be administered with the greatest caution. S. nigrum, Thunb. jap. p. 92, and Ruiz, et Pav. fl. per. p. 32, are probably distinct varieties.

Var. /3, *melanocérasum* (Dun. sol. 153.) branches angularly toothed; leaves ovate, toothed, angular, glabrous ; racemes sub-umbellate, extra-foliaceous. ©. H. Native of the South of Europe. S. melanocérasum, Willd. enum. p. 237.

Var. y, *atriplicifdlium;* leaves sinuated, angular. 0. H. S. atriplicifôlium, Desportes in herb. D. C.

.B/acA>fruited Nightshade. Fi. June, Sept. Britain. PI. 1 to 1± foot.

64 S. FISTULOSUM (Rich. herb. Dun. syn. p. 12. sol. ed. 2d. ined. Nees in Lin. trans. 17. p. 37.) branched, herbaceous ; stern fistular, angular; leaves ovate, with a blunt acumen, somewhat repand, running into the narrow petioles at the base; pedicels when bearing the fruit equal in length to the common peduncle; pollen yellow. ©. H. Native of the Mauritius, East Indies, and cultivated in America. Very like *S. nodiflôrum,* and *S. Guineênse,* but differs from them in the peduncles being stronger and shorter, in the leaves being repand, and the stems being angular and more blunt, in the flowers being smaller, the anthers shorter, and in the pollen being yellow, not violaceous.

Far. a; berries black. ©. H. S. fistulosum, Rich. 1. c. Dun. syn. p. *12.* S. Rhinocerdtis, Blum, bijdr. p. *695.* ? S. nigrum, Wall. cat. no. 2615.

Far./3; berries red. ©. H. S. rubrum, Gmel. syst. p. 384. Willd. spec. 1. p. 1034. S. erythrseum, Dun. sol. *238.* S. nigrum fructu rubro, Hamilt. herb. Wall. cat. no. 2615.

Fistular-itemmed Nightshade. PI. 1 to 2 feet.

65 S. INCE'RTUM (Dun. sol. 155. syn. p. 13. Nees in Lin. trans. 17. p. *38.)* branched, diffuse, herbaceous; stem angular; angles smooth, or denticulated ; leaves deltoid, or deltoid-oblong, triangularly acuminated, sinuately toothed in the middle ; fructiferous pedicels reflexed, equal in length *to* the common peduncle. 0. H. Native of India, in sandy places, Silhet, Wallich. Flowers sub-umbellate, small, white. Berries round, size of peas.

Var. a; leaves narrower, sharply and sinuately toothed ; fruit red, or yellow ; stem rather scabrous. ©. H. S. nigrum, Wall. cat. no. 2615, from Oude and Rungpur.

Var. /?; leaves broadly deltoid, sparingly angular, or somewhat bastately angular.

Berries red, or copper-coloured. 0. H. Native of India, Arabia, and the South of Europe. S. nigrum, Forsk. fl. cegypt. p. 46. Wall. cat. no. 2615. C. N. S. miniàtum, Bernl?. ex Willd. enum. 1. p. 236. Dun. sol. p. 156. S. nigrum, /3, Judàicum, Lin. spec. p. 266. ? S. officinarum acinis puniceis, Tourn. inst. p. 148. S. puniceum, Cord. hist. 158. Nelan Tsjunda, Rheed. mal. 10. p. 145. t/73. Mesaelleha hadie of the Arabs, ex Forsk. 1. c.

* * Berries black. 0. H. Native of Nipaul. S. nigrum, var. melanocérasum, Wall. cat. no. 2615. F.

Uncertain Nightshade. Fl. June, July. Clt. 1823. PI. ¾ to 3 feet.

66 S. RUWUM (Mill. diet. no. 4. Ait. hort. kew. 1. p. 249. Dun. sol. p. 155.) herbaceous, branched, diffuse; stem angular, with the angles and ribs of leaves denticulated; leaves ovate-oblong, attenuated at the base and apex, repandly toothed; fructiferous pedicels divaricate, shorter than the common peduncle, which is slender ; pollen yellow. ©. H, Native all over India in cultivated places; and of Java, Amboyna; California (but with broader leaves). This species differs from *S. nigrum* and *S. incertum,* in the stem being more elongated, in the angles of the stems, petioles, and ribs of the leaves on the under side being muricated, and furnished with strigulose down when young, in the leaves being attenuated at both ends, narrower and softer, never deltoid ; in the umbels being smaller, and also the berries.

Var. a; berries red, or copper-coloured ; flowers smaller ; stem and leaves smoothish. ©. H. S. rubrum, Roxb. fl. ind. 2. p. 216. S. nigrum, r/, rubrum, Willd. spec. 1. p. 1036. S. Rumphii, Dun. sol. p. 157. S. nigrum, Wall. cat. part. S. asperum, Horn. herb. Gunth. from California. S. nigrum, fructu rubro, Wall. cat. no. 2615. A. B. Halicacabus Indicus minor niger, Rumph. amb. 6. t. 26. f. *2.*

Var. /3 ; berries red, or copper-coloured; flowers smaller ; stem and leaves hairy, both erosely toothed. ©. H. India. S. Rumphii, Blum, bijdr. p. 693, but not of Dun. S. chenopodioides, Lam. ill. no. 234. Dun. sol. p. 157.—Feuill. per. 2. t. 14. Berries pale, or whitish, and watery. S. nigrum, herb. Heyne, part. Stems clothed with hoary villi, having the angles more muricated than in var. a, and the leaves are more rhomboid, and erosely toothed to the top, villous, obscure.

Var. y ; berries black, flowers larger. ©. H. Native of tropical America. S. oleraceum, Richard, herb. Dun. syn. p. 12. S. nigrum, Blum, bijdr. p. 694. S. nigrum fructu nigro, Wall. cat. no. 2615. H. Aquara-Quiya, Piso, lib. 4. cap. 50. f. 3. Branches downy at top.

/?ec?-berried Nightshade. Fl. June, July. Clt. 1817. PI. 1 to 3 *feet.*

67 S. ERYTHROCA'RPUM (Meyer, esseq. p. 109.) stems permanent ; leaves oblong-ovate, acuminated at both ends, quite entire; racemes subumbellate, interfoliaceous. %. S. Native in plantations about the Essequibo. S. rùbrum, Lin. syst. veg. p. 173. ed. 15.? Habit and stature of *S. nigrum.* Stem branched, obsoletely angular, puberulous, as well as the branches. Leaves twin, or solitary, sometimes downy, sometimes glabrous. Corolla white, downy; segments oblong, acute. Berry pendulous, smaller than a pea, yellowish, and shining.

Red-fruited Nightshade. PI. 2 to 3 feet.

68 S. FURCA'TUM (Poir. suppl. 3. p. 750. Dun. syn. p. 13. sol. ed. 2d. ined. t. 135.)'stem herbaceous, somewhat dichotomous, angularly-toothed ; leaves ovate, toothed ; racemes forked. ©. H. Native of Peru. The flowers are said to be the largest of its congeners.

Var. a, *glàbrum;* plant glabrous.

Var, /3, *pilbsum ;* plant pilose.

Forked Nightshade. PI. 1 to 2 feet?

69 S. PTEROCAU'LUM (Dun. sol. p. 153. syn. p. IS.) stem*

herbaceous, and is, as well as the branches, angular and toothed ; leaves subovate, sinuately angular ; flowers subumbellate. ©. H. Native of South America, in various places; and of New Holland. H. B. et Kunth, nov. gen. 3. p. 25. S. nigrum, var. e, Virginicum, Lin. spec. 266. Aubl. guian. 1. p. 215. Swartz, obs. p. 83. R. Br. prod. p. 445. S. scabrum, Mill, diet. no. 6, but not of Vahl. nor Jacq. S. alatum, Moench. meth. p. 474.—Dill. elth. p. *367.* t. *275.* f. *256.* Branches puberulous ; angles somewhat ciliated, rather prickly at the base of the cilia. Leaves glabrous. Calyx downy. Corolla white, ex H. B. et Kunth, 1. c. pale violet at first, at length pale, ex Dun. Berries roUnd, black at maturity, size of peas. Anthers yellow.

Wing-stemmed Nightshade. Fl. June, Sept. Clt. ? PI. 1 to 2 feet.

70 S. JUDVICUM (Schultes, sestr. fl. ed. 2d. vol. 1. p. 393. Bess. fl. gall. p. 183. no. 278. Roem. et Schultes, wsyst. 4. p. 589.) stem herbaceous, almost unarmed; branches angular, muricated ; prickles incurved ; leaves ovate, sinuately-angular ; corymbs distich, nutant. ©. H. Native of Austria and Galicia, &c. by way-sides. S. nigrum, 3, Judaicum, Willd. spec. 1. p. 1035. S. nigrum Virginicum, /3, Judaicum, Pers. syn. 1. p. 224. Stem nearly terete. Leaves almost glabrous. Corollas white. Anthers distinct, yellow, connivent. Pedicels deflexed. Berries black.

T *vish* Nightshade. Fl. June, Aug. Clt. 1816. PI. 1 to 2 t.

1 S. SUFFRUTICOSUM (Schousb. ex Willd. enum. p. 236. Lun. sol. *p.* 154. syn. p. 13.) stem unarmed, sufFruticose; leaves ovate, dentately angular, nearly glabrous, ciliated; flowers sub-panicled, ex Dun. ; umbels extra-foliaceous, pedunculate, ex Willd. *Vi* . H. Native of Barbary. Branches 2-edged, or quadrangularly-winged from the decurrence of the petioles ; angles toothed. Leaves large, glaucous, covered with soft hairs above while young. Flowers white. Berries black. Very like *S. nigrum,* but the stem is shrubby, the leaves larger, and the flowers more numerous, &c.; it also differs from *S. quadrangulare,* in the leaves being always dentately angular, and in the flowers being white, not violaceous.

Suffruticose Nightshade. Fl. May, Sept. Clt. 1804. Shrub 4 feet.

72 S. QUADRANGULA^RE (Thunb. prod. 36. Lin. suppl. p. 147.) stem shrubby, tetragonal; leaves ovate, entire, and angular ; flowers panicled. J?. G. Native of the Cape of Good Hope. This species is readily recognized by its tetragonal, hairy, scabrous stem ; angles curled. Branches scabrous. Leaves glabrous. Flowers terminal, bluish.

Var. fi ; leaves lanceolate, entire.

Quadrangular-stemmed Nightshade. PI. 2 to 3 feet.

73 S. TRIANGULA^RE (Lam. ill. no. 2342.) stem herbaceous, trigonal ; leaves oblong-ovate, quite entire, naked ; flowers panicled. ©. H. Native of the East Indies. Poir. encycl. 4. p. 290, exclusive of the synonyme of Rumph. S. quadrangul&re, var. triangulare, Pers. ench. 1. p. 225. Stem trigonal, not winged. Leaves soft, acute. Corolla small, pale violet, with reflexed segments. Berries size of peas, greenish.

Triangular-stemmed Nightshade. Fl. June, Aug. Clt. 1800. PI. 1J to 2 feet.

74 S. BRACTEATUM (Thunb. in act. gorensk. 1812. fl. cap. 2. p. 57.) stem unarmed, shrubby, tetragonal; leaves ovate, serrated ; racemes leafy. I?. G. Native of the Cape of Good Hope. Stem stiff, glabrous ; angles curled. Leaves glabrous. Bracteas similar to the leaves, convolute, serrulated. Calyxes acute. Berries black. It differs from *S. quadrangulare* in the calyx, inflorescence, and leaves.

Bracteate Nightshade. Shrub.

75 S. HU'MILE (Bernh. ex Willd. enum. p. 236. Dun. sol. p. 156.) stem herbaceous ; branches rather angular, toothed, downy ; leaves ovate, sub-repand : superior ones almost entire ; flowers subumbellate. 0. H. Native of the South of Europe. S. officinarum acinis e luteo-virescentibus, Tourn. inst. p. 148. Stems prostrate. Leaves rather downy, with a few teeth. Alternate pedicels drooping. Corolla small, white. Berry nearly globose, size of a pea, green, or yellowish green, smaller than in *S. nigrum.*

Humble Nightshade. Fl. June, July. Clt. 1823. PI. pros.

76 S. FLA'VUM (Kit. in Schuhes, austr. ed. 2d. vol. 1. no. 871.) stem herbaceous ; branches angular, toothed, clothed with strigose down ; leaves ovate-oblong, angularly-sinuated, rather hairy ; flowers subumbellate. ©. H. Native of the South of Hungary, and of France, about Andegaveny. S. ochroleucum, Dun. syn. p. 14. Bast, in Desv. journ. bot. 3. 1814. p. 20. D. C. fl. fr. suppl. p. 418. Dun. sol. ed. 2d. ined. Nearly allied to *S. villosum,* but the leaves are narrower, and more sinuately-toothed ; the corollas are cream-coloured ; the umbels fewer-flowered. Berries yellowish, at length dark brown.

Yellow-fruited Nightshade. Fl. June, July. Clt. 1817. PI. 2 feet.

77 S. VILLOSUM (Lam. ill. no. 2338. Dun. sol. 157. syn. p. 14.) stem herbaceous, villous ; leaves ovate, angularly-toothed, villous; flowers subumbellate. 0. H. Native of Europe, in cultivated and waste places. Willd. enum. 1. p. *236.* S. luteum, Gmel. fl. bad. 1. p. 521. Mill. diet. no. *3.* S. nigrum, y, villosum, Lin. spec. *266.* Willd. spec. 1. p. 1035. Bieb. fl. cauc. 1. p. 165. S. nigrum villosum mosehatum, Pers. ench. 1. p. 224. S. ^Egyptiacum, Forsk. descr. p. 46 — Hall. helv. no. *576.*—Sabb. hort. rom. 2. p. 12. t. 61.—Dill, elth. *366. t. 274:.* f. *353.* S. officinarum acinis luteis, Tourn. inst. p. 148. The whole plant is canescent from soft hairs. Berries at first green, but of a dirty copper colour, or almost red at maturity, nearly globose. Corollas white, larger than those of *S. nigrum,* to which it is nearly allied.

Villous Nightshade. Fl. June, Sept. Clt. 1820. PL 1 to 3 feet.

78 S. HIRSUTUM (Dun. sol. p. 158. syn. p. 14.) stem and branches terete, hairy; leaves quite entire, hairy ; flowers subumbellate. ©. H. Native of Egypt, in gardens. S. nigrum, d, hirsutum, Vahl. symb. 2. p. 40. S. JEgyptiacum, b. Forsk. fl. aegypt. p. 46. S. Memphiticum, Gmel. syst. p. *385. S.* nigrum hirsutum, Forsk. descr. p. 46. Enab eddib. i. e. Fox grape in Arabic. Umbels nutant. Berries edible. This species differs from A£. *villosum* in the berries being black, and the leaves quite entire.

Hairy Nightshade. Fl. June, Sept. Clt. 1817. PI. 1 to 2 feet.

79 S. KITAIBE^U (Schultes, fl. austr. ed. 2d. vol. 1, p. 395.) stem herbaceous, and is, as well as the leaves, clothed with tomentose pubescence; corymbs few-flowered. 0. H. Native of Hungary, Kitaibel. S. inc&num, Kit. mss. This species differs from *S. hirsutum,* in the leaves being hardly an inch long, and sinuated only at the base. Berries fuscescent, 4-5 together.

KitaibeVs Nightshade. Fl. June, Sept. Clt. 1822. PI. 1 foot.

80 S. BESSE^RI (Weinm. ex Rcem. et Schultes, syst. 4. p. 593.) stem herbaceous, rather angular ; leaves ovate, acuminated, quite entire, downy ; racemes subumbellate, extra-foliaceous, pendulous. 0. H. Native of America. Leaves 5-6 inches long. Calyx 5-toothed. Corolla white or bluish, with reflexed segments. Berries size and colour of those of *S. nigrum.*

Besser's Nightshade. Fl. June, Aug. Clt. 1820. PI. 1 foot.

SUBSECT. III. HOLOPHY'LLA (from *6\OQ, holos,* entire ; and <*pv\\oy, phyllon,* a leaf; in reference to the entire leaves.) ***Leaves quite entire, solitary. Calyx 5-parted. Stamens equal.***

§ 1. *Racemes terminal.*

81 S. SE'SSILE (Ruiz, et Pav. fl. per. *2.* p. *35.* t. 167. f. a. Dun. sol. p. 159. syn. p. 14.) stems shrubby, glabrous; leaves oblong-spatulate, acuminated, sessile, quite glabrous; racemes recurved. *h.* S. Native of Peru, in waste places about Munna. Shrub glabrous. Leaves a foot long. Corolla white. Anthers dark purple. Berry white, size of a cherry. Peduncles terminal, solitary, a span long.

Sessile-leaved Nightshade. Shrub 10 to 12 feet.

82 8..ALLOGONUM (Bernh. mss. ex Schlecht, in Linnsea, 8. p. 252.) corolla greenish, physaloid, furnished with a large spreading calyx, remaining under the berry; and is, as well as the stem, angularly winged. ©.? H. Native of Mexico, at Jalapa and Hacienda de La Laguna. Perhaps a proper genus.

Diverse-angled Nightshade. PI.

83 S. ANON^EFOAUM (Dun. syn. p. 15. sol. ed. 2d. t, 95. H. B. et Kunth, nov. gen. amer. 3. p. 27.) arboreous, glabrous; leaves oblong, acuminated, acute at the base, quite entire, glabrous, blistered above, and pilose in the axils of the veins beneath ; corymbs terminal, branched. J?. S. Native of New Granada, on the banks of the river Magdalena, between Tenenffe and Monpox. Branches terete. Leaves 5 inches long. Corollas white ? with ovate-oblong, obtuse segments.

^nova-leaved Nightshade. Tree.

84 S. PABULUM (Pers, ench. 1. p. 223. Dun. sol. 162. syn. P- 15.) stem shrubby ; branches powdery ; leaves oblong-lanceolate, acute, powdery on both surfaces, and particularly on the under side ; racemes loose, spreading; pedicels twin. I?. o. ' Native of Peru, in groves at Munna and Tambo-nuevo, P" lance ola T tum, Ruiz, et Pav. 2. p. *33.* t. 164. f. a. but not of ^av. Reaves subpetiolate, about 5 inches long. Calyx powdery. Corolla large, violaceous, glabrous, powdery outside. Berry black, size of a cherry.

Spreading Nightshade. Fl. June, Sept. Clt. 1818. Shrub 4 to 5 feet.

85 S. PULVERULE'NTUM (Pers. ench. 1. p. 223.) stem shrubby ; branches powdery; leaves lanceolate-linear, nerved beneath, undulated; racemes rameal, powdery; pedicels twin. h. S. Native of Peru, in groves of Huanuco, at Acamago. Dun. sol. p. 163. syn. p. 15. S. angustifolium, Ruiz, et Pav. fl. per. 2. p. *33.* t. 163. f. b. but not of Lam. Stem much branched. Leaves powdery. Corolla whitish-violet, powdery outside. Berry black, subovate, size of a *chick-pea.*

Powdery Nightshade. Shrub.

86 S. LONGIFLORUM (Vahl, eclog. 1. p. 20.) stem shrubby; leaves oblong or elliptic, attenuated, rather tomentose on both surfaces; racemes bifid, cymose; corolla 5-parted. F2 • S, Native of Guiana. S. longifolium, Dun. sol. p. L63. t. 9. syn. p. 15. S. salvifdlium, Lam. ill. no. 2308. ? S. subenerme, Jacq. ? Branches terete, rather tomentose from minute starry hairs at top, as well as the peduncles, pedicels, leaves, and calyxes. Leaves unequal, 2-9 inches long, reflexed, undulately repand, green above. Corolla bluish-violet, with narrow, blunt segments, tomentose outside. Teeth of calyx subulate. The young branches are said by Link, ex enum. 1. p. 184. to be furnished

[illegible] Aug. Clt. 18,3.

Shrub 4 87 S ^ . S (Ruiz- et Pav. fl. per. *2.* p. 33. t. 163.) stem shrubby; branches glabrous, shining; leaves **ovate-lanceolate**, acute ; racemes subcymosc, clothed with powdery tomentum. Jj. S. Native of Peru, in groves of Tarma, where it is called *Rapace* by the natives. Leaves entire or repand. Corolla whitish-violet, powdery outside. Berry black, size of a chick-pea.

Shining-branched Nightshade. Shrub.

88 S. ANGUSTIFOLIUM (Lam. ill. no. 2343. Dun. syn. p. 15.) stem shrubby ; branches subherbaceous ; leaves narrow-lanceolate, quite glabrous, bluntish ; flowers corymbose. *?. G. Native of Buenos Ayres, in fields. Dun. sol. ed. 2d. ined. t. *32.* Branches smooth. Leaves petiolate, similar to those of the *Laurel.* Peduncles long, branched. Corolla white ? with ovate, blunt segments. Anthers large, yellow.

Narrow-leaved Nightshade. Shrub.

89 S. STENOPHY'LLUM (Dun. syn. p. 15. H. B. et Kunth, nov. gen. arner. 3. p. 27.) stem sub-herbaceous, clothed with powdery tomentum; leaves narrow, oblong-linear, almost sessile, quite glabrous above, but clothed with powdery tomentum beneath ; racemes coarctate. %. ? S. Native of Peru, on the Andes, near Olleros and Yanto. Dun. sol. ed. 2d. t. 97.

Narrow-leaved Nightshade. PI. 2 feet ?

90 S. LOXE'NSE (Dun. syn. p. 16. H. B. et Kunth, nov. gen. 3. p. 28.) stem tomentose, scandent; leaves subcordate, ovate-lanceolate, hairy, and woolly beneath ; racemes terminal, divaricate. 2^.^. S. Native of Quito, frequent between Loxa, Gonzanama, and the banks of the river Catamayo, at the altitude of 1060 hexapods. Dun. sol. ed. 2d. ined. t. 98. Stem angular, a little winged, downy at base. Tomentum stellate, whitish-yellow. Leaves on short petioles, unequal fit the base. Panicles terminal. Calycine segments truncate, mucronate. Corolla small, with oblong, acute segments.

Loxa Nightshade. PI. climbing.

91 S. CRI'SPUM (Ruiz, et Pav. fl. per. 2. p. 31. t. 158. f. a. Dun. sol. 159. syn. p. 16.) stem shrubby; leaves ovate and subcordate, undulately curled, acuminated, quite entire ; flowers corymbose, terminal. *?. G. Native of Chili, in waste places. Plant very bitter, and called by the natives *Natre.* Stem glabrous. Calyx 5-toothed. Corolla pale blue, slightly puberulous. Berry pale yellow, globose, size of a pea.

Curled-lewed Nightshade. Fl. June, July. Clt. 1824. Shrub 12 to 15 feet.

92 S. AU'REUM (Dun. syn. p. 16. H. B. et Kunth, nov. gen. 3. p. 28.) stem shrubby, twining; leaves petiolate, ovate, shining above, and rather pilose ^beneath ; racemes dichotomous, clothed with brownish-yellow tomentum. *?. w. G. Native of America, in frigid places at the bottom of Mount Chimborazo, near Calpi and Yanaurcu, at the altitude of 1620 hexapods. Stem clothed with powdery, brownish-yellow tomentum, as well as the pedicels, racemes, calyxes, &c. Racemes paniculately corymbose. Corolla violaceous; segments lanceolate, with revolute edges.

Golden-haired Nightshade. Shrub twining.

93 S. PYRIFOLIUM (Lam. ill. p. 2345. Dun. sol. p. 160. syn.. p. 16.) stem sub-herbaceous; leaves ovate, entire, acute, naked on both surfaces, on long petioles; racemes panicled, terminal ; calycine segments obtuse, mucronate. *h* • • *• Native of Martinico. Dun. sol. ed. Sd. ined. t. 34. Allied to *S. quercifblium ;* but differs in the leaves being entire, and the flowers larger. Corolla white; with oval, obtuse segments. Calyx glabrous ; segments blunt.

Pear-leaved Nightshade. Shrub 2 to 3 feet (

94 S. MACRANTHE RUM (Moc et Sesse. pi. mex. icon. ined. Dun. syn. p. 16. sol. ed. 2d. ined. t. 100. H. B. et Kunth, nov. gen. 3. p. 28. t. 195.) shrubby, scandent; leaves on long petioles, ovate, acuminated, acute at the base, quite entire, hairy or downy ; panicles terminal, branched; flowers subcorymbose.

V} . yj. G.* Native of Mexico, near Cuernavaca. S. dulcamaroides, Poir. suppl. 3. p. 750. Branches rather angular, downy. Leaves 3 or 3| inches long. Panicles downy. Calyx downy, sinuately 5-lobed. Corolla violaceous, size of those of *S. tuberosum,* glabrous; with ovate, acute segments. Berry globose, red, an inch in diameter. Nearly allied to *S. pyrifolium.* Anthers large, sessile, approximate.

Large-anther'ed Nightshade. Shrub climbing.

95 S. BOMBE'NSE (Jacq. p. 49. eclog. t. 24. H. B. et Kunth, nov. gen. 3. p. 29. -Dun. sol. p. 160. ed. 2d. ind. t. 101. syn. p. 16.) shrubby ; leaves petiolate, lanceolate-oblong, attenuated at both ends, acute, subundulated, glabrous ; corymbs extra-axillary, trifid. *?. S. Native of the Island of Tierra Bomba, about Carthagena ; and of Mexico, near Moran, Regla, and Omitla. Plant glabrous. Leaves about 3 inches long. Peduncles opposite the leaves, an inch long, racemosely umbellate, ex Dun. Corollas white, size of those of *S. nigrum,* green outside; segments ovate-oblong, acute, downy towards the margins. Calyx 5-toothed, a little ciliated.

Tierrd-Bomba Nightshade. Fl. June, July. Clt. 1822. Tree 12 feet.

96 S. PUBI'GERUM (Dun. sol. 160. t. 6. syn. p. 16.) stem erect, shrubby; leaves ovate-lanceolate, attenuated at both ends, downy ; racemes di-triehotomous. T? . G. Native of Mexico. Moc. et Sesse, icon. mex. ined. Poir. suppl. 3. p. 751. S. microcarpum, Cerv. elench. hort. matr. 1803. Brouss. cat. hort. monsp. 1804. S. Cervantesii, Lag. gen. et spec. nov. p. 10. no. 145. Stem marked with small tubercles. Young branches green, downy, rather angular. Leaves undulately repand. Racemes corymbose, downy. Flowers small, white, drooping. Calyx 5-toothed. Segments of corolla ovate, reflexed. Berry black, size of a pea. This species differs from *S. Bomhense* in being clothed with silky tomentum ; and from *S. terminate,* in the stems being erect, not decumbent; and in the flowers being cymose, not umbellate.

Down-bearing Nightshade. Fl. May, June. Clt. 1818. Shrub 3 to 5 feet.

97 S. TERMINABLE (Forsk. segypt. p. 45. Vahl, symb. 2. p. 40.) stem shrubby, decumbent; leaves ovate-lanceolate, almost quite entire, pilose ; umbels terminal, villous. T? . F. Native of Arabia Felix, on the higher mountains of Yemen, and shady places at Mocha. Dun. sol. 161. syn. p. 17. Stems warted, downy at top. Leaves villous beneath, acute at both ends, with undulately denticulated, ciliated edges. Calyx 5-toothed; segments lanceolate, obtuse. Corolla white. Berries taste of those of *S. Dulcamara.* Anthers yellow.

*Terminal-flow*ered Nightshade. Shrub decumbent.

98 S. A'SPERUM (Vahl, eclog. 2. p. 17. Dun. sol. p. 164. t. 7. syn. p. 17.) stem shrubby ; leaves ovate-lanceolate or elliptic, rough ; cymes on long peduncles, *ly* • S. Native of South America, Vahl; Cayenne, Rich ; Guadaloupe, D. C. herb. Branches scabrous from stellate hairs. Leaves 6 inches long, approximate towards the tops of the branches, attenuated at both ends, scabrous from minute, stellate hairs. Peduncles dichotomous, clothed with yellowish-white, stellate pili, as well as the peduncles, calyxes, and corollas. Segments of corolla oblong, acute. Berry almost globose.

Rough Nightshade. Shrub.

99 S. RA'DULA (Vahl, eclog. 2. p. 16.) stem shrubby; leaves oblong-elliptic, acuminated at both ends, quite entire, very scabrous above, but clothed with canescent down beneath ; corymbs terminal, dichotomous, hairy, ex Kunth ; tomentose, ex Vahl. Pj . S. Native of Cayenne ; and on the banks of the river Magdalena, near Badilla. Dun. sol. p. 164. ed. 2. ined. t. 35. syn. p. 17. H. B. et Kunth, nov. gen. amer. 3. p. 29. S. salvifolium, Lam. ill. no. 2308. S. asperum, Rich, in act. soc. p. 19. Branches clothed with stellate pili, as well as the leaves, &c. Leaves 2-4 inches long, scabrous and green above. Cymes clothed with starry down, twice or thrice bifid. Corollas small, white ; with ovate segments,

/fasp-leaved Nightshade. Shrub.

100 S. LEPIDOTUM (Dun. syn. p. 17. sol. ed. 2d. t. 102. H. B. et Kunth, nov. gen. 3. p. 30.) stem arboreous, terete ; leaves ovate-lanceolate, falcate, rather scabrous above, and clothed with scaly tomentum beneath, shining on both surfaces; racemes subdichotomous. J?. S. Native of New Granada. Branches, peduncles, pedicels, calyxes, and corollas, rubiginose from minute, scale-like, stellate hairs, as well as the under sides of leaves. Berry globose.

Scale-dotted Nightshade. Tree.

101 S. LAURIFOLIUM (Lin. suppl. p. 148. Dun. sol. p. 165. t. 8. syn. p. 17.) stem arboreous; leaves ovate-oblong, acute, glabrous above, and tomentose beneath ; panicles dichotomous ; pedicels cymose. T? . S. Native of South America, in woods. Branches tomentose. Leaves on short petioles, quite entire, yellowish-brown beneath. Panicles tomentose. Calycine segments mucronulate. Corolline segments ovate.

Laurel-leaved Nightshade. Fl. June, \July. Cult. 1820. Tree.

102 S. RIPA'RIUM (Pers. ench. 1. p. 221.) stem shrubby; leaves oblong-acuminated, hoary from powdery, white tomentum; corymbs terminal, dichotomous, many-flowered, pedunculate. J? • S. Native of Peru, in the province of Huanuco, on the edges of waterfalls. Dun. sol. p. 163. syn. p. 17. S. dichotomum, Ruiz, et Pav. fl. per. 2. p. 34. t. 166. f. b. but not of Lour. Almost all parts of the plant are canescent from powdery tomentum. Flowers small. Corolla violaceous. Berry yellow, size of a filbert.

River-side Nightshade. Shrub.

103 S. VERBASCIFOLIUM (Lin. spec. 184. Mill. diet. no. 22.) shrubby ; leaves ovate-oblong, acuminated, quite entire, tomentose, white beneath, without any leaves in the axils; corymbs nearly terminal, dichotomous; calyx semiquinquefid. h_L . S. Native of Asia, America, tropical parts of New Holland, &c. R. Br. prod. p. 444. Dun. sol. 165. syn. 17. Jacq. hort. vind. 1. t. 13. Willem. herb. maur. p. 17. S. pubescens, Roxb. fl. ind. 2. p. 244. Blum, bijdr. 698. S. erianthum, D. Don, prod. fl. nep. p. 96. S. adulterinum, Hamilt. herb. S. bicolor, Willd. rel. ex Roem. et Schultes, syst. 4. p. 661.—Burm. amer. p. 241. t. 245. f. 2.—Plukn. aim. 351. t. 316. f. 1. Every part of the plant is clothed with powdery, white tomentum. Leaves broad, greenish-yellow above, and of a whitish-yellow colour beneath. Corollas small, white. Berries size of small cherries.

Far. /3, adulterinum (Hamilt. herb.) leaves a little broader, more ovate, and less tomentose. ^ . S. India.

Mullein-leaved Nightshade. Fl. June, July. Clt. 1749. Shrub 6 to 7 feet.

104 S. AURICULA'TUM (Ait. hort. kew. 1. p. 246.) shrubby; leaves ovate-oblong, acuminated, quite entire, tomentose, of the* same colour on both surfaces : axils furnished with oblique small leaves ; corymbs subterminal, dichotomous, pedunculate ; calyx semiquinquefid. T? . S. Native of the Islands of Madagascar, Mauritius, and Bourbon. Dun. sol. p. 166. syn. p. 17. Vahl, symb. 3. p. 38. Wall, in Roxb. fl. ind. 2. p. 245. S. Mauritianum, Scop. del. 3. p. 16. t. 8. Lam. ill. no. 2307. Leaves 6-7 inches long. All parts of the plant are clothed with yellowish tomentum. Corolla villous outside, violaceous inside. Berry globose, yellowish. Nearly allied to *S. verbascifolium.*

Aurkled-leaved Nightshade. Fl. ? Clt. 1773. Shrub 6 to 7 feet.

105 S. UMBELLIFERUM (Eschscholtz, in mem. acad. st. pe-

tersb. 10. p. 286. Hook, et Am. p. 152.) plant clothed with hoary down ; stem suflfruticose ; leaves petiolate, ovate, acutish, quite entire ; racemes umbellate, terminal, few-flowered ; calyx urceolate, 5-cleft: with acute segments; corolla 5-cleft, 3 times longer than the calyx. J?. H. Native of California. Corolla at first campanulate. Anthers biporose at the apex, with a tendency to split.

Umbelliferous Nightshade. Shrub.

106 S. BAHAME'NSE (Mill. diet. no. 24.) shrubby ; leaves lanceolate, sinuately toothed, glabrous ; umbels erect. J? . F. Native of the Bahama Islands, Catesby. Dill. elth. t. *363.* Bark brown. Leaves *3*\ inches long, and \\ broad, acuminated, pale green. Umbels small, lateral. Flowers large, white ; segments acuminated.

Bahama Nightshade. Shrub 4 to 6 feet.

§ *2. Racemes, cymes, or corymbs, lateral, rameal, not axillary nor opposite the leaves.*

107 S. VANGUM (Heyne, ex Wall. cat. no. 2624. Nees, in Lin. trans. 17. p. 48.) shrubby ; leaves ovate-oblong, repandly sinuated, clothed with powdery tomentum beneath while young, as well as the young branches ; cymes lateral, bifid; calycine segments long-acuminated ; berries small, globose. F?, S. Native of the East Indies. S. corymbdsum, Wight, herb. This is a very distinct species, nearly allied to *S. longifblium,* and *S. Bombense,* or *pubigerum,* Dun. ; but differs in the leaves being repandly angular ; from the first it differs in the flowers being smaller, and white ; and from the last in the calycine segments being long-acuminated.

Common Nightshade. Shrub.

108 S. LUXTEO-A'LBUM (Pers. ench. 1. p. 221. Dun. sol. 168. syn. p. 18.) stem shrubby ; leaves ovate, acute, downy on both surfaces; racemes cymose, lateral ; flowers secund. J? . S. Native of Peru, in groves at Cuchero. S. pubescens, Ruiz, et Pav. fl. per. 2. p. 36. t. 169. f. b. Corolla pale yellow. Berry globose, shining, orange-coloured, size of a cherry. Habit of *S. pubescens;* but differs in the flowers being cymosely branched, less umbellate, and not opposite the leaves. Calycine segments deflexed, acute.

Yellow-wfo'te-flowered Nightshade. Shrub.

109 S. CHLORA'NTHUM (Spreng. syst. 1. p. 682.) leaves oblong, attenuated at the base, shining above, and quite glabrous, but clothed with stellate tomentum beneath ; peduncles sub-umbellate ; corollas minute, green ; calyx 5-parted. F? . S. Native of Brazil.

Green-flowered Nightshade. Shrub.

110 S. LA'XUM (Spreng. syst. 1. p. *682.)* leaves ovate, acute, glabrous, veiny; branches cirrhiferous, scandent; peduncles racerllose, loose ; «alyx 5-parted. h_L . ^,. S. Native of Monte Video, Sello.

Loose Nightshade. Shrub climbing.

111 S. DICHOTOMUM (Lour. coch. 1. p. 160.) stem suffruticose, pilose ; leaves cordate-lanceolate, quite entire, tomentose ; peduncles dichotomous. J? . G. Native of China. Dun. sol. p. 167. syn. p. 18. Stem diffuse, branched. Berry small, globose, red.

Forked-yeduncled Nightshade. Shrub.

112 S. FILIFORME (Ruiz, et Pav. fl. per. 2. p. 31. t. 159.) stem suffruticose ; leaves ovate and cordate, obtuse, pubescent; peduncles filiform, bifid, subumbellate. \J . S. Native of Peru, on hills at Lomas de Atiquipa. Dun. sol. 171. syn. p. 18. Habit of *Salvia.* Stem granular. Flowers drooping. Corolla pale blue, thrice as large as the calyx.

TWorm-peduncled Nightshade. Shrub.

113 S. VI'RIDE (R. Br. prod. p. 445.) suffruticose; leaves ovate-oblong, acute, entire, flat, membranous, glabrous ^ racemes corymbose, simple or bipartite; calyx and corolla 5-cleft. J? . G. Native of New Holland, within the tropic, on the sea shore. Perhaps the same as *S. viride.* Forst. pi. escul. p. 42. Spreng. mant. 1. p. 37.

Green Nightshade. Shrub.

114 S. SERI'CEUM (Ruiz et Pav. fl. per. 2. p. *33.* t. 161. f. b. Dun. sol. p. 181. syn. p. 19.) stem shrubby; branches slender; leaves small, ovate-lanceolate, silky, quite entire; peduncles 2-flowered, or few-flowered, cymose. h_c . S. Native of Peru, at Huassen-huassi, in woods. Branches silky. Leaves hoary. Corolla bluish-violet, silky outside. Berry red. Ruiz. et Pav. say that this species agrees with *S. eleagnijolium,* and probably, like it, prickly at the base.

Silky Nightshade. Shrub *4>\ feet.*

115 S. LINKIANUM (Rcem. et Schultes*, syst. 4. p. 601.) stem shrubby, much branched ; branches twiggy, thickish, strigose; leaves ovate-lanceolate, strigose on both surfaces, somewhat repand ; peduncles 2-flowered. J? . S. Native of Brazil. S. diffusum, Link, herb. Leaves lj inch long, and ^ an inch broad. Peduncles extra-foliaceous, nearly an inch long, deflexed. Calyx 5-parted, hairy, with lanceolate segments. Berry glabrous, size of a pea.

Link's Nightshade. Shrub.

§ 3. *Racemes opposite the leaves, or almost so, tomentose, downy, or clothed with leprous-like silvery, powdery down.*

116 S. NU'TANS (Ruiz, et Pav. fl. per. *2.* p. 34. t. 166. f. a.) shrubby; leaves oblong-ovate, acuminated, woolly beneath; racemes very short, opposite the leaves, cymose, recurved, many-flowered ; flowers secund, drooping. ^ . S. Native of Peru, in waste places on the road to Pillao, where it is called *Chuculate* by the natives. Dun. sol. p. 167. syn. p. 19. Shrub rusty ; branches granular. Leaves quite entire, granular above, and nearly glabrous. Corollas small, white. Calyx woolly. Berry yellow, globose.

Drooping -lowered. Nightshade. Shrub.

117 S. VENOSUM (Dun. syn. p. 19. sol. ed. 2d. t. 105. H. B. et Kunth, nov. gen. amer. 3. p. *32.)* arborescent; branches floccosely pilose; leaves lanceolate-oblong, acuminated, acute at the base, quite entire, rather pilose above, and hairy beneath; corymbs opposite the leaves. J? . S. Native of New Granada, on the Andes of Quindiu. Leaves floccose on the midrib beneath, 5 or 5\ inches long; petioles floccose. Calyx small, with roundish segments. Berry nearly globose, size of a sloe.

Feiny-\eaved Nightshade. Shrub or Tree.

118 S. SWARTZIA'NUM (Rcem. et Schultes, syst. 4. p. 602.) shrubby ; leaves petiolate, ovate-lanceolate, quite entire, coriaceous, glabrous, clothed with stellate hairs, beset with orbicular, golden-yellow scales beneath ; racemes solitary, terminal. J?. S. Native of Brazil, near Villa Ricca. S. aureum, Swartz, in litt. Branches terete, beset with rusty scales. Racemes 5-flowered; pedicels deflexed, scaly. Calyx pentagonal, scaly outside. Corolla beset with scales outside, dark purple inside, with acuminated segments. Anthers purple.

Swartz's Nightshade. Shrub.

119 S. GNAPHALIOIDES (Pers. ench. 1. p. 223.) stem shrubby; leaves lanceolate, repand, glabrous,- shining; umbels opposite the leaves, tomentose; berries drooping. J? . S. Native of Peru, in shady places at Tarma ; and in hedges about Acabamba, where it is called *Nununya* by the natives. Dun. sol. p. 173. syn. p. 19. S. calygnaphalium, Ruiz, et Pav. fl. per. *2.* p. 31. The calyxes being clothed with tomentum, the plant has much the appearance of a species of *Gnaphalium.* Corollas violaceous. Berries dark red, saponaceous, size of a filbert.

Gnaphalium-Vike Nightshade. Shrub 10 to 12 feet.

120 S. VELLOZIA'NUM (Dun. sol. 236. ed. 2d. ined. t. 37. syn. p. 19.) branches leprosely tomentose, rufescent; leaves large, oblong-lanceolate, leprously tomentose beneath, but quite glabrous above ; racemes short, almost opposite the leaves, multifid, cymose. *?. S. Native of Brazil. Vand. spec. fl. bras, p. 13. and in Roam, script, hisp. p. 86. Poir. suppl. 3. p. *754>*. Leaves petiolate, a foot long, dark green above, and rufescent beneath, like the racemes. Calyx deeply 5-eleft, with obtuse segments. Corolla small, deeply 5-cleft. Style villous.

VellozVs Nightshade. Shrub.

121 S. ARGE'NTEUM (Dun. syn. p. 19. sol. ed. 2d. t. 39.) branches leprously silvery; leaves ovate-oblong, shining on both surfaces, leprously silvery beneath, but green and glabrous above : they are twin on the primary branches, and solitary on the secondary ones. T2 . S. Native about Rio Janeiro. Poir. suppl. 3. p. *755.* Peduncles twin or tern, very short, 1-flowered, silvery, like the calyxes and outside of the corolla. Flowers small. Calyx 5-toothed. Segments of corolla oblong, acute.

Silvery Nightshade. Fl. June, July. Clt. 1824. Shrub 3 to 4 feet.

§ 4. *Glabrous trees or shrubs. Leaves glabrous, rarely pilose in the axils of the nerves. Racemes simple, cymose, cymosely umbellate, opposite the leaves. Corolla somewhat* 5-*cleft.*

122 S. TJRCEOLATUM (Pers. ench. 1. p. 223. Dun. sol. p. 171. syn. p. 20.) stem shrubby; leaves oblong, acuminated, undulately repand ; peduncles opposite the leaves, few-flowered, very short. *Vi* . S. Native of Peru, in woods at Vitoc. S. oppositifdlium, Ruiz, et Pav. fl. per. 2. p. *35.* t. 168. f. a. Shrub glabrous. Leaves shining above. Peduncles 2-4-flowered. Calyx 5-toothed, in the floriferous state small, but large in the fructiferous state. Corolla 5-cleft, with hooked segments.

(Trceotoe-calyxed Nightshade. Shrub 6 feet.

123 S. L/EVIGA'TUM (Dun. syn. p. 20. sol. ed. 2d. ined. t. 106. H. B. et Kunth, nov. gen. 3. p. 32.) shrubby ; branches and leaves glabrous, but pilose in the axils of the veins beneath ; leaves on short petioles, elliptic-oblong, acuminated, cuneated at the base, quite entire; umbels opposite the leaves; pedunculate, few-flowered, f?. S. Native of New Granada, near Fusagasuga. Leaves 4| inches long, and 2 broad. Calyx 5-cleft, puberulous, with short, ovate, acutish segments. Allied to *S. triste,* ex Kunth.

Smooth Nightshade. Shrub 4 to 6 feet ?

124 S. OBOVATUM (Dun. syn. p. 21. sol. ed. 2d. ined. t. 112. H. B. et Kunth, nov. gen. 3. p. *35.)* arboreous ; branchlets angular, clothed with fuscous tomentum ; leaves elliptic-oblong, acuminated, somewhat cuneated at the base, quite entire, glabrous, but pilose in the axils of the veins beneath; flowers opposite the leaves, umbellate, polygamous. T?. S. Native of Peru, on the Andes of Quito, near Cuenca. Branches terete, glabrous. Leaves petiolate, 3 or 3j inches long. Umbels sessile, many-flowered; and in each umbel there are 3-4 fertile flowers, which stand on long pedicels; the rest are small and abortive, and stand on short pedicels. Pedicels and calyxes clothed with fuscous tomentum. Calyx 5-lobed : lobes bluntish, unequal. Corolla smoothish, white? segments of the limb linear-oblong, acute, equal, mucronately tubercled under the apex.

ObovateAeaved Nightshade. Tree.

§ 5. *Racemes or cymes axillary, solitary or twin.*

125 S. INCURVUM (Ruiz, et Pav. fl. per. 2. p. 34. t. 164. f. b. Dun. sol. p. 171. syn. p. 21.) pubescent; stem angular, herbaceous ; leaves ovate, acuminated ; racemes twin, one shorter than the other ; pedicels incurved, secund. 1/. ? S. Native of Peru, in woods at Munna. S. recurvum, Poir. suppl. 3. p. 755. Stem thickened at the nodi, glabrous; the rest downy. Pedicels cymose, violaceous. Calyx campanulate, deeply 5-toothed. Corolla whitish-violet, 5-parted.

incurved-pediceWed Nightshade. PI. 2 feet.

126 S. A'NCEPS (Ruiz, et Pav. fl. per. *2.* p. *36.* t. 169. f. a. Dun. sol. 171. syn. p. 21.) stem herbaceous; leaves oblong-lanceolate ; peduncles axillary, very short, 2 or 3 together; berries conical, 2-edged. ^. ? S. Native of Peru, in woods at Cuchero. Leaves quite entire, downy. Calyx and corolla 5-parted. Peduncles cymose. Flowers secund, small, green. Berry whitish, many-angled towards the top.

Two-edged-berried Nightshade. PL 3 feet.

127 S. BASSOVIA (Rich. herb. ined. Dun. syn. p. 22.) stem shrubby ; leaves ovate-oblong, attenuated at both ends, glabrous ; cymes small, axillary, solitary. T? • S. Native of Guiana, in woods, Richard. Poir. suppl. 3. p. 754. no. 132. S. rugosum, Rich. herb. Bassdvia sylvatica, Aubl. guian. p. 217. t. 85. Lam. ill. t. 102. Willd. spec. 1. p. 1065. Leaves large, petiolate, shining ; nerves rough above. Cymes shorter than the leaves. Calyx 5-toothed ; teeth obtuse. Corolla pubescent, greenish ; anthers yellow. Berry conical, somewhat compressed, wrinkled, greenish-white. This differs from its nearest ally, *S. dnceps,* in the stem being shrubby, and the cymes being solitary.

Bassovia Nightshade. Shrub 3 to 4 feet.

§ 6. *Peduncles axillary, ^-flowered, solitary, twin, or many together.*

128 S. BREVIFOLIUM (Dun. syn. p. 22. sol. ed. 2d. ined. t. 113. H. B. et Kunth, nov. gen. 3. p. 36.) suffruticose, scandent ; branches and leaves glabrous; leaves ovate, obtuse, obsoletely cordate; peduncles almost opposite the leaves, 1-flowered, solitary. \ . w. S. Native of Quito, near the town of Ibarra, climbing on trees. Stems radicant; branches rather angular. Leaves 9-10 lines long, furnished with a small twin or solitary leaf in the axils. Calyx 5-toothed. Corolla pale violet; segments lanceolate. Berries globose, red, size of those of *S. nlgrum;* Fructiferous calyx 5-cleft. Perhaps a species of ***Withermgia.***

Short-leaved Nightshade. Shrub climbing.

129 S. HAVANE'NSE (Jacq. amer, p. 49. t. *35.* ed. pict. t. 48. Dun. sol. 147. syn. p. 22.) shrubby ; branches angular, and are, as well as the leaves, glabrous ; leaves oblong-lanceolate, acute, shining, quite entire, narrowed at the base, rather coriaceous; peduncles sub-axillary, 1-flowered, solitary; berries oval. J?. S. Native of Martinico, Jamaica, Peru, in shady parts of woods by the sea side ; and of Cuba, near Havana, Regla, and Guanavacoa. H. B. et Kunth, nov. gen. 3. p. *36.* Swartz, obs. 82. Ruiz, et Pav. fl. per. 2. p. *39.* Leaves sometimes twin, but very seldom, 2\ inches long. Corollas blue, an inch in diameter ; segments broad, short, emarginate. Berry ovate, deep blue, shining, ex Jacq. ; globose, red, ex Kunth. Peduncles 2-3-flowered, ex Jacq. ; 1-flowered, ex Kunth. Calyx 5-parted.

Havana Nightshade. Fl. July, Aug. Clt. 1793. Shrub 5 to 8 feet.

130 S. MONTEVIDE'NSE (Spreng. syst. 1. p. 684.) leaves oblong, attenuated at the base, sub-repand, scabrous on both surfaces ; branches powdery; peduncles erect, 1-flowered. T?. S. Native of Monte Video.

Monte Video Nightshade. Shrub.

131 S. CORIA'CEUM (Hook. bot. mag. 2703.) shrubby, glabrous ; leaves petiolate, oblong, coriaceous, shining, .entire, rather veiny ; peduncles terminal and axillary, generally 1-flowered ; corolla 5-lobed : lobes blunt, and plicae mucronate, and longer than the lobes ; calyx 4-5-parted. F? . G. Native of Mexico. Corollas bluish-purple ; anthers yellow beyond the throat.

Coriaceous-leaved Nightshade. Fl. July, Aug. Clt. 1820. Shrub 2 to 4 feet.

SUBSECT. IV. GEMINA'TA (from *geminus,* twin ; in reference to the leaves being twin.) *Leaves quite entire, twin, and sometimes solitary on the same branch, rarely aggregate. Calyx 5-parted. Stamens equal,*

§ 1. *Peduncles axillary, l-flowered, solitary, twin, or aggregate,*

132 S. CONOCA'RPUM (Rich. herb. Dun. syn. p. 22. sol. ed. 2d. ined. t. 30.) stem shrubby ; leaves twin or tern, unequal, entire, obtuse, nearly sessile; peduncles solitary or twin, 1-flowered; berries oval, very acute. T?. S. Native of the Island of St. John, Richard. Poir. suppl. 3. p. 748. Habit of a species of *Cestrum.* Branches wrinkled, yellowish. Leaves coriaceous, obovate or elliptic. Calycine segments ovate. Corolla blue, deeply 5-parted. Berry twice the size of a cherry, edible. Very nearly allied to *S. Havanense ;* and perhaps only differs in the colour of the berry, which is blue in *S. Havanense.*

Cone-fruited Nightshade. Shrub.

133 S. MEMBRANA'CEUM (Wall. cat. no. 2625, A. B. Nees, in Lin. trans. 17. p. 41.) stem herbaceous, dichotomous; leaves twin, ovate and oblong, acuminated at both ends, oblique at the base, unequal, hairy above ; flowers usually twin, axillary; calyx 5-toothed : teeth subulate. ^.? ©. S. Native of the Neelgherry Mountains, Noton, along with *S. bigemindtum.*

Membranous-leaved Nightshade. PI.

134 S. LiE'VE (Dun. syn. p. 22. sol. ed. 2d. t. *36.)* plant herbaceous, glabrous; leaves twin, one much smaller than the other, ovate, acute at both ends, acuminated, entire; peduncles usually twin, axillary ; calyx 5-toothed : teeth subulate. 1/. S. Native of the East Indies. S, membranaceum, Wall. cat. no. 2625. B. Peduncles short. Calyx coriaceous, with 5 linear teeth. Berry globose. Seeds subtriangular, dotted.

• *Sleek* Nightshade. Shrub.

135 S. AGGREGA'TUM (Jacq. coll. 4. p. 124. icon. rar. t. *323.)* stem shrubby; leaves somewhat ovate, obtuse, aggregate; peduncles 1-flowered, slender, many from the same bud, interfoliaceous ; corollas campanulate. J?. S. Native of Africa, on the sea shore ; in Guinea; and at the Cape of Good Hope. Dun. sol. p. 146. syn. p. *22,* Lam. ill. no. 2320. S. Guinee'nse, Lin. spec. p. 263. S. sempervirens, Mill. diet. no. *25.* Lin. spec. ed. 1. p. 185. Saracha Guinee'nsis, Pers. ench. 1, p. 219. A'tropa solanacea, Lin. mant. 205. Willd. spec, l! p. 1018. Vogel. icon. rar. t. 16. ex Lam. 1. c.— Commel. hort! *2.* p. 191. t. 96. Shrub glabrous. Leaves many from the same bud, quite entire, petiolate, shining, an inch long. Fructiferous pedicels drooping ; all length of leaves. Corolla pale purplish-violet, an inch in diameter, with lanceolate segments. Berries globose, yellow, shining, 2-celled, size of peas.

Aggregate-leaved Nightshade. Fl. June, July. Clt. 1821. Shrub 4 to 6 feet.

136 S. HYGRO'PHILUM (Schlecht, in Linnsea, 8. p. 254.) shrubby ; branches villous ; leaves twin, on short petioles, lanceolate, yellowish-green, acute at both ends', pilose above, and rather villous beneath ; flowers forming umbels, on very short peduncles, opposite the leaves, few-flowered ; teeth of calyx broad-ovate, acute; corollas white, 5-cleft, at length reflexed, pilose outside; berries globose, glabrous. *2. G. Native of Mexico, in humid woods about Jalapa. Corolla white. Stamens regular. Leaves unequal in size, larger one 3 inches long, and 1| broad.

Water-loving Nightshade. Shrub.

§ 2. *Glabrous trees or-shrubs. Leaves glabrous, but sometimes pilose in the axils of the veins beneath. Racemes simple, cymose, or cymosely umbellate, opposite the leaves. Corollas 5-parted.*

137 S. NU'DUM (Dun. syn. p. 20. sol. ed. 2d. ined. t. 107. H, B. et Kunth, nov. gen. amer. 3. p. *33.)* shrubby; braflches and leaves glabrous ; leaves twin, one much smaller than the other, elliptic oblong, acuminated at both ends, quite entire ; umbels nearly opposite the leaves, on short peduncles, few-flowered ; pedicels at length reflexed. J? . G. Native of Mexico, near Jalapa, in humid places. Leaves 3 or *3* inches long, and about 1| broad. Corolla white, size of those of *S. nigrum.* Berry globose, glabrous, size of a large pea. Very like *S. diphyllum;* and hardly differs from it, unless in the leaves being all acute, deeper green: and in the pedicels being deflexed.

Naked Nightshade. Shrub.

138 S. DIPHY'LLUM (Lin. spec. 2C4. Aubl. guian. 1. p. 215.) stem shrubby; leaves twin: the larger one oblong, attenuated at both ends, obtuse ; the smaller one obovate-elliptic, sometimes emarginate; cymes small; umbels short, opposite the leaves ; floriferous pedicels drooping, fructiferous ones erect. *?. S. Native of tropical America. Jacq. coll. 2. p. 231. icon, rar. 2. t. 322. Dun. sol. p. 172. syn. p. 20.—Pluck, aim. p. 349. phyt. t. 111. f. 4. An evergreen, fetid shrub. Stem blackish, terete. Leaves nearly sessile. The larger leaf 2 to 4 inches long. Corolla white, with lanceolate, acute segments. Berries globose, succulent, pale orange-coloured, size of a chick pea.

Two-leaved Nightshade. Fl. June, July. Clt. 1696. Shrub 2 to 4 feet.

139 S. ARBOREUM (Dun. syn. p. 20. sol. ed. 2d. ined. t. 198.) arboreous ; branches flexuous, and are, as well as the leaves, glabrous; leaves twin, oblong, acuminated, cuneated at the base, quite entire, one of which is very small, and nearly sessile ; cymes small, opposite the leaves. I?. S. Native of the province of New Andalusia, near Cumanacoa. Branches angular, glabrous, or a little downy. Leaves shining above, 7-8 inches long, and 3 broad: upper ones twin, the smaller one roundish, ovate, an inch long. Cymes very minute, simple. Calyx 5-toothed ; teeth ovate, acute. Corolla white, with oblong, acute segments, 6 times as long as the calyx.

Tree Nightshade. Fl. June, July. Clt. 1819. Tree 40 feet.

140 S. ACUMINA^TUM (Ruiz, et Pav. fl. per. 2. p. 34. t. 159. f. a. Dun. sol. 172. syn. p. 20.) shrubby; leaves twin, ovate-oblong, and elliptic, acuminated : the point straight or twisted ; racemes cymose, opposite the leaves, many-flowered; flowers secund. ^ . S. Native of Peru, in woods at Chincao. Plant glabrous. Leaves on short petioles, quite entire, shining above. Racemes recurved at apex; pedicels slender, but thickened

at top. Corollas small, white. Berry black, globose, size of a chick pea.

Acuminated-leaved Nightshade. Shrub.

141 S. FCE'TIDUM (Ruiz, et Pav. fl. per. 2. p. 34. t. 165. f. b. Dun. sol. p. 173. syn. p. 20.) stem shrubby; leaves usually twin, ovate, dependent; cymes short, umbellate, drooping, opposite the leaves. ^ • S. Native of Peru, about Tarma, in the fissures of rocks, and in waste places. Plant glabrous, very fetid when bruised. Leaves veiny beneath. Corolla whitish blue, or pale blue; anthers declinate. Berry golden yellow, size of a small walnut. The leaves mixed with the flowers of *Sambucus* are used for bathing ulcers in Peru.

Fetid Nightshade. Shrub 6 feet.

142 S. TRI'STE (Jacq. amer. p. 50. t. 40. ed. pict. t. 49.) stem shrubby; leaves twin, lanceolate-oblong, somewhat repand, acuminated; cymes short: flowers secund. *fy* . S. Native of Martinico, among bushes on the banks of rivers; and of Peru, in woods at Pillao. Vahl. symb. 3. p. 38. Willd. spec. 1.p. 1031. Dun. sol. p. 170. syn. p. 21. S. oblongum, Ruiz, et Pav. fl. per. 2. p. 34. t. 165. f. 6. Dun. sol. p. 172. Leaves petidlate, a hand long, dark green. Peduncles lateral, an inch long, many-flowered. Corollas small, white, ex Jacq., whitish violet, ex Ruiz et Pav. with lanceolate segments. Berry globose, dusky yellow, size of a chick pea. Calyx 5-toothed, ex Ruiz, et Pav. Calycine segments roundish, ex Jacq.

Sorrowful Nightshade. Fl. June, July. Clt. 1820. Shrub 8 feet.

143-S. SPIRA'LE (Roxb. fl. ind. 2. p. 247. Wall. cat. no. 2619.) stem shrubby; branches compressedly angular, glabrous; leaves twin, the one 2 or 3 times smaller than the other, oblong-lanceolate, attenuated at the base, glabrous, quite entire; racemes sub-cymose, almost opposite the leaves, secund, revolute at apex; calyx beset with glandular dots. ~*fy* • S. Native of Silhet, and Gualpara. S. Naratida, Hamilt. herb. This species is nearly related to *S. triste,* Jacq. but differs from it in the branches being angular; in the leaves being cuneated a long way at the base, acute, not acuminated, always entire; in the flowers being larger and white; and in the calyxes being glandular. Though rather fetid this species is still ornamental, on account of its smooth deep green foliage, spiral racemes of pretty white flowers, and numerous small round yellow berries.

Spiral Nightshade. Shrub.

144 S. CORNIFOLIUM (Dun. syn. p. 21. sol. ed. 2d. ined. t. 110, H. B. et Kunth, nov.-gen. amer. 3. p. 34.) shrubby; branches and leaves glabrous; leaves elliptic-oblong, acuminated, acute at the base, quite entire, somewhat parallelly veined, twin, one of which is very minute; umbels opposite the leaves, on short peduncles. ^ • S. Native of New Granada, in the valley of the river Cauca, betwixt Palace and Popayan. Branches angular. Larger leaves about 3 inches long, downy when young: the smaller ones obovate, almost sessile. Calycine segments obtuse. Corollas white, size of those of *Lysimachia vulgaris,* with ovate, acuminated segments. Ovarium villous.

Dogwood-leaved Nightshade. Shrub.

145 S. LEUCOCA'RPUM (Rich. herb. Dun. syn. p. 21. sol. ed. 2d. ined. t. 38.) branches twiggy; leaves twin,, one 3 times smaller than the other, nearly orbicular, the other elliptic-lanceolate; cymes unilateral, few-flowered, opposite the leaves. J? . S. Native of the Island of St. Martha, Richard. Nearly allied to *S. triste,* but differs particularly in the leaves, in the unilateral cymes, and colour of the berries. Shrub glabrous. Branches terete. Leaves shining on both surfaces. Calyx coriaceous, small, 5-crenate. Corolla white, rather large, with acute segments. Berry spherical, shining, white.

White-fruited Nightshade. Shrub.

146 S. PSYCHOTRIOIDES (Dun. syn. p. 21. sol. ed. 2d. ined. t. 111. H. B. et Kunth, nov. gen. amer. 3. p. 35.) arboreous; branches glabrous, suberosely warted, angular; leaves twin, lanceolate-oblong, or obovate-oblong, acuminated, acute at the base, quite entire, glabrous, but pilose in the axils of the veins beneath; umbels opposite the leaves, nearly sessile. T?. S. Native of New Granada, on the banks of the river Magdalena near Morapox, and TenerifFe. Larger leaves 3-4 inches long. One of the leaves smaller than the other. Umbels 3-4-flowered. Flowers size and structure of those of *S. cornifolium.* Fructiferous pedicels thickened at top, suberose.

Psychotria-like Nightshade. Shrub or tree.

§ 3. *Racemes lateral, rameal, not axillary, nor opposite the leaves.*

147 S. CROTONIFOLIUM (Dun. syn. p. 18. sol. ed. 2d. ined. t. 103. f. b. H. B. et Kunth, nov. gen. 3. p. 30.) shrubby; branches tomentose; leaves twin, oblong, narrow-acuminated, rounded and unequal at the base, somewhat repand, clothed with canescent down above, and soft white tomentum beneath; racemes supra-axillary, bifid; flowers unilateral. ^ • S. Native of New Granada, near the port of Carthagena, in hot places. Hairs stellate. One of the leaves is twice the size of the other, the largest 4-5 inches long. Calyx and corolla tomentose outside; segments of the latter linear-lanceolate. Berry globose, smoothish, size of a pea.

Croton-leaved Nightshade. Shrub.

148 S. NARE'NSE (Dun. syn. p. 18. sol. ed. 2d. ined. t. 103. f. 8. H. B. et Kunth, nov. gen. 3. p. 31.) shrubby; branches tomentose; leaves twin, ovate, acute, cordate at the base, and unequal, clothed with canescent down above, and with white soft tomentum beneath; lower leaves sinuately angular; racemes lateral, bifid; flowers unilateral. T? . S. Native of New Granada, in shady places on the banks of the river Magdalena, between Nares and Honda. Tomentum and down stellate. One of the leaves smaller than the other, petiolate. Larger leaves 7-8 inches long, and 5-6 broad. Flowers size of those of the preceding, pale yellow, ex Bonpl. Very like the preceding species, and only differs in the tomentum being more dense, in the leaves being broader and cordate, and in the lower ones being sinuately angular.

Nares Nightshade. Fl. June. Shrub 6 to 12 feet.

149 S. TRACHYPHY'LLUM (Dun. syn. p. 18. sol. ed. 2d. ined. t. 104.) shrubby; branches tomentose; leaves twin, oblong, acuminated, rounded at the base and unequal, quite entire, roughish above, but clothed with soft hoary tomentum beneath; racemes lateral, dichotomous; flowers unilateral. T? . S. Native of the province of Popayan, between Buga and Carthage. Branches terete. One of the leaves smaller than the other. Tomentum and down stellate. Larger leaves 5-6 inches long, and 2 or 2j broad. Flowers like those of *S. crotonifolium,* but a little smaller. Very nearly allied to *S. crotonifolium,* but the tomentum is more dense; the leaves green and roughish above, and the flowers a little smaller.

Rough-leaved Nightshade. Shrub 6 to 10 feet ?

150 S. TETRA'NDRUM (R. Br. prod. p. 445.) suffruticose, erect; leaves generally twin, oblong-ovate, entire, membranous, beset with a few scattered hairs; racemes corymbose, simple; flowers quadrifid. J? . S. Native of New Holland, within the tropic, on the sea-shore. Dun. syn. p. 18. no. *98.*

***Tetrandrous-fiowered* Nightshade. Shrub.**

151 S. GEMINIFOLIUM (Schlecht, et Cham, in Linnaea, 5, p. 112.) shrubby; branches, inflorescence, and under sides of

leaves clothed with cream-coloured tomentum ; upper surfaces *of* leaves green, but beset with stellate hairs ; leaves twin, unequal in size, obovate, obtuse : the larger one ovate, acuminated, rounded at the base, 2 J inches long; cymes terminal and lateral, pedunculate, many-flowered ; calyx suburceolate, 5-toothed : teeth rounded ; berry globose. f?. G. Native of Mexico, at Jalapa. Flowers hardly larger than those *oVS. nigrum.*

Twin-leaved Nightshade. Shrub.

§ 4. *Racemes terminal.*

152 S. PTERÒPODUM (Dun. syn. p. 14. sol. ed. 2d. ined. t. 94. H. B. et Kunth, nov. gen. amer. 3. p. 26.) stem herbaceous, winged ; leaves twin, sessile, decurrent, elliptic-oblong, sub-acuminated, very narrow at the base, undulately repaad, smoothish above, but clothed with fine powdery down beneath ; * corymbs opposite^ the leaves, dichotomous ; peduncles winged. %. ? S. Native of South America, near the city of Quito, at the altitude of 1500 hexapods. Leaves 8-10 inobes long, and 3f bfoad. Peduncles many-flowered, one-half shorter than the leaves ; branches and pedicels clothed with powdery down. Calycine lòbes truncate, mucronate. Corolla white, with oblong acute segments. Ovarium glabrous, nearly globose. Said to be nearly allied to *S. sessile,*

Wing-peduncled Nightshade. PL 2 to 3 feet ?

153 S. OBLONGIFÒLIUM (I?Un' SVn* P* ^' S0^ e^' ^d. t. *95.* H. B. et Kunth, nov. gen. amer. 3. p. 27.) herbaceous ; leaves twin, elliptic-oblong, acute, narrowed at the base, almost quite entire, glabrous, downy on the veins beneath; racemes nearly terminal, bifid. %. S. Native of New Granada, on the Andes of Quindiu. Branches terete, glabrous. One of the leaves one-half smaller than the other, green above ; larger ones 6-7 inches long, and 2| to 3 inches broad : the smaller ones nearly orbicular. Pedicels thickened under the top, and are, as well as the branches, villous. Calycine segments obtuse. Corolla white, glabrous; with ovate, obtuse segments.

Oblong-leaved Nightshade. PL ?

154 S. PU'LCHRUM (Dun. syn. p. 15. sol. ed. 2. ined. t. *35.)* stem shrubby ; branches rugose ; leaves oblong-ovate, ending in the petioles ; racemes large, terminal, sub-dichotomous. T? . S. Native of Brazil. Poir. suppl. 3. p. 750. Branches terete, glabrous. Leaves usually twin, acute, or obtuse, rather downy beneath. Pedicels cymose. Segments of corolla lanceolate, acute. Berry globose. Nearly allied to *S. crispum,* but the leaves are less cordate, and the racemes are larger.

Fair Nightshade. Shrub.

SUBSECT. 4. *Branches spinescent. Leaves solitary, entire. Peduncles axillary, filiform, \-flowered, solitary, or aggregate. Calyx 5-toothed, or 5-cleft. Stamens unequal. Seeds bony.*

155 S. LYCIOI'DES (Lin. mant. 45. Jacq. icon. rar. 1. t. 46.) shrubby; branches spinescent, numerous; leaves elliptic, or oblong, obtuse, cuneated at the base, or acute at both ends, glabrous, or hairy; peduncles extra-axillary, solitary, 1-flowered, *h* • S. Native of Peru. Dun. sol. p. 172. syn. p. 22. Branches terete, glabrous ; branchlets angular, hairy. Leaves *7-8* lines long. Pedicels solitary. Calyx urceolate, truncate, 5-toothed ; teeth linear, subulate, remote. Corolla pale violet; limb angularly *5-ldbed* ; throat yellow. Anthers yellow, a little arched. Berry globose, glabrous, red, size of a pea.

Far. /J; leaves hairy. J?. S. S. lycioides, var. *(1,* Dun. syn. p. 23. H. B. et Kunth, 1. c.

Lycium-like Nightshade. Fl. May, June. Clt. 1791. Shrub 3 to 4 feet.

156 S. CANDI'CANS (Dun. syn. p. *23.)* shrubby ; branches spinescent ; leaves obovate-cuneiform, obtuse, clothed with white tomentum beneath, but scabrous above; peduncles filiform, 1-flowered, solitary. ? F? . S. Native of Peru, on argillaceous rocks of Huanuco and Tarma. S. lycioides, Ruiz, et Pav. fl. per. 2. p. 41. t. 177. f. 6, exclusive of the synonymes, but not of Lin. S. lycioides * tomentosum, Dun. sol. p. 174. Stem much branched; branches ending in floriferous leafy spines. Calycine segments appendiculate. Corolla blue, with a yellowish bottom. Anthers free. Berry globose, of a reddish copper colour.

Whitish-leaved Nightshade. Shrub 3 to 5 feet.

SUBSECT. V. HOLOCLA'INA (from *o\og, holos,* entire; and *yXaiva, chlaina,* an outer cloak; in reference to the entire calyx.) *Leaves quite entire, solitary, or twin. Calyx truncate, entire. Flowers twin, or fascicled at the sides of the leaves.*

157 S. BIGEMINA'TUM (Nees in Lin. trans. 17. p. 42.) stem suffruticose ;. lower leaves solitary : superior ones twin, densely clothed with bristles above, elliptic-oblong, acuminated at both ends, unequal in size ; flowers usually twin at the sides of the leaves ; calyx quite entire, smooth ; peduncles erect while bearing the fruit. J? . S. Native of Travancore. S, flexu6sum, and S. angulòsum, Herb. madr. Fruit size of a pea, seated on an erect, thick peduncle.

Twice-twin-f\owered Nightshade. Shrub.

158 S. NEESIA'NUM (Wall. cat. suppl. 248. Nees in Lin. trans. 17. p. 42.) stem suffruticose; branches tetragonal, roughish towards the^summit; lower leaves solitary ; superior ones twin, scabrous above from rough dots, oblong-lanceolate, acuminated at both ends, unequal in size; flowers fascicled at the sides of the leaves; calyx quite entire, smooth ; -peduncles spreading in the fruit-bearing state. I? . S. Native of the mountains of Silhet. Corolla white, glabrous ; segments lanceolate. Berry round, smaller than a pea.

Nees's Nightshade. Shrub.

159 S. BLU'MII (Nees in Blum.Jbijdr. 696, in Lin. trans. 17. p. 45.) leaves twin, of two forms, smaller on« ovate, clothed with dense bristles on the upper surface ; stem violaceous ; flowers many in a fascicle, fc. S. Native of Java. Calvx quite entire.

*Blume*s* Nightshade. Shrub.

160 S. PARASI'TICUM (Blum, bijdr. p. 697.) stem nodose; leaves all solitary, glabrous ; calyx entire. ^ • S, Native of Java.

Parasitical Nightshade. Shrub.

SUBSECT. VI. POLY'MERIS (from *TTOXVQ, polys,* many; and /xeptc, *meris,* a part ; the divisions of the calyx are numerous.) *Leaves quite entire, solitary, or twin. Calyx 10-toothed, or* 10-*cleft. Peduncles \-flowered, axillary, or interfoliaceous.*

S 1. *Leavertwin. Corolla plicate, 5-angled. Stamens sometimes unequal**

161 6. UNIFLÒRUM (Dun. syn. p. *33.* sol. ed. *2d.* ined. t. *42.)* stem dichotomous ; branches glabrous, rough from dots ; leaves usually twin, ovate, bluntish, glabrous, and shining above, but clothed with leprous tomentum beneath ; peduncles solitary. J? • S. Native of St. Domingo. Poir. suppl. 3. p. *757.* S. dichòtomum, Richard. Shrub elegant; branches brown, angu-

lar. Peduncles glabrous. Calyx glabrous, 10-cleft; the alternate segments smaller. Corolla with a 5-rayed star. Stamens equal. Berry globose, mucronate, size of a small cherry.

One-flowered Nightshade. FL May, July. Clt, 1820. Shrub 2 to 3 feet.

162 S. MONANTHUM (Roem. et Schultes, syst. 4. p. 608.) leaves usually twin, almost sessile, elliptic; peduncles axillary, 1-flowered; calyx 10-cleft. %. S. Native of New Spain. S. uniflorum, lag. ge*i. et. spec. nov. p. 10. no. 142. Herbaceous, roughish from scattered, short, stellate hairs. Corolla dark purple, or blue, 3. times as long as the calyx. Calycine segments oblique, short. Berry ovate, quite smooth, size of a small hen's *egg.*

One-flowered Nightshade. Fl. June, July. Clt. 1818. PI. 2 to 3 feet?

163 S. SPECIOSUM (Dun. sol. p. 179. syn. p. 23.) arboreous ; branches flexuous; leaves oblong, acuminated, solitary, or twin ; peduncles solitary, axillary ; margins of corolla crenulated. Tj . S. Native of the Caribbee Islands.— Burm. amer. p. 242. t. 245. f. 5.—Plum, cat. p. 4. Tourn. inst. p. 150. Leaves veiny : superior ones twin. Flowers showy. Corolla large, expanded, semiquinquefid, rather pentagonal. Berry spherical, erect, drooping at maturity.

Showy Nightshade. Tree.

164 S. NEGLECTUM (Dun. sol. p. 177. syn. p. 23.) stem shrubby; leaves ovate, undulated; peduncles solitary and twin ; calycine segments reflexed. I? . S. Native of the West India Islands.—Burm. amer. p. 242. t. 245. f. 4.—Plum. mss. vol. 4. f. 34. ex Aubl. guian. 1. p. 217.—Tourn. inst. p. 150. Much branched. Leaves quite entire. Lower peduncles solitary: upper ones twin, or tern. Calyx denticulated, according to the figure 10-16-toothed. Berry roundish, scarlet. This species is nearly allied to *S. geminatum,* but differs In the stem not climbing, and in the more numerous retroflexed calycine teeth.

Neglected Nightshade. Fl. June, July. Clt. 1824. Shrub 4 to 5 feet ?

165 S. TRICOLOR (Moc. et Sesse. pi* mex. icon. ined. Dun. syn. p. 24. sol. ed. 2d. ined. t. 41. Poir. suppl. 3. p. *756.)* stem terete, dichotomous ; leaves twin, one of them smaller than the other, ovate, acutisU, clothed with shining tomentum ; peduncles 4, together ; anthers 5, one of which is twice as long as the others. *2. S. Native of Mexico. Nearly allied to *S. lentum,* but differs in there being 3 green spots at the base of each segment of the corolla, and in the anthers being unequal, &c. Stem woolly. Peduncles villous. Calyx 10-toothed. Corolla white, somewhat reflexed, with a violaceous star in the middle. Berry globose, red.

Three-coloured- flowered Nightshade. Shrub.

166 S. PAUCIFLORUM (Vahl. eclog. 1. p. 21. Dun. sol. p. 176. syn. 24.) branches villous, tomentose above; leaves ovate, quite entire, glabrous above, tomentose beneath : rameal ones twin, unequal; peduncles twin, unequal, f?. S. Native of Martinico. Branches herbaceous, clothed wjth rusty tomentum, as well as the under sides of the young leaves. Leaves 2-3 inches long. Flowers drooping, clothed with rusty tomentum. Calyx short, truncate, 10-toothed; teeth linear. Corolla glabrous, length of peduncles.

Few-flowered Nightshade. PI. ?

167 S. SYLVATICUM (Dun. syn. p. 24. sol. ed. 2d. ined. t. 11*. H. B. et Kunth, nov. gen. amer. 3. p. 37.)«shrubby, scandent>; leaves ovate, acuminated, rounded at the base, subrepand, glabrous, but hairy on the veins beneath : superior ones twin, unequal; flowers extra-axillary, usually by threes ; calyx 10-toothed: teeth subulate. ^ • *KJ'* S- Native near Cumana and Bordones, in woods. Branchlets hairy. Leaves about 2 inches long. Corolla large, pentagonal, marked by a 5-rayed star. Stamens 5, one longer than the others. Berry globose, glabrous, size of a sloe.

Wood Nightshade. Shrub climbing.

168 S. LYSIMACHIOIDES (Wall, in Roxb. fl. ind. 2. p. 257. cat. no. 2609. Nees in Lin. trans. 17. p. 44.) herbaceous ; stem creeping at the base, but ascending at the top, as well as the branches; leaves usually twin, nearly equal, ovate, acute at both ends, quite entire, pubescent; flowers solitary, smoothish, placed between the leaves ; calyxes 8-10-toothed : teeth subulate, equal in length to the fruit. %. G. Native of Sheopore, Chundragiri, and Chitlong. Corollas white. Berries globular, size of a gooseberry, scarlet, or red.

Loostrife-like Nightshade. PI. creeping, 1 foot long.

169 S. RETROFRACTUM (Vahl. eclog. 1. p. 21. Dun. sol. 176. t. 5. syn. p. 24.) stem shrubby, flexuous; axillary branches retrofracted; leaves ovate, glabrous : upper ones twin, unequal; peduncles filiform, many together, umbellate, axillary and terminal ; calyx truncate, toothless, glabrous. J? . S.- Native of tropical America. Shrub twining. ? Leaves petiolate, quite entire, 1| inch long. Calyx 10-cleft; segments linear, subulate, unequal, joined by a pellucid membrane, whence it appea'rs toothless. Corolla as in *S. virgatum,* but smaller^, 3 times longer than the calyx. Stamens equal.

Retrofracted Nightshade. Shrub twining ?

170 S. GLANDULOSUM (Ruiz, et Pav. fl. per. 2. p. 35. t. 167. f. b. Dun. soi. p. 180. syn. p. 25.) stem suffruticose, scandent ; leaves twin, ovate-cordate ; peduncles 3-5 together, interfoliaceous; calycine teeth gland-formed. J? . ^,. S. Native of Peru, in groves at Vitoc, in the province of Tarma. Leaves on short petioles, very veiny, unequal at the base. Calyx turbinate, angularly striated, usually 10, rarely 12-14-toothed. Corolla white, spreading; limb plicate. Berry globose, pale red.

Glandular-toothed-calyxed Nightshade. Shrub climbing.

171 S. CUTACENSE (H. B. et Kunth, nov. gen. amer. 3. p. 38.) shrubby, scandent ?; branches clothed with downy tomentum ; leaves twin, ovate, sub-acuminated, quite entire, clothed with silky hairs on both surfaces, canescent beneath; flowers extra-axillary, twin, or terminal, by threes; calyx 10-toothe<L J? . w. S. Native of Peru, in woods near Ayavaca and Rio Cutaco. Branchlets angular. Leaves petiolate, one a little smaller than the other. Corolla sinuately 5-lobed, white, with a violaceous star, dovvniy outside. Hairs simple, not stellate.

Cutaco Nightshade. Shrub climbing.

172 S. MACRODON (Wall. cat. no. 2621.) shrubby, erect; lower leaves solitary : superior ones twin, the one 2 or 3,times smaller than the other, oblong-lanceolate, acuminated at both ends, quite entire, hairy above, as well as the branchlets ; flowers solitary, or in fascicles placed between the leaves ; calyx furrowed, 10-toothed : teeth subulate, longer than the fruit. *2 . S. Native of the Pundua mountains. Similar to *S. denticulatum* in habit, but differ* in the teeth of the calyx being very long.

Long-toothed-ca\yxe& Nightshade. Shrub.

173 S. DECEMDENTATUM (Roxb. fl. ind. 2. p. 247. Wall, cat. no. 2614.) herbaceous, erect, perennial; lower leaves solitary : superior ones twin, ovate, acute at both ends, hairy, the one smaller than the other; flowers fasciculately aggregate at the sides^of the leaves; calyx 10-toothed, and is, as well as the pedicels, glabrous : teeth linear-subulate, equal. ©. *G.* Native of China and Singapore. Berries the size of a pea, smooth, bright red when ripe.

Ten-toothed Nightshade. PL 2 to 3 feet.

174 S. CRASSIPE'TALUM (Wall, in Roxb. fl. ind. 2. p. 256. cat. no. 2618. Nees in Lin. trans. 17. p. 42.) shrubby; lower leaves solitary: superior ones twin, ovate-oblong, acuminated at both ends, ciliated, hairy above, one smaller than the other; flowers fasciculately aggregate at the sides of the leaves; calyx somewhat 10-toothed; teeth subulate: alternate ones shorter. J? . G. Native of Nipaul. S. denticulatum, var. a, Blam. bijdr. p. 697. S. biflorum, D. Don, prod. fl. nep. p. 96, exclusive of many synonymes, and probably of Lour. coch. 1. p. 159. ? Corolla purple, or white. Berry globular, scarlet, ¼ an inch in diameter.

Thick-petalled Nightshade. Shrub 2 to 3 feet.

175 S. MOLLISSIMUM (Blum, bijdr. p. 698.) flowers fascicled at the sides of the leaves; teeth of calyx equal in length to the tube; leaves of two forms, tomentose beneath, the one ovate, and the other oblong. J?. S. Native of Java.

Very-soft Nightshade. Shrub.

§ 2. *Leaves solitary. Corolla plicate, 5-angled. Stamens sometimes unequal.*

176 S MOCINIANUM (Dun. syn. p. 23. sol. ed. 2d. ined. t. 43.^ stem herbaceous, pilose; leaves almost sessile, ovate-lanceolate, acute, pilose; peduncles solitary; calyx 10-cleft. ©.? H. Native of Mexico. Poir. suppl. 3. p. 757.—Moc. et Sesse, pi- mex. icon. ined. Nearly allied to *S. viridiflorum.* Peduncles axillary, longer than the leaves. Corolla violaceous, with acute angles. Anthers nearly sessile. Berry ovate-oblong, yellowish green.

Mocino's Nightshade. PI.

177 S. FI/GAX (Jacq. coll. 4. p. 123. icon. rar. t. 324. Dun. sol. 178. syn. p. 2Aj|ttem shrubby, dichotomous, divaricate; leaves lanceolate,jHoothish; peduncles solitary; calyx 10-toothed. ^2 • ˢ«-% Native of Caraccas. Lam. diet. 4. p. 282. Bark blackish, Toughish with dots. Peduncles from the divarication of the branches, or opposite the leaves. Calyx small, truncate, 10-striped. Corolla large, white, with a yellow 5-rayed star, as in *S. stellatum,* expanding about 5 in the morning, but closes in a short time afterwards, hence the specific name.

Fugacious-flowered Nightshade. Fl. May, July. Clt. 1816. Shrub 5 to 6 feet.

178 S. STELLA'TUM (Jacq. coll. 3. p. 254. and 5. t. 5. f. *2.* icon. rar. t. 325. Dun. sol. p. 178. syn. p. 24.) stem shrubby, scandent, flexuous; leaves ovate-lanceolate, glabrous, acuminated; peduncles generally twin; calyx unequally toothed. T?. w. S. Native country unknown. Shrub evergreen, glabrous, *green.* Peduncles sometimes solitary, and by threes. Corollas el^fent, large, blue, marked by a 5-rayed star, which is green-isjprand protuberant beneath, stretched out beyond the limb #Fthe corolla into acute points, as in *S.fugax, S. virgatum,* 4*id others. Berry globose, orange-coloured. Nearly allied Jo *S. geminatum,* and *S. retrofrdctum,* but differs in the larger Jfiowers and unequally-toothed calyx.

Starry-flowered Nightshade. Fl. June, July. Clt. 1805. Shrub climbing.

179 S. GEMINATUM (Vahl. eclog. 1. p. 21. Dun. sol. 177. syn. p. 24.) stem scandenU; leaves ovate, quite entire, glabrous, as well as the calyxes and pedicels; peduncles axillary, usually twin; calyx 10-toothed: teeth linear-subulate. f? . ^. S. Native of Cayenne. Branches terete, powdery, when examined by a lens. One of the peduncles is longer than the other. Corolla glabrous.

TWflowered Nightshade. Shrub climbing.

180 S. BIFLORUM (Lour. coch. 159.) stem shrubby; leaves ovate, villous; peduncles twin; calyx 10-cleft. f? . G. Native of China and Cochinchina, where it is called *Thicn-phao.* Dun. sol. p. 177. syn. p. 24. Leaves quite entire. Calycine segments subulate. Berry small, roundish, red.

Two-jlowercd Nightshade. Shrub 3 to 4 feet.

181 S. PHILLYREOI'DES (Dun. syn. p. 24. sol. ed. 2d. ined. t. 115. H. B. et Kunth, nov. gen. 3. p. 37.) stem shrubby, erect, dichotomous; leaves oblong, or lanceolate-oblong, tapering to both ends, acuminated, quite entire, glabrous above, and downy beneath; flowers alar, and lateral, 2 to 4 together; calyx somewhat 10-toothed. \ . S. Native of New Granada, in the valley of the river Magdalena, near Teneriffe and Badilla. Branchlets angular, downy. Leaves glabrous, and green above, but pale and downy beneath. Corollas size of those of *S. lycioides.* Teeth of calyx linear-subulate, remote: the alternate ones very small, and placed in the middle of the tube. Corolla sinuately 5-angled, marked by a violaceous star. Berry globose.

Phillyrea-like Nightshade. Shrub.

182 S. VIRGATUM (Lam. ill. no. 2310. Dun. sol. p. 174. t. 4. syn. p. 25.) stem shrubby; branches twiggy; leaves ovate-oblong, acute, tomentose beneath, as well as the peduncles and calyxes; peduncles numerous, filiform, axillary, and in the forks of the branches; filaments unequal. *? . G. Native of the Canary Islands. Tomentum stellate. Leaves quite entire. Calyx 10-cleft; segments joined by a pellucid membrane: alternate ones short. Corolla violaceous, marked by a 5-rayed star, tomentose outside. Stamens 5, one of which is longer than the others.

Twiggy Nightshade. Fl. June, Sept. Clt. 1820. Shrub 4 feet?

183 £. LE'NTUM (Cav. icon. 4. p. 4. t. 308.) shrubby, scandent; branches and under sides of the leaves clothed with starry hoary tomentum, but clothed with stellate down above; leaves ovate, acute, quite entire; extra-axillary flowers twin, and the terminal ones numerous; calyx 10-toothed: teeth linear-filiform. T?. w. S. Native of New Spain, Cav.; in the province of Caraccas, near Cura, in the valley of Aragua. Dun. sol. 175. syn. p. 25. H. B. et Kunth, nov. gen. amer. 3. p. 38. Solanum scandens, foliis tomentosis, Plum. cat. p. 4. ? Tourn. inst. p. 150. ?—Plum. ed. Burm. p. 242. t. 245. f. 3. ? Superior leaves twin. ? Corolla sinuately 5-lobed, violaceous, with a white star, downy outside. One of the stamens is twice as long as the other 4.

Pliant Nightshade. Fl. June, Sept. Clt. 1823. Shrub cl.

§ 3. *Leaves twin. Calyx slightly 10-toothed. Flowers fascicled, or twin at the sides of the leaves.*

184 S. DENTICULA'TUM (Blum, bijdr. p. 697. Nees in Lin. trans. 17. p. 41.) stem suffruticose; lower leaves solitary: superior ones twin, smoothish, the larger one oblong, acuminated at both ends, the smaller one subovate; flowers fasciculately aggregate at the sides of the leaves; calyx minutely 10-toothed, furrowed. J?. S. Native of Silhet; Java, in shady places on the higher mountains of Gede and Burangrang. There is a var. of this plant described by Blum, having the leaves, peduncles, and calyxes hairy; and another variety having the peduncles solitary, and the flowers tetrandrous from abortion.

Denticulated-calyxed Nightshade. Shrub.

§ 4. *Leaves solitary, rarely twin. Corollas 5-parted. Stamens equal.*

185 S. SCA'NDENS (Lin. suppl. 147. amoen. acad. 8. p. 253.) stem herbaceous, twining; leaves cordate, ovate, dependent,

very soft beneath; flowers sub-umbellate, terminal. Tj. ^ S. Native of Surinam. Dun. sol. p. 179. syn. p. 25. Racemes compound. Corolla rotate, with lanceolate, recurved segments. Berry globose, size of a cherry.

Climbing Nightshade. Fl. July, Aug. Clt. 1820. Shrub twining.

186 S. SIDEROXYLOIDES (Schlecht. in Linnaea, 8. p. *253.)* shrubby; branches flexuous, tomentose; leaves ovate, or oblong-ovate, entire, acute, or sub-acuminated, bluntish at the base, roughish above, and clothed with rough tomentum beneath; tomentum stellate, of a rusty yellow colour ; calyx hemispherical, 10-toothed: teeth short, obtuse; corollas white, downy outside ; berries globose, glabrous, *fy* • G. Native of Mexico, near Hacienda de La Laguna. Umbels sessile, axillary. Anthers regular. Pedicels and calyxes tomentose. Leaves very similar to those of the pear tree. There is an unnamed species very like this from Hayti. in Willd. herb. no. 4410.

Iron-wood-like Nightshade. Shrub.

187 S. LANUGINOSUM (Dun. syn. p. 25. sol. ed. 2d. ined. t. 116. H. B. et Kunth, nov. gen. amer. 3 p. *36.)* shrubby; branchlets tomentose; leaves ovate, acutish, subcordate, quite entire, beset with stellate hair above, but clothed with hoary, villous tomentum beneath ; peduncles tomentose, opposite the leaves, twin, or 3 together ; calyx 10-toothed, tomentose. *1?* . S. Native of Quito, near Mulalo, at the altitude of 1690 hexapods. Tomentum stellate. Berry size of a sloe, globose.

Woolly Nightshade. Shrub.

188 S. CHRYSOPHYLLUM (Dun. syn. p. 25. sol. ed. 2d. ined. t. 117. H. B. et Kunth, nov. gen. *3,* p. 39.) shrubby, scandent ; branches tomentose ; leaves elliptic, acute, quite entire, clothed with stellate pubescence above, and fuscescent tomentum beneath, of a golden rusty colour when young, as well as the branchlets ; peduncles subaxillary, solitary ; calyx 5-toothed. T2 . y^. S. Native of the kingdom of Quito. Tomentum stellate. Leaves 2 inches long : superior ones twin, unequal in size. Corolla 5-parted, with ovate, oblong segments.

Golden-leaved Nightshade. Shrub climbing.

189 S. LASIOPHYLLUM (Dun. syn. p. 25. sol. ed. 2d. t. 118. H. B. et Kunth, nov. gen. 3. p. 39.) shrubby; branches somewhat dichotomous, hispid from pili; leaves twin, oblong, subacuminated at both ends, quite entire, hispid above, but yellowish and softer beneath; peduncles alar and subaxillary, solitary or twin ; calyx 10-toothed. J?. S. Native of New Granada, on the Andes of Pasto, between Menezes and Zeindala, at the altitude of 1400 hexapods. Hairs simple. Calyx hispid ; teeth linear, filiform ; alternate ones a little shorter. Corolla whitish-violet, pilose outside ; with oblong-lanceolate segments.

Woolly-leaved Nightshade. Shrub 2 to 3 feet.

190 S. LINEATUM (Ruiz, et Pav. fl. per. 2. p. 31. t. 158. f. b.) stem shrubby ; leaves twin, ovate, acuminated, lined, villous beneath ; berries inclosed within the segments of the corolla, peduncled, interfoliaceous; calyx 10-toothed. J?. S. Native of Peru, in groves at Munna. Dun. sol. p. 180. Peduncles hairy. Calyx 10-cleft, hairy ; segments linear. Corolla white, length of calyx. Berry fuscous, size of a chick-pea.

Lined-leaved Nightshade. Shrub.

191 S. BIFORMIFOLIUM (Ruiz, et Pav. fl. per. 2. p. 32. 1.161. f. a.) stem suffruticose, flexuous ; leaves twin, oblong-lanceolate : the smaller ones orbicular; peduncles interfoliaceous ; calyx 10-toothed; berry inclosed within the segments of the calyx. >2 • S. Native of Peru, in groves at Chincao. Dun. sol. p. 180. syn. p. *26.* Peduncles usually twin, but sometimes 3-4-5 together. Calyx hispid; teeth long-linear. Corolla purplish-violet. Berry yellowish-red, size of a pea.

Two-formed-leaved Nightshade. Shrub.

192 S. ACUTIFOLIUM (Ruiz, et Pav. fl. per. 2. p. *S3.* t. 162. f. b. Dun. sol. p. 180. syn. p. 26.) stem suffruticose, flexuous ; leaves twin, or 3 together, lanceolate; peduncles interfoliaceous ; calyx 10-toothed. Tj • S. Native of Peru, in groves at Munna. Plant hairy. Leaves rather hispid on both surfaces, deflexed. Corolla white, 5-parted. Berry roundish, orange-coloured.

Acute-leaved Nightshade. Shrub.

SECTION II. ACULEATA. Prickly shrubs and plants.

SUBSECT. I. *Leaves entire, repand, or sinuately angular. Peduncles or racemes simple, or nearly so.*

§ 1. LEPROPHORA (from *Xewpog, lepros,* rough; and *(jjoptw, phoreo,* to bear.) Dun. sol. p. 181. *Stems and leaves white from leprous, powdery tomentum. Racemes lateral, seldom axillary or opposite the leaves, few-flowered. Prickles straight, acerose.*

193 S. ELEAGNIFOLIUM (Cav. icon. 3. p. 22. t. 243.) stem shrubby ; leaves discoloured : lower ones sinuated and prickly : superior ones entire, unarmed ; peduncles few-flowered. T? . G. Native of Chili. Dun. sol. p. 181. syn. p. 26. Old stems prickly : young ones unarmed. Prickles short. Leaves white beneath, and greenish-yellow above. Calyx 5-cleft. Corolla blue, large, clothed with powdery tomentum outside, like the rest of the plant. Berry globose, yellow, glabrous, size of a chick-pea. Leaves very like those of *Eledgnus angustifblius.*

Eleagnus-leaved Nightshade. Fl. June, July. Clt. 1823. Shrub 4 to 6 feet.

194 S. DEALBATUM (LindL hort. trans. 7. p. 52.) suffruticose, hoary from stellate, leprous tomentum all over; leaves oblong-lanceolate, obtuse, having the petioles and midrib prickly beneath ; lower leaves subsinuated : superior ones entire; racemes axillary, few-flowered; calyxes prickly. F? • @. Native of Chili. Corolla pale lilac. Allied to *S. eleagnifbliumi* and *S. le prd sum.*

Whitened Nightshade. Fl. June. Clt. 1824. Shrub 2 to 3 feet.

195 S. LEPROSUM (Ortega, dec. 9. p. 115. Dun. sol. 182. syn. p. 26.) stem shrubby; leaves discoloured, all sinuated, and prickly on both surfaces, hoary beneath ; peduncles few-flowered ; calyx prickly. % . G. Native of Chili. The whole plant is canescent from short tomentum. Stem prickly. Prickles small, reddish-yellow ; those on the calyx sometimes stellately pilose at top. Corolla large, pale blue, clothed with powdery down outside. Berry yellowish, size of a cherry. This species differs from *S. eleagnifolium* in the leaves being all sinuated and prickly ; and in the branchlets, peduncles, and calyxes being also prickly.

Leprous Nightshade. PI. 2 feet.

196 S. OBTUSIFOLIUM (Dun. syn. p. 26. sol. ed. 2d. t. 119. H. B. et Kunth, nov. gen. amer. 3. p. 40.) stem shrubby; branches prickly, and are, as well as the leaves, clothed with silvery tomentum; leaves oblong, obtuse, sinuately repand, prickly along the middle nerve beneath ; peduncles lateral, solitary, few-flowered, and are, as well as the calyxes, prickly. J? . G. Native of Mexico, near Regla; and Totonilco el Grande, at the altitude of 1200 hexapods. Tomentum stellate. Prickles yellow, short. Calyx 5-6-cleft. Corolla clothed with white tomentum outside, and blue inside, size of those of the potatoe ; segments oblong, acutish. Stamens *5-6.* Fruit unknown.

Obtuse-leaved Nightshade. Shrub.

197 S. FLAVIDUM (Torrey, in ann. lye. 2. p. 227.) suffruti-

cose, densely clothed with yellowish tomentum all over : branches and caly>es prickly ; leaves solitary, oblong, bluntish, sinuately repand : superior ones obsoletely sinuated; racemes opposite the leaves, usually 3-flowered. T? . G. Native of North America, but the exact locality is unknown. Stem armed with simple, scattered prickles. Racemes at the extremities of the branches. Calycine segments subulate. Corolla large ; lobes triangularly-lanceolate.

Yellowish Nightshade. Shrub.

§ 2. LEPROPHORIS AFFINIA. *The plants contained in this division are very like those of the last.*

198 S. FURFURA'CEUM (R. Br. prod. p. 446.) stem shrubby; prickles acerose ; leaves narrow-lanceolate, quite entire, furnished with a few prickles above, or unarmed, glabrous, smooth, but clothed with cinereous tomentum beneath ; umbels lateral, 2-4-flowered, sessile ; calyx unarmed. T? . S. Native of New Holland, within the tropic. Dun. sol. 182. syn. p. *26.*

Furfuraceous Nightshade. Shrub.

199 S. PARVIFOLIUM (R. Br. 1. c.) stem shrubby; prickles acerose ; leaves narrow-lanceolate, quite entire, flat, glabrous above, and furnished with a few prickles, but tomentose beneath, and unarmed, as well as the calyxes; umbels lateral, 2-4-Howered, sessile. *? . S. Native of New Holland, on the sea shore, within the tropic.

Small-leaved Nightshade. Shrub.

200 S. ORBICULA'TUM (Dun. syn. p. *27.* sol. ed. 2d. ined. t. 44. Poir. suppl. 3. p. 762.) stem prickly; prickles acerose, red ; leaves nearly orbicular, clothed with leprous tomentum on both surfaces, small; flowers twin or solitary, on short pedun-cles. ,11' ^ * 9' Native of New Holland. Branches greyish-yellow. Prickles long, tomentose at the base, one to each petiole. Leaves somewhat petiolate, unarmed, cream-coloured neiow, and greenish-grey above. Peduncles and calyxes clothed vwth rusty tomentum.

OrWcWar-leaved Nightshade. Shrub.

201 S.STELLI'GERUM (R. Br. prod. p. 445.) stem shrubby; prickles few, acerose; leaves entire, almost unarmed, lanceolate, glabrous above, smooth, grey and tomentose beneath; corymbs lateral, subumbellate, simple, nearly sessile; calyx unarmed. *?. G. Native of New South Wales, about Port Jackson. Dun. sol. p. 201. syn. p. 27. Flowers pale blue. Fruit red. Tomentum stellate.

Far. a; prickles of the stem much curved. J?. G. Stem and branches tomentose. Corolla pale purple. Stamens equal. Berry globose, scarlet. S. stelligerum, Smith, exot. bot. 2. p. 57. t. *88.*

Far.fi; prickles of the stem straight, f? . S. Native of New Holland, within the tropic, on the sea shore. Dun. sol. ed. 2d. ined. t. *57.* Tomentum on the under sides of the leaves rusty. Corolla villous outside, pale blue. Berry small, scarlet.

Star-bearing Nightshade. Fl. June, Aug. Clt. 1823. Shrub 3 feet.

202 S. DISCOLOR (R. Br. prod. p. 445.) stem shrubby; prickles setaceous, straight; leaves elliptic, subrepand, glabrous above, and tomentose beneath, cinereous, and are, as well as the calyxes, unarmed ; racemes lateral, many-flowered, undivided. J? . S. Native of New Holland, on the sea shore, within the tropic. Dun. sol. 183. syn. p. *27.*

Two-coloured leaved-Nightshade. Shrub.

203 S. DIANTHOPHORUM (R. Br. 1. c. but not of Lour.) nearly unarmed ; stem furnished with a very few acerose prickles, and sometimes there are no prickles ; leaves oblong-ovate, entire, tomentose, unarmed; peduncles lateral, 2-flowered or twin • calyx 5-cleft, acuminated. ^ . S. Native of New Holland', within the tropic, on the sea shore. Dun. sol. 183. syn. p. 27. Branches clothed with rusty-yellow, stellate tomentum, as well as the under sides of leaves. Leaves often twin, dark green above. Calyx woolly, longer than the corolla ; anthers violaceous.

Pink-bearing Nightshade. Shrub.

204 S. ELLI'PTICUM (R. Br. 1. c.) stem shrubby; prickles straight, tomentose at the base ; leaves oblong-oval, obtuse, entire, tomentose on both surfaces, and are, as well as the calyxes, prickly ; peduncles usually 3-flowered. J? . S. Native of New Holland, within the tropic, on the sea shore.

Elliptic-\eaved Nightshade. Shrub.

205 S. HORRIDUM (Dun. syn. p. *28.* sol. ed. 2d. ined. t. 46.) stem terete, pilose, prickly; leaves on long petioles, ovate-oblong, entire, villous on both surfaces, and prickly, as well as the peduncles, which are 1-flowered. T? . G. Native of New Holland. Poir. suppl. 3. p. 763. The whole plant is clothed with stellate hairs. Leaves greyish-green above, and cream-coloured beneath. Segments of corolla acute. Berry globose, size of a large cherry.

Horrid Nightshade. Shrub.

206 S. ECHINA'TUM (R. Br. prod. p. 447.) stem erect; prickles setaceous, straight, acerose ; leaves ovate-oblong, entire, unarmed, tomentose on both surfaces ; racemes opposite the leaves, simple; berry somewhat 4-celled, inclosed in the echinated calyx. *?. S. Native *of* New Holland, on the sea shore, within the tropic.

Echinated-calyxed Nightshade. Shrub.

207 S. RODSCHIEDII (Meyer, prim, esseq. p. 111.) stem shrubby ; leaves oblong, sinuated or entire, subcordate at the base, or attenuated, tomentose beneath, and prickly ; racemes lateral; calyxes mutic. T?. S. Native about the Essequibo, on the American continent. The whole plant, except the adult branches and genitals, is beset with elegant stellate hairs. "Branches, petioles, and leaves prickly; prickles solitary, compressed, yellow : rameal ones curved, the rest straight. Calycine segments short, bluntish. Corolla like that of *S. mammosum,* violaceous, clothed with tomentum outside, as well as the calyx. Berry size of a cherry.

Rodschiede's Nightshade. Shrub.

§ 3. PERSICVRUE (SO named from the leaves of most of the species resembling those of *Persica,* or the peach.) Dun. sol. 183. Leaves entire or repand, narrow, oblong-lanceolate. Racemes simple, elongated, extra-foliaceous ; pedicels secund, erect in the flowering state, but drooping in the fruit-bearing state. Corollas 5-parted.

208 S. RACEMOSUM (Jacq. amer. p. 50. t. *36.* ed. pict. t. 50. Lin. mant. 47.) stem unarmed, shrubby ; leaves lanceolate, repand, undulated, acute; corollas 5-parted. J?. S. Native of Martinico, on the declivities of mountains, Jacquin ; Surinam, Lin. Leaves shining, petiolate. Racemes length of leaves. Corolla white; segments deep, oblong-lanceolate. Berry red, size of a small pea.

Racemose-flowered Nightshade. Fl. July, Aug. Clt. 1781. Shrub 3 to 4 feet.

209 S. I'GNEUM (Lin. spec. p. 270.) stem shrubby ; leaves lanceolate, acuminated, revolute on both sides at the base ; corollas 5-parted. >?. S. Native of the Caribbee Islands', and Guiana. Jacq. hort. vind. t. 14. Aubl. guian, 1. p. 207. exclu-

sive of the syn. of Plum.—Burm. amer. 241. t. 245. f. 1.—Sloane, jam. 1. p. 38. t. 11. f. 3.—Plukn. aim. 350. pbyt. t. 225. f. 5. Solanum fruticbsum, lauri foliis, aculeatum, Plum, cat. p. 4. Tourn. inst. p. 149. Shrub sometimes prickly, and sometimes unarmed. Leaves clothed with stellate villi on both surfaces, but most so beneath. Prickles long, of a reddish, fiery colour, subulate, straight. Corolla white or purplish ; with long, narrow, reflexed segments. Berry red, size of a cherry, ex Poir ; yellowish, size of a pea, ex Jacq.

Far. fl, parvifōlium (Vahl. eclog. 1. p. *23.)* J? . S. Native of the Island of Santa Cruz. This differs from the species in habit; in the stem and branches being more slender ; in the leaves being much smaller, less acuminated ; and in the prickles being *2* or 3 times longer.

Fiery-spined Nightshade. Fl. March, Nov. Clt. 1714. Shrub 5 to 6 feet.

210 S. SUBARMATUM (Willd. enum. p. 240.) stem shrubby, rather prickly; leaves lanceolate, downy beneath, quite entire, having the margins revolute at the base ; racemes simple. T?. S. Native country unknown. Dun. sol. p. 185. syn. p. 28. Down stellate. Leaves glabrous above, having the midrib sometimes furnished with one prickle beneath. Corolla white, with lanceolate segments. This plant is sometimes to be found in the gardens under the name of *S. Bahamēnse.* According to Poiret it is perhaps a mere variety of *S. igneum.*

Half-armed Nightshade. Fl. May, June. Clt. 1820. Shrub 5 to 7 feet.

211 S. PERSICIEFŌLIUM (Dun. sol. p. 185. syn. p. *28.)* stem shrubby ; leaves oblong-lanceolate, narrow ; racemes simple ; corollas 5-cleft. P? . S. Native of the Caribbee Islands.—Burm. amer. p. 240. t. 244.—Plum. cat. 4. Stem scabrous, unarmed. Leaves prickly on the middle nerve beneath. Calyx unarmed. Berry globose, drooping. This species differs from *S. igneum* in the leaves being narrower.

Peach-leaved Nightshade. Shrub 4 to 6 feet.

212 S. BAHAME'NSE (Lin. spec. ed. 1st. p. 188. ed. 2d. p. 270.) stem shrubby ; leaves lanceolate, repand or sinuated, obtuse, with reflexed margins ; corollas 5-parted. T? . G. Native of Providence, one of the Bahamas. Dun. sol. p. 186. syn. p. 28.. S. fruticōsum, Mill. diet. no. 18.—Sloan, hist. p. 236. t. 145.—Dill, elth, 263. t. 271. f. 250. Stem and leaves prickly. Leaves villous. Prickles brownish, straight. Corolla bluish-purple, with narrow, reflexed segments. Berry size of a pea, yellowish. Said to be nearly allied to *S. polyacdnthum;* but the leaves are broader, and the flowers racemose, not solitary, &c.

Bahama Nightshade. Fl. June, July. Clt. 1732. Shrub 5 to 6 feet.

213 S. GRACILIFLŌRUM (Dun. syn. p. 29. sol. ed. 2d. ined. t. 47.) branches smoothish, prickly ; prickles straightish ; leaves ovate-oblong, unequal at the base, sinuated, prickly on both surfaces, rather pilose ; pili very minute, stellate, distant; racemes short, cymosely umbellate. J? • S. Native of Java. Prickles yellowish, rather villous at top. Pedicels and flowers slender. Calyx small, 5-toothed.

Slender-flowered Nightshade. Shrub.

214 S. DUNALIA'NUM (Gaud, in Freyc. voy.pt. bot. p. 448. t. 58.) shrubby ; leaves elliptic, acute, running into the petioles at the base, quite entire, glabrous, spiny on the middle nerve beneath, as well as on the branches and petioles; flowers corymbose, tetrandrous ; calyx glabrous, with ovate, acute lobes ; corolla clothed with powdery tomentum outside, with ovate-lanceolate segments; berries globose, *h* . S. Native of the Moluccas.

DunaVs Nightshade. Shrub.

215 S. MŌLLE (Dun. syn. p. 28. sol. ed. 2d. ined. t. 120. H. B. et Kunth, nov. gen. amer. 3. p. -40.) stem suffruticose, prickly ; branches unarmed, clothed with hoary tomentum, as well as the under surfaces of the leaves, but the upper surfaces of the leaves are clothed with canescent down, they are oblong, acuminated, sinuated, prickly on the nerve beneath; racemes almost opposite the leaves, subdichotomous, and are, as well as the calyxes, unarmed. T? . S. Native of the province of Caraccas, near St. Geronimo del Pyrital, on the banks of the river Guarico. Prickles straight, yellowish. Down stellate. Corolla white, clothed with hoary tomentum outside. Berry round, variegated with white and green, ex Bonpl.

%* Nightshade. Fl. June, Sept. Clt. 1818. Shrub 4 to 5 feet.

§ 4. POLY'GAMA (from *TTOXVQ, polys,* many ; and *yafxog, gamos,* a marriage; in reference to the greater number of male flowers than of hermaphrodite ones.) ***Flowers small: hermaphrodite ones solitary, on short peduncles: male ones racemose. Leaves entire, or repand.***

216 S. POLYACA'NTHUM (Lam. ill. no. 2377. Poir. diet. 4. p. 304.) very prickly ; prickles acicular ; leaves linear-lanceolate, nearly sessile, obtuse, villous on both surfaces; peduncles axillary, 1-flowered. T? . S. Native of the Island of Dominica. Vahl, eclog. 1. p. 24. Dun. sol. p. 186. syn. p. 29. S. parviflōrum, Cav. icon. 3. p. 19. t. 236.—Burm. amer. p. 218. t. 224. f. 1. exclusive of the syn. of Lin. and Dill.—Plum, mss. 5. p. 51. ex Burm. 1. c. Villi stellate, yellowish. Prickles straight, yellowish-brown at top. Corollas small, white ; segments linear, villous outside. Berry globose, glabrous, shining, size of a coriander seed.

Many-spined Nightshade. Fl. June, Sept. Clt. 1821. Shrub 3 to 4 feet.

217 S. MICROPHY'LLUM (Dun. sol. p. 187. syn. p. 29.) stem branched ; leaves small, ovate, entire, rather tomentose; flowers quadrifid, tetrandrous. J?. S. Native of the Caribbee Islands. Aquartia microphylla, Lam. ill. no. 1604. t. 82. f. 2. Poir. suppl. 1. p. 410. Habit of *S. lycioides.* Prickles acicular, sometimes solitary, and sometimes twin at the base of the branches, or infrafoliaceous. Leaves size of those of wild thyme, or hardly larger, acute or obtuse. Peduncles extrafoliaceous, very short, solitary or twin. Segments of corolla linear.

Small-leaved Nightshade. Shrub.

218 S. AQUA'RTIA (Dun. sol. 187. syn. p. 29.) stem branched, prickly; leaves subovate, obtuse, entire, tomentose ; flowers 4-cleft, tetrandrous. J? . S. Native of St. Domingo, at Bayaba, on rocks by the sea side. Aquartia tomentdsa, Lam, ill. no. 1603. t. 62. f. 1. Poir. diet. 1. p. 217. Aquartia aculeata, Jacq, amer. t. 15. Branches armed with short, subulate prickles, but almost unarmed in the young state. Peduncles lateral, 1-flowered, very short. Calyx tomentose; segments unequal. Corolla white, tomentose outside; segments linear, bluntish. Berry globose, yellow, shining, size of a small pea.

AquarVs Nightshade. Fl. ? Clt. 1819. Shrub 4 feet.

219 S. CROTONOIDES (Lam. ill. no. 2383. Poir. diet. 4. p. 306.) stem shrubby; leaves discoloured, elliptic-lanceolate, glabrous above, and tomentose beneath, unarmed ; racemes short; flowers quadrifid, tetrandrous. \ . S. Native of the Caribbee Islands. Dun. sol. p. 188. t. 13. syn. p. 29. Branches tomentose, rusty at top. Prickles acicular, few, straight. Peduncles lateral, clothed with rusty tomentum, forked and cymose at top. Segments of corolla linear.

Croton-like Nightshade. Shrub 3 to 4 feet.

220 S. RETICULA'TUM (Dun. syn. p. *29.* sol. ed. 2d. ined. t. 48.) branches tomentose at top, powdery; leaves ovate-lanceolate, unequal, quite glabrous and reticulated above, nerved be-

neath, and clothed with leprous tomentum ; peduncles 1-flowered ; flowers quadrifid ? J?. S. Native of St. Domingo. Poir. suppl. 3. p. 764. Habit of *S. crotonoides,* prickly or unarmed. Berries globose, mucronate.

Reticulated-leaved Nightshade. Fl. June, July. Clt. 1820. Shrub 3 to 4 feet.

221 S. POLY'GAMUM (Vahl, symb. 3. p. 39. t. *55.* Dun. sol. 188. ed. 2d. ined. t. 49. syn. p. 39.) stem shrubby; leaves ovate-oblong, nearly entire, rather scabrous above, but tomentose beneath. J?. S. Native of the Island of Santa Cruz. Branches, and under surfaces of leaves, and peduncles, clothed with rusty tomentum. Prickles straight, reddish-yellow. Leaves subcordate at the base, unequal, 2-3 incites long. Flowers small, cymose. Calyx and corolla tomentose outside, 4-5-parted. Stamens 4-5. Some of the flowers are male, and some hermaphrodite, as has been observed by D. West, ex Vahl.

***Polygamous-ftowered* Nightshade. Shrub.**

222 S. INTEGRIFÒLIUM (Poir. diet. 4. p. 301. Dun. sol. p. 189.) stem shrubby; leaves ovate, subrepand, rather tomentose beneath; umbels axillary. *?. S. Native of the Mauritius. Stem prickly, as well as pilose. Leaves sometimes twin, sometimes aggregate, smoothish above, but furnished with distant, minute pili, and prickles ; prickles few, small. Calyx villous, 5-toothed. Corolla small, whitish. Berry globose, yellowish, size of a grape, ex Poir.

Entire-leaved Nightshade. Shrub.

§ 5. ERIOPHY'LLA (from *epiov,erion,* wool; and <*f*>*v**ov*ƒ *phyllon,* a leaf; leaves woolly.) Dun. sol. p. 189. *Leaves repand,* ***angular or sinuated, woolly on both surfaces. Peduncles solitary, many-flowered; or aggregate,* 1 *-flowered, short. Flowers small.***

223 S. HI'RTUM (Vahl, symb. 2. p. 40. icon. 3. t. 21.) stem shrubby ; leaves cordate, angular, tomentose, prickly; peduncles lateral, aggregate, and are, as well as the calyxes, hairy. *? . S. Native of Trinidad. Dun. sol. p. 189. syn. p. 30. Prickles small, straight, acicular. Stem tomentose at top. Leaves a hand long, whitish beneath. Peduncles supra-foliaceous, 1-flowered. Calyx and corolla hairy outside; three of the segments of the corolla are longer than the other two.

Hairy Nightshade. Fl. June, July. Clt. 1821. Shrub.

224 S. CORDIFÒLIUM (Dun. syn. p. 30. sol. ed. 2d. ined. t. 135.) stem hairy, prickly ; leaves on long petioles, cordate, angularly repand, villous on both surfaces, unarmed; racemes simple, lateral. T? • S. Native of Brazil, at Rio Janeiro. Poir. suppl. 3. p. 764. The whole plant is clothed with stellate and simple, soft, rust-coloured hairs. Leaves unequal at the base. Segments of corolla equal. This species differs from *S. Mr turn,* in the leaves being unarmed ; in the flowers being racemose ; and in the corolla being regular.

Heart-leaved Nightshade. Shrub.

225 S. ERIOPHY'LLUM (Dun. syn. p. 30. sol. ed. 2d. ined. t. 50.) branches clothed with white tomentum, prickly; leaves clothed with white tomentum on both surfaces, ovate, sinuated, obtuse, on short petioles ; calyxes woolly, subcampanulate. J?. G. Native of New Holland. S. lasiophýllum, Poir. suppl. 3. p. 764. Prickles small, slender. Segments of calyx obtuse, **rarely prickly. Corolla blue, pentagonal, the star villous outside. Berry globose.**

***Woolly-leaved* Nightshade. Shrub.**

226 S. TOMENT6SUM (Lin. spec. ed. 1st. p. 188. ed. 2d. p. *<>69~)* stem shrubby, prickly ; prickles acerose; leaves cordate, subrepand, undulated, densely tomentose on both surfaces ; tender parts clothed with purplish powder. *hc* . S. Native of North America, ex Lin. spec. ed. 1st.; Ethiopia, ex Lin. spec ed. *2d.*; Guiana, ex Aubl.; Peru, where it is called *Hormis,* ex Ruiz, et Pav. ; Cape of Good Hope, ex ThunB. pro. p. *36.* Aubl. guian. 1. p. 216. Ruiz, et Pav. fl. per. 2. p. 4. Dun. sol. p. 190. syn. p. *30.*—Sabb. hort. rom. 2. t. 58. Triumf. prael. 46. t. 6.—Bocc. sic. 8. t. 5.—Plukn. aim. 351. t. 316. f. 2. ? The whole plant is densely clothed with greenish-yellow tomentum. Leaves usually 3 inches long, and about 1 inch broad, sometimes unarmed, sometimes prickly beneath. Prickles straight, yellowish-green. Racemes shorter than the petioles, at length drooping. Corolla bluish-violet. Berry subglobose, rather tomentose while young; but glabrous, and of a dirty orange colour, and about the size of a gooseberry when mature.

Tomentose Nightshade. Fl. June, July. Clt. 1662. Shrub 2 to 3 feet.

227 S. HY'BRIDUM (Jacq. vind. 2. t. 113. Dun. sol. 191. syn. p. 30.) stem shrubby, prickly; leaves ovate, almost unarmed, acute, repand ; the tender parts clothed with violet powder on the back and margins. J? . S. Native of Guinea. Leaves repandly angular, pale green, undulated, unequal at the base. Peduncles clothed with violet tomentum : some umbellate, and others 1-flowered. Corolla pale blue; segments 5-10. Some of the flowers are sterile. Berry roundish, depressed, orange-coloured, pendulous. Prickles strong, straight or recurved, sometimes wanting on the leaves. Perhaps only a variety *of S.* ***tomentdsum.***

Hybrid Nightshade. Fl. June, July. Clt. 1815. Shrub 2 to 3 feet.

228 S. COCCINEUM (Jacq. misc. 2. p. 239. icon. rar. 1. t. 43.) stem shrubby, prickly; leaves ovate, somewhat cordate, repand, tomentose ; berries scarlet. \ • S. Native country unknown, and probably of garden origin. Dun. sol. 191. syn. p. 31. S. tomentòsum, var. coccineum, Willd. spec. 1. p. 1045. Pers. ench. 1. p. 228. Prickles straight, subulate, brown. Leaves green, sometimes prickly on the middle nerve and petioles. Racemes opposite the leaves, simple, tomentose. Corolla white or purplish. Calycine segments ovate-lanceolate, acute. Berry pea-shaped, red at first, but at length dirty white, ex Jacq. It is very like *S. tomentdsum,* but smaller in all its parts, and less tomentose.

Scarlet-herried Nightshade. Fl. June, July. Clt. 1810. Shrub 2 to 3 feet.

229 S. BREVI'PILUM (Dun. sol. p. 191. t. 21. syn. p. 31.) stem shrubby ; leaves twin, sessile, obtuse-angled, tomentose on both surfaces; calyx 5-parted. T?. S. Native of the West Indies ; as of St. Thomas and Porto Rico. This species differs from *S. Jamaicense* in the peduncles, pedicels, and calyxes being unarmed ; and in the calyx being 5-parted, not 5-toothed. Every part of the plant is clothed with stellate tomentum. Leaves of a rusty yellow colour on both surfaces, often unarmed.

Short-haired Nightshade. Shrub 4 to 6 feet.

230 S. JAMAICE'NSE (Swartz, fl. ind. occ. 1. p. 454.) stem shrubby; leaves twin, cuneated, broadest in the middle, and obtuse-angled, tomentose on both surfaces, as well as the rachi and calyxes ; calyx 5-toothed ; prickles reflexed. T?. S. Native of Jamaica and Hispaniola, among rubbish. Dun. sol. 191. syn. p. 31. Stem and midrib of leaves beneath furnished with strong prickles. Racemes lateral, much shorter than the leaves, simple, many-flowered ; flowers pedicellate, subcymose. Corolla small, pale blue or white, with reflexed segments, tomentose beneath. Berry round, black when ripe, size of a red currant.

Jamaica Nightshade. Fl. June, July. Clt. 1818. Shrub 6 feet.

231 S. TOXICA'RIUM (Lam. diet. 3. p. 309. Dun. sol. 193. ed. 2d. ined. t. 50. syn. p. 31.) stem shrubby, prickly; leaves lobately angular, tomentose, oblique at the base, emarginate,

furnished With scattered prickles on both surfaces; racemes sessile, cymose; segments of corolla sub-lanceolate. J?. S. Native of Guiana. Richard, act. soc. par. ex Poir. suppl. 3. p. 764. S. Juripēba postĕrior, Pis. bras, book 4. chapt. 41.? Prickles of the stto large, recurved. Leaves usually twin. Peduncles, pedicels^ calyxes, and outside of corollas clothed with stellate tomenitum, like the under surfaces of the leaves. Root poisonous.

Poisonous Nightshade. Shrub.

232 S. CUNEIFŌLIUM (Dun. sol. p. 193. t. 22. syn. p. 31.) stem shrubby; leaves twin, long-cuneated, sinuately angular above; angles acute, but sometimes the leaves are nearly entire, ^ with obtuse angles; racemes short. P?. S. Native of Cayenne: S. crdceum, Dun. sol. 241. S. dubium, Dun. sol. p. 240. S. Jamaicense, Mill. diet. no. 71.—Sloan, hist. p. 236. t. 144. f. 3. —Plukn. phyt. t. 226. The whole plant clothed with rusty stellate tomentum. Branches and base of midrib of leaves prickly; prickles strong, reflexed, tomentose at the base. Leaves unequal: largest ones 4-5 inches long, and the smaller ones 2-3 inches long. Pedicels longer than the peduncle, slender. Flowers small. Calycine segments long, subulate, prickly. Corolla white, 5-cleft. Berry globose, reddish yellow.

Wedge-leaved Nightshade. FL June, July. Clt. 1818. Shrub 3 to 4 feet.

233 S. HETERŌTRICHUM (Dun. sol. p. 192. t. 20. syn. p. 31.) stem tomentose; leaves twin, sessile, ovate, rather angular, tomentose from stellate pili; nerves bullate, beset with simple hairs. ^. S. Native of tropical America. Branches clothed with long yellowish hairs, which are stellate at top. Prickles slender, recurved. Leaves yellowish beneath, and rather rusty above; nerves furnished with a few small prickles beneath. Racemes short, simple, many-flowered, beset with stellate tomentum, as well as the outside of the corollas and calyxes. Calycine segments linear-lanceolate, long. Corolla 5-parted, with almost linear segments. Berry globose.

Variable-haired Nightshade. Fl. June, July. Clt. 1824. Shrub 3 to 4 feet.

234 S. WILLDENOVIA^NTTM; tomentose; stem shrubby, prickly; leaves twin, angular, cuneated; umbels extra-foliaceous, sessile; peduncles and calyxes hispid. T?. S. Native of Porto Rico, Desf. S. cuneifōlium, Willd. herb, ex Roam, et Schultes, syst. 4. p. 623, but not of Dun.

Willdenow's Nightshade. Shrub.

§ 6. MICRACA'NTHA (from *jMKpog, micros,* small; and ακανθα, *akantha,* a spine; in reference to the small, short, recurved prickles.) Dun. sol. p. 193. *Stem shrubby, prickly; prickles small, short, recurved. Leaves lanceolate, entire, or sinuately angular; the middle nerve prickly beneath. Racemes simple, cymose, extra-axillary,*

235 S. SCA^BRUM (Vahl. eclog. 1. p. 22.) stem shrubby; branches flexuous, prickly, glabrous; leaves usually by threes, oblong, acute, sinuately angular, clothed with stellate down above, and stellate pili beneath, having the nerve prickly; racemes lateral, few-flowered, and are, as well as the calyxes, prickly. P?. S. Native of Caraccas, near San Juan, and other parts of tropical America. Dun. sol. p. 193. ed. 2d. t. 121. syn. p. 31. H. B. et Kunth, nov. gen. 3. p. 41. S. adhsĕrens, Willd. rel. ex Rcem. et Schultes, syst. 4. p. 669. Prickles scattered, recurved, yellowish. Calyx 5-cleft. Corolla white, tomentose outside; segments lanceolate-linear. Berry small, globose.

Scabrous Nightshade. Shrub.

236 S. HETEROPHY'LLUM (Lam. ill. no. 2360. Poir. diet. 4. p. 301. no. 64.) leaves by threes, unequal, scabrous above, and rather tomentose beneath; racemes and calyxes unarmed. J?. S. Native of Guiana. Dun. sol. p. 205. ed. 2d. t. 62. syn. p. 32. S. acanthifōlium, Hort. Prickles strong, sub-recurved. Leaves large, with blunt lobes, prickly on the midrib. Pedicels and calyxes villous. Calycine segments ovate, obtuse. Corolla large, divided to the base into lanceolate-linear, obtuse segments. Fruit-bearing peduncles reflexed. Berry round, size of a pea.

Variabletifyved Nightshade. Shrub.

237 SJHA-TURE'NSE (Dun. syn. p. 32. sol. ed. 2d. ined. t. 122. H. Bv«e*-Kunth, nov. gen. amer. 3. p. 41.) shrubby; branches prickly, and clothed with rusty tomentum; leaves twin, elliptic-oblong, acuminated, quite entire, beset with stellate hairs above, and stellate pili beneath; midrib of leaves, as well as the calyxes, prickly; racemes extra-axillary, simple, unarmed. J?. S. Native on the banks of the Orinoco, near the cataract of Ature. Prickles compressedly conical, subulate, and recurved at top, shining. Leaves unequal in size, greenish above, and fuscescent beneath, 6 inches long. Racemes clothed with rusty tomentum, as well as the calyxes and outside of corolla. Calyx prickly.

Ature Nightshade. Shrub.

238 S. NEMORE'NSE (Dun. sol. p. 194. syn. p. 32.) stem shrubby, scandent; leaves petiolate, twin, the larger one oblong, sinuately angular, and the smaller one ovate, lanceolate, quite entire; racemes filiform, very long. J?. ^. S. Native of Peru, in groves at Chincao and Cuchero, where it is called *Rocotito de Monte.* S. laciniatum, Ruiz, et Pav. fl. per. 2. p. 40. t. 177. f. a. Pers. ench. 1. p. 228, but not of Ait. Branches angular, prickly; prickles small, recurved, yellowish. Leaves nearly sessile, prickly on the back. Peduncles prickly, hanging in the fruit-bearing state. Calyx small. Corolla blue. Berry ovate-globose, size of a small pear, golden yellow.

Grove Nightshade. Shrub climbing.

239 S. VOLU'BILE (Swartz. fl. ind. occ. 1. p. 458. Pers. ench. 1. p. 226, exclusive of the syn. of Lam. and Jacq.) stem shrubby, scandent; leaves angular, with denticulated margins; racemes lateral; calyxes prickly. T?. $_{KJ}$. S. Native of Hispaniola, in woods. Dun. sol. p. 195. syn. p. 32. S. scandens, Swartz. prod. p. 47, but not of Lin. Plum. mss. t. 4. f. 32. ex Aubl. guian. 1. p. 217.? Stem prickly; branches terete. Leaves 3-4 inches long, or a span, ovate-lanceolate, rough above, and hispid from rusty hairs beneath; petioles and midrib prickly; prickles small, recurved. Calyx 5-toothed, clothed with rusty down, prickly, reflexed. Corolla large, bluish, 5-parted, tomentose outside, with long segments. Berry umbilicate.

Twining Nightshade. Fl. June, July. Clt. 1823. Shrub climbing.

240 S. LANCEZEFŌLIUM (Jacq. icon. rar. 2. t. 329. coll. 2. p. 286.) stem shrubby, scandent; leaves twin, lanceolate-oblong, attenuated at both ends, rather roughish, prickly on the midrib and petioles beneath; racemes short, unarmed. P2. S. Native of tropical America. Dun. sol. p. 195. syn. p. 32. S. sarmentdsum, Lam. ill. no. 2385. Poir. diet. 4. p. 307, exclusive of the syn. of Swartz. Branches sarmentose, green and shining, rather villous, as well as the stem and both sides of the leaves; hairs obsolete, starry. Leaves unequal in size, 4-8 inches long, sometimes entire, and sometimes sinuately angular, shining above, but paler beneath. Prickles solitary, or by pairs, yellowish, small, recurved. Racemes rather villous, as well as the outside of the calyxes and corollas. Pedicels cymose, approximate. Calyx 4-5-parted, with subulate segments. Corolla white, 4-5-parted, with lanceolate, acute segments. Anthers 4-5, yellow.

Var. /3, tetrdndrum; flowers tetramerous, tetrandrous. J?. $_{w}$. S. Native of Cayenne, S. flexudsum, Vahl. eclog. 1. p, 22.

Lance-leaved Nightshade. Fl. July, Aug. Clt. 1816. Shrub climbing.

241 S. AMBIGUUM (Dun. syn. p. 32. sol. ed. 2d. ined. t. 123.) branches scandent, pilose ; lower leaves solitary : superior ones twin, ovate-elliptic, angular, a little sinuated, rather scabrous from pili on both surfaces, having the midrib prickly; racemes simple, unarmed. I? . ^. S. Native country unknown.

Ambiguous Nightshade. Shrub climbing.

242 S. MICRACA'NTHUM (Lam. ill. no. 2382. Poir. diet. 4. p. 306.) stem shrubby ; leaves ovate-lanceolate, acuminated, rather tomentose beneath; prickles small, few, recurved; racemes short. Tj • S. Native of Guadaloupe, Brazil, and Cayenne. Dun. sol. p. 196, exclusive of the syn. of Vahl, syrnb. p. 32. Branches rather villous, or tomentose at top. Down stellate. Leaves green above, but rough from minute stellate hairs, but tomentose beneath, as well as the petioles, peduncles, and outside of the corollas and calyxes. Branches, petioles, and midrib of leaves beneath prickly ; prickles sometimes twin. Racemes lateral; pedicels cymose. Calyx .5-toothed. Corolla deeply 5-cleft. Berry size of a chick pea.

Small-spined Nightshade. Shrub.

243 S. BRACHYA'NTHUM (Dun. syn. p. *32.* sol. ed. 2d. ined. t. 124. H. B. et Kunth, nov. gen. amer. 3. p. 42.) arboreous; branches prickly; branchlets tomentose; leaves twin, elliptic, acute at both ends, quite entire, puberulous above, but clothed with hoary fuscescent tomentum beneath, and prickly on the midrib ; racemes lateral, simple ; pedicels and calyxes prickly. *?. S. Native of New Andalusia, on the declivity of Mount Cocollar, at the altitude *of* 480 hexapods. Down and tomentum stellate. Prickles short, recurved. Pedicels long, unilateral, and are, as well as the calyxes, prickly. Racemes, outside of corollas, and calyxes clothed with hoary tomentum. Calyx 5-parted ; segments obovate, cuspidate, cohering. Corolla 5-parted, with linear-oblong, acute segments, about the size *of* those of *Ornithogalum luteum.* This species differs from *S. micracdnthum,* Lam. in the leaves being tomentose beneath, and in the pedicels and calyxes being prickly.

Short-flowered Nightshade. Tree 30 feet.

244 S. JUSSIJE'I (Dun. syn. p. *33.* sol. ed. £d. ined. t. 52.) leaves solitary, ovate-lanceolate, smoothish above, but rather tomentose and prickly on the midrib beneath ; racemes simple, cymose longer than the petioles. Tj . S. Native of Rio Janeiro, Commerson. Poir. suppl. 3. p. *767.* Prickles short, recurved. Down and tomentum stellate. Peduncles, pedicels, and calyxes woolly. Calyx 5-toothed. Corolla deeply 5-cleft; segments ovate-lanceolate. Ovarium tomentose, powdery.

Jussieu's Nightshade. Shrub.

245 *S. JAVITE'NSE (H. B. et Kunth, nov. gen. amer. 3. p, 42.) shrubby ; branches prickly; branchlets clothed with fine hoary tomentum; leaves solitary, oblong, acute, quite entire, clothed with stellate down on both surfaces, rather prickly on the midrib beneath; racemes lateral, simple ; pedicels and calyxes unarmed. J?. S. Native on the banks of the Orinoco, and the Tuamino, near Carichana and Javita. S. monachophyllum, Dun. syn. p. 33. sol. ed. 2d. ined. t. 125. Hairs and tomentum stellate. Prickles conical, recurved at top, shining, yellowish. Pedicels unilateral, clothed with stellate down, as well as the calyxes. Calyx 5-parted ; segments subobovate, cuspidate. Corolla and stamens like those of *S. brachydnthum.* It differs from *S. Jussiafi* in the leaves being on short petioles, entire, oblono- downy *on* both surfaces, often unarmed, with the middle nerve° rather prickly ; the prickly racemes and flowers smaller.

Javita Nightshade. Shrub.

246 S. UMBROSUM (Dun. syn. p. *33.* sol. ed. 2d. ined. t. 126. H. B. et Kunth, nov. gen. amer. 3. p. 43.) shrubby scandent; branches prickly, and are, as well as the under surfaces of the leaves, clothed with hoary villous tomentum: upper surfaces villous; leaves solitary, or twin, oblong, acuminated, quite entire ; racemes extra-axillary, bifid ; peduncles and midribs of leaves beneath prickly ; pedicels and calyxes unarmed. ^ . S. Native of New Andalusia, in bushy places near Cumanacoa". Hairs and down stellate, simple. Prickles scattered, small, subulate, yellowish, recurvedly reflexed. Pedicels unilateral. .Calyx villous, 5-parted ; segments obovate, cuspidate, cohering. Corolla hispid from stellate pili outside, with linear, acutish segments.

Shaded Nightshade. Fl. June, July. Clt. 1825. Shrub cl.

247 S. JURIPE'BA (Rich. act. soc. par. p. 107. Dun. sol. p. 196. t. 15. syn. p. 33.) shrubby; branches prickly, rather pilose; leaves solitary, elliptic-oblong, acute, almost quite entire, clothed with stellate pili on both surfaces, prickly on the midrib beneath : superior leaves twin; racemes lateral and terminal, almost sessile, and are, as well as the calyxes, unarmed. J? . S. Native of Cayenne; and *of* the Island Pararumo, in the Orinoco, and near the cataract of Ature, on the banks of the Orinoco. S. obscurum, Vahl, symb. p. 41. Willd. spec. 1. p. 1046. Juripeba prior, Pis. bras. lib. 4. cap. 41. S. styracifolium, Willd. rel. ex Rcem. et Schultes, syst. 4. p. 663.—Plum. mss. t. 4. f. *32,* ex Dunal. Hairs or down stellate. Leaves canescent beneath. Flowers unilateral. Corolla violaceous, ex Bonpl. white inside, and purple outside, ex Plum. Prickles on the branches recurved, on the midribs of leaves straight. Calyx 5-cleft, with broad, mucronulate segments. Corolla 5-parted, with long, linear segments.

Juripeba Nightshade. Shrub.

248 S. RUBIGINOSUM (Vahl. eclog. *2.* p. 17. icon. t. 13.) shrubby, clothed with rusty stellate tomentum all over ; prickles recurved ; leaves elliptic, acute, quite entire, glabrous above, and tomentose beneath ; cymes terminal. T? . S. Native of Cayenne. Dun. sol. p. 197. syn. p. *33.* Branches, petioles, and midribs of leaves beneath prickly. Leaves 3-4 inches long, obscure green above. Peduncles bifid; pedicels reflexed at first. Calyx 5-cleft, with linear-lanceolate segments. Corolla 5-cleft, with sublinear segments.

Rusty Nightshade. Fl. June, July. Clt. 1821. Shrub.

249 S. VELUTINUM (Dun. syn. p. *33.* sol. ed. 2d. ined. t. *53.)* stem scandent, ? tomentose ; leaves ovate-oblong, unequal at the base, acute, clothed with silky tomentum, furnished with a few prickles beneath ; racemes terminal, few-flowered. J? . *Ky,* ? S. Native of Cayenne. This species differs from *S. rubigindsum* in the leaves being silky on both surfaces, in the hairs being simple, but yellowish. Prickles short, recurved. Leaves yellowish green above, but whiter beneath. Racemes villous. Calycine segments oblong, acute, and are, as well as the corolla, villous outside.

Velvety Nightshade. Shrub climbing.

250 S. CORIVCEUM (Dun. sol. p. 197. t. 14. syn. p. *33.)* shrubby, scandent; leaves glabrous, lanceolate-elliptic, acute; racemes lateral, simple, equal in length to the leaves. I? . w. S. Native of Cayenne. Branches terete, powdery, as well as the young leaves, peduncles, and pedicels. Leaves sometimes twin, on short petioles 4 inches long, coriaceous, sometimes prickly on the midrib. Prickles short, recurved. Peduncles sometimes bifid ; pedicels secund. Corolla large, blue. Calyx coriaceous, 5-toothed ; teeth roundish, mucronate. Stigma 2-lobed.

Coriaceous-leaved Nightshade. Shrub climbing.

SUBSECT. II. SUBINE'RMIA. *Stem prickly at the base. Leaves sinuately angular•, or entire. Racemes many-parted; pedicels cymose. Flowers numerous, many of which are abortive; in the fertile /lowers the style is longer than the anthers; in the*

sterile flowers the style is the length of the filaments. Corollas 4>-5-6-cleft. Berries 4-celled. a. Anthers unequal.

251 S. BONARIE'NSE (Lin. spec. 264, exclusive of the syn. of Plum.) shrubby, almost unarmed; leaves ovate-oblong, sinuately repand, smoothish ; racemes corymbose, lateral, or extrafoliaceous. ^ • H. Native of Buenos Ayres. Dun. sol. 198. syn. p. 34.—Dill. elth. p. 364. t. 272. f. 351. Stem green, prickly at the base: adult ones unarmed. Leaves sometimes entire, rarely prickly. Corymbs large. Calyx 4-5-cleft; segments subulate. Corolla large, white, downy outside. Berry gk bose, yellow ? 4-celled, size of a chick pea. Root creeping.

Buenos-Ayrean Nightshade. Fl. June, Sept. Clt. 1727. Shrub 6 to 10 feet.

252 S. FASTIGIA'TUM (Willd. enum. p. 235.) shrubby, almost unarmed ; leaves ovate-oblong, entire, or sinuately repand, downy ; racemes corymbose, terminal. ^ . G. Native country unknown. Dun. sol. p. 198. t. 16. t. 2. p. D. syn. p. 34. Poir. suppl. 3. p. 770. Jacq. eclog. t. 6. Stem usually unarmed, but sometimes prickly. Branches green. Leaves rarely prickly, sometimes entire, scabrous from short stellate pili. Flowers large, some fertile, and some sterile. Calyx 4-5-6-cleft; segments acute. Corolla large, 4-5-6-cleft, pale blue, marked by a yellow star inside. Anthers 4-5-6, yellow. Berry globose, 4-celled, orange yellow at maturity, size of a chick pea.

Fasligiate-fiowered Nightshade. Fl. June, July. Clt. 1818. Shrub 4 to 5 feet.

253 S. P6KA (Dun. syn. p. 34. ed. 2d. ined. t. *56.)* branches nearly glabrous, prickly; leaves ovate-lanceolate, almost entire, or sinuately angular, scabrous on both surfaces, rather tomentose beneath, unarmed ; racemes short, lateral, few-flowered. T?. S. Native of Java, Leschenault. Branches prickly towards the top; prickles short, straight, slender, rarely recurved. Racemes bifid, unarmed, beset with rusty hairs. Calyx 5-cleft. Corolla woolly outside, 5-cleft; with lanceolate, acute segments. Down and hairs stellate.

Poka Nightshade. Shrub.

254 S. OPORINUM (Willd. enum. 1. p. 238. Poir. suppl. 3. p. 768.) stem shrubby, prickly at bottom ; leaves oblong-lanceolate, repandly angular, or entire ; racemes cymose, lateral, and terminal. 1?. G. Native of Mexico. ? S. macrophyllum, Hort. monsp. Dun. sol. p. 199. t. 16. syn. p. 34. S. grandifldrum, Desf. arb. 1. p. 169, but not of Ruiz, et Pav. S. cymosum, Ort. dec. 1. p. 12.—Zucc. cent. 1. p. 47. Tops of branches beset with powdery tomentum; hairs short, stellate, cinereous. Prickles somewhat recurved at apex. Leaves large, a foot long, unequal, somewhat cordate at the base, having the midrib and petioles sparingly prickly: upper leaves nearly entire : young ones canescent beneath, with convolute edges. Peduncles 2-3-parted, green, scabrous from short stellate hairs, as well as the pedicels, and calyxes, and outside of corollas. Calyx 5-parted; segments broad at the base, and subulate at the apex. Corolla large, blue, marked with a yellow star inside, 4-5-cleft, plicate, spreading, afterwards reflexed. Stigma somewhat 2-lobed. Berry globose, 4-celled, yellowish when ripe, size of a chick pea. This species differs from *S. fastigidtum* in all its parts being larger and more pilose ; corollas deep blue ; racemes leafy.

Autumnal Nightshade. Fl. July, Sept. Clt. 1820. Shrub 5 to 6 feet.

255 S. SUBINE'RME (Jacq. amer. p. 50. t. 40. f. 3, a leaf only.) stem shrubby, nearly unarmed ; leaves lanceolate, elliptic, quite entire, glabrous above, but rather tomentose beneath ; cymes mealy ; calycine segments obtuse. *?. S. Native of the West Indies, among bushes; Mexico, &c. Dun. sol. p. 200. syn. p. 34. Swartz. prod. 1. p. 453, Lin. mant. 8. p. 253. S. laurifdliu«i, Mill. diet. no. 20. Leaves 3-4 inches, glabrous above, and more or less tomentose beneath. Racemes cymose. Calyx 5-cleft, with obtuse segments. Corolla blue, with lanceolate segments. Berry globose. This species differs from *S. lanceoldtum* in the racemes being smaller, and in the calycine segments being obtuse.

Nearly-unarmed Nightshade. Fl. July, Aug. Clt. 17i>#. Shrub 4 to 6 feet.

256 S. ELA'TUM (Link. enum. 1. p. 186.)"Stem furnished with reflexed prickles, which are tomentose at the base ; leaves lanceolate, rather tomentose, unarmed, when young hoary beneath ; peduncles lateral, bifid ; calycine segments linear, f? . S. Native country unknown. Prickles numerous, short. Leaves acute, repand. Tomentum stellate. Pedicels crowded, tomentose, as well as the calyxes. Corolla blue, tomentose outside.

Tall Nightshade. Fl. June, July. Clt. 1820. Shrub 6 to 8 feet.

257 S. OCHRONEU'RUM (Link. 1. c) stem furnished with recurved prickles ; branches clothed with rusty tomentum ; nerves of leaves prickly ; cymes terminal; calycine segments short; corolla 5-parted. ^ • S. Native of Brazil. Leaves tomentose, not hoary. Tomentum stellate. Corolla blue. Anthers distant.

Far. (3 ; stem furnished with more numerous, larger prickles. Leaves smaller, and more finely tomentose, and the nerves more prickly on both sides. 1? . S. Native of Brazil.

Yellow-nerved-\eaved Nightshade. Clt. ? Shrub.

258 S. ASTROITES (Jacq. eclog. t. *65.* Link. enum. 1. p. 186.) stem almost unarmed ; or the branches are furnished with a few short, recurved prickles ; leaves ovate-oblong, sinuated or repand, beset with stellate hairs on both surfaces ; corymbs intrabliaceous, dichotomous ; calyxes acuminated, clothed with stellate pili. T2, G. Native of Chili or Peru. Leaves 9 inches long. Corollas 5-lobed, of a violaceous blue colour. Petioles furnished with 1 or 2 short, recurved prickles. Berry globose, orange-coloured, 2-celled. This species comes very near to ***S. Bonariénsis* and *S. fastigidtum.***

Star-like Nightshade. Fl. June, July. Clt, 1818. Shrub 3 to 4 feet.

259 S. MEXICA^NUM (MOC. et Sesse, fl. mex. icon. ined. Dun. syn. p. 34. sol. ed. 2d. ined. t. *56.)* stem shrubby, tomentose, unarmed, or nearly so ; leaves ovate-oblong, tomentose, canescent beneath ; racemes subcymose ; calycine segments subulate ; corolla 5-cleft, with acute segments. J? . S. Native of Mexico. Stem prickly at the base. Racemes lateral and terminal. Corolla violaceous. Berry globose, orange-coloured, size of a pea.

Mexican Nightshade. Fl. June, July. Clt. 1825. Shrub 3 to 4 feet.

260 S. LANCEOLVTUM (Cav. icon. 3. p. 23. t. 245.) stem shrubby, tomentose, prickly at the base; branches clothed with hoary tomentum; leaves lanceolate-oblong, quite entire, clothed with canescent down on both surfaces, unarmed: lower ones sinuate; racemes cymose, lateral, almost terminal; calycine segments subulate ; corolla semiquinquefid, angularly plicate. J?.G. Native of Mexico. Dun. sol. p. 200. syn. p. 34. Pseudocapsicum lancifolium, Moench. meth. suppl. p. 180. Down and hairs stellate. Leaves greenish above. Corolla pale blue. Berry globose, 4-celled, size of a chick pea, orange-yellow.

LanceolateAedived Nightshade. Fl. June, July. Clt. 1800. Shrub 5 to 6 feet.

261 S. GLUTINOSUM (Dun. syn. p. *35.* sol. ed. 2d. ined. t. 54.) stem shrubby, erect, sparingly prickly; leaves oblong-lanceolate, cordate at the base, acute, tomentose, clammy and soft on both surfaces ; racemes cymose, lateral, clammy. J? • S. Na-

tive country unknown. Prickles straight, acerose; hairs stellate and glandular at apex; the leaves, peduncles, and calyxes clothed with similar hairs; the upper parts of the hranches clammy. Leaves undulated, quite entire, or sinuated, yellowish *on* both surfaces, prickly on the midrib beneath. The hairs on the petioles, peduncles, nerves of leaves, and calyxes, are clammy, and of a rusty-yellow colour. Flowers pentamerous. Cafycine segments oblong, acute. Corolla blue, with the star in the centre villous; lobes mucronate. Berry globose, size *of* a cherry, 4-celled, yellow.

Clammy Nightshade. Fl. June, July. Clt. 1810. Shrub 3 to 5 feet.

262 S. FORMOSUM (Dun. syn. p. *35.* sol. ed. 2d. ined. t. 127. H. B. et Kunth, nov. gen. amer. 3. p. 44.) stem shrubby, very prickly, hairy; leaves rather cordate, ovate-lanceolate, acuminated, clothed with woolly tomentum, almost unarmed; racemes lateral, many-flowered, very hairy. *?. S. Native on the banks of the Orinoco, in woods near Maypures. Branches very hairy. Prickles straight, acerose. Hairs rufescent, stellate and simple, intermixed. Leaves sinuately-repand, undulated, unarmed, of a pale rufescent colour beneath, and greenish-yellow above. Calyx 5-parted, clothed with pale rusty hairs. Corolla large, plicate, 5-angled, violaceous, with a star in the centre, which is woolly outside. Stigma capitate.

Showy Nightshade. Shrub.

263 S. BROWNII (Dun. sol. p. 201. syn. p. 35.) stem shrubby; prickles straight, subacerose; leaves entire or repand, long-lanceolate, almost unarmed, rather scabrous above, but clothed with grey tomentum beneath; corymbs lateral, subumbellate, on short peduncles, simple; corolla 3 times as long as the calyx. T? . G. Native of New South Wales, within the tropic. S. violaceum, R. Br. prod. p. 446. Leaves often twin. Calyx of a greyish-purple colour, with long subulate segments. Corolla violaceous.

Brown's Nightshade. Fl. June, Aug. Clt. 1820. Shrub 2 to 4 feet.

264 S. ELEGANS (Dun. syn. p. *35.* sol. ed. 2d. ined. t. *58.)* stem tomentose, prickly; leaves oblong, acuminated, tomentose on both surfaces, prickly, sinuately repand, *whitish-yellow beneath; racemes simple, tomentose, prickly. ^ • G. Native of New Holland. This species differs from *S. Brownii* in the stem, leaves, racemes, and calyxes, being prickly. Prickly, small, acute, straight, yellow at the base, and brown at top, tomentose, like the rest of the plant. Leaves often twin, prickly on the middle nerve beneath. Calyx 5-parted; with subulate segments, greyish-brown, afterwards bluish. Corolla violaceous. Style incurved.

Elegant Nightshade. Shrub.

SUBSECT. III. TORVUM (from *torvus,* grim or stern; in allusion to the shrubs bearing prickles.) *Prickly shrubs. Leaves entire, sinuated, or lobed. Flowers corymbose, or yaniclcd. Anther* equal.*

265 S. GIGANTEUM (Jacq. coll. 4. p. 125. icon. rar. 2. t. 328.) stem shrubby; prickles tomentose at the base; leaves elliptic-lanceolate, acute, unarmed, entire, glabrous above, but clothed with hoary tomentum beneath; racemes dichotomous, cymose, lateral, many-flowered, clothed with white tomentum. *b*. G. Native of the Cape of Good Hope. Dun. sol. p. 202. syn. p. 36. Sims, bot. mag. 1921. S. niveum, Vahl, symb. 2. p. 41. Thunb. prod. p. *36.* S. papilionaceum, Dumont de Courset bot. cult, suppl. p. *153. 1* S. farindsum, Wall, in Roxb fl ind. *2.* p. *Mo.* S. argenteum, Heyne, herb. The whole plant is clothed with mealy tomentum, except the upper surfaces of the leaves. In the axils of the leaves, which are large, rise other small ones. Pedicels pendulous when bearing the flowers. Calyx small, at first 5-toothed, but afterwards 5-cleft. Corolla purplish-violet, small, deeply 5-cleft. Berry roundish, red, shining, size of a pea.

Far. /3 ? stem unarmed ? leaves thinner, and on longer petioles; tomentum finer, and more hoary; calyx deeply divided. }?. S. Native of Dindygul, in the East Indies. Nees, in Lin. trans. 17. p. 47. S. farindsum, Wall. cat. no. 2610. b.

Far. y ? leaves nearly a foot long, and 4 inches broad, form of those of the var. /3, as well as the tomentum. J? . G. Native of the Neelgherry mountains. Nees, 1. c. S. farindsum, Wall. cat. no. 2510. c.

Giant Nightshade. Fl. June, July. Clt. 1792. Tree 10 to 15 *feet.*

266 S. TORVU* (Swaftz, prod. p. 47. fl. ind. occ. 1. p. 456.) stem shrubby; prickles recurved, tomentose at the base; leaves twin, subeordate, ovate, sinuated and lobed, ox angular, tomentose, having the midrib prickly; peduncles exfra-foliaceous, corymbose, many-flowered, and are, as well as the calyxes, unarmed; segments ovate, acuminated. J?. S. Native of Jamaica; Hispaniola; Cuba; Bermudas; and in many parts of the East Indies, in hedges. In Cuba it is called *Pendejera.* Dun. sol. p. 203. t. 23. syn. p. *36.* exclusive of the syn. of Jacq. S. I'ndicum, Lin. spec. ed. 1st. p. 187. S. stramonif61ium, Ait. hort. kew. 1. p. 2j52. ? Lam. ill. no. *2365.* exclusive *of* the syn. of Jacq. Poir. diet. 4. p. 300. exclusive of the syn. of Jacq. S. ficifolium, Ort. dec. 9. p. 116. S. acanthifdlium, Desf. hort. par. ex Lam. S. scabrum, Ruiz, et Pav. fl. per. 2. p. *39. t.* 175. f. a. S. pseudosaponaceum, Blum, bijdr. p. 702.—Plukn. aim. p, 350. t. 225. f. 6,? Stem tomentose, branched, armed with a *few* prickles. Tomentum or down stellate, pale yellow or rusty. Leaves often twin. Prickles tomentose at the base. Racemes lateral, bifid or trifid, many-flowered; pedicels cymose. Calyx 5-cleft. Corolla white, 5-cleft, marked with a yellow, shining star in the centre; segments lanceolate, acute, with undulated edges. Anthers yellow. Style in the sterile flowers length of filaments; in the fertile flowers longer than the anthers. Berry globose, green, 4-celled, size of a chick-pea. This species is nearly allied to *S. I'ndicum;* but differs from it in the leaves being hardly prickly; in the racemes being multifid; and in the peduncles, pedicels, and calyxes, being unarmed.

Far. jo ; unarmed; leaves repand. Jj. S. Native of the East Indies. Nees in Lin. trans. 17. p. 54. S. Silanum, Ham. herb, ex Wall. cat. no. 2627. D. S. multiflorum, Roth, nov. spec. p. 1*30.* *

Grim Nightshade. Fl. June, July. Clt. 1816. Shrub 6 feet.

267 S. FERRUGINEUM (Jacq. hort. schoenbr. 3. p. 46. t. 334.) stem shrubby; prickles glabrous; leaves ovate, lobed or sinuated, prickly on the midrib and petioles beneath, acute, tomentose; racemes corymbose. ^ . S. Native country unknown. Willd. enum. 1. p. 239. Dun. syn. p. *36.* sol. ed. 2d. ined. Young leaves and branches clothed with rusty tomentum. Corolla pale blue or white. Nearly allied to *S. torvum,* but differs in the racemes being shorter and fewer-flowered. Tomentum rusty, stellate. Prickles of the stem glabrous, rarely recurved. Said by Nees, Lin. trans. 17. p. *53.* to be the same as *S. torvum.*

Rusty Nightshade. Fl. July, Aug. Clt. 1816. Shrub 4 to 6 feet.

268 S. HERNANDE'SII (MOC. et Sesse, fl. mex. icon. ined. Dun. syn. p. *36.* sol. ed. 2d. ined. t. 59.) stem shrubby, prickly, tomentose; leaves twin, deeply sinuated, acute, tomentose; racemes lateral; pedicels umbellate; berry 6-celled. T? . G. Native of Mexico. Prickles few, recurved. Leaves ovate-oblong, subeordate. Petioles and peduncles prickly. Calyx villous,'

with deep, acute segments. Corolla white, with ovate-oblong, bluntish segments. Berry globose.

Hernandez's Nightshade. Shrub.

269 S. TRICUSPIDATUM (Rich. herb, ex Dun. syn. p. 36. sol. ed. 2d. ined. t. 60.) stem shrubby, sometimes prickly; leaves sinuately angular at top, acute, scabrous above, and tomentose beneath, and rather prickly on the midrib beneath; cymes simple, tomentose. ^ • S- Native of Guiana. Poir. suppl. 3. p. 771. Branches tomentose, rusty at top. Leaves large, ovate-oblong, on long petioles, subcordate. Hairs and tomentum stellate. Calycine segments 5, acute. Corolla large, deeply 5-cleft. It differs from *S. torvum* in the form of the leaves, and simple racemes.

Tricuspidate-lezved Nightshade. Shrub 4 to 6 feet.

270 S. MACCA'I (Rich. herb, ex Dun. syn. p. 37. sol. ed. 2d. t. 61.) stem shrubby, hardly prickly ; leaves subcordate at the base, sinuately lobed, canescent beneath : sinuses rounded ; lobes sinuately angular; cymes simple. J?. S. Native of Cayenne. Poir. suppl. 3. p. 771. Maccai, Merian, surin. t. 6. Branches white, powdery. Prickles straight. Leaves on long petioles, broad, furnished with a few prickles on the midrib beneath, beset with distant, stellate pili above. Peduncles, pedicels, calyxes, and under surfaces of leaves tomentose. Inflorescence and flowers similar to those of *S. tricuspidatum.* Berry red, globose, edible.

Maccai Nightshade, Shrub 4 to 6 feet ?

271 S. OVALIFOLIUM (Dun. syn. p. 37. sol. ed. 2d. ined. t. 128.) stem shrubby, prickly; branches villously tomentose, unarmed ; leaves obovate-elliptic, acute, rounded at the base, and almost unarmed, clothed with stellate tomentum beneath ; racemes lateral, subdichotomous, shorty and are, as well as the calyxes, unarmed, J?. S. Native of New Granada, in the valley of the Magdalena, near Honda. Leaves repand, and somewhat undulated, furnished with 1 or 2 straight prickles on the midrib beneath, 3-4 inches long. Racemes, outside of calyxes and corollas clothed with white, stellate tomentum. Calyx 5-parted; segments obovate, acute. Segments of corolla oblong, linear, acute.

Oval-leaved Nightshade. Shrub.

272 S. HI'SPIDUM (Pers. ench. 1. p. 228. Dun. sol. p. 204. syn. p. 37.) stem shrubby, prickly, very hairy ; leaves lobed, acuminated ; racemes lateral, dichotomous, unarmed. 1?. S. Native of Peru, among rubbish at Pillao and Panao, where it is called *Campucasa* and *Huircacasa.* Plant beset with stellate, rusty hairs all over. Some of the supejpor leaves are ovate, and quite entire, acute, and a few are repand; the rest are cordate, 7-11-lobed: lobes acutish, a span long, very hairy. Racemes axillary and terminal, many-flowered. Calyx 5-cleft. Corolla white, clothed with rusty, stellate tomentum outside, somewhat 5-parted. Berry globose, yellowish.

Hispid Nightshade. Shrub 10 to 12 feet.

273 S. LANATUM (Dun. sol. p. 305. syn. p. *37.)* stem prickly, arboreous; leaves oblong, solitary or twin ; corymbs rameal, subdichotomous. J? . S. Native of Peru, at Huassanassi. S. asperum, Pers. ench. 1. p. 229. but not of Vahl. S. asperolanatum, Ruiz, et Pav. fl. per. 2. p. 39. t. 174. f. b. Shrub clothed with rough, stellate, rusty wool. Leaves oblong-lanceolate, angular, shining. Calyx 5-cleft. Corolla white, woolly outside. Berry yellow, about the size of a filbert.

Woolly Nightshade. Shrub 5 to 6 feet.

274 S. PANICULATUM (Lin. spec. 267.) stem and petioles prickly ; leaves sinuately angular, glabrous above ; flowers panicled, terminal. T?. S. Native of Brazil, and the West India Islands, where it is called *Croc de Chien* by the French. Aubl. guian. 1. p, 216.. Dun. sol. p. 203. syn. p. *37.* Stems and petioles clothed with white tomentum. Prickles few, straight, naked. Leaves tomentose, broad, cordate, unarmed, glabrous above. Panicles terminal, compound, tomentose, and are, as well as the calyxes, unarmed.

Panicled-fiowered Nightshade. Shrub.

27.5 S. ACUTILOBUM (Dun. syn. p. 37. sol. ed. 2d. ined. t. *6S-)* branches almost unarmed, clothed with powdery tomentum ; leaves on long petioles, cordate, sinuately angular, clothed with powdery tomentum on both surfaces ; racemes cymose, almost terminal. Fj • S. Native of Para, in Brazil. Poir. suppl. 3. p. 772. Nearly allied to *S. paniculatum;* but differs from it in the leaves being clothed with powdery tomentum. Branches almost unarmed ; prickles few, small, and acute. Tomentum yellowish, stellate. Leaves greenish-yellow above, and whitish beneath. Racemes multifid, tomentose, as well as the calyxes. Corollas large.

Acute-lobed-\ea.ve& Nightshade. Shrub.

276 S. A'LBIDUM (Dun. sol. p. 206. syn. p. 37.) stem arboreous, prickly ; leaves sinuated: lower ones lobed, hoary beneath ; racemes axillary, many-flowered, subcorymbose. ^ • S. Native of Pern, among broken rocks on the edges of torrents; at Huanuco, Acomayo, Chulquillo, and Camuha, where it is called by the inhabitants *Yurahuacta* and *Yurahusa.* S. incanum, Ruiz, et Pav. fl. per. 2. p. 40. t. 175. f. b. but not of Lin. spec. ed. 1st. Young leaves 7-9-lobed: adult ones sinuated, glabrous above. Racemes tomentose. Calyx small. Corolla white. Berry globose, small, yellow, sometimes black.

Whitish Nightshade. Shrub *20* feet.

277 S. SAPONACEUM (Dun. sol. p. 206. syn. p. *37-)* stem shrubby, prickly ; leaves sinuately angular, scabrous ; corymbs lateral, dichotomous ; flowers secund. I? . G. Native of Peru and Chili, in waste places. S. scabrum, Ruiz, et Pav. fl. per. 2. p. 39. t. 175. f. a. but not of Vahl. In Peru the plant is called *Casiamuru.* Prickles few, remote, straight, fulvescent. Leaves solitary, J?ut sometimes twin, beset with small stellate hairs on both surfaces. Calyx deeply 5-cleft. Corolla bluish-violet, with acute segments. Berry orange-yellow, size of a chick pea. Said by Nees in Lin. trans. 17. p. 54. to be the same as *S. torvum,* Swartz. The *S. saponaceum,* Hook. bot. mag. t. 2697. is *S. dealbatum,* Lindl.

Soapy Nightshade. Fl. July. Clt. 1825. Shrub 4 to 6 feet.

278 S. PLATYPHY'LLUM (Dun. syn. p. 38. sol. ed. 2d. ined. t. 130,) suffruticose ; branches prickly? leaves broad-oblong, sinuately lobed, rounded at the base, beset with stellate pili on both surfaces, prickly on the midrib beneath ; flowers racemose; pedicels and calyxes unarmed, and are, as well as the corollas, clothed with fuscous tomentum. I? . S. Native in woods on the banks of the Orinoco, between the confluence of the Meta and the Cataract of Maypures. S. undecimangulare, Willd. rel. ex Roem. et Schultes, syst. 4. p. 669. Leaves purplish beneath, ex Bonpl., 7-8 inches long, and *5-6* broad. Flowers unilateral. Calyx 5-cleft; lobes acute. Corolla violaceous, white inside ; segments ovate-lanceolate, acuminated. Perhaps only a var. of *S. saponaceum,*

Broad-leaved Nightshade. Shrub.

279 S. VAILLA'NTH (Dun. syn. p. *38,* sol. ed. 2d. ined. t. 64.) stem glabrous, prickly ; prickles reversed; leaves ovate, acuminated, sinuately-lobed, pilose above, scabrous beneath; racemes bifid, cymose. J? . S. Native country unknown. Poir. suppl. 3, p. 772. This species differs from *S. saponaceum* in the characters indicated above ; and in the leaves being beset with simple hairs on the upper surface, instead of stellate ones ; and in the flowers being fewer.

VaillanCs Nightshade. Shrub.

280 S. PROCU'MBENS (Lour. coch. ed. Willd. 1. p. 163.) stem shrubby, procumbent, prickly; prickles recurved; leaves small, twin, on short petioles, ovate, obtuse, repandly lobed, clothed with stellate tomentum on both surfaces, glaucous,

prickly on the midrib ; peduncles lateral and terminal, few-flowered; flowers reflexed, quadnfid, tetrandrous. Jj . S. Native of Cochinchina, in fields and hedges. Dun. sol. p. 207. svn p 38. Nees, in Lin. trans. 17. p. 58. Habit of *S. trilobatum.* Corolla small, pale violet, with lanceolate, obtuse segments. Berry red, size of a pea, smooth, globose.

Procumbent Nightshade. Shrub procumbent.

281 S. LICHTENSTE'INII (Willd. enum. 1. p. 239. Dun. sol. p. 207. syn. p. 38.) stem prickly, shrubby, scandent; leaves oblong-cordate, sinuately angular, tomentose, white beneath, prickly on the middle nerve on both surfaces. T? . w. G. Native of the Cape of Good Hope. Fruit size and colour of those of *Capsicum dnnuum.* Leaves in the young plants 4 inches long, green above. Perhaps belonging to a different section.

JAchtensteins Nightshade. Shrub climbing.

SUBSECT. IV. MELONGENA (altered from the Arabic name of the Egg-plant, bydendjan, ex Forsk. p. 63.) Tourn. inst. p. 152. *Peduncles shorter than the leaves, sometimes solitary and \-flowered, but usually bifid below ; the lower pedicel rising from the stem, and bearing afertile flower•, drooping after florescence; the other part of the peduncle bearing many usually sterile flowers; in the fertile flower the calyx is prickly, and increasing after florescence; and the style is longer than the anthers; in the sterile flower the calyx is unarmed, or hardly at all prickly, and the style is as long as the f laments. Corollas quinquefid, undulately plicate. Berry 2-3-celled; placentas* 2-3, *convexo-concave, fixed to the axis on both sides of dissejnment of the intermediate longitudinal lamina. Leaves sinuated, angular, or lobed.*

282 S. MELONGE'NA (Lin. syst. 1. p. 188. Wall. cat. no. 2628. Nees, in Lin. trans. 17. p. 48.) herbaceous, woody at the base, perennial, clothed with stellate tomentum ; leaves ovate, unequal at the base, angularly sinuated ; flowering peduncles reflexed ; fertile peduncle solitary : sterile one racemose; calyx campanulate, with linear-lanceolate segments ; corolla angular. ©• S. Native of the East Indies, and Arabia? Leaves canescent from stellate tomentum, but most so beneath. Calyx 6-9-cleft. Corolla large, violaceous, 6-9-cleft, marked by a yellow star inside, tomentose outside ; segments broad, acute. Stigma 4-5-cleft. Berry large, smooth, shining, shape of an *egg,* blunt and umbilicate at apex, white ; cells vanished ; placentas fleshy, white, as well as the seeds, which are small and compressed.

Far. a, ovigerum; stem, leaves, and calyxes unarmed, or almost so. 0. S. S. ovigerum, Dun. sol. 210. Blum, bijdr. p. 698. S. melongena, Lin. syst. 1. p. 188. Murr. syst. 1. p. 183. Roxb. fl. ind. 2. p. 248. Lour. coch. 1. p. 161. S. pseudo-undatum, Blum, bijdr. 699. S. pubescens, Herb. madr. ex Wall. cat. S. melongena, var. ovigera, Lam. ill. no. 2348. Pers. ench. 1. p. 221. Melongena ovata, Mill. diet. no. 1. Melongena Blackw. t. 549. Lob. icon. 1. p, 2688. Chunda, Rheed. mal. 2. p. 69. t. 37.—Mor. hist. sect. 13. t. 2. Melongena A'rabum, Chab. 524. with a figure. Mala insana, Ger. hist. 345. with a figure, &c. Plante a ccuf of the French; Mad-apple of the English. There are several sub-varieties of this, differing principally in the colour of the fruit. 1. Berries violaceous. Melongena fructu oblongo violaceo, Tourn. inst. p. 151. 2. Berries white. Melongena fructu obJongo albo, Tourn. 1. c. 3. Berries yellow. Melongena fructu oblongo luteo, Tourn. 1. c. 4. Berries of a beautiful red colour. Melongena fructu oblongo suave rubente, Tourn. 1. c.

Far. ft, esculentum; stem, leaves, and calyxes, more or less prickly. ©. S. S. esculentum, Dun. sol. p. 208. S. Melongena, Lin. spec. p. 266. Lour. coch. 1. p. 161. Plenk. off. t. 123. S. insanum, Lin. mant. p. 46. Willd. spec. 1. p. 1047. Mosnch, meth. 474. Nila Barudena, Rheed. mal. 10. p. 147. t. 74. Plukn. aim. p. 550. t. 220. f. 3. Trongum hortense, Rumph. amb. 5. t. 85. Fockii is the name in Java. Aubergene, Melongene, Mayenne, Verangeane of the French ; Egg-plant *of* the English. There are sgftral varieties of this, differing in the colour, and shape, and size of the fruit. 1. Berries white. Trongum puti, Rumph. 2. Berry oblong-terete, violaceous. Melongena fructu oblongo violaceo, Sabb. hort. rom. p. 13. t. *65.* exclusive of the syn. of Tourn. Melongena fructu tereti violaceo, Tourn. inst. p. 152.? Melanzana, Besl. hort. eyst. ord. 1. f. 1. fol. 3. Melongene, Lab. voy. en. espag. t. *5.* p. 165. ex Berg. mat. nied. 1. p. 142. Aubergine, Regn. bot. icon. t. *56.* Trongum mera, Rumph. 3. Berries oblong-terete, recurved at top, purple, yellow, or cinereous. Melongena fructu incurvo, Tourn. inst. p. 152. Sol. pomiferum, fructu incurvo, Plukn. aim. p. 350. phyt. t. 226. f. 2. Bauh. hist. 3. p. 316. icone. Melantzana Arabum; Melongena et Bedegian, Rauw. itin. ex C. Bauh. 167. 4. Berries black. S. pomiferum fructu spinoso nigro, Mor. hist. 3. p. 524. sect. 13. t. *2.* f. 2. Bauh. hist. 3. p. 619. icon. Melongena spinosa, fructu longo nigro, Tourn. inst. p. 152. ? Melongena spinosa, fructu rotundo nigro, Tourn. 1. c.—Plukn. aim. 350. phyt. t. 226. f. 3. Melanzana nigra, Rauw. itin. ex C. Bauh. I, c. et Mor. hist. 1. c. 5. Berries round. Melongena fructu rotundo, Tourn. inst. 1. c. The egg-plant, *Melongene* in French, *Tollapfel* in German, and *Malanzana* in Italian. The berries are large, oval, and generally white in colour, much resembling a hen's egg, and in large specimens that of a swan. In French and Italian cookery it is used in stews and soups, and for the general purposes of the Love-apple or Tomato. The following varieties are cultivated for culinary purposes. 1. The oval-shaped white. 2. The globular-shaped white, and the purple or violet-coloured of both forms. In cultivating the plants for use, they should be reared on a hot-bed in light rich earth. After they have grown *two* or three proper leaves, *they* may either be pricked out into another hot-bed, or planted in small pots, to be shifted in rotation till in size no. 16. in which they will produce their fruit. If the plants instead of being shifted into fruiting pots are planted against a wall, or in a warm bor-' der in June, they will fruit in the open air, if the season is not unusually wet and cold.

Melongene Egg-plant, Mad-apple, and Jews'-apple. Fl. June, July. Clt. 1597. PI. *2* to 3 feet.

283 S. INCA'NUM (Lin. spec. ed. 1. p. 188. Dun. sol. p. 213. but not of Ruiz, et Pav.) alUas in *S. melongena,* except that the fertile peduncles are racemosely corymbose, 3-4-flowered: stem, leaves, and calyxes prickly ; fruit smaller, ovate or subglobose, and more inclosed in the calyx. 0. S. Native of the East Indies, everywhere; Mauritius, &c. S. incanum, Roxb. fl. ind. 2. p. 249. exclusive of the syn. of Rumph. S. undatum, Lam. diet. 4. p. 301. Blum, bijdr. p. 700. S. Zeyjonicum, Scop. del. 1. t. 1. S. I'ndicum, Wall. cat. no. *2626.* S. incanum Zeylanicum, Pers. ench. 1. p. 226.*^—Boerh. lugdb. *2.* p, 69. Plant clothed with canescent tomentum. Corolla bluish-violet. Berry roundish, yellow or white, egg.-shaped.

Var. ft ; flowers 6-7-cleft. G- S. Native of the Mauritius. S. argyracantha, Dum. Courset. bot. cult. ed. 2d. vol. 3. p. 162. S. marginatum argyracantha, Pers. ench. 1. p. 228.

Hoary Egg-plant. Fl. July, Aug. Clt. 1820. PL 2 *to 3* feet.

284 S. HETERACA'NTHUM (Dun. syn. p. 39. sol. ed. 2d. ined. t. 65. Nees in Lin. trans. *17.* p- 51.) herbaceous, woody at the base, perennial, clothed with stellate hairs ; prickles of the

stem, which is angular, thick and hooked; leaves oval, sinuated, hoary beneath, furnished with strong straight prickles on both surfaces ; segments of the leaves angular; peduncles corymbose, many-flowered, with one fertile flower at the base; calyx a little increased after florescence ; corolla quinquefid: with oblong-lanceolate segments. ©. S. Native of the East Indies, and Africa. ? This species differs from *S. Melongena,* which it is very like, in*idie strong, recurved, more crowded prickles of the stem, and in the leaves being more deeply sinuated, having the lobes angular on both sides, and in the corolla being 5-cleft to the middle.

Variable-spined Egg-plant. PI. *2* to 3 feet.

285 S. MELANOXYLUM (Link, enum. 1. p. 188.) leaves cordate-oblong, rather unequal at the base, sinuated, prickly, tomentose, green above, and canescent beneath. ©. H. Native country unknown. Prickles fuscescent. Peduncles axillary, solitary. Calyx tomentose, prickly, with obtuse segments. Corolla violaceous, 6-parted. Anthers separate.

Black-wooded Egg-plant. Fl. June, July. Clt. 1821. PL 2 to 3 feet.

286 S. FUSCATUM (Lin. spec. 268.) stem shrubby; leaves ovate-oblong, sinuately lobed, obtuse, rather tomentose ; peduncles lateral, bifid at the base ; berries globose. Tj. S. Native of tropical America. Dun. sol. p. 212. syn. p. 39. S. Campechiense, /3, fuscatum, Lin. mant. 340. Branches prickly, fuscescent on the side towards the sun, beset with short, scattered, stellate hairs. Leaves prickly on both surfaces, rather roughish above, but tomentose beneath. Prickles recurved. Calyx prickly in the fertile flowers, but unarmed in the sterile flowers, 5-cleft. Corolla pale violet. Berry variegated with white and green, sometimes yellow.

Far. a, *violaceum;* prickles violaceous. Tourn. inst. p. 149.

Far. /3, *luteum;* prickles yellow, or greenish white. ©. S. fuscfctum, Jacq. coll. 1. p. 51. icon. rar. t. 42. Melongena fructu rotundo, cum spinis ex albo virentibus, Tourn. inst. p. 152.?

Fuscous Egg-plant. Fl. June, July. Clt. 1817. Shrub 3 to 4 feet.

287 S. SODOMEUM (Lin. spec. 268.) stem shrubby, diffuse ; prickles straight, dilated at the base ; leaves oblong, sinuately-pinnatifid, shining above, and rather scabrous and prickly on both surfaces, as well as the calyxes; lobes of leaves obtuse, angular, or sinuated; peduncles bifid. ©.? J?.? G. Native of the North of Africa, and South of Europe, from which it has been probably introduced to New Holland, Cape of Good Hope, and Brazil. Lam. ill. no. 2358. t. 115. f. 1. R. Br. prod. p. 446. Sibth. et S.uith, fl. graec. t. *235.* Thunb. prod. 1. p. 37. S. Hermanni, Dun. sol. p. 212. t. 2. /3.—Munt. phyt. cur. f. 212.' good.—Mor. hist. 3. sect. 13. t. 1. f. 15.—Herm. lugdb. p. *573.* t. 575.—Pluk. aim. 351. phyt. t. 226. f. 5.—Sabb. hort, rom. 2. p. 12. t. *57.* Solanastrum, Heist. Fabr. Helmst. p. 348, ex Willd.—Tourn. inst. 249. Stem and branches usually fuscous, or purplish ; branches beset with minute stellate hairs at top. Leaves deep green. Prickles yellow, subulate, brown at the base. Calyx prickly in the fertile flowers, and unarmed in the sterile ones. Corolla purple, 5-cleft. Berry size of a walnut, globose, variegated with white and green, at length yellow.

Sodom Egg-plant, or Apple of Sodom. Fl. June, July. Clt. 1688. Shrub 3 to 4 feet.

288 S. INDICUM (Lin. spec. 268.) shrubby, prickly; prickles of the stem compressed, recurved; leaves solitary, or twin, oblong, or ovate, tomentose, discoloured, sinuately lobed, or pinnatifid, unequal at the base ; racemes interfoliaceous, subcymose ; calyx prickly, with straight, linear, reflexed segments ; berries globose ; corolla quinquefid. i? . S. Native of Barbadoes. Dun. sol. p. 228. syn. p. 40.—Dill. elth. 362. t. 270. f. 349.—Rob. t. 28. Tourn. inst. p. 149. exclusive of the syn. of Mor.—Plukn. aim. 350. phyt. t. 225. f. 9.—Rumph. amb. 5. p. 240. t. 86. f. 1.? Leaves prickly on both surfaces, green above, and paler beneath. Down stellate. Prickles straight; those of the stem shorter, and brown ; and those of the leaves pale green. Peduncles lateral, simple, 5-6-flovvered. Corolla large, bluish-purple, undulated, semi-5-cleft, somewhat pentagonal. Berry pear-shaped. ? This species is said to differ from *S, Caroliniense* in the leaves being more deeply sinuated, in the segments being sinuately-toothed, in the racemes being shorter, and in the calycine segments being reflexed, and in the corollas being larger.

Far. a ; leaves cuneiform, or truncate at the base, sinuately lobed. J? . S. Native of Silhet and Sirinagur, Penang, &c. S. rndicum, Lin. Roxb. fl. ind. 2. p. 252. ex Nees in Lin. trans. 17. p. *55.* S. violaceum, Jacq. fragm. p. *82.* t. 133. f. 1. Dun. sol. p. 128. S. canescens, Blum, bijdr. p. 701. S. Soddmeum, Russel, herb. Cheru-chunda, Rheed. mal. 2. t. *36.*

Far. (Z ; leaves truncate at the base, or cuneate, erosely pinnatifid. Jj. S. Native of Penang and Bengal. Nees, 1. c. S. pinnatifidum, Roth, nov. spec. 129. S. Heynei, Rcem. et Schultes, syst. 4. p. *669.* S. I'ndicum, Wall. cat. no. 2626. D. E.

Far. y; leaves smaller, cordate at the base, sinuately lobed. *? . S. Native of the East Indies. Nees, 1. c. S. agreste, Roth. nov. spec. 130. Roem. et Schultes, syst. 4. p. *55.* S. I'ndicum, Wall. cat. no. *2626.* G. suppl. no. 240.

Far. B; leaves smaller, truncate, or subcordate at the base, repandly angular; stem sparingly prickly; racemes usually 1-4-flowered. T? • S. Native of the East Indies. Nees, 1. c. S. pubescens, Heyne, herb. Wall. cat. no. 2629. hort.

Indian Egg-plant. Fl. July. Clt. 1732. Shrub 3 to 4 feet.

289 S. COAGULANS (Forsk. fl. segypt. arab. p. 47. Vahl. symb. 2. p. 41.) stem shrubby; leaves ovate-oblong, sinuately repand, rather tomentose, whitish beneath, prickly on the middle nerve beneath ; prickles smoothish. ^ • G. Native of Arabia, Felix, where it is called *Beikaman.* Jacq. hort. schoenbr. 4. p. 35. t. 469. Delile, descr. p. 63. t. 23. f. 1. Dun. sol. p. 214. t. 2. Stem sparingly prickly, clothed with white tomentum at top. Leaves clothed with short stellate tomentum, greenish above: lobes obtuse. Prickles straight, or a little recurved, suUulate at first, rather tomentose, but at length smoothish. Peduncles bifid, tomentose. Flowers as in *S. Sodbmeum.* Berry roundish, ovate, yellow at maturity.

Curdling Egg-plant. Fl. July. Clt. 1802. Shrub 3 to 4 feet.

290 S. SANCTUM (Lin. spec. 269.) stem shrubby, tomentose ; leaves ovate, repand, oblique at the base, clothed with hoary tomentum on both surfaces ; prickles rather tomentose ; berries nearly globose. J?. S. Native of Palestine. Vahl, symb. 2. p. 49. Dun. sol. p. 215. syn. p. 40. S. incanum, Forsk. fl. aegypt. arab. p. 46, but not of Lin. S. coccineum, Hort. par. Melongena spindsa, fructu rotundo croceo, Tourn. inst. p. 152. Pomum de Hiericho melongenis congener, Bauh. hist. 3. p. 619. with a bad figure. P6ma Hierachuntica, Imp. p. 878, with a bad figure. Every part of the plant is clothed with white, short, stellate tomentum, the prickles also. Leaves sinuately repand, obtuse, or acute, obliquely cordate at the base. Prickles compressed, broad at the base, subulate at apex, at length glabrous. Petioles prickly beneath. Racemes and flowers as in *S. codgulans.*

Holy Egg-plant. Fl. June, July. Clt. 1818. Shrub 3 feet.

291, S. DITBIUM (Fres. pi. segypt. p. 166.) prickly, and

clothed with stellate tomentum ; stem shrubby ; leaves ovate-oblong, unequally cordate at the base, sinuately repand, prickly ; prickles acicular, very straight; peduncles 3-5-flowered ; calyx almost unarmed, clothed with stellate tomentum. J? . G. Native of Egypt. Very nearly allied to *S. sanctum,* and *S. incanum.*

Doubtful Nightshade. Shrub.

292 S. CONGE'NSE (Link. enum. 1. p. 137.) stem tomentose, furnished with straight prickles; leaves ovate, sinuated, prickly, tomentose ; peduncles lateral, very short, many-flowered ; calyx tomentose, with oval, obtuse segments; corolla deeply 5-parted. *V}* . S. Native of Africa, on the banks of the Congo, or Zaire river. Prickles broad at the base, those on the nerves of the leaves long, and straight. Corolla blue, downy outside. Anthers separated, equal.

Congo Egg-plant. Fl. June, July. Clt. 1821. Shrub 2 to 3 feet.

293 S. VE'LLEUM (Swartz. in litt. ex Roam, et Schultes, syst. 4. p. 643.) stem shrubby, prickly; leaves ovate, acute, quite entire, unarmed on both surfaces, clothed with woolly tomentum, reticulated beneath ; racemes dichotomous, flexuous. J?. S. Native of tropical America. Prickles straight, scattered. Branchlets tomentose. Leaves opposite, one smaller than the other, rusty, *2-3* inches long. Racemes terminal from the divisions of the branches, very long, tomentose, many-flowered. Flowers crowded, nearly sessile. Calyx tomentose. Corolla blue, tomentose outside, with obtuse segments. Stigma obtuse.

Woolly Egg-plant. Shrub.

294 S. MARGINA'TUM (Lin. suppl. p. 147. Murr. comm. goctt. 1783. p. 11. t. 4. Jacq. coll. 1. p. 50. icon. rar. 1. t. 45.) stem shrubby ; leaves subcordate, sinuately lobed, clothed with hoary powdery *tomentum* beneath, margined with white above ; berry 3-celled, globose. J? . G. Native of Palestine. Dun. sol. p. 215. t. 8. A. syn. p. 40. Sims. bot. mag. 1928. S. niveum, Allioni, auct. misc. and S. Abyssinicum, Jacq. hort. vind. ex Vittm. summ. p. 492. Stem prickly, tomentose at top, as well as the branches; tomentum powdery. Leaves sinuately repand, obtuse, prickly on both sides, when young white on both surfaces, but green above in the adult state. Prickles straight, subulate, yellow, fuscous at the base. Petioles, peduncles, pedicels, outsides of calyxes, and corollas clothed with white tomentum. Calyx 5-6-cleft. Corolla *5-6*-cleft, large, white, marked by a purple star in the centre. Berry large, S-celled, globose, yellow, drooping, ex Poir.

Whitc-edged-leaved Egg-plant. Fl. June, Sept. Clt. 1775. Shrub 3 *to* 4 feet.

295 S. CAMPECHIE'NSE (Lin. spec. *267.)* stem herbaceous, very prickly, hairy; leaves cordate-oblong, lobed : lobes toothed ; calyxes of the fertile flowers very prickly ; berries cherry shaped. ©. H. Native of the Bay of Campeachy, Willd. spec. 1. p. 1059, exclusive of the syn. Lin. mant. Dun. sol. p. 216. S. acanthifolium, Mill. diet, no 14.—Dill. elth. p. 316. t. *268.* f. 347. Stem brown on the side next the sun, hairy like the leaves ; hairs all stellate. Leaves prickly beneath, somewhat 5-lobed, green above, and greenish white beneath. Prickles straight, whitish, yellowish, or brown. Peduncles, pedicels, and fertile calyxes hairy, and very prickly. Corolla hairy outside, pale violet, 5-cleft. Berry form and size of a cherry, whitish when ripe.

Campeachy Egg-plant. Fl. July. Clt. 1732. PI. 1 to 2 feet.

296 S. TRONGUM (Poir. diet. 4. p. 308. Dun. sol. p. 217. syn. 40.) stem suffruticose, prickly ; leaves angularly sinuated, prickly on both surfaces; flowers solitary, extra-foliaceous; berries globose. ©. ? S. Native of the Moluccas. Trongum agreste spinosum, Rumph. amb. 5. p. 240. t. 86. f. 1. Root hard, long. Prickles recurved. Leaves obscure green. Calyx prickly. Corolla purple. Berry globose, size of a cherry. Perhaps only a var. of *S. Melongena,* ex Nees.

Trongum Egg-plant. Fl. June, July. Clt. 1818. Shrub J to 1 foot.

297 S. PRE'SSUM (Dun. *sol.* p. 217. syn. p. 41.) stem almost unarmed; leaves ovate, attenuated at both ends, prickly ; berries glabrous, nearly globose, flat on the top. ©. ? S. Native of the Moluccas. Trongum pra rubrum, Rumph. amb. 5. cap. 48. p. 241. t. *86.* f. 2. Stem usually dwarf; branches sparingly prickly. Leaves twin, acute, obscure, green, with brown nerves. Prickles short. Calyx prickly. Corolla white, or pale red. Berries size of a pigeon's *egg, green,* marked with white spots. Perhaps a var. of *S. Melongena,* ex Nees.

Pressed-fruited Egg-plant. PI.

298 S. A'LBUM (Lour. coch. 1. p. 129.) stem suffruticose, almost unarmed ; branches prostrate ; leaves oblong, angular, sparingly prickly ; peduncles many-flowered; berries globose. J? . G. Native of Cochinchina, where it is called *Ca-Co* by the natives; and of Amboyna. Dun. sol. p. 217. syn. p. 41.—Rumph. amb. 5. p. 241. cap. 48. Root extended, with the smell of a turnip. Leaves 9-10 inches long, on long petioles, powdery, like the branches, petioles, and fruit; the powder yellow. Prickles small, short. Peduncles many-flowered, *6-7.* Calyx bearded. Corolla white. Anthers yellow. Berry globose, green, marked with white spots. Perhaps a var. of *S. Melongena,* ex Nees.

White-Lowered Egg-plant. PI. 3 to 4 feet.

SUBSECT. V. ACANTHOPIIORA (from *cLKavdoQ, acanthos,* a spine; and *cpopeu), phoreo, to* bear ; the species contained in this section bear spines.) Dun. sol. p. 218. *Stem prickly. Leaves sinuately angular, toothed or pinnatifid, almost glabrous, or villous from simple, silky hairs, or tomentose from stellate hairs. Racemes short, few-flowered. Corollas 5-parted.*

§ 1. *Berries glabrous. Leaves smooth, or villous from usually simple silky hairs.*

299 S. ACERIFOLIUM (Dun. syn. p. 41. sol. ed. 2d. ined. t. 131. H. B. et Kunth, nov. gen. amer. 3. p. 46.) suffruticose ; branches and both sides of leaves prickly, and hispid from pili; leaves hastately 3-lobed, cordate, on long petioles; peduncles few-flowered ; calyx unarmed. 1? . S. Native of New Andalusia, at the monastery of Caripe. Prickles subulate, straight, elongated, yellow. Leaves about 4 inches long; lobes acuminated : lateral ones diverging, obsoletely angled outside at the base : middle one large. Peduncles prickly. Corolla violaceous. Calyx 5-lobed.

Maple-leaved Nightshade. Shrub 8 feet.

300 S. MYHIACA'NTHUM (Dun. sol. p. 218. t. 19. syn. p. 41.) stem very prickly, hairy ; prickles soft, acicular; leaves cordate, sinuately angular, acute, very villous and prickly *on* both surfaces. J? . S. Native country unknown. Hairs cinereous. Prickles straight. Peduncles slender, 2-3-flowered, nearly opposite the leaves, almost unarmed. Calycine segments oblong-subulate, villous outside, with ciliated margins. Corolla pilose outside, with linear-lanceolate, acute segments. This species differs from *S. aculeatissirnum,* in the leaves being very villous and sinuately angular, not lobed, and in the prickles being smaller and more slender.

Many-spined Nightshade. Fl. July, Aug. Clt. 1822. Shrub.

301 S. ACULEATI'SSIMUM (Jacq. coll. 1. p. 100. icon. rar. t. 41.) stem shrubby, very prickly; leaves subcordate, lobed, villous and prickly on both surfaces ; lobes acute, toothed. ^ .

S. Native of tropical America, and Ceylon. Dun. sol. 219. syn. p. 41.—Lin. fl. zeyl. p. 38. exclusive of the syn. of Dill, and Plukn.—Ray. 3. p. 353. Prickles subulate, unequal, mixed with villi. Peduncles almost unarmed, very short, few-flowered. Flowers usually abortive. Corolla white, with acute segments. Berry globose, size of a small cherry, at first spotted with green and white, but at length pale yellow.

Very prickly Nightshade. Fl. April, July. Clt. 1816. Shrub 2 to 4 feet.

302 S. PLATANIFŌLIUM (Hook, in bot. mag. t. 2618.) stem hairy, sparingly prickly ; prickles straight; leaves 5-lobed : lobes deeply toothed, acute ; peduncles lateral, aggregate, generally 1-flowered, drooping; berry variegated. J? . S. Native of South America. Corolla deeply 5-cleft, revolute, pale violet, with hairy margins. Stem hairy. Leaves downy. Berry large, almost globular, beautifully variegated with green and white. The plant is said to have considerable affinity with ***S. Campechiense*** **and** ***S. aculeatissimum,*** **but differs from both** in being less prickly.

Plane-leaved Nightshade. Fl. July. Clt. 1823. Shrub 2 to 4 feet.

303 S. INCARCERA'TUM (Ruiz, et Pav. fl. per. 2. p. 40. t. 176. f. a.) stem prickly, villous, suffruticose; leaves usually twin, cordate, sinuately-angular, acuminated, prickly ; flowers secund; berry clasped by the segments of the calyx. J?. S. Native of Peru, in groves at Chincao. Dun. sol. p. 219. syn. p. 41. Prickles unequal, broad at the base, and subulate at the apex, and others filiform, minute. Leaves unequal in size, clothed with white hairs. Peduncles villous, nearly unarmed; pedicels cymosely umbellate. Calyx villous, with linear, reflexed segments. Corolla pale violet. Berry white, oblong, size of a cherry.

Incarcerated-fruited Nightshade. Shrub 3 to 4 feet.

304 S. MAMMŌSUM (Lin. spec. p. 267. Aubl. guian. 1. p. 216.) herbaceous; stem villous, sparingly prickly ; leaves subcordate, lobed, villous, prickly on both surfaces ; berry large, teated at the base. ©. S. Native of Virginia, Guiana, and the West India Islands, Cape of Good Hope, ex Thunb. prod. 1. p. *36.* fl. cap. 2. p. 58. Dun. sol. p. 220. syn. p. 41. Pursh. fl. amer. sept. 1. p. 156. S. villosissimum, Zuccag. cent. 1. no. 48. Pdmum Sodómae Merian, sur. 27. t. 27, ex Sloane. S. Americanum molle, foliorum nervis et aculeis flavescentibus, fructu mammoso, Tourn. inst. p. 149.—Sloan, hist. p. 38. t. 12. f. 1.—Plum. mss. t. 4. f. 37.—Plukn. aim. p. 350. phyt. t. 226. f. 1. The plant is called by the French *Pomme à* ***chauve-souris, Pomme teton,*** **and** ***Poire de Bachelier.*** **Prickles** compressed, yellow, broad at the base, subulate at the apex, straight, or incurved. Leaves large, the breadth almost equal to the length; lobes acute, sinuately-toothed. Peduncles unarmed, 3-4-flowered, short. Calyx very villous. Corolla violaceous, or blue, with almost linear segments. Anthers corniculate. Berry large, yellow, teated, or mammose round the base, conical.

Teated-fruited Nighishade. Fl. June, Aug. Clt. 1699, PI. 2 to 4 feet.

305 S. ACICULA'RE (Swartz. in litt. ex Rcem. et Schultes, syst. 4. p. 647.) stem prickly, shrubby ; prickles subulately acerose ; leaves roundish-cordate, repandly acute-angled, prickly on both surfaces, clothed with stellate hairs above, and tomentum beneath ; peduncles axillary, terminal, very long, many-flowered. J?. S. Native of Brazil. Prickles straight. Peduncles solitary, length of leaves, pilose, bifid at apex. Flowers large, blue. Calyx beset with bristly hairs.

Acicular-spined Nightshade. Shrub.

306 S. CILIA'TUM (Lam. ill. no. 2360.) stem herbaceous ; leaves subcordate, sinuately lobed, ciliated : lobes obtuse ; peduncles short, few-flowered ; corollas 5-parted ; berries globose, almost dry. ©. H. Native country unknown. Dun. sol. p. 221. t. 18. syn. p. 41. S. ciliare, Willd. enum. 1. p. *M7.* S. capsicoides, Hort. par. ex Lam. This species differs from *S. Campechiense* in the leaves not being toothed, in the hairs being simple, in the stem being prickly, not hispid. Corymbs 2-3, rarely 5-flowered. Flowers white, nutant. Berry smaller than a walnut, globose, brick coloured. It is distinguished from *S. Soddmeum* in the racemes being small, and always 2-3-flowered.

Ciliated-leaved Nightshade. Fl. June, July. Clt. 1820. PI. li to 2 feet.

307 S. LI'VIDUM (Willd. herb, ex Link, enum. 1. p. 188.) leaves subcordate, sinuately-pinnatifid, rather tomentose above, but green : tomentose, and canescent beneath; prickles dilated at the base. Tj . S. Native country unknown. Branches and petioles tomentose. Leaves equal, or unequal at the base, furnished with prickles on the nerves. Peduncles 4-5-flowered, tomentose. Calyx tomentose, and furnished with long prickles. Corolla white.

Livid Nightshade. Fl. June, July. Clt. 1819. Shrub.

308 S. BARBISE'TUM (Nees, in Lin. trans. 17. p. 51.) fascicu lately hairy; stem herbaceous, prickly; prickles straight; leaves twin, elliptic, sinuated, rather hairy on both surfaces, and prickly, having the segments angular ; racemes lateral, simple, many-flowered, secund, prickly ; berry glabrous, covered by a bristly calyx, ©.? H. Native of Silhet; on the banks of the river Atran, in Martaban, and Tavoy. S. Melongena, Wall, cat. no. 2628. e. part. Habit of *S. aculeatissimum,* but is easily distinguished from that species in the racemose inflorescence, and in the berry being covered by the calyx.

Bristly-bearded Nightshade. PI. ?

§ 2. *Leaves villous, or tomentose from usually stellate hairs. Berries hairy.*

309 S. STRAMONIFŌLIUM (Jacq. misc. 2. p. 298. icon. rar. 1. t. 44.) stem shrubby, prickly; leaves cordate, sinuated, or acutely lobed, vilious, and prickly on both surfaces ; peduncles and calyxes unarmed. I? . S. Naiive of the East Indies. Dun. sol. p. 222. syn. p. 42. Willd. spec. 1. p. 1044. exclusive of the syn. of Ait. but not of Lam. nor Poir. S. mammosum, Lour. coch. 1. p. 162. exclusive of the syn. of Burm. Leaves a foot long, on long petioles, soft, beset with large, straight, and recurved prickles. Pedicels cymose. Calycine segments small, roundish. Corolla white, or purplish, with lanceolate segments. Stigma subcapitate.

Stramonium'leaved Nightshade. Fl. June, Sept. Clt. 1778. Shrub 6 feet.

310 S. FLAVE'SCENS (Dun. syn. p. 42. sol. ed. 2d. ined. t. 67. f. 2.) stem shrubby, prickly, canescent; leaves cordate, sinuated, obtuse, prickly, and tomentose on both surfaces, yellowish beneath ; peduncles, calyxes, and bracteas very hairy. J? , S. Native of Trinidad. S. ferox, *j3,* flavescens, Nees in Lin. trans. 17. p. 52. Stem very prickly. Prickles on the leaves long and strong, and the pili stellate; but the pili on the pedicels, calyxes, and berries are simple. Berry yellowish-brown., Segments of the calyx ovate, acute. Nearly allied to *S. lasiocdrpum,* but differs in the leaves being sinuated, and in the recesses and lobes being very blunt.

Yellowish-fruited Nightshade. Fl. June, July. Clt. 1826. Shrub 4 to 6 feet.

311 S. FE'ROX (Lin. spec. 267. Nees in Lin. trans. 17. p. 52.) stem perennial, prickly, herbaceous, woody at the base, clothed with woolly tomentum; leaves cordate, sinuately-angular, clothed with woolly tomentum, and prickly; peduncles intrafoliaceous, and are, as well as the pedicels, short; berry hairy, covered by the hairy calyx. %• S. Native of the East

Indies. Dun. sol. 223. ed. 2d. ined. t. *68.* syn. p. 42. S. involucratum, Blum, bijdr. p. 701. S. lasiocarpum, Dun. sol. p. 222#syn. p. 42. Blum, bijdr. p. 701. Wall, in Roxb. fl. ind. 2. p. 255. S. hirsutum, Roxb. fl. ind. *2.* p. 253. S. mammdsum, Lour. coch. 1. p. 131.—Burm. zeyl. p. 218.—Mor. hist. 3. p. *525.* no. 12. sect. 13. t. 2. f. 12. Anachundri, Rheed. mal. 2. p. *65.* t. *35.* There are varieties of this plant having the calyxes and peduncles more or less prickly ; prickles small, subulate, sometimes lying under the hairs. Stature of *S. Melongena.* Leaves large, villous above, but tomentose beneath, as well as the racemes and calyxes, which are also prickly. Peduncles axillary, simple, short. Corolla white. Berry yellow when ripe.

Fierce Nightshade. Fl. Aug. Sept. Clt. 1795. PI. 2 to 3 feet.

3J2 S. ORINOCE'NSE (Dun. sol. p. 42. sol. ed. 2d. ined. t. 132. H. B. et Kunth, nov. gen. p. 4G.) stem herbaceous, very prickly ; leaves cordate, sinuately angular, tomentose and prickly on both surfaces; calyx unarmed ; berries hispid, almost covered by the calyx. *%.l S.* Native on the banks of the rivers Orinoco and Atabapo, very frequent. Stem and leaves clothed with pale yellow, stellate tomentum. Prickles long, subulate, rather compressed, straight, brown, and rather woolly at the base, and rusty, or yellow at top. Racemes lateral. This species differs from *S.ferox,* in the stem being very prickly, in the leaves being tomentose on both surfaces, and in the racemes being unarmed.

Orinoco Nightshade. PI. 2 to 3 feet.

313 S. WI'GHTII (Nees in Lin. trans. 17. p. 51.) clothed with fascicled or stellate hairs ; stem suffruticose, terete, armed with acicular prickles ; leaves solitary, subcordately-ovate, or elliptic, sinuated, acute, rather prickly; fascicles few-flowered ; peduncles elongated in the fruit-bearing state ; berry glabrous, globose, covered by the unarmed, hairy calyx. ^ • S. Native of the East Indies. ? This species differs from *S. barbisetum,* and *S.ferox,* in the fruit-bearing pedicels and calycine segments being more elongated.

Wight's Nightshade. Shrub *2* to 3 feet.

Acanthophoris affinia?

314 S. CAMPAHLAXTUM (R. Br. prod. p. 446. Dun. sol. p. 223.) stem herbaceous ; prickles crowded, straight, subulate; leaves ovate, angularly-lobed, hairy, very prickly on both surfaces, as well as the calyxes ; racemes simple, armed; corollas campanulate. ©. H. Native of New South Wales, about Port Jackson.

Campanulate-fiowered Nightshade. Fl. June, Sept. Clt. 1819. PI. 1 to 2 *feet.*

315 S. ARMVTUM (R. Br. prod. p. 446. Dun. sol. p. 224. ed. 2d. ined. t. 69.) stem herbaceous, diffuse ; prickles much crowded, setaceously subulate; leaves oblong, sinuately pinnatifid, glabrous on. both surfaces: lobes angular, or sinuated prickly, as well as the calyxes; racemes 2-3-flowered ; peduncles solitary. ©.*H. Native of New South Wales, about Port Jackson. Prickles orange-coloured. Leaves often twin. Down stellate. Berry globose.

Armed Nightshade. Fl. Aug. Sept. Clt. 1819. PL 2 feet.

316 S. PUNGE'TIUM (R. Br. 1. c.) stem herbaceous; prickles straight, acerose ; leaves ovate-oblong, pinnatifkl, or repandly sinuated, membranous, pilose on both surfaces, and the same colour, and are, as well as the calyxes, prickly; peduncles lateral, solitary, or twin, 1-flowered. ©. H. Native of New South Wales, about Port Jackson. Dun. sol. ed. 2d. ined. t 70. Corolla bluish violet. Down stellate.

Pungent Nightshade. Fl. Aug. Sept. Clt. 1823. PI. 1 to 2 feet.

317 S. CINE'REUM (R. Br. 1. c. Dum sol. 1. c.) stem herbaceous ; prickles straight, subulately-setaceous ; leaves oblong, pinnatifidly-sinuated, glabrous above, smooth, but clothed with cinereous tomentum beneath, and prickly on both surfaces, as well as on the calyx ; peduncles 2-3-flowered. ©. H. Native of New South Wales, about Port Jackson.

Cinereous Nightshade. Fl. Aug. Sept. Clt. 1823. PI. i to 2 feet.

318 S. LATIFOLIUM (Poir. diet. 4. p. 303. Dun. sol. p. 231. ed. 2d. ined. t. *66.* syn. p. 43.) stem suffruticose, prickly; leaves petiolate, cuneated, ovate, very large, sinuately pinnatifid, pilose and prickly on both surfaces : lobes acute, and the recesses obtuse ; racemes lateral, few-flowered. ^ • &• Native of tropical America. Nearly allied to 5. *rigidum,* but less rigid, the stem taller, the leaves larger, and the flowers less terminal. Stem green, smooth ; branches villous at top. Leaves green, soft. Prickles stiff, rather villous. Flowers both fertile and sterile. Calyx villous, sometimes prickly, usually unarmed in the sterile flowers. Corolla white ; segments ovate, obtuse, hardly mucronate.

Broad-leaved Nightshade. Shrub.

319 S. CRINMTUM (Lam. ill. no. 2356. Poir. diet. 4. p. 297.) stem shrubby, prickly ; leaves ovate, sinuately angular, tomentose, prickly on the midrib; petioles, peduncles, and calyxes beset with capillary prickles ; berries villous. ^ • S. Native of Cayenne. Dun. sol. p. 224. ed. 2d. ined. t. 71. syn. p. 43. Stem very villous, and very prickly, some of the prickles are strong, and others are more numerous and capillary, usually ending in a 5-6-rayed star. Leaves large, cream-coloured, whitish beneath, and furnished with strong prickles, but almost unarmed above. Flowers disposed almost in a spicate panicle. Calyx inclosing the fruit. Corolla large, white, villous beneath, divided even to the middle into ovate, obtuse segments. Berry ovate.

Long-haired Nightshade. Shrub.

320 S. MACRA'NTHUM (Dun. syn. p. 43. sol. ed. 2d. ined. t. 72.) stem prickly, woolly; leaves large, subcordate, acuminated, angularly-lobed, woolly on both surfaces, prickly beneath; racemes cymose, woolly. ^ • S. Native of Brazil. Down or wool stellate, greyish brown. Prickles yellowish brown, straight. Leaves sometimes twin, greyish green above, rufescent beneath, with red nerves. Racemes simple, or bifid, unarmed, or furnished with a few prickles. Corolla large, with a large star in the centre, which is silky outside.

Large-flowered Nightshade. Shrub.

321 S. SESSILIFLORUM (Dun. syn. p. 43. sol. ed. 2d. ined. t. *73.)* branches tomentose, almost unarmed; leaves subcordate, large, sinuately angular, clothed with silky tomentum on both surfaces ; flowers sessile. 1?. S. Native of Para, in Brazil. Poir. suppl. 3. p. *775.* Tomentum rusty. Leaves ciliated, when young rusty. Flowers 3-4 together. Calyx tomentose outside. Corolla tomentose outside. Berries eaten in Para, where they are called *Cubios.*

Sessile-flowered Nightshade. Shrub.

SUBSECT. VI. LATIIYROCA'RPUM (from *Xadvpog, lalhyros,* chick-pea ; and *Kapiroe, karpos,* a fruit; in reference to the size and shape of the berries.) *Stem prickly. Leaves sinuated, or lobed. Racemes simple, or almost so. Corollas quinquefd. Berries small, globose.*

322 S. MILLE RI (Jacq. coll. 4. p. 209. icon, rar, *2.* t. 330.) stem suffruticose, prickly; leaves nearly glabrous, lobed, bluntish, prickly ; peduncles generally twin. J?. G. Native of the Cape of Good Hope, ex Jacquin; on the higher mountains of Caramania, ex Ortega. Dun. sol. 225. syn. p. 43. Lam. ill. no. *2376.* Poir. diet. 4. p. 304. exclusive of the

synonymes. S. trilobâtum, Lin. spec. ed. 1st. p. 188. S. trilobâtum, floribus parvis albis, Lin. spec. 270. S. subbifldrum, Orteg. dec. 9. p. 118. S. Schiru Schuna, Mill. diet. no. 32. This species differs from *S. trilobâtum* in the leaves being pinnatifidly 5-lobed ; in the flowers being much smaller, and white. Stem shining, glabrous. Cauline prickles a little recurved. Peduncles 1-flowered, solitary, twin, or tern. Lobes of leaves repand, obtuse. Berry roundish, glabrous, reddish-yellow, drooping, size of a pea, ex Jacq.; but the plant of Miller is annual, and the berries are red, and size of a pea.

Miller's Nightshade. Fl. July, Aug. Clt. 1762. Shrub 2 to 3 feet.

323 S. TRILOBA[X]TUM (Lin. spec. 270.) stem frutescent, scandent, prickly ; prickles hooked ; leaves panduriformly 3-lobed, or 3-lobed, obtuse, glabrous, and are, as well as the petioles and peduncles, prickly ; racemes subumbellate, terminal and lateral; corollas deeply 5-cleft. ^ . ^. S. Native of the East Indies ; as of Coromandel, Java, &c.; and of Jamaica, ex Plukn. Dun. sol. p. 225. Burm. ind. p. *57.* t. 22. f. 2. Roxb. fl. ind. 2. p. 253. Nees, in Lin. trans. 17. p. 59. S. acetosaefdlium, "Lam. ill. no. 2341. Poir. diet. 4. p. 306. Dun. sol. p. 226. S. fûscum, Heyn. herb, ex Wall. cat. no. 2622, B.—Plukn. aim. p. 351. phyt. t. 316. f. 5. Corollas large, white. Berries small, globose, red, drooping.

Three-lobed-\e2ive& Nightshade. Fl. Aug. Clt. 1?59. Shrub climbing.

324 S. SARMENTOSUM (Nees, in Lin. trans. 17. p. 58.) herbaceous ; stem procumbent, sarmentose, prickly ; leaves geminately sub-opposite, oblong, repandly sublobed, rather prickly, clothed with stellate hairs ; peduncles extra-foliaceous, usually 1-flowered, prickly, as well as the calyxes ; calyx turbinate, 5-cleft, with subulate segments. ©. ? S. Native of Penang. S. Melongëna, Wall. cat. no. 2628. ? F. Leaves a little cut, and nearly opposite. It differs from *Melongëna* in the inflorescence and leaves.

Sarmentose Nightshade. PI. sarmentose.

325 S. RIGE'SCENS (Jacq. schoenbr. 1. p. 19. t, 42.) stem prickly, suffruticose; leaves sinuately-lobed, rough from fascicles of stellate pili, prickly ; prickles straight; racemes few-flowered. T? . G. Native of the Cape of Good Hope, Dun. sol. p. 226. exclusive of the syn. of Lam. and Poir. suppl. p. 44. S. hûmile, Lam. ill. no. 2374. Branches rather villous. Leaves green ; lobes obtuse. Prickles straight, long, subulate, shining, yellow. Racemes lateral, simple. Pedicels drooping. Peduncles, pedicels, and calyxes, rather ttfmentose, sometimes unarmed, and sometimes prickly. Corollas violaceous. Berry globose, size of a pea, glabrous.

Stiffish Nightshade. Fl. June, July. Clt. 1823. Shrub 2 *feet*

326 S. ANGUI'VI (Lam. ill. no. 2375. Poir. diet. 4. p. 304.) stem shrubby, prickly ; leaves ovate, sinuately angular, tomentose beneath ; racemes short; calyx unarmed* T? . S. Native of Madagascar. Dun. sol. p. 227. syn. p. 44. sol. ed. 2d. ined. t. 74. Berries small, glabrous, red, esculent.

Anguivi Nightshade, or Madagascar Potatoe. Fl. May, Sept. Clt. 1818. Shrub 2 to 3 feet.

327 S. CAHOLINE'NSE (Lin. spec. 268.) stem prickly, herbaceous; leaves ovate-oblong, tomentose, sinuately lobed, acuminated; racemes simple, loose. %. H. Native of Carolina; and on the banks of the Missouri, along the Platte to the mountains. Jacq. coll. 2. p. 287. icon. rar. t. 331. Michx. fl. bor. amer. 1. p. 150. Dun. sol. p. 227. syn. p. 44. but not of Mill, which is *S. Dillenii.—T>* elth, p. 362. t. 269. f. 348. Root creeping. Stem pale green, beset with stellate pili. Segments of leaves acutish. Leaves prickly on the midrib above, and on the principal veins beneath. Prickles straight, subulate, yellow. Racemes simple, lateral and terminal, elongated. Corolla white or pale blue. Berry globose, larger than a chick-pea, yellow at maturity. Calycine segments lanceolate, acuminated.

Carolina Nightshade. Fl. July, Sept. Clt. 1732. PI. 1 to [9] feet.

328 S. VIOLA[V]CEUM (Jacq. fragm. p. 82. t. 132. f. 1.) stem shi bby, prickly ; leaves lobately sinuated, tomentose, unequal at th base: superior ones twin; racemes nearly simple; calyxes prickl) T? . S. Native of Ceylon, Malabar, China, New South Wales, ^rtega, dec. 5. p. *56.* Dun. sol. p. 228. syn. p. 44. Poir. suppi. 3. p. 743. S. cuneâtum, Moench. meth. p. 476. S. I'ndicum, Lam. ill. no. 2336. Poir. diet. 4. p. 300. exclusive of the syn. of Plukn. Willd. spec. 1. p. 1042. exclusive of the syn. of Roxb., Dill., and Lin. fl. zeyl. Lour. coch. 1. p. 163.—Burm. thes. zeyl. 220. t. 102. S. frutiedsum rndicum, fructu rubro, Tourn. inst. p. 149. Scheru-Schunda, Rheed. mal. 2. t. *36.* This species differs from *S. Tndicum* in the leaves ; in the sinuses being obtuse, larger, and less numerous; lobes entire, not dentately angular; cauline prickles compressed, recurved ; calycine segments not reflexed; corollas smaller; berries globose. Leaves green above, and oanescent beneath. Down stellate. Prickles brown at the base, and yellow at top ; those of the leaves straight, unequal. Racemes few-flowered, tomentose, prickly, sometimes forked at the base ; the other division 1-flowered. Corolla pale violet; segments lanceolate, acute, spreading. Berry copper-coloured, size of a chick-pea.

Violaceous-flowered Nightshade. Fl. June, July. Clt. 1817. Shrub 3 to 4 feet.

329 S. PYRACA'NTIIUM (Lam. ill. no. 2364. Poir. diet. 4. p. 299.) stem shrubby, prickly; leaves oblong, narrow, acute, sinuately pinnatifid, tomentose, prickly; prickles straight, red. h_c . S. Native of Madagascar. Cav. descr. p. 114. Willd. enum. 1. p. 238. Dun. sol. p. 229. syn. p. 44. S. pyracântha, Smith, exot. hot. 2. p. 9. t. 64. S. runcinâtum, Wendl. obs. p. 43. ex Willd. 1. c. S. pyracanthon, Jacq. schoenbr. 4. p. 30. t. 470. S. spinosissimum, Lodd. cat. ? Young branches tomentose. Down all stellate. Leaves having the middle nerve red above ; lobes almost entire, acutish ; recesses obtuse. Prickles straight, subulate, red. Petioles, peduncles, pedicels, and calyxes, dotted with white tomentum, pAckly. Racemes simple, many-flowered. Calyx rusty, with ovate-subulate segments. Corolla bluish-violet, marked by a paler star inside in the centre, and by a pale green star outside. Berry globose, yellowish-green, at length fuscous, twice the size of a pea. A specimen received from Agardh by Schultes, under the name of *S. undcltum,* does not differ from *S. pyracdnthum,* unless in the prickles being yellow, not red.

Far. /3, *inermis* (Sims, bot. mag. 2547.) peduncles and calyxes unarmed. F? . S. Native of Madagascar.

Fire-spined Nightshade. Fl. Aug. Oct. Clt. 1789. Shrub ^to 4 feet.

330 S. VIRGINIA[X]NUM (Lin. spec. 267.) stem annual, erect, prickly; leaves pinnatifidly sinuated, prickly on both surfaces, glabrous, with ciliated margins: lobes sinuated, obtuse; racemes prickly, simple. ©. H. Native of North America, from Virginia to Carolina. Dun. sol. p. 230. syn. p. 45. but not *of* Jacq. Pursh, fl. amer. sept. p. 156.—Dill. elth. p. 350. t. *267.* f. 346.—Plukn. aim. p. 351. phyt. t. 62. f. 3. Tourn. inst. p. 149. Stem rather angular. Leaves green. Prickles strong, subulate, straight, whitish. Racemes 6-7-flowered. Calyx prickly. Corolla large, violaceous. Berry small, ron-<dish-oblong, variegated with white and green before matun[v].

Virginian Nightshade. Fl. May, Aug. Clt. 1662. PI. 1 to 2 feet.

331 S. JACQUI[V]NI (Willd. spec. 1. p. 1041.) stem decumbent,

diffuse, prickly ; leaves sinuately pinnatifid, prickly on both surfaces, glabrous, with naked margins ; racemes simple, and are, as well as the calyxes, prickly. ©. H. Native of the East Indies. Dun. sol. 231. syn. p. 45. S. Virginiānum, Jacq. icon. rar. t. 332. coll. 2. p. 235. exclusive of the syn. of Dill. S. diffūsum, Wall. cat. no. 2613. S. Jacquini, /J, Nees, in Lin. trans. 17. p. *57.* Kandung Kattiri of the Tamuls. This species differs from *S. Virginianum* in the stem being decumbent, not erect; and in the margins of the leaves being naked, not ciliated. Prickles subulate, straight, long, white ; lobes of leaves acutish, sinuated ; recesses obtuse. Corolla bluish-purple.

Jacquiris Nightshade. Fl. Sept. Nov. Clt. 1804. PI. procumbent.

332 S. XANTHOCA'RPUM (Schrad. et Wendl. sert. hannov. 1. p. 8. t. 2.) stem herbaceous, prickly ; lower branches procumbent, divaricate; leaves pinnatifidly ciliated, prickly on both surfaces, and clothed with stellate down : segments sinuated, acute, with naked margins; racemes few-flowered, drooping. ©. H. Native of the Cape of Good Hope, East Indies, and Mauritius. Dun. sol. p. 231. exclusive of the syn. of Lam. syn. p. 45. S. diffūsum, Roxb. fl. ind. 2. p. 250. S. Jacquini, var. a, Nees, 1. c. Very like *S. Jacquini;* but differs in the cauline prickles being fewer ; in the young branches and leaves being clothed with stellate down. Prickles long, yellow. Peduncles 3-4-flowered, lateral and terminal. Corolla large, blue, flat, marked with a purple star in the centre, which is downy outside. Berry globose, size of a cherry, yellow, shining, 1-celled.

Yellow-fruited Nightshade. Fl. June, July. Clt. 1824. PI. i foot.

3S3 S. RICHA'RDI (Dun. syn. p. 45. sol. ed. 2d. ined. t. 67. f- 1.) stem prickly, and scabrous from tomentum, as well as the leaves, on both surfaces, cinereous beneath ; flowers panicled. t? . S. Native country unknown. Leaves ovate-oblong, beset with stellate pili on both surfaces; the prickles on the upper surface straight, and those on the under surface recurved. Racemes simple, beset with stellate hairs, and prickly as well as the calyxes and pedicels. Corolla large, with a 5-rayed star in the centre, villous outside.

Richard's Nightshade. Shrub.

334 S. HK'STRIX (R. Br. prod. p. 446. Dun. sol. 232. syn. p. 45.) stem herbaceous, diffuse; prickles much crowded, subulate, straight; leaves oblong, pinnatifidly sinuated, glabrous, and are, as well as the calyxes, very prickly; corolla armed. ©. S. Native of New Holland, on the south coast.

Porcupine Nightshade. PI. ?

SECT. VII. CRYPTOCA'RPUM *(tcpviTTU), krypto,* to hide ; and καρπός, *karpos,* a fruit; fruit hidden by the calyx.) Dun. sol. 232. syn. p. 45. Nyctērium species of authors. *Leaves pinnQf tifid, bipinnatifd, and pinnate. Corollas 5-cleft. Berry covered by the increased prickly calyx.*

§ 1. *Anthers equal.*

335 S. BALBI'SII (Dun. sol. 232. t. 3. D. syn. 45. Ker. hot. reg. 140.) stem shrubby, villous, prickly; leaves pinnatifid, pilose, prickly : segments acute, sinuately toothed; racemes cymose, lateral and terminal, and are, as well as the calyxes, prickly; anthers nearly equal. J?. G. Native of Peru, on the Andes, near Ayavaca ; and on the banks of the river Cutaco, at the altitude of 900 to 1400 hexapods. S. decurrens, Balb. icon, et descript. fasc. 1. p. 17. £ 1. S. viscōsum, Lag. gen. et spec. nov. p. 10. no. 145. D. C, hort. monsp. S. sisymbrifōlium, Lam. ill. no. *2386.* Poir. diet. 4. p. 307. S. inflātum, Horn. hort. hafn. 1. p. £21. S. brasicaefōlium, Jacq. eclog. p. 14. t. 7. S. formōsum, cat. hort. Dorp. S. Mauritānum velins du gard. de paris, p. 21. t. *66.* Roth, nov. spec. S. viscidum, Schweigg. enum. p. 67. Mart. enum. hort. erl. p. 64. S. Thouini, Gmel. cat. carlsr. p. 254. The whole plant is clothed with simple pili, which are tipped by glands. Leaves soft, clammy, prickly. Petioles prickly. Calyx sometimes unarmed, and sometimes prickly. Prickles straight, subulate, slender, yellow, or reddish-yellow. Corollas large, white, semiquinquefid. Berry ovate, size of a cherry, copper-coloured. This is a beautiful plant when in blossom.

Far. /3, purpūreum (Hook. bot. mag. t. 2828.) Mowers purple. *? . S. Native of Brazil. S. Balbisii, Ker. bot. reg. t. 140. Berry large, yellow, covered by the calyx. There is also another variety with pale blue flowers.

Balbis's Nightshade. Fl. April, Sept. Clt. 1816. Shrub 3 to 4 feet.

336 S. TE'CTUM (Pers. ench. 1. p. 228. Dun. sol. p. 233. syn. p. 46.) stem shrubby, terete, prickly ; leaves bipinnatifidly sinuated, villous, prickly on both surfaces ; berry covered by the villous calyx. J? . G. Native of Mexico. S. sinuātum, Willd. spec. 1. p. 1043. Pers. ench. 1. p. 227. S. fructu tecto, Cav. icon. 4. p. 5. t. 309. S. villdsum, Dietr. gart. lex. 9. p. 341. Plant villous. Leaves bipinnatifid ; lobes obtuse, curftd. Prickles thick, whitish: the slenderer ones brown. Corolla yellow, tomentose outside. Stamens alternating with the crense in the throat. Berry globose, glabrous. Racemes cymose, extrafoliaceous. Peduncles and calyxes very prickly.

Covered-berried Nightshade. Fl. April, Sept. Clt. 1824. Shrub *2* to 3 feet.

§ 2. *Anthers unequal.*

337 S. CORNU TUM (Lam. ill. *2.* p. 25. no. 2387. Poir. diet. 4. p. 308.) stem prickly, glabrous, subherbaceous ; leaves pinnate, prickly: segments pinnatifid, obtuse ; prickles strong; anthers declinate, horn-formed : the lower one large, and much drawn out. h_c . G. Native of Mexico; also of Brazil. Juss. ann. mus. 3. p. 120. t. 9. Dun. sol. p. 234. syn. p. 46. S. heterāndrum, Juss. Nyctērium cardaminifōlium, Vent. jard. malm, no. 85. Nyctērium cornūtum, Link, enum. 1. p» 189. Leaves large, glabrous. Peduncles and calyxes villous and prickly at the base. Prickles subulate, yellow, fuscescent at the base ; those of the calyx setaceous. Racemes simple, lateral. Corollas large, yellow, irregular, semiquinquefid, with reflexed segments.

//orwecf-anthered Nightshade. Fl. June, Aug. Clt. 1823. Shrub 2 to 4 feet.

338 S. HETERA'NDRUM (Pursh, fl. amer. sept. 2. p. 731. t. 7.) annual; stem and leaves prickly and hairy; leaves ovate, obtuse, pinnatifid, hairy on both surfaces : segments obsoletely crenated and undulated ; anthers declinate, distant: lower one horn-formed, and drawn out; berry inclosed in the echmated calyx. ©. H. Native on the banks of the Missouri, Arkansas, &c. Pursh, 1. c. 1. p. 156. Androcēra lobāta, Nutt. gen. amer. 1. p. 129. Nycterium lobātuin, Sweet. N. luteum, Donn. Corollas yellow. Peduncles lateral, many-flowered.

Variable-anthered Nightshade. Fl. June, July. tit. 1813. PI. 1 to 2 feet.

339 S. ROSTRA TUM (Dun. sol. p. 234. t. 24. syn. p. 46.) stem prickly, pilose ; pili stellate at apex; leaves pinnatifid: segments obtuse; corollas irregular; anthers declinate, horn-formed: lower one large, and much drawn out. ©. H. Native of Mexico. Leaves beset with cinereous, stellate, and simple hairs, and very prickly on both surfaces. Prickles unequal, straight, subulate, yellowish. Racemes lateral, simple.

Calyx villous, prickly. Corollas large, yellow, pilose outside, semiquinquefid. Berry globose, size of a pea.

Beaked-anthered Nightshade. Fi. June, Aug. Clt. 1823. PL 2 to 3 feet.

340 S. FONTANESIA^NUM (Dun. syn. p. 46. sol. ed. 2d. ined. t. 76.) stem rather woody, annual, prickly, pilose; leaves deeply pinnatifid : segments sinuated ; corollas almost regular ; anthers small: lower one a little curved at apex, brown. ©. H. Native of Brazil ? Poir. suppl. 3. p. 777. Ker. bot. reg. t. 177. Nyctèrium Fontanesianum, G. Don, in Loud. hort. brit. p. 74.—An intermediate plant between *S. rostrdtum* and *S. heterodoxum;* but differs from both in the prickles being recurved, and more robust; in the leaves being more deeply pinnatifid; in the segments being more deeply sinuated and curled ; in the flowers being smaller, and more regular, although also yellow.

Desfontaine's Nightshade. Fl. July, Sept. Clt. 1813. PI. 2 to 3 feet.

341 S. HETERODÓXUM (D. C. hort. monsp. mss. with a drawing, ex Dun. sol. p. 235. t. 25. syn. p. 46.) herbaceous; branches and leaves pilose and prickly ; leaves bipinnatifid ; segments sinuately 3-lobed, or runcinate; peduncles lateral, few-flowered, and are, as well as the calyxes, prickly; anthers declinate : lower one large, and much drawn out. ©. H. Native of Mexico, near Zelaya and Molino de Sarabia, at the altitude of 940 hexapods. Nyctèrium heterodóxum, Link, enum. 1. p. 189. Segments of leaves acute. Hairs simple, clammy, glanduliferous at top. Prickles subulate, yellow. Corollas small, blue, downy outside. Berry globose, size of a sloe.

Variable Nightshade. Fl. June, Aug. Clt. 1820. PI. *2* to 3 feet.

SUBSECT. VIII. NYCTE'RIUM (from *vvKrepig, nycteris,* a bat; form of leaves?) Dun. sol. p. 202. *Leaves cordate, entire ; or* ***oblong, sinuated. Corolla rather irregular, quinquefid; segments acute, reflexed. Anthers unequal. Berry globose, propped by the calyx, but not covered by it.***

342 S. PUBE'SCENS (Willd. phyt. p. 5. no. 17. t. 3. spec. 1. p. 1026.) shrubby, unarmed, clothed with hairy down all over; leaves ovate, acute, quite entire, or subrepand; racemes corymbose at the sides of the leaves ; lower anthers drawn out. ^. S. Native of the East Indies. Dun. sol. p. 167. syn. p. 19. Nees, in Lin. trans. 17. p. 60. Corollas large, purplish. Very nearly allied to *S. vespertilio* of Ait; but the stem in that species is prickly, and the leaves cordate, and the flowers are often, quadrifid.

Downy Nightshade. Fl. June, July. Clt. 1820. Shrub 5 to 6 feet.

343 S.cALYc'NUM (Nees, in Lin. trans. 17. p. 60.) shrubby? unarmed, clothed with hairy stellate pubescence ; leaves ovate, quite entire, or a little repand ; racemes terminal; calyx and corolla funnel-shaped ; one of the anthers drawn out. F? /? S. Native of the East Indies. S. pubescens, var. Herb. madr. Wall. cat. suppl. no. 237. This is a singular species.

Large-calyxed Nightshade. Shrub.

344 S. VESPERTILIO (Ait. hort. kew. 1. p. 252.) stem shrubby ; leaves cordate, entire; corollas rather irregular, usually quadrifid ; lower anther elongated. f?. G. Native of the Canary Islands, where it is called *Realgera* and *Permenton.* Dun. sol. p. 202. syn. p. *35.* Wendl. hort. harr. p. 5. t. 21. Nyctèrium cordifólium, Vent. malm. p. 85. t. 85.—Pluk. phyt. t. 316. f. 3. aim. 351. mant. 173. Stem prickly. Leaves scabrous above, and tomentose beneath ; petioles and midrib prickly. Hairs and tomentum stellate. Racemes extra-axillary, prickly, tomentose. Flowers tetramerous or pentamerous. Corolla blue, tomentose outside. Anthers 4-5, one of which is long and arched. Berry glabrous, size and form of a cherry.

Bat-winged-leaved Nightshade. Fl. April, July. Clt. 1779. Shrub *2* to 3 feet.

345 S. TRIDYNA'MUM (MOC. et Sesse, fl. mex. icon. ined. Dun. syn. p. 35. sol. ed. 2d. ined. t. 75.) stem herbaceous? prickly, rather tomentose, leaves sinuated, bluntish, tomentose ; racemes simple; calyxes prickly on the ribs ; corollas irregular; 3 of the anthers are recurved, and longer than the other two. ©.? G. Native of Mexico. Stem of a rusty-yellow colour. Racemes terminal and axillary. Calycine segments 5, acute; and the corolla large and violaceous, as well as the tops of the anthers. Berry globose.

Three-powered Nightshade. PI. 2 feet.

346 S. AMAZ6NIUM (Ker, in bot. reg. t. 71. Dun. syn. p. *36.* sol. ed. 2d. ined.) stem shrubby, tomentose, unarmed; leaves oblong-ovate, repand, or sinuately-lobed; racemes cymose, scorpioid; flowers polygamous, monoecious ; calyxes of the fertile flowers prickly at the base: the segments unarmed ; corollas irregular; 3 of the anthers longer than the other 2. J? . 1. Native *o^* Mexico. Nyctèrium Amazóniura, Link, enum. 1. p. 189. G. Don, in Loud. hort. brit. p. 74. N. Lamberti, Sweet. The whole plant is clothed with hoary down. Flowers large, beautiful blue, corymbose.

Amazonian Nightshade. Fl. June, Aug. Clt. 1800. Shrub *2* to 3 feet.

"f *Species not sufficiently known.*

§ 1. *Unarmed species.*

**** Leaves entire or repand.***

347 S. CAJUNUME'NSE (H. B. et Kunth, nov. gen. amer. *S.* p. 47.) stem shrubby ; branches hairy; leaves solitary, roundish-ovate, short-acuminated, cordate, quite entire, hairy; racemes supra-axillary, trifid ; flowers unilateral. J? . S. Native of New Granada, in the woods of Cajunuma and Untusinga, near Loxa, at the altitude of 1040 hexapods. Corolla subrotate, violaceous, glabrous; segments ovate-oblong, acute, with inflexed margins. Berry 2 inches long, ovate, acute, 1-ceiled, many-seeded, ex BonpL Perhaps this species belongs to section *S. crotonoldes,* or is, and perhaps with more correctness, a species of *Cdpsicum.*

Cajanuma Nightshade. Shrub 10 to 12 feet.

348 S. ADENÓTRICHUM (Dun. sol. *236.* syn. p. 46.) stem unarmed, shrubby; leaves cordate, acuminated, clothed with glanduliferous hairs on both surfaces, quite *o^-**; flowers racemose. T?. S. Native of Brazil. Van spec. fl. bras, in Roem. script, de pi. hisp. p. 86.

Gland-haired Nightshade. Shrub.

349 S. DI'DYMUM (Dun. sol. p. 236. syn. p. 47.) stem frutescent, flexuous; leaves ovate; calyxes, stem, and leaves, beset with branched hairs ; the upper surfaces of the leaves tubercled ; flowers cymose. J? . S. Native of Brazil. Vand. spec, fl. bras, in Roem. script, pi. hisp. p. 86.

Didymous Nightshade. Shrub.

350 S. CLADÓTRICHUM (Dun. 1. c.) stem unarmed, frutescenr, flexuous ; leaves ovate; calyxes, stem, and leaves, beset with branched hairs ; upper surface of the leaves tubercled ; flowers cymose. P? . S. Native of Brazil. Vand. spec fl. bras, in Rcem. script, de pi. hisp. p. 85.

Branch-haired Nightshade. Shrub.

351 S. INTEGE'RRIMUM (Dun. sol. p. 236. syn. 47.) stem unarmed, shrubby; leaves broad-lanceolate, quite entire ; lower

surfaces of the leaves tomentose ; racemes terminal. h_c . S. Native of Brazil. Vand. spec. fl. bras, in Room, script, pi. hisp. p. 85.

Quite-cntireAeaxed Nightshade. Shrub.

352 S. FORSKA'LII (Dun. sol. p. 237. syn. p. 47.) leaves villous, oval, oblique at the base, with repand margins.—Native of Arabia. S. villosum, Forsk. fl. arab. p. 47. but not of Lam. Bockoeme is the Arabic name of the tree.

ForskceVs Nightshade. Shrub ?

353 S. RErA NDIM (Forst. prod. p. 105. Willd. spec. 1. p. 1032. Dun. 1. c.) stem unarmed, sub-herbaceous, flexuous, smooth ; leaves ovate, repand, tomentose ; peduncles axillary, cymose. ©. ? H. Native of the Society Islands.

Bepand-\ea\ed Nightshade. PI.

354 S. PLUKENETII (Dun. 1. c.)—Native of? Soldnum I'ndicum, lauriniis angustioribus foliis maximum. Plukn. phyt. t. 227. f. 2.

PlukeneVs Nightshade. Shrub ?

355 S. ERIOCALYX (Dun. 1. c.) stem unarmed, shrubby; leaves ovate, quite entire, tomentose beneath ; umbels erect, terminal; calyxes obtuse, woolly. *? . S. Native of America, about Carthagena. S. racemosum, Mill. diet. no. 28. ex Houst. mss. but not of Lin. Umbels large. Corollas large, white. Berry globose, yellow, size of a small cherry. Leaves 4 inches long, and \\ broad.

Woolly-calyxed Nightshade. Shrub.

356 S. UMBELLA'TUM (Mill. diet. no. 17. ex Houst. mss. Dun. 1. c.) stem frutescent, unarmed ; leaves lanceolate, quite entire, pilose beneath ; umbels erect, terminal. T? . S. Native of Mexico, about Campeachy. Leaves 5 inches long, and 1£ broad. Flowers small. Corolla white. Anthers purple. Berry yellow, size of a pea.

Umbellate-Cowered Nightshade. Shrub 10 to 12 feet.

357 S. AMERICA^NUM (Mill. diet. no. 5.) stem unarmed, herbaceous ; leaves ovate, acuminated, glabrous; umbels erect. ©. H. Native of Virginia. S. Americanum vulgari simile, flore parvo purpurascente, acinis nigricantibus minoribus, Rand, ex Mill. Stem angular ; branches slender, spreading. Leaves dark green, a little toothed. Flowers few, small. Calycine segments narrow, acuminated, white, purplish outside. Berries small, black.

American Nightshade. PL 2 to 3 feet.

358 S. AXILIFLORUM (Dun. sol. p. 238. syn. p. 47.) stem unarmed, frutescent, flexuous ; leaves ovate, tomentose beneath ; flowers solitary, alar. *J?* . ^. S. S. scandens, Mill. diet. no. 19. ex Houst. mss. Leaves 2 inches long, and lj broad. .Corolla large, pentagonal, blue ; angles mucronate. Berry size of a pea, red. Perhaps belonging to section *Pohjmeris.*

Axillary-jlowered Nightshade. Shrub 10 to 12 feet.

359 S. WILLDENOWII (Rcem. et Schultes, syst. 4. p. 661.) unarmed, herbaceous, quite glabrous; leaves ovate-elliptic, obtuse, quite entire ; peduncles solitary or twin. ©. H. Native country unknown. S. obtusifolium, Willd. enum. suppl. p. 11.

Willdenows Nightshade. PI. 1 to 2 *feet.*

360 S. MEMPHI'TICUM (Mart. enum. hort. erlang. p. *63.)* stem herbaceous, unarmed, erect, denticulately angular; leaves ovate ; peduncles erect, many-flowered : fructiferous ones droopincr. 0. H. Native country unknown. Leaves petiolate, rath?: downy, purplish, having the veins violaceous on the under side. Peduncles corymbose, 5-7-flowered. Calycine segments obtuse. Corollas size of those of *S. nlgrum,* violaceous ; the segments cut even to the calyx, with a yellowish claw; anthers brown Berry black. Aspect of the plant lurid, from the stem beinc purplish, and the veins of the leaves dark purple.

MempLic Nightshade. **PI. 1 to 1{ foot.**

361 S. DICTYO'TICUM (R«m. et Schultes, syst. 4, p. 661.) stem shrubby, tomentose ; leayes ovate, truncately cordate at the base, unequal, angular towards the base, toothed, densely tomentose beneath ; cymes axillary. I? . S. Native country unknown. S. reticulatum, Willd. herb mss.

Netted Nightshade. Shrub.

362 S. CITRIFOLIUM (Willd. herb, ex Rcem. et Schultes, syst. 4. p. 662.) &tem shrubby ; leaves oblong, acuminated, shining, clothed with white tomentum beneath ; spikes terminal, dichotomously corymbose. I? . S. Native of South America, on the banks of the river Magdalena.

Citron-leaved Nightshade. Shrub.

363 S. STIPULACEUM (Willd. 1. c.) stem shrubby; leaves lanceolate, quite entire, tomentose; cymes pedunculate, alar; stipulas semilunate. ^ • S. Native of Brazil, Hoffmannsegge.

Stipulaceous Nightshade. Shrub.

364 S. CUMANE'NSE (Rcem. et Schultes, syst. 4. p. *662.)* stem shrubby ; leaves roundish-ovate, acute, glabrous, a little t*>tbed ; umbels terminal. h . S. Native of Cumana, Humb. et Bonpl. S. umbellatum, Willd. herb. 1. c.

Cumana Nightshade. Shrub.

365 S. DUMETORUM (Willd. herb. 1. c.) stem shrubby, branched; leaves ovate, downy above, but pilosely tomentose beneath; peduncles axillary, 1-flowered. J? . S. Native courttry unknown.

Bush Nightshade. Shrub.

366 S. CAMPANIFORME (Roem. et Schultes, syst. 4. p. 662.) shrubby ; leaves lanceolate, acuminated, glabrous ; racemes axillary, on long peduncles. J? . S. Native of Brazil. S. campanulatum, Willd. herb. 1. c. Racemes axillary and extra-foliaceous, longer than the leaves, erect. Corolla deeply 5-parted, campanulate.

Bell-formed-fiowered Nightshade. Shrub.

367 S. PEDUNCULATUM (Willd. herb. 1. c.) shrubby; leaves lanceolate, petiolate, bluntish, pilosely strigose ; umbels pilose, pedunculate. ^ • S. Native country unknown.

Pedunculate-dowered Nightshade. Shrub.

368 S. PRUNIFOLIUM (Willd. 1. c.) shrubby; leaves elliptic, acuminated, serrated, on long petioles ; panicle terminal. T? . S. Native of Caraccas, Bredemeyer. Leaves lj inch long, acuminated at both ends, erosely-toothed. Panicle divaricate.

Plum-leaved Nightshade. Shrub.

369 S. FLEXUOSUM (Willd. herb. 1. c.) stem shrubby, flexuous, retrofracted; leaves ovate, tomentose beneath; peduncles solitary, axillary, filiform, elongated. *V}.* S. Native of St. Domingo, Desfontaincs.

Flexuous Nightshade. Shrub.

370 S. MICRA'NTIIUM (Willd. herb. 1. c.) stem shrubby; leaves oblong, attenuated at both ends, scabrous and green beneath ; corymbs shorter than the petioles. Jj . S. Native of South America. Humb. et Bonpl.

Small-jlorvercd Nightshade. Shrub.

371 S. MODE'STUM (Roem. et Schultes, syst. 4. p. *665.)* stem frutescent, unarmed, glabrous ;. leaves lanceolate, attenuated at the base, veiny, with subundulated margins, glabrous ; flowers terminal, corymbose. J? . S. Native of Mexico. S. Mexicanum, Willd. herb. 1. c.

Modest Nightshade. Shrub.

* * *Leaves toothed, sinuated, lobed, and pinnate.*

372 S. AFRICA NUM (Tourn. inst. p. 149. Dun. sol. p. *238.* syn. p. 48.)—Native of Africa. S. bacciferum vulgari simile Africanum; foliis frequentius et profundius crenatis, Tourn. 1. c.

African Nightshade. Pl. ?

373 S. LEUCOCA'RPUM (Dun. sol. p. 228. syn. p. 45.) ♃. H. S. *Leucánicum* perenne; foliis amplis profunde crenatis; fructu rubro. Tourn. inst. p. 149.

Portugal Nightshade. Pl.

374 S. PSEUDO-CA'PSICUM (Hemsl. meth. suppl. p. 72. Dun. sol. p. 256. syn. p. 45.) stem shrubby, clammy; leaves large, cordate, sinuated, clammy; stalks elevated. ♄. S. *Native country* Unknown. Stem terete, branched at top. Leaves petiolated; lobes roundish, pubescent. Peduncles lateral, shorter than the petioles, bearing each 3-4 pedicels, which are reflexed in the fruit-bearing state. Corolla white. Berry roundish, yellow, striated.

Clammy Nightshade. Shrub 4 feet.

375 S. AVICULA'RE (Forst. prod. no. 107. pl. esc. no. 18.) stem unarmed, shrubby; leaves sinuately pinnatifid; corymbs terminal. ♄. G. Native of New Zealand.

Knot-Grass Nightshade. Shrub.

376 S. NODIFLO'RUM (Dun. sol. p. 238. syn. p. 45.) stems herbaceous, pilose, tetragonal, membranous, creeping; leaves petiolate, ovate, quite entire, pilose; racemes simple. ♃. H. Native of Brazil. Vand. spec. fl. bras. in Roem. script. pl. hisp. p. 86.

Creeping Nightshade. Pl. creeping.

377 S. VERRUCU'LOSUM (Palacio, mem. min. 2. p. 340. Dun. syn. p. 45.) root bearing tubers; leaves unequally pinnate; racemes few-flowered; pedicels articulated; berries glabrous, oblong, compressed. ♃. H. Native of New Grenada, at the river Malave, Eloy Valenzuela. Stalons bearing white, nearly round, flattened, tapid tubers. Stems procumbent, much branched. Corolla with revolute segments. A variety of *S. tuberosum*.

Valenzuela's Potatoe. Pl. procumbent.

378 S. CA'VAE (Mol. chil. p. 109.) stem herbaceous; leaves pinnate, entire; nectarium campanulate, exceeding the petal. ♃. ? H. Native of Chili. This is certainly no *Solanum*, and perhaps even does not belong to the order.

Cavi Nightshade. Pl. ?

379 S. SERPENTI'NUM (Willd. herb. l. c.) stem suffruticose, branched; leaves lanceolate, sublobed, naked, obtuse; pedunculus opposite the leaves, sub-trilobed. ♄. G. Native of Buenos Ayres.

Subfalcate-leaved Nightshade. Shrub.

380 S. CARACASA'NUM (Roem. et Schultes, syst. 4. p. 654.) stem shrubby; leaves pinnate, ternate and simple, quite entire; flowers racemose. ♄. S. Native of Caracas. Bredemeyer. *S. heterophyllum*, Willd. herb. l. c. Shrub 10 feet high, branches dichotomous, divaricate. Peduncles from the axils of the leaves, elongated into twin, pendulous racemes. Corolla purple, violaceous.

Caracas Nightshade. Shrub.

381 S. VESPERTI'NUM (Roem. et Schultes, l. c.) shrubby; leaves interruptedly pinnate, tomentose beneath; stipules falcate; flowers corymbose; pedicels. ♄. S. Native of South America. Humb. et Bonpl. *S. pinnatum*, Willd. herb. l. c.

Pinnate Nightshade. Shrub.

382 S. HYPOLEU'CUM (Willd. herb. l. c.) stem frutescent; leaves pubescent, auricled at the base almost sessile; peduncles axillary, 1-flowered. ♄. G. Native of Buenos Ayres.

Thyme-leaved Nightshade. Shrub.

¼ 2. *Prickly plants.*

* *Leaves entire.*

383 S. BONA'RIENSE (Vand. fasc. p. 10. Roem. script. pl. hisp. p. 55.) stem shrubby, tomentose, rather prickly; leaves ovate-oblong, quite entire, tomentose beneath; racemes lateral, drooping. ♄. S. Native of Brazil. *S. Bonariánum*, Dun. sol. p. 229. Prickles few, very short. Calyxes, peduncles, and petioles tomentose. Leaves unequal at the base, glabrous above. Berry glabrous.

Estelle's Nightshade. Shrub.

384 S. BRASILIA'NUM (Dun. sol. p. 262. syn. p. 48.) ♄. S. Native of Brazil. *Solánum Brasilianum*, folio integro non sinuato, fructu, Papas Americani, floribus in summitate capilli. Plukn. amalth. append. t. 434. f. 2. Leaves ovate, acuminated, unarmed. Flowers corymbose. Corolla pentagonal; anthers divaricate.

Brazilian Nightshade. Fl. Cl. Shrub.

385 S. CORDA'TUM (Forsk. fl. arab. p. 47. no. 30.) stem shrubby, rather prickly; leaves roundish-cordate, entire, unarmed. ♄. S. Native of Arabia, where it is called *Hadak*. Leaves [illegible] long, glabrous. Corolla violaceous, deflexed. [illegible] grey, teal, size of a pea.

Cordate-leaved Nightshade. Shrub.

386 S. SICORIS'FOLIUM (Lag. gen. et spec. nov. p. 16. no. 143.) stem prickly, shrubby; leaves obliquely cordate-oblong and oblong, acute, unarmed, subundulated, very clammy. ♄. S. Native country unknown.

Tobacco-leaved Nightshade. Shrub.

387 S. RHIZOLA'TUM (Herm. ind. t. 12. f. 2. Gmel. syst. p. 386. Vitm. summ. 1. p. 493.) stem shrubby; leaves ternate, ovate, quite entire. ♄. S. Native of Coromandel. Stem quite glabrous. Prickles few, incurved. Leaves alternate, petiolate, glabrous.

Trifoliate Nightshade. Shrub.

388 S. DOMINGE'NSE (Willd. herb. ex Roem. et Schultes, syst. 4. p. 665.) stem shrubby, rather prickly, flexuous; leaves elliptic, petiolate, quite entire, tomentose beneath; flowers axillary, aggregate. ♄. S. Native of St. Domingo.

St. Domingo Nightshade. Shrub.

* * *Leaves dentated, lobed, and pinnatifid.*

389 S. CHINE'NSE (Dunal sol. p. 240. [illegible] Native of China. *Solanum inermum* [illegible] floribus parvis, fere umbellatis, fructu [illegible] phyt. t. 62. f. 1. Tourn. inst. p. 149. In the figure the leaves are represented as twin: the one smaller than the other, sinuated, having the midrib prickly; the peduncles are numerous, aggregate, almost opposite the leaves, and hardly longer than the petioles; and the flowers are small. Said to be nearly allied to *S. violaceum*.

China Nightshade. Shrub.

390 S. INCE'RTUM (Dun. l. c.) stem prickly, shrubby; leaves prickly, oblong, dentately-sinuated, glabrous; calyx glabrous; corolla violaceous, reflexed; berry globose. ♄. G. Native of Arabia, at Surdud. *S. Bahamense*, Forsk. egypt. p. 46. no. 32.

Glabrous Nightshade. Shrub.

391 S. ARMA'TUM (Dun. l. c.) stems procumbent, annual, very prickly; prickles straight; peduncles opposite; flowers racemose. ☉. H. Native of Arabia, where it is called *Bachmé*, or *Bakm*. *S. armatum*, Forsk. fl. arab. p. 47. no. 33, but not of R. Br. Perhaps only a variety of *S. [illegible]* with which it agrees in the leaves and [illegible] and figure of the corolla. Prickles numerous, white, straight, spreading. Stem, petioles, nerves of leaves, calyxes, and peduncles very prickly. Fruit fleshy, obscure green, veined with white.

Arabian Nightshade. Pl. procumbent.

392 S. [illegible] (Vand. fasc. p. 10. Roem. script. pl. hisp. p. 55.) stem shrubby, strigose; leaves ovate, sinuated, rather

prickly on the midrib, tomentose; calyxes strigose; berry smooth. ♄. S. Native of Brazil. Dun. sol. p. 241. syn. p. 49. Stem, petioles, and calyxes beset with long, yellowish strigæ. Leaves cordate at the base; prickles yellowish. Panicles lateral, branched. Corolla tomentose outside. Berries small.

Sinuate Nightshade. Shrub.

393 S. SINUATUM (Dun. sol. p. 241. syn. p. 49.) stem frutescent, dichotomous, shrubby, prickly, tomentose; prickles recurved; leaves sinuately-angular, rather tomentose, spiny on the midrib; flowers solitary. ♄. S. Native of Brazil. S. dichotomum, Vand. fasc. p. 9.; Roem. script. p. 54, but not of Lour. Stem green, yellow. Tomentum stellate. Prickles few, yellow at top. Leaves sub-petiolate. Spikes revolute, as in *Heliotropium*. Calyx tomentose. Corolla white.

Vandelli's Nightshade. Shrub.

394 S. MACRONUM (Dun. sol. p. 242. syn. p. 49.) stem herbaceous, pilose, prickly, scabrous; pili white, stellate; leaves sinuated, acute, rather pilose, the midrib prickly on both sides; peduncles erect, terminal, 1-3-flowered, longer than the petioles. ♃. S. Native country unknown. S. stellatum, Marsch. meth. p. 475, but not Jacq. Stems simple. Prickles yellow, distant. Peduncles and calyxes pilose, and furnished with a very few prickles. Corolla white, large. Anthers dilute. Style white; stigma green. Berry smooth, yellow.

Marsh's Nightshade. Pl. ? fig.

395 S. BERTERIANUM (Dun. sol. p. 242. syn. p. 49.) stem shrubby, tomentose, prickly; leaves deeply and sinuately angular, tomentose, rather prickly; flowers corymbose. ♄. S. Native of Brazil. *S. Berteri*, Vand. fasc. p. 10. Roem. script. p. 56. Prickles few, very short, straight. Leaves petiolate, unequal at the base. Prickles slender. Corymbs lateral. Calyx pilose.

Belfort's Nightshade. Shrub.

396 S. RANCEANUM (Vand. fasc. p. 10. Roem. script. p. 53. Dun. sol. p. 242.) stem prickly, pilose, herbaceous; lower leaves cordate, ovate; superior ones pinnatifidly-sinuated, acute, as well as prickles straightish on both surfaces. ♃. S. Native of Brazil, where it is called *Relambabou*. Prickles thick, recurved, yellow at top. Berry yellow, nearly dry, size of a cherry.

Bonda's Nightshade. Pl.?

397 S. ATURIANUM (Dun. sol. p. 243. syn. p. 50.) ♄. S. Native of India. Solanum Indicum spinosum stroviceo, et hodiepno glabrum, folio branchæ ursinæ divisuris. Pluckn. phyt. t. 92. f. 2. S. pomiferum spinosum Indicum, fructu echinato, foliis cardui seu acanthi spinosi. Breyn. prod. p. 1.?

Dark-green Nightshade. Shrub.

398 S. CARAGUM (Thunb. prod. 37. Lin. suppl. 147.) stem prickly, shrubby, erect; leaves sinuately-pinnatifid, prickly, naked; divaricate segments entire, obtuse. ♄. G. Native of the Cape of Good Hope. Dun. sol. p. 243. syn. p. 50. Plant armed with copious yellow, recurved prickles. Leaves ovate, sinuate, glabrous. Peduncles solitary, 1-3-flowered, drooping. Calyx prickly. Corolla blue. Berry glabrous.

Dwarf Nightshade. Shrub 1 foot.

399 S. HUMILE (Dun. sol. p. 243. syn. p. 50.) stem shrubby, prickly; leaves oblong, sinuately pinnate, prickly; umbels sessile. ♄. S. Native of Vera Cruz. *S. parviflorum*, Mill. fig. t. 7. S. ex Houst. mss. Prickles recurved. Flowers pale. Berries red, size of juniper berries.

Houstan's Nightshade. Shrub 5 or 6 feet.

400 S. HOUSTANUM (Dun. l. c.) stem shrubby, prickly; leaves pinnatifidly-lyrate, tomentose, prickly on both surfaces; peduncles axillary, few-flowered. ♄. S. Native of Vera Cruz. *S. angustifolium*, Mill. dict. no. 13. ex Houst. mss. Stem procumbent, tomentose. Prickles long, yellow. Leaves almost 3 inches long, and 2 broad. Peduncles 2-3 inches long. Calyx very prickly. Corollas large, yellow. Berry globose, size of a pea, variegated with green and white.

Aegeria-leaved Nightshade. Shrub procumbent.

401 S. VITIFOLIUM (Vand. in Roem. script. p. 55.) stem suffruticose, prickly, rather pilose; leaves pinnate, cut, prickly on both surfaces; racemes lateral, compound. ♄. S. Native of Brazil. Dun. sol. p. 243. syn. p. 50. Stem green. Prickles long, straight, red, very sharp. Leaves rather pilose. Petioles, peduncles, and calyxes prickly and pilose.

Valadares Nightshade. Shrub.

402 S. ROTTERIANUM (Barte. et Schultes, syn. 4. p. 648.; Dun. sol. p. 243. syn. p. 50. The berry on being opened, or bruised, exhales an intolerable smell, which excites nausea and cephalalgia.

Rottboll's Nightshade. Shrub.

403 S. SIERRENSE (Lam. ill. no. 2573. Poir. dict. 4. p. 380. Pers. euch. 1. p. 228.) a dwarf prickly shrub; leaves ovate, sinuately angular, prickly, almost naked, beset with white prickles on both surfaces. ♄. S. Native country unknown. Stem very stiff, hardly a foot long, erect, a little branched. Leaves acute, rather villous; prickles short, straight. Leaves acute, undulated; lobes acute, sub-mucronate, rather ciliated, pale or yellowish green. Prickles numerous, naked, subulate, stiff, purplish at the base. Racemes terminal. Peduncles short, a little villous. Calyx villous; with lanceolate, very acute segments, sometimes prickly, and sometimes unarmed.

Soft Nightshade. Shrub 1 foot.

404 S. AQUARIENSE (Hort. par. Dum. Courset, bot. cult. ed. 2d. suppl. p. 152.) stem shrubby, prickly, thick, villous; leaves cordate, deeply and sinuately lobed, prickly on both surfaces, as well as the petioles, villous, soft. ♄. S. Native country unknown. Stem straight, simple, or branched, dark purple. Prickles strong, a little recurved. Leaves large, 8-9 inches long, pale green.

Aquatic Nightshade. Shrub.

405 S. AQUATICUM (Willd. herb. ex Roem. et Schultes, syst. 4. p. 662.) stem shrubby; leaves 3-angled, hairy, and as well as the petioles, beset with subulate prickles; peduncles generally 2-flowered. ♄. S. Native of Caracas, Bredemeyer. *Five-angled-leaved* Nightshade. Shrub.

406 S. PENTAGONIFOLIUM (Willd. l. c.) stem shrubby, and is, as well as the peduncles, prickly; leaves roundish-ovate, angulately toothed, downy and prickly on both surfaces; calyxes covered with prickles bristly. ♄. S. Native on the banks of the Orinoco, Humb. et Bonpl.

Bearded Nightshade. Shrub.

N.B. In Salt's abyss. append. p. 475, there are 2 species mentioned, but without any diagnosis of either, viz. *S. cinereum*, R. Br. and *S. variabile*, R. Br.

What are the following species. 1. *S. æthiopicoides*, Car. 2. *S. agreste*, Brouss. 3. *S. aracdiacum*, Bess. Krasn. 4. *S. nigellifolium*, Brouss. 5. *S. sestrifolium*, Fisch.

Cult. All the species of *Solanum* thrive best in a rich, light soil, and are readily increased by seed, or cuttings planted in sand under a hand-glass root readily. A great number of the species are very handsome, and therefore worth cultivating for ornament. They are treated like other stove greenhouse and hardy plants. The seeds of annual species, natives of tropical countries, require to be raised on a hot-bed, and the plants to be set out in the open ground about the end of May in a sheltered, dry situation.

II. LYCOPE'RSICUM (from \VKOQ, *lyJcos,* a wolf; and *TepaiKov, persicon,* a peach ; Wolf-peach.) Tourn. inst. p. 150. t. 63. Adams, fam. 2. p. 218. Mill. diet. Mcencli. meth. p. 515. Dun. sol. p. 109. H. B. et Kunth, nov. gen. amer. 3. p. 17.—Lycopersicum and Psolanum, Neck. elem. bot. 2. p. 60. —Solanum species. Lin. gen. no. 251. Juss. gen. p. 126. &c.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-6-parted. Corolla rotate, with a very short tube, and a 5-G-cleft limb. Stamens 5. Anthers conical, joined by a membrane, which is elongated at apex, dehiscing lengthwise inside. Stigma sub-bifid. Berry 2-3-celled. Seeds villous.—Herbaceous, unarmed, procumbent herbs. Leaves impari-pinnate. Peduncles solitary, extra-axillary, many-flowered, sometimes leafy; pedicels articulated under the flowers, reflexed when bearing the fruit. Corollas yellow. Fruit of various shapes and sizes, usually red and glossy. In most of the species the hairs are glandular at the base.

1 L. PIMPINELLIFOLIUM (Mill. diet. no. 4. Dun. sol. p. 111.) stt herbaceous, glabrous ; leaves pinnate; leaflets entire, glabuus; racemes simple. ©. H. Native of Peru, and Brazil. Solanum pimpinellifolium, Lin. amcen. 4. p, 268. spec, p. 265. Vellozo. spec. fl. bras, in Rcem. script, p. 85. L. inoddrum, Juss. Leaflets cordate, not cut or toothed in any way. There are no hairs on this species.

Burnet-leaved Love Apple, or Tomato. Fl. May, July. Clt. ? PI. proc.

2 L. PERUVIA'NUM (Mill. diet. no. 5. Dun. sol. p. 111.) stem sub-herbaceous, tomentose ; leaves unequally pinnate, tomentose, canescent, stipulate ; leaflets cut; peduncles and pedicels bracteate. %. S. Native of Peru, in arid and waste places, very common in the provinces of Lima and Chancay, ex Ruiz, et Pav. ; cultivated in Cochinchina, ex Lour. Solanum Peruvianum, Lin. spec. ed. 1st. 186. ed. 2d. p. 267. Jacq. icon. rar. 2. t. 327. Ruiz, et Pav. fl. per. 2. p. 37. Lour, coch. 1. p. 162.—Feuill. per. 3. p. 37. t. *25.* In Peru the **plant is called *Tomatle Cimarron,* i. e. *Wild Golden Apple,* and** in China it is called *Cd iau Fang,* Root permanent. Stems woody at the base ; branches villous. Leaflets bluntish. Racemes villous, sometimes simple, sometimes bipartite, lateral, and terminal. Calyx 5-parted. Corolla the largest of the genus. Berry size of a pea, rather villous. Plant with a pleasant smell.

Peruvian Love Apple, or Tomato. Fl. May, June. Clt. 1823. PI. proc.

3 L. PYRIFORME (Dun. sol. p. 112. t. 26.) stem herbaceous, pilose ; leaves unequally-pinnate, pilose ; leaflets cut, glancescent beneath ; racemes often leafy ; calyeine segments about equal in length to the corolla; berries obconical. ©. H. Native country unknown. Solanum pomiferum, Cav. descr. p. 112. Pers. syn. 1. p. 226. Racemes large: superior ones rarely leafy: lower ones usually terminated by a leafy branch. Berry pear-shaped, 2-celled, as in the 4 following species. Hairs simple, unequal. This and all the following species exhale a heavy smell.

Pear-formed-ftuited Love Apple, or Tomato. Fl. July, Sept. Clt. 1823. PI.

4 L. HUMBOLDTII (Dun. sol. p. 112.) pilose; pili diverse; stem herbaceous ; leaves unequally pinnate, pilose; leaflets cut, glaucescent beneath ; peduncles and pedicels bractless; calyeine segments about half as long as the corolla. 0. H. Native of South America, on the banks of the Rio Negro. L. lycopersicum, Wall. cat. no. 2611. Roxb. fl. ind. 2. p. 245. Solanum Humboldtii, Wilkl. hort. berol. 1. p. *21.* t. 27. enum. p. 235. This is very like *L. ccrasiforme,* but differs in the racemes of flowers being smaller, the calyeine segments being never the length of the corolla; and the berries being one-half smaller, size of a cherry, and red. Berry 2-3-celled, smoothish, and, when cultivated, not less angular than those of *L. esculentum,* **ex Nees.**

Humboldt's Love Apple, or Tomato. Fl. July, Sept. Clt. 1822. PI. 2 to 3 feet.

5 L. REGULA'RE (Dun. syn. p. 3. sol. ed. 2d. ined. t. 81.) plant rather villous; stem almost herbaceous ; leaves regularly pinnate, canescent; segments or leaflets almost entire; peduncles and pedicels often bractless. 0. H. Native country unknown.

Regular-leaved Love Apple, or Tomato. Fl. May, July. Clt. ? PI. *2* to 3 feet.

6 L. DENTATUM (Dun. syn. p. 4. sol. ed. 2d. ined. t. 82.) plant rather villous; stem herbaceous ; leaves stipulate, unequally pinnate ; leaflets oblong-acuminated, toothed ; peduncles and pedicels often bracteate ; segments of the calyx shorter than the corolla. ©. H. Native country unknown.

Tooled-leaved Love Apple, or Tomato. PI. 2 to 3 feet.

7 L. HIRSUTUM (Dun. syn. p. 4. sol. ed. 2d. ined. t. 83. H. B. et Kunth, nov. gen. amer. 3. p. 18.) hairy ; stem sub-herbaceous ; leaves stipulate, unequally pinnate; leaflets dentately crenated ; pedicels sometimes bracteate ; calyeine segments about equal in length to the corolla. 0. H. Native of New Granada, near Loxa. Peduncles unibracteate in the middle. Corollas yellow like the other species. Fruit unknown.

Hairy Love Apple, or Tomato. PI. *2 to 3* feet.

8 L. CERASIFORME (Dun. sol. 113. syn. p. 4.) pilose; hairs diverse ; leaves unequally pinnate ; leaflets cut, glaucescent beneath; calyeine segments rather shorter than the corolla; berries spherical. ©. H. Native of Peru, by the sea-side, and in gardens. Solanum lycopersicum, var. /3, Lin. spec. ed. 1st. p. 185. Solanum pseudo-lycopersicum, Murr. syst. 183. Jacq. vind. 1. t. 11. Ruiz, et Pav. fl. per. 2. p. 37. Solanum spurium, Gmel. syst. 384. Lycopersicum Galeni, Mill. diet. no. 2.—Rumph. amb. 5. p. 416. cap. 49. Very like *L. esculentum,* and *L. pyriforme,* but differs in the berries being cherry-formed, 2-celled, size of a plum, but not furrowed lengthwise, rather villous. *Tamatta Bontal* is the Malay name of this species, and *Tornate redondo* the Peruvian name.

Far. a ; berries red. Q. H. Lycop. fructu cerasi rubro, Tourn. inst. p. 150. Cerasa amoris racemosa, rubra, Bauh. prod. p. 90.

Var. /3 ; berries yellow. ©. H. . Lycop. fructu cerasi luteo, Tourn. inst. p. 150. Solanum racemosum, cerasorum forma, fructu luteo, Tourn. 1. c.

Cherry-formed- fruited Love Apple, or Tomato. Fl. July, Sept. Clt. 1800. PL 2 to 3 feet.

9 L. ESCULE'NTUM (Mill. diet. no. 2. Dun. sol. p. 113; t. 3. f. 3. syn. p. 4.) herbaceous, pilose ; pili diverse; leaves unequally pinnate ; leaflets cut, attenuated at the apex, glaucescent beneath; flowers many, joined; berries torulose. ©. H. Native of South America. Solanum Lycopersicum, Lin. spec, p. 150. Lam. ill. t. *115.* f. 2. Lour. coch. 1. p. 162.—Plenck, off. t. 122.—L. pomum amoris, Moench. meth. p. 515. L. Galeni, Tourn. inst. p. 150. t. *63.*—Sabb. hort. rom. p. 12. t. 62. Pomum amoris, Blackw. t. 133. Rumph. amb. 5. p. 416. t. 154. f. 1.—Mor. hist. sect. 13. t. 1. Mala aurea, Chabr. icon. 525. La Pomme d' amour, Regn. bot. p. 54. Many flowers are joined in one, which makes them appear of many parts, having from 2 to 5 joined pistils, and as many bundles of stamens. Calyx longer than the corolla.

The Love Apple, or Tomato, is called *La Pomme d' amour,* and *La Tomatte* in France, *Liebes Apfel* in Germany, and *Porno d' oro* in Italy ; it is a tender annual. The stem, if supported, will rise to 6 or 8 feet, and exhales, like the leaves, when handled, a

disagreeable smell. The flowers appear in bunches in July and August. The fruit is smooth, depressed at both ends, and furrowed on the sides; it varies in size, but seldom exceeds that of an ordinary golden-pippin apple.

IT5e.—When ripe, the fruit, which has an acid flavour, is put in soups and sauces, and the juice is preserved for winter use, like ketchup ; it is also used in confectionary, as a preserve, and when green as a pickle. Though a good deal used in England in soups, and as a principal ingredient in a well-known sauce for mutton, yet our estimation and uses of the fruit are nothing to those of the French and Italians, and especially the latter. Near Rome and Naples whole fields are covered with it, and scarcely a dinner is served up in which it does not in some way or other form a part.

Varieties.—Those in general cultivation are called, the large, and small, cherry and pear-shaped red, and the large and small, or cherry-shaped yellow. The first sort is in most estimation for domestic purposes, and should be cultivated accordingly, while a few plants of the other kinds may be raised for variety of the fruit.

Propagation and Culture,—The plants must be raised and forwarded in a hot-bed, under glass from about the vernal equinox till May. Sow in any general hot-bed about the end of March, or beginning or middle of April, and as to quantity of seed one ounce will produce 60 plants. As soon as the plants are about 2 inches high, if they are immediately pricked out into another hot-bed, or into that where raised, or singly into small pots placed in the hot-bed, they will grow more stocky, and can be more successfully transplanted. About the middle or end of May transplant them each with a ball of earth into a south border, to have the full sun, that the fruit may ripen to perfection. Some may be planted close *to* a south wall, if vacant spaces can be had ; but as they draw the ground exceedingly, do not set them near choice fruit trees. Give water. During the first week, or fortnight, if the nights be cold, defend them with hand-glasses, or by inverting a large garden pot over each plant, or transplant upon holes filled with hot dung, earthed to 6 inches depth, and cover with hand-glasses. When they begin to run train them to stakes, or, where planted near a wall or pales, nail up the branches. J. Wilmot plants at the foot of a bed sloping steeply to the south, and trains the stems and branches on it by pegging them down ; they frequently strike root at the joints; he tops them as soon as their branches meet, clears off all the lateral shoots, and thins the leaves, by which the fruit is exposed, and well ripened. In the fine season of 1818 each plant so treated produced on an average twenty pounds weight of fruit. The fruit begins *to* ripen in August; gathered in October, and hung up in bunches in any dry apartment it will continue good for use in November.

To save Seed.—" Gather some of the best ripe fruit in autumn, clear out the seed, wash and cleanse it from the pulp, and dry it thoroughly, then put it up in papers or bags for use next spring." Abercrombie.

Var.fi; berries pale red. *Q.* H. L./ructu e rubro pallescente, Tourn. inst. p. 150.

Var. y ; berries yellow. ©. H. L. fructu luteo, Tourn. 1. c.

Var. S; berries white.' ©. H. L. fructu albo, Tourn. 1. c.

Esculent, or Common Love Apple, or Tomato. Fl. July, Sept. Clt. *l$96.* PI. 2 to 3 feet.

-j- *Species not sufficiently known.*

10 L. PROCU'MBENS (Mill. (Uct. no. 6.) stem herbaceous, procumbent; leaves pinnatifid, glabrous; segments cut; flowers solitary, axillary. 0. H. Native country unknown. Dun. sol. p. 115. syn. p. *5.* Flowers lateral. Calyx large, deeply multifid. Flowers cream-coloured. Berries small, sub-compressed.

Procumbent Love Apple, or Tomato. Fl. July, Sept. Clt. 1770. PI. proc.

11 L. COMMUTATUM (Rcem. et Schultes, syst. 4. p. 569.) leaves interruptedly pinnate ; leaflets oblique, ovate, obtuse, downy on both surfaces, sub-repandly crenated ; racemes bifid, longer than the leaves, the branches diverging. 7/. S. Native of South America, Solanum commutatum, Spreng. pug. 1. p. 18. Corolla yellow, form of those of the other species. Calyx 5-cleft.

Changed Love Apple, or Tomato. Fl. July, Sept. Clt. 1818. PI. 2 to 3 feet.

Cult. For culture and propagation see *L. esculentum,* no. 9

III. PELTANTHERA (from *WIXTTI, pelte,* a buckler; and *avQnpay anther a,* an anther ; in reference to the form of the anthers.) Roth. nov. spec. p. 126. Roem. et Schultes, syst. 4. p. LIV. and G70.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla rotate, plicate, 5-cleft. Stamens inserted in the throat of the corolla, short, broad. Anthers sagittate at the base, conniving into an oblong, attenuated, obsoletely pentagonal cone. Stigma clavate. Berry unknown. This genus differs from *Solanum* in the anthers being 1-celled, hamately sagittate at the base, and furnished with a sessile, peltate body on the back, and not dehiscing by 2 pores at top as in that genus.

1. P. SOLANA'CEA (Roth, 1. c. Roem. et Schultes, syst. 4. p. 670.) *V}.* S. Native of the East Indies, Vallaris, Heyne mss. Leaves opposite, elliptic, quite entire. Racemes axillary, subcorymbose. Corolla size and colour of that of *Solanum pseudocapsicum.* Ovarium 1-celled ?

Solanaceous Peltanthera. Shrub.

Cult. For culture and propagation see *Solanum,* p. 442.

IV. CA'PSICUM (from *KairTio, kapto,* to bite ; on account of the biting heat *o£* the seeds and pericarp; some derive it from *capsa,* a chest.) Tourn. inst. *66.* Lin. gen. no. *252.* Schreb. gen. no. 338. Juss. gen. p. 126. ed. Usteri. p. 141. Gsertn. fruct. 2. p. 1241. t. 132. Lam.'ill. t. 116. f.]•, 2. H. B. et Kunth, nov. gen. 3. p. 48. Fingerhuth diss. cap. Nees in Lin. trans. 17. p. 62.

LIN. SYST. *Pentdndria, Monogynia.* Calyx permanent, 5-toothed. Corolla rotate ; ..limb plicate, 5-cleft. Anthers connivent, 2-celled, dehiscing lengthwise. Stigma obtuse. Berry dry, inflated, and hollow, of a papery consistence, 2-4-celled, many-seeded, naked. Placentas adnate to the dissepiment.—Shrubs, or sub-shrubs, rarely herbs. Leaves scattered, solitary, or twin, and quite entire. Peduncles extra-axillary, and alar, 1-flowered. Flowers greenish white, or violaceous.

§ 1. *Peduncles solitary. Fruit erect, or pendulous.*

* *Annual. Berries pendulous.*

1 C A'NNUUM (Lin. spec. p. 270.) fruit oblong, pendulous, and erect; petioles glabrous ; stem herbaceous ; calyx obsoletely 5-toothed. 0. H. Native of South America. Woodv. med. bot. 391. t. 144. Stev. and Church, med. bot. 1. t. 44. Plenck. off. t. 107.—Knor, del. 2 1.1. 6.—Rheed. mal. 2. t. *35.* Corollas white. Fruit red, yellow, variegated with red and yellow, and dark green, variable in shape.

Capsicum is called *Pimcnt* in French, *Spanischr P/effer* in German, *Pcberonc* in Italian, *Chilli* in Mexico, and *Tsvhili* in Hindostan. There are 3 species in cultivation. 1. C. *dnnuiun,* the Guinea pepper, though a native of India, endures our

climate in summer. The fruit varies much in shape and colour, either long-podded, red, or yellow, or short-podded, red and yellow, or heart-shaped, red and yellow. 2. *C. cerasiforme,* the cherry-pepper, is also an annual standing our climate in summer; is known by its small, cherry-shaped fruit, which is sometimes heart-shaped or angular, in colour red or yellow. 3. *C. grossum,* the bell-pepper, a stove biennial; the berries of this kind are large, red or yellow. It will endure the open air in summer, but will require a place in the stove in winter and spring months. The well known preparation called Cayenne-pepper is the pods of the smaller kinds of capsicum dried in the sun, pounded, and mixed with salt; it is then kept stopped in bottles. When used in moderation it is not unwholesome, especially to those of cold leucophlegmatic habits. In such temperaments, as well as in paralytic cases, it is used medicinally in small quantities, as one of the highest stimulants. A mixture of sliced cucumbers, shalots, or onions, cut very small, a little lime juice and Madeira wine, with a few pods of bird-pepper, well mashed and mixed with the liquor, seldom fails to provoke the most languid appetite in the West Indies. It is there called Man-dram. Gathered fresh from the plant, the pods of all the species are liberally used in all tropical countries to assist digestion and correct flatulencies.

Far. a, *longicdrpum ;* fruit long, pendant. Tourn. inst. 152.

Far. /3, *olwcefdrme* (Mill. diet. no. 6.) fruit ovate. Ait. hort, kew. ed. *2d.* vol. 1. p. 405.

Far. y, *abbrevidtum* (Fing. diss. t. 2. f. 1.) Miller has raised from the seed of one individual plant the following varieties of Tournefort. 1. Capsicum fructu surrecto oblongo, Tourn. inst. 152. 2. Capsicum fructu bifido, Tourn. 1. c, 3. Capsicum siliquis surrectis et oblongis brevibus, Tourn. 1. c. 4. Capsicum tereti spithamaeo, Tourn.

Annual Capsicum, or Chilli, or Guinea Pepper. Fl. June, July. Clt. 1548. PI. 1 to 2 feet.

2 C. LONGUM (D. C. hort. monsp. 1813. p. 86.) fruit oblong, acuminated, a little incurved; petioles glabrous; stem herbaceous. ©. H. Native country unknown. C. annuum, Hort. —Mor. hist. sect. 13. t. 2. f. 2. no. 6.—Clus. cur. post. p. 101. f. 9—10.—Dod. pempt. 716. f. 3.—Bauh. hist. 2. p. 943. f. 1. — Fuchs. icon. *7 S3.* Capsicum fructu tereti spithamaeo, Tourn. inst, p. 152. ? C. annuum, var. a, Ait. hort. kew. 2. p. 405.

Long-fruited Capsicum, or Chilli Pepper. Fl. June, July. Clt. 1548. PI. 1 to 2 feet.

3 C. CORDIFORME (Mill. diet. no. 2.) fruit heart-shaped; stem herbaceous. ©. H. Native of India. Capsicum siliqua propendente oblonga et cordiformi, Tourn. inst. p. 152. Fruit yellow and red, variable in shape. The following varieties of this species are mentioned: 1. Fruit pendent, round or heart-shaped, Tourn. 2. Fruit broader and rounder,. Tourn. 3. Fruit large, round, Tourn. 4. Fruit erect, round, Tourn. 5. Fruit erect, heart-shaped. In all these varieties the fruit varies from yellow to red.

Far. /3, *majus,* Fing. diss. t. 9. f. c. C. annuum, Wall. cat. suppl. no. 222.

Heart-shaped-fruited Capsicum, or Chilli pepper. Fl. June, July. Clt.? PI. 2 feet.

4 C. ANGULOSUM (Mill. diet. no. 4.) fruit heart-shaped, angular; stem herbaceous. ©. H. Native of India ? Capsicum siliquis surrectis cordiformibus angulatis, Tourn. inst. p. 153. Fruit large, pendulous, of 2 forms, obtuse, angular, rather compressed, usually retuse and bifid at apex. Besser, cat. krzem. 1811. p. 27. Leaves wrinkled. Fruit red or scarlet, sometimes formed like a mitre at top, and sometimes campanulate. More tender than the other annual kinds.

Angular-fruited Capsicum, or Chilli Pepper. Fl. June, July. Clt. ? PI. 1 to *2* feet.

5 C. MILLE'RI (Roem. et Schultes, syst. 4. p. *563.)* stem herbaceous; fruit round, glabrous. 0. ? H. Native of New Spain, Miller. C. cerasiforme, Mill. diet. no. 5. Capsicum siliquis surrectis cerasiformis, Tourn. inst. 153. Leaves fascicled, pale green, on long petioles. Fruit red, size and shape of a pea. Perhaps only a variety of *C. annuum.*

Miller's Capsicum, or Chilli Pepper. Fl. June, July. Clt. ? PI. 1 foot.

6 C. CONICUM (Meyer, esseq. p. 112.) herbaceous; branchle downy, terete; fructiferous calyx almost quite entire; ped' nicies twin; fruit oblong-conical, erect; leaves solitary, ra.ely twin, ovate, acuminated, on short petioles, roughish on both surfaces, downy on the veins beneath, as well as the petioles. ©. H. Native about the Essequibo, in plantations. C. frutescens, Rodschied, obs. p. 38. but not of Lin. Peduncles alar and axillary. Flowers drooping. Fruit croceous, shining.

Conical-fruited Capsicum, or Chilli Pepper. PL ?

7 C. TETRAGONUM (Mill. diet, no. 3.) herbaceous; fruit large, angular, obtuse. ©. H. Native of both Indies. Fing. diss. t. 10. f. d. Wall. cat. no. 224. Capsicum fructu longo ventre tumido, per summum, tetragono, Tourn. inst. p. 153. C. cydoniforme, Hort. Berries always red, crowded, 1-2 inches long, subtetragonal at top, usually pendulous, rarely erect.

Tetragonal-fruited Capsicum, or Chilli Pepper. Fl. June, July. Clt. ? PI. 1 to 2 feet.

* * *Shrubby. Berries pendulous.*

8 C. SPILE'RICUM (Willd. enum. 1. p. 241.) fruit globose; petioles glabrous; stem shrubby. \. S. Native of India ? Fing. diss. t. 9. f. a. C. cerasiforme, Wall. cat. no. 221. Shrub middle-sized; branches dichotomous. Leaves ovate, acuminated, glabrous. Fruit size of a cherry. Said to differ from *C. cerasiforme* in the fruit being pendulous.

Spherical-fruited Capsicum, or Chilli Pepper. Fl. April, July. Clt. 1807. Shrub 2 feet.

9 C. OVA'TUM (D. C. cat. hort. monsp. 1813. p. 86.) fruit ovate, acuminated; petioles and leaves glabrous; stem shrubby. J? . S. Native country unknown. Peduncles shorter than the petioles. Calyx bluntly 5-toothed. Berry colour and size of a cherry, but ovate, pendulous. It differs from *C. sph&'ricum* only in the shape of the fruit.

Ovate-fruited Capsicum, or Chilli Pepper. Fl. June, Sept. Clt. 1824. Shrub 2 to 3 feet.

10 C. PE'NDULUM (Willd. enum. 1. p. 242.) fruit oblong; petioles downy; stem shrubby. fj . S. Native country unknown. C. grossum, *j3,* Schultes, obs. no. 299. Fruit an inch long, red.

Pendulous-fruited Capsicum, or Chilli Pepper. Fl. April, July. Clt. 1804. Shrub 2 to 3 feet.

11 C. LU'TEUM (Lam. ill. 2. no. 239.2.) fruit ovate, 3-celled; branches and petioles hairy; stem shrubby, flexuous. \/. S. Native of the East Indies. Stem subtetragonal. Leaves glabrous, twin, or 4-5 in a fascicle. Flowers solitary or fascicled, supra-axillary. Corolla small, white, with short acute segments. Fruit yellow, oblong, middle-sized, on hardly recurved peduncles, downy.

Yellow-fruited Capsicum. Fl. June, Aug. Clt. 1820. Shrub 2 to 3 feet.

12 C. GROSSUM (Lin. syst. 226.) fructiferous calyx bowl-shaped, spreading, sinuately toothed; fructiferous peduncles solitary, erect, or reflexed; berry oblong or ovate, torose; leaves ovate, acuminated; branches downy. *h* • S. Native of India. Nees, in Lin. trans. 17. p. 62. " Roxb. fl. ind. 2. p. 260. Wall. cat. no. 2643.A.—Besl. hort. eyst. 2. t. 2. f. 1. Fruit large, pale red.

Far. fi; branches smoothish; fruit pendulous; leaves •broader, very unequal at the base, subrepand, or cut a little, f? . S. Native of India. C. grossum, Wall. cat. no. 2643. B.

•. *y,* ***cordahtm*** (Ping, diss, t. 6. f. a.) fruit cordate.

far, & 1 pomi/ertitn (Martins, liort. erl, p. 65.) stem downy ; fruit large, globose.

*jlobbsuf** (Bes*er. eat. Kraem. 1811, p, 27.) fruit globosely depre-sed, erl'Ct.

sa. 1. *c.)* fruit ovat«-conical, yellow, erect or drooping. **Schultet,** obs. **p. 45.** no. 299.

***I** ar. i), (AjiJuiti,* fruit bifid. Capsicum fructu uifido, Tourn. inst. rnaut. p. \52.

Iturgt-fruited Capsicum, or Bell Pepper, Fl. Jnlv. Clt, 1759. Shrub 1 to 3 for.

C (IAVASJ-'W *II.* B. et Kiimh, nov. *gen. S. p.* 49.) Initescent, tlichotomoug, ilfvaricate ; stem glabrous, striated, terete ; branches angular; leave* **ovate-oblong,** glabrous; peduncles solitary, fructiferous ones reHexed; berries oblong, fj . -;ttive of Cuba, on the sea beach, among sand about the Havana. Leaves solitary, rounded at the **bate,** miming into the petioles, w iiich are sniioothi»h. Berry red, half an **tadb** long, . irded by the calyx.

Capsicum, or **Chilli Pepper.** Shrub.

• • • *Shrubby. Fruit* er.

14 C. COKQI'BM (Mill. diet. no. 8.) stem suffrutcsceni ; fruit ovate-cotiieal, erect. *tj* • S. Native of both Indies. C. couicum, Lam, ill. no. **9390,** C. erectum, var. annuum, Mart. enum. l»trt. crl, p. C5. C. (.-enistfurme, c, macroearpum, Besser. cat. hort. **Kr*et».** 1811. p. 27.—Lob. icon. SIT. ? Shrub glabrous. Leave- lanceolate, aeute. Flowers extra-axillary. Calyx campamilwe, with ,J short teeth. Corolla cream-coloured.

Cwo'ul-ftuitetl Capsicum, or Chilli Pepper. **Fl.** June, July. Ctu **V7M. Shrub I** i o 2 feet.

15 C, ivHAWiDA'tE (Mill. r)u-t. no. 1, Fing. diss. t. 3. f. 1.) shrubby ; leaves **liaear-lasccalate ; fruit** pyramidal, **erect, yellow.** \.. S. Native of Egypt. Perhaps *C. (ontlbmm* of Jacii. hort. vind.

Fyr$_{a}$,,$_{tl}$d$_{a}$tf$_{rvh}$e$_{d}$ **C.psicum,** or Chilli Pepper. Ft. April, **Ju!y.** Ch. 1 **750.** Shrub ***i*** to 3 feet.

10 C. cEKARtrouME (WMld. spec. 1. p. 1851. **exelu«ii** KK- syn. of Mill. emim. I. p. 243.) fruit **oloboM**; **petiok** i stem shrubby. £ , S. Native country unknown. Very like *C./nithcms;* but is distinguished from that species in the **fruit** being globose, and the size of a cherry, red or yellow.

Ckerty-fmaedr-fh&teA Capsicum, or Cherry Pepper. **Fl.** Jimc, Sept. Cli. 1739. Shrub 1 to S feet.

17 C. CESASIFL6BI;M (Link, enum. 1. p. 190.) young petioles I ; berries erect, globose, solitary. J; . S. Native country unknown. Very nearly allied to *C. ceratiforme,* but differs in the petioles being ciliated.

Cha'•ry-Jlotvtrcd Capsicum, or ChilJi Pe»per. Fl. June, Sept Clt. 1823. Shrub. '

18 C. JRUTE'BCSKS (Lin. hort. cliff, p. 59. spec. 371.) fructiferous calyx cylindrical, subtruncate; fructiferous peduncles solitary ; berry conicatly attenuated, incurved ; **Inrei** oval, acuminated at both finis | petioles and branches, which are angular, downy. (; . S . Native of India. **Willd. spec. I.p. 1051,** Roxb. fl. $_{m}$l. *2.* p. 201. Bhim. bijdr, ?0i. H. *U. vt* Kunth, **nor. geo.** 8. p. 4S. Nees, in Lin. transr, 17. p. 63. Capsicum minus rubnmi $_{1}$1 fiavum, Rumph. smb. 5. p. 248. t. 88. f, 1—3, Capo Molago, rtl. rna!.2. p. 109. t. 56, Corolla white. Fruit size of an olive, or i-t>j>jier-co!ouTMl, or reddish-yellow. T|,$_{e}$ **red-frahed I** is **called** Tscbiii-cuninfr, and the yellow-fruited sort Tachil»-ir*ra This species also furnishes the Cayenne-pepper of the shops The ripe pods are dried **in** the sun, and then in an **ova*** afteV bread is baked, in an **estthen** or stone pot, with flour be. **l««en** the strata of pod*" Wl,en quite dry they are cleaned **from** the flour, and b « t « or ground to hue powder. To every* a pound of wlitat f!our **il** added, ami H is made into small cakes **with leaves** ; these are **btked agbiSt** tiiat they may be as dry and bard as biscuit, and then are beaten into powder and sifted. It is then fit for use ;is • pepper, or **for** being [lacked in a compressed state, and ao as to exclude air, for **exportation.**

far. /J$_{K}$ *t'/ruloium* (Jacq. hort. vind.) fruit twice as targe as the **i** species.

FruUtcait Capsicum, or Chilli Pepper. Fl. June, Sept. Clt. 1?56. Shrub 2 to *3 I* et.

10 C. BI'COLOR (Jacq. **fragm.** t. 99. f. **I.)** fruit oblong, uiucronate; petioles glabrous; stem **shrubby. ; S. Nfatweof** the West **la** lies. Sn». bot. mag. 1835, C, nigrum, Willd. cnutn. I, **p.** ***Hi, V,*** **i-iolacetun, Brotuu. elench.** monsp. 1S04. Desf. tab I. di- **I'ecole,** \>. *H3.* **D. C.** cut. hort. monsp. 183 3. **p.** 87. **Flowera** large, ribvioloceous. **Fruit** black or dark purple. Calyx cam^umlate, obsoletely ^-toothed.

• *coloured* Capsicum, or Chilli **Pepper.** 11. **June**$_{f}$ Sept. Clt. 1S04. Shrub CJ to *4* feet.

20 C. ruiipuVEUM (Vah), **b«rb.** ex Horn. hort. **bain. 1.** p. 224.) peduiuk'H **generally** solitary ; fruit oblong, erect, inucronate; petioles glabrous; stem shrubby; brandies divaricate. **Native** country unknown. Stem dark purple ; branches striped with dark **purple** ; and the leaves spotted with the same colour.

Purple Capsicum, or Chilli Pepper. Fl. June, Sept. Clt. T Shrub *t* to 3 feet.

-M C. **ClUXSCz'BiMfl** (Necs, in. Lin. trans. 17. p. 65.) frutescent ; branches stibtetrngonal, contracted, glabrous ; fructiferous calyx loose, Jarge, cup-shaped, **qoite** entire; peduncles solitary, erect; berry globose j leaves lanceolate, glabrous, ft . S. Native of India. C. eerasiforme, I'oir. suppl. *f.* p. 325. but not of Willd. C. **purpureum,** Wall. cat. **suppl.** no. 206. This species **differs** from *C. eerasiforme* in **the** large, cup-shaped, entire calyx.

' **Capsicum,** or Chilli Pepper. Shrub.

§ 2. *Peduncles generally Imn. Fruit erect or pendulous.*

* *Shrubby. Betrk* ertct.*

22 C. FASTIGIATUIH (Ilium, bijdr. 705.) frutescent; branches tetragonal, fastigiate, diverging, **pubescently** scabrous ; fructiferous calyx subcyltDdricaliy truncate; fructiferous ptdimele* generally twin, croet; **berry oblong-cylindrical,** straight; leaves oval or lanceolate, **acuminated at both** ends, minutely and sorrulately ciliated, h . S. **Native of India. C. frut&eens, Lia** spec. 1. p. W1.but not of bort. clifl'. Burm. ff. ind. **p.** 5*". **Flag.** «••. exclusive of many of the synonymes. C. minimum, Roxb. fl. ind. 3. p. 201. hut not of Mill.

Fasttgutie-bnztcbed C;ij>sicum, or Chilli Peppt). I 1- June. Se])t, Shrtib 1 to a feet.

£3 C. OLOBI'FEKUM (Meyer, esseq. p. **113.)** frutescent: branches terete, tubercular ; **fructiferous** calyx **nearly** entire ; pedimclis twin ; fruit globose, erect; leaves twin or solitary, ovate, acuminated at both ends, subciluiud. ': • 6. Native m plantasions about the **Essequlbo.** C. baccatum, Iledschieil, obs. p. 38. Branches glabrous. Leaves rather ***»brow** on both surfaces, **downy while** young. Flowers miJiuir, drooping. **Berry** aize of a small **cherry,** pale yellow.

Chbe-bearing Capsicum, or I'billi Pepper. FL June, July. Clt. 1624. Shrub2 fet.

24 C. jtu$_{R}$i$_{X}$ A'RI-UM (Brouss. elench. 1804. p. 12. D. C. <'". h(irt. **mooap.** 1813. p. 8(J.) frutescent; petioles and leaves downy ; **calya** with 5 **iobulat« spreading teeth** ; peduncles twin; fruit ovate, erect, *h* . S. Native country unknown. Horn. hort. bafti. 3. p. 958. C. ciliare, Willd. **enum.** 1. **p.** 2+3. T Flowers small, **white,** furnished with 10 green spots on the lower part of the **limb.** Pedicels striated, downy, ex I). C,

Petioles ciliated on the margins ; peduncles longer than in *C. baccatum,* ex Willd. Fruit a little smaller than in *C. baccalum.*

Small-fruited Capsicum, or Chilli Pepper. Fl. April, July. Clt. 1820. Shrub 2 feet.

25 C. MINIMUM (Mill. diet. no. 10.) stem shrubby; fruit small, ovate, erect. T? . S. Native country unknown. C. baccatum, var. *P,* Poir. suppl. 5. p. 326.

Smallest-fruited Capsicum, or Chilli Pepper. Fl. April, July. Clt. ? Shrub 1 to 2 feet.

26 C. BACCATUM (Lin. syst. p. *226.* Mill. diet. no. 9.) frutescent; branches angular, striated; leaves oblong, glabrous, as well as the petioles ; calyx urceolate, obsoletely 5-toothed ; peduncles twin ; fruit erect, almost globose. J?. S. Native of tropical America, and now cultivated in India and Guinea. Willd. spec. 1. p. 1050. H. B. et Kunth, nov. gen. 3. p. 49. Afz. rem. guin. coll. 2. p. 12. C. frutescens, *(i9* Lin. spec. 271. —Sloane, hist. 1. p. 240. t. 116. f. 2.—Rumph. amb. 5. p. 147. t. 88. f. 2. Flowers greenish. Fruit small, ovate. The calyx is said to have 5 subulate teeth according to Lin.; but according to H. B. et Kunth it is obsoletely 5-toothed; there are, therefore, probably two distinct species, confounded under the name of *C. baccatum.*

Berried Capsicum, or Bird Pepper. Fl. June, Sept. Clt. 1731. Shrub 2 to 4 feet.

27 C. MICRANTHUM (Link, enum. 1. p. 190.) calyxes very blunt ; leaves ovate, acuminated ; petioles ciliated. T?. S. Native of Brazil. Leaves as in *C. microcdrpum,* and with the calyx always entire, and the fruit cylindrical, 6 lines long. Peduncles twin.

Small-flowered Capsicum, or Chilli Pepper. Fl. May, June. Clt. 1824. Shrub 2 to 3 feet.

* * *Shrubby. Berries pendulous.*

28 C. SINENSE (Jacq. hort. vind. 3. t. 67.) frutescent ; branches flexuous, divaricate, angular; leaves large, ovate, acuminated, on slender, filiform, downy pedicels; calyx entire ; fruit ovate, pendulous, twin, f? . G. Native of China. Willd. spec. 1. p. 1051. Lam. ill. 2394. Flowers 4-5 in a fascicle in the spontaneous plant, supra-axillary, but twin or solitary in the cultivated plant. Corolla dirty white. Berry yellow, glabrous, mucronate by the style.

China Capsicum, or Chilli Pepper. Fl. June, Sept. Clt. 1807. Shrub 2 to 3 feet.

f *Species hardly known.*

29 C. VIOLACEUM (H. B. et Kunth, nov. gen. 3. p. 49.) suffruticose; branchlets angular, rather scabrous, downy while young ; but the branches are terete; leaves ovate-oblong, acuminated, puberulous ; flowers solitary or twin, drooping ; calyx urceolate, hairy, with 7 acute teeth ; berries oblong. T? . S. Native near the city of Quito, in cultivated places, at the altitude of 1500 hexapods, where it is called *Aji* by the natives. C. Quitense, Willd..herb, ex Rcem. et Schultes, syst. 4. p. 809. Shrub much branched. Leaves solitary ? twin, ex Bonpl., running into the petioles at the base ; petioles puberulous. Flowers extra-axillary. Corolla violaceous, hairy outside ; throat white ; limb 7-cleft; segments ovate, acuminated, equal. Stamens 7, inserted in the upper part of the tube. Stigma somewhat 2-lobed. Berry dry, oblong, red, *3-6* inches long.

Violaceous-Rowered Capsicum, or Chilli Pepper. Shrub.

30 C. HAMILTONII ; stem shrubby, biennial, about 3 feet high, erectish, violaceous; leaves dark violet; immature berries red, of a dark violet colour when mature, short, bluntly conical. £ . S. Native of the Island of Nevis, in gardens. C violaceum, Desf. cat. hort. par. Hamilt. prod. p. 25, but not of H. B. et Kunth.

Hamilton's Capsicum, or Chilli Pepper. Fl. Year. Shrub *3* feet.

31 C. CJERULESCENS (Bess. cat. hort. Krzem. p. 27.) Said to be nearly allied to *C. bicolor;* but differs in the stem and leaves being green ; in the fruit being one half shorter, and difFormed, bluntly angular, retuse, and at length orange-coloured.

Bluish Capsicum, or Chilli Pepper. Shrub ?

32 C. AGGREGATUM (Willd. rel. ex Rcem. et Schultes, syst. 4. p. 809.) peduncles aggregate, pubescent; leaves downy above, but clothed with hoary tomentum beneath. *2 • S. Native country unknown.

Aggregate Capsicum, or Chilli Pepper. Shrub.

33 C. WILDENOWII ; peduncles twin ; fruit globose, small; branches and petioles downy ; stem shrubby. T? . S. Native of South America. Humb. et Bonpl. C. microcarpum, Willd. rel. ex Rcem. et Schultes, syst. 4. p, 808.

Willdenows Capsicum, or Chili Pepper. Shrub.

Use.—The" green pods, or inflated berries, of all the species and their varieties, are used for pickling. They are sometimes also used in their ripe state, when they form a spice of the hottest quality, known by the name of Cayenne-pepper. The fruit of *C. grossum* are deemed better for pickling than the others, the skin being thick, pulpy, and tender..

Culture.—All the species, with their varieties, are raised from seed : a small parcel, or the produce of two pods, will be a sufficient quantity of each, or of any one variety, for ordinary supply. Sow all the annual sorts at the end of March, or beginning or middle of April, in a moderate hot-bed, under a frame. Cover the seed a quarter of an inch deep. When the plants are 2 or 3 inches in growth, prick some into a new, moderate hot-bed, to forward them for final transplanting; or, in default of this, prick them into a bed of natural earth, at the beginning of May, if fine, settled, warm weather : defend them with a frame or awning of mats at night, or in cold weather. Give water lightly at planting, and occasionally afterwards in moderate supplies, to assist their fresh rooting and subsequent growth. At the beginning of June, when the weather is settled warm, transplant them into the open garden, in beds of light rich earth, from 12 to *18* inches apart, giving water. They will thus advance freely, flower in July or August, and produce plenty of pods from August till the end of September. Under the deficiency of a hot-bed or stove, or for succession, annual capsicums may be raised in a bed of light rich earth, under a hand-glass; but the sowing must be deferred to fine warm weather in May. Give the plants air in the day, but cover them close at night, till danger from frost is over. At the close of June transplant as above. The perennial and shrubby species may be wintered in the stove.

To save seed.—Leave one or two of the largest and handsomest shaped pods to ripen in autumn; after gathering them, the best way is to hang them up in a dry place, and not take out the seeds till wanted for sowing in spring.

V. PHYSALIS (from *(pvaa, physa,* a bladder ; in reference to the inflated calyx.) Lin. gen. no. 250. Schreb. gen. no. 336. Gaertn. fruct. 2. p. 238. t. 131. Juss. gen. p. 126. ed. Usten, p. 140. H. B. et Kunth, nov. gen. amer. 3. p. 12. Nees, in Linnaea, 6. p. 449. and Lin. trans, 17. p. 66.—Alkekengi, Tourn. inst. p. 151. t. 64.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-toothed. Corolla campanulately rotate, plicate, 5-lobed. Anthers connivent, dehiscing lengthwise. Stigma capitate. Berry 2-celled, many-seeded, cov Ted by the unarmed, membranous, angular, inflated ftlyx ; plac ntas adnate.—Annual or perennial herbs, rarely shrubs. Stens angular. Leaves scattered, sometimes twin,

entire or lobcd. Flowers lateral or extra-alar, solitary or aggregate. Corollas greenish, white, yellow, or blue.

SECT. I. PHYSALODENDRON (from *(pvcraXig, physalis,* winter cherry' and *UvSpov, dendron,* a tree ; in allusion to the species being woody.) Shrubby. Flowers aggregate.

1 P. SOMNI'FERA (Link, enum. hort. berol. 1. p. 180. Nees, in Linnaea, 6. p. 453.) shrubby; leaves quite entire; flowers crowded, nearly sessile, sub-verticillate. T?. G. Native of the East Indies; and the South of Europe; in the Grecian Islands, Spain, &c. Corolla yellowish-green. Berry small, red.

Far. a, flexudsa (Nees, in Linnaea, 6. p. 454. in Lin. trans. 17. p. *66.)* stem more flexuous ; leaves pubescent, or pubescently tomentose ; flowers smaller ; segments of the calyx about equal in length to the tube. T? . G. Native of the East Indies, and the South of Europe. P. flexudsa, Lin. spec. p. 261. Jacq. eclog. 1. t. *23.* Roxb. fl, ind. 2. p. 240. Wall. cat. no. 2635. P. Suqunda, Hamilt. herb. P. Alpini, Jacq. eclog. 1. p. 39. Pavetti, Alp. exot. p. 71. t. 70. ? Leaves smoothish or downy, canescent. Stem woolly or downy.

Far. /3, somnifera (Nees, in Lin. trans. 17. p. *67.)* stem less, flexuous; flowers one half larger ; segments of the calyx sometimes shorter than the tube, and sometimes equal in length to it. F; . G. Native of the Grecian Islands, Canaries, Mauritius, and the Cape of Good Hope. P. somnifera, Lin. hort. cliff, p. *62.* spec. 261. Mill. diet. no. 6. Sibth. et Smith, fl. graec. t. 233. Cav. icon. *2.* p. 2. t. 103. Jacq. eclog. 1. t. 22. Physaloides somnifera, Mcench, meth. p. 473.—Mor. hist. 3. p. *526.* sect. 13. t. 3. f. 20.—Tourn. inst. p. 151. *^Tpv^yoq VTTVOTIKOQ,* Diosc. mat. lib. 4. cap. 73. P. arborescens, Thunb. prod, p. 37. fl. cap. 1. p. 191. P. tomentosa, Sieb. fl. maur. *2.* no. 226. Plant downy. Calyx greenish-yellow, or red. Corolla yellowish.

Somniferous Winter Cherry. Fl. July, Aug. Clt. 1759, /3. 1796. Shrub 2 to 3 feet.

2 P. ARBORE'SCENS (Willd. herb. Lin. spec. p. 261. ? Willd. spec. 1. p. 1020. ?) stem arborescent; leaves repandly toothed ; flowers aggregate, pendulous ; corolla 5-parted. J? . S. Native of Mexico, about Campeachy. Mill. diet. no. 8. t. 206. f. 2. Leaves canescent, tomentose. Corolla tomentose outside, fuscous. This is the species described by Nees, in Linnaea ; but the plant is described by Linnaeus as follows : " Stem fruticose; leaves ovate, pilose; flowers solitary or twin ; corollas revolute." The leaves are also said to be dark green above, and woolly beneath : upper ones twin. Corolla is said to be yellow, marked with brown spots inside, and the berry round, red, and the calyx becoming dark purple in the fructiferous state. The plant of Nees, and that of Linnaeus, are, however, probably the same, notwithstanding the apparent difference in the characters given to it by them.

Arborescent Winter Cherry. Fl. July, Aug. Clt. 1700. Shrub 4 to 12 feet.

SECT. H- EUROSTORHIZA (from *EV^GTOQ, eurostus,* robust; and *«v ,hiza,* a root; in reference to the strong roots of the *P/Xd* ' \ Frurescent or herbaceous, with strong roots, and species ; bases of the stems. Flowers solitary. Alabastra permanent ^ the size of the corolla, ventricose. while cloS6 d jarre VgA (Lin. hort. cliff, p. 496. spec. p. 261.) herbace-

3 P. Visco from bi_trifurcate, short hairs ; root perennial, ous, scabrous ^ ^^ dichotomous; leaves ovate, or silb- creeping, scabrous, polished flowers almost spotless ; segments cordate, entire, on ^^ %t H< Native of Brazil, of calyx unequal, *oi* Pennsylvania to Carolina in Nor© and of Virginia, and p. 167- **p. Pennsylvania, America. .Pursh, fl.**

Lin. spec. 1670. Pursh, 1. c. p. 167.—Dill. hort. elth. *V* 41. t. 10. f. 10. The whole plant is beset with short, 2-S-4-forked bristles, seated on minute tubercles : upper leaves twin, unequal. Corolla yellow, marked with a paler star in the centre. Berry ovate, or turbinate, umbilicate, smooth, viscid, orange-coloured, rather acid, and not disagreeable *to* tlie taste.

Far. ft, Jacquini; leaves ovate, repandly toothed, often acutish, smaller. *%,W.* Native from Pennsylvania to Carolina. P. viscosa, Jacq. vind. 2. t. 136. P. Jacquini, Link, enum. 1. p. 180. P. Pennsylvania, Lin. spec. 1670. Mill. diet. no. *3.* P. tomentdsa, Walt. fl. carol, p. 99. In *P* P^J' sylvanica* the stems are said to be procumbent, the flowers twin, and the berries small, red, size of a pea.

Clammy-berried Winter Cherry. Fl. July, Aug. Clt. 1699, B. 1726. PI. 1 to 3 feet.

4 P. LANCEOLA^TA (Michx. fl. bor. amer. 1. p. 149. Pursh. fl. 1. p. *157.)* plant dwarf, downy ; leaves almost sessile, ova-lanceojate, almost entire, green on both surfaces, and rather downy; calyx villous ; stem dichotomous. 3|1.?H. ^a" tive of Lower Carolina. P. Virginiana, Mill. diet. no. 4. t. 206. f. 1.? Leaves tapering gradually into the petioles at the base. Corolla sulphur-coloured, with a dark purple bottom. Berry yellow, ex Mill.

Lanceolate-leaved Winter Cherry. PI. 1 to 2 feet.

5 P. WALTE'RI (Nutt. in journ. acad. nat. sc. phil. 7. p- H^.) perennial, clothed with powdery tomentum, much branched, dichotomous ; leaves twin, broad, ovate, obtuse, on long petioles, entire; peduncles solitary, nutant ; fructiferous calyx smoothish. %• H. Native of South Carolina. P. lanceolata, Elliott, but not of Michx. Leaves green above.

Walter's Winter Cherry. PI. 1 foot ?

6 P. ANGUSTIFOLIA (Nutt. 1. c. p. 1] 3.) perennial, quite glabrous, prostrate, dwarf; leaves very long, linear, fleshy, solitary ; peduncles nutant, filiform, i;. H. Native of West Florida. Leaves 3 inches long.

Narroyv-leaved Winter Cherry. PI. prostrate.

7 P. CURASSA'VICA (Lin. hort. cliff, p. *62.* spec. 261.) shrubby, clothed with viscid down; down simple, articulated ; stem erect; leaves ovate, repand ; flowers solitary, spotless ; calyx hairy, with subulate segments. *If.* S. Native of Curaçoa. Mill. diet. no. 5. P. origanifolia, Lam. ill. gen. no. 2398.—Mor. hist. 3. p. 527.—Plukn. phyt. t. 111. f. 5. Calyx cylindrically campanulate, not angular, densely hairy. Corolla sinuately 5-angled, yellow. Berry greenish-yellow. This species differs from *P. viscosa,* in the down being simple, not forked, in the calyx being densely hairy and smaller, and in its segments being short and subulate, and in the bottom of the corolla being pale.

Curaçoa Winter Cherry. Fl. June, Sept. Clt. 1699. PI. \\ foot.

8 P. ALKEKEVGI (Lin. spec. p. 262.) herbaceous, downy from simple hairs ; root perennial, creeping ; stem almost simple; leaves ovate-deltoid, acuminated, repand ; flowers spotless ; fructiferous calyx ovate, coloured : segments subulate. *If* . fj% Native of Europe, on exposed parts of hills ; and of Japan ? Willd. spec. 1.p. 1022. Sibth et Smith, fl. graec. t. 234. Schkuhr handb. t. 45. P. Halicacabum, Scop. fl. cam. ed. 2d. no# *286,* Alkekengi officinarum, Tourn. inst. p. 151. 2rpvvvoc a\tm# *KafioQ,* Diosc. lib. 4. chap. 72.—Plench, off. t. 124.—Blackw 161. Corolla dirty white. Calyx reddish yellow inrlndn scarlet berry. The berries of the *Alkekhm,* or *Winter* were well known to the ancients, and are describp Tf n des. They have an acidulous, and not unpleasant flavour, followed by a slight bitterness, which they are said to deIVG from the investing calyx. Though estopm *JA* the fruit is chiefly recommended as a diuretic. From 6 to 12

berries, or an ounce of the expressed juice, is given as a dose. In some parts of Germany the country people eat the fruit by handfuls, and in Spain and Switzerland they frequently supply the place of other eatable fruits. Instances are related of their good effects in dropsical and calculous disorders, but at present they are wholly disregarded. In some parts they are esteemed as good as gooseberries for tarts.

Alkekengi, or Common Winter Cherry. Fl. July, Sept. Clt. 1548. PL 1 to 1½ foot.

P. CHENOPODIFOLIA (Lam. ill. no. 2401. Poir. suppl. 2. p. 348.) herbaceous, perennial, tuberous at the base, clothed with hoary, simple tomentum; stem erect, dichotomous; leaves deltoid-ovate, angularly-toothed; corolla spotted; anthers violaceous; fructiferous calyx ovate, angular, pale. %. S. Native of Peru. P. tuberosa, Willd. enum. 1. p. 232. P. incana, Mat. hort. par. Root thick, branched. Leaves small for the size of the plant: superior ones twin, unequal. Flowers drooping. Calyx pubescently tomentose, bifid to the middle, with the segments unequal. Corolla downy outside, yellow, marked with 5 square, dark, violaceous spots at the bottom. Berry yellow, clammy. This species often occurs in gardens under the name of P. *viscosa.*

Coosefoot-leaved Winter Cherry. Fl. July, Aug. Clt. 1798. Stem 2 to 3 feet.

10 P. HETEROPHYLLA (Nees, in Linnsea, 6. p. 463.) herbaceous, villous, with a perennial root; branches diffuse, angular, flexuous; leaves twin, very unequal in size, ovate, or cordate, acute, toothed; corollas spotted; anthers yellow; fructiferous calyx ovate, angular, pale. %. H. Native of North America, on argillaceous hills in Pennsylvania, Poeppig. P. Pennsylvánia, Willd. herb. P. tomentósa, Walt. fl. car. p. *99.1* P. nutans, Walt. fl. car. p. 99. ? Root creeping. Stems procumbent. Flowers nutant. Calyx hairy, 5-cleft, unequal. Corolla downy outside, with a repand margin, yellow, marked by 5 obscure, brownish-violet spots. Leaves almost orbicular, cordate, ovate, or repand in various ways.

Variable-leaved Winter Cherry. Pl. procumbent.

11 P. PERUVIANA (Nees in Linnaea, 6. p. 464. and Lin. trans, 17. 67.) herbaceous, perennial, densely and pubescently villous; stems procumbent; branches ascending; stem erect, branched a little; leaves ovate, acuminated, entire, or dentately sinuated, rather tomentose; corolla spotted; anthers violaceous; fructiferous calyx ovate, angular, pale. V. G. Native of Peru, about Lima; Plant as in Indies; New Holland, at Port Jackson; Madeira, size of the last. Leaves downy down. Leaves twin. Calyx downy. Corolla spots at the throat of *P. Alkekengi* S. yellow, marked with 5 brown scented • the throat. Berry globose, viscid, yellow, sweet-ttiakino- ... an excellent substitute for gooseberries in *Var.* ... which they are used in many places.

P. ACUTIFOLIA, *esculenta;* leaves more or less toothed. %. G. tomentose, Willd. in act. nat. car. berol. 4. p. 197. P. Roykeana, Medic. act. Pal. 4. p. 184. t. 4. P. Peruviana, Lab. fl. ind. 2. p. 241. Wall. cat. no. 2644.

P. EDULIS; leaves almost entire, ... G#. P. Peru, ... P. 232. Spec. P. 1670. Willd. spec. 1. p. 1022. enum. 1. p. 232. P. pubescens, Lin. herb. R. Br. prod. p. 447. Ruiz. Pav. fl. per. 2. p. 41. Roem. et Schultes, syst. 4. p. *675.* P. crenata, Zucc. obs. cent. no. 43. in Roem. coll. p. 130. 2407. P. ... Sw. prodr. p. 50. P. latifolia, Lam. ill. no. 1068. P. ... Lam. dict. 2. p. 102. no. 12. Cat. hort. taur. 1813.—Mor. hist. *3.* p. 526. sect. 13. t. 3 f. 1. Peruviana, Feuill. per. *3.* p. 5. t. 1.

Winter Cherry. Fl. April, Oct. Clt. 1772. Pl. 2 to 3 feet.

SECT. II. EPETEIORHIZA (from ἐπέτειος, *epeleios,* annual; and ῥίζα, *rhiza,* a root; in reference to the annual roots.) Herbaceous, annual; root slender. Flowers solitary. Alabastrum ovate, while closed small in respect to the corolla.

§ I. *Fructiferous calyx bladdery, closed.*

12 P. PUBESCENS (Lin. hort. cliff, no. 62. spec. p. 262.) herbaceous, annual, much branched, clothed with pubescent tomentum; leaves unequal at the base, cordate, acuminated, toothed, but quite entire at the base; corollas spotted; anthers violaceous; fructiferous calyx ovate, acuminated, acutely angular, retuse at the base. 0. H. Native of North America, as of Virginia, Carolina, and Pennsylvania; East Indies, but hardly indigenous; Island of Ascension, but probably introduced. Pursh. fl. sept. amer. 1. p. 157. P. ramósa, Mill. diet. no. 9. P. Peruviána, Roxb. fl. ind. 2. p. 241. Wall. cat. no. 2034. C. D. F. P. Rothiana, Herb. hort. berol. Alkekengi procumbens, Moanch. meth. 473.—Mor. hist. 3. p. 527. sect. 13. t. 3. f. 24. P. staminea, Muhl. in herb. Willd. P. edulis, Cyr. Balb. cat. hort. taur. 1813. Mill. fig. t. 206. f. 1. The whole plant is densely clothed with minute soft down. Leaves generally distinctly cordate at the base. Corolla yellow, marked with 5 roundish, brownish-violet spots at the throat. Berries yellowish when ripe, size of cherries; they are called gooseberries in many parts, and are used in tarts as a substitute for them.

Var. fly pruindsa; leaves also toothed at the base. 0. H. Native of America. P. pubescens, /3, Lam. diet. 2. p. 101. no. 9. P. pruinósa, Lin. spec. p. 263. Roem. et Schultes, syst. 4. p. *678.* P. Barbadensis, Jacq. misc. 2. p. *359.* icon. rar. 1. t. 39. Rcem. et Schultes, syst. 4. p. *676.* Willd. enum. 1. p. *232.* P. obscura, /3, pubescens, Pursh, fl. amer. sept. 1. p. 157. Roem. et Schultes, syst. 4. p. *677.* no. 21. /3.—Dill. elth. p. 12. t. 9. f. 9.

Downy Winter Cherry. Fl. July, Aug. Clt. 1640. PL 1 *to 2* feet.

13 P. FOSTENS (Poir. suppl. 2. p. 348.) herbaceous, annual, clothed with clammy pubescence; branches dichotomously diffuse; leaves ovate-elliptic, unequal at the base, acute, coarsely toothed; corollas spotted; anthers violaceous; fructiferous calyx ovate, ventricose, equal. ©. H. Native of tropical America. P. fœtidissima, Lag. gen. et spec. nov. diagn. p. 10. no. 146. Roem. et Schultes, syst. 4. p. 680. Link, enum. 1. p. 181. P. nodósa, Lam. ill. p. 29. ? The whole plant is clothed with capitate, soft, short hairs, of an ungrateful smell, green, and shining. Stems and branches thickened at the joints. Corolla rather downy outside, with ciliated edges, sulphur-coloured, marked with 5 large livid-violaceous spots at the bottom; angles acute. Berry nearly globose, yellowish.

Stinking Winter Cherry. Fl. July, Aug. Clt. 1816. Pl. 1½ to 2 feet.

14 P. JEQUATA (Jacq. fil. eclog. 2. Nees in Linnaea, 6. p. 470.) herbaceous, annual; stem dichotomous, and clothed with hairy pubescence at the side, as well as the erect, strict branches; leaves ovate, or oblong, sinuately serrated, glabrous; corollas spotted; anthers violaceous; fructiferous calyx ovate-subglobose, smooth; pedicels short, hairy. 0. S. Native country unknown. P. ixocárpa, Brot. ex D. C. hort. monsp. 1813. Horn. hort. hafn. suppl. p. *26.* Upper leaves said to be twin. Leaves sometimes scabrous on the midrib and veins beneath; petioles hairy above. Calyx downy; segments triangular. Corolla small, downy outside, yellow, with a blackish violet bottom. Berry large, yellow, filling the bottom of the calyx.

Equal-calyxed Winter Cherry. Fl. June, July. Clt. 1826. Pl. 1½ to 2 *feet.*

15 P. LINKIANA (Nees, in Linnaea, 6. p. 471.) herbaceous, annual, glabrous; stem branched, rather diffuse; leaves ovate,

acuminated, sinuately serrated, glabrous : serratures mucronate; corolla spotless ; anthers violaceous ; fructiferous calyxes ovate, acuminated, equal; peduncles elongated, glabrous. ©. H. Native of Brazil. P. dubia, Link, enum. 1. p. 181. P. ixocarDa Brot. hort. bonn. P. angulata, Hort. P. arenaria, Hort.' Vrat.—Mor. hist. 3. p. 526. sect. 13. t. 3. f. 22. Stems procumbent at length, but erect at first. Upper leaves twin. Calyx rather scabrous, with triangular, acuminated segments. Corolla sinuately 5-angled, yellow, with a more obscure, 5-lobed star in the bottom; angles acute. Berry globose, yellow. The variety having the calyx veined with purple is the *P. dübia,* Link ; and the one with pale, self-coloured calyx, is *P. arenaria,* Hort. Vrat.

Link's Winter Cherry. Fl. July, Aug. Clt. 1821. PI. 1 to *2* feet.

16 P. LANCEIFOLIA (Nees, in Linnaea, 6. p. 473.) herbaceous, annual, smoothish ; stem dichotomous; leaves lanceolate, attenuated at both ends, a little toothed ; corolla spotless ; anthers bluish ; fructiferous calyx pendulous, ovate, equal ? ; peduncles very long, downy. ©. H. Native of Peru, Mexico, and North America?. P. angulata, Ruiz, et Pav. fl. per. 2. p. 42. Stem thickened at the nodi, sulcately angular. Leaves sometimes twin, pale green: lower ones glabrous : upper ones minutely pubescent about the petioles and principal veins, as well as the calyx in the same way; midrib marked by a furrow on both sides. Corolla downy outside, cream-coloured. Berry globose, yellow.

Lance-leaved* Winter Cherry. PI. 1 *to 2 feet.

17 P. ANGULATA (Lin. hort. cliff, p. *62.* spec. p. *262.)* herbaceous, annual, much-branched, glabrous; leaves ovate or oblong, acute, coarsely, unequally, and dentately serrated, but in var. *ft* almost entire; corolla spotless ; anthers pale blue ; fructiferous calyx 5 angled, truncate at the base ; the segments triangularly subulate under florescence, about equal in length to its tube. ©. H. Native of the East Indies. Willd. spec. 1. p. 1022. Roem. et Schultes, syst. 4. p. *676,* exclusive of var. *ft,* and its synonymes. Nees in Linnaea, 6. p. 474, and in Lin. trans. 17. p. 70. P. obs ra, var. a, glabra, Pursh, fl. 1. p. 157. P. Peruviana, W , cat. no. 2634. A. E. G. H. P. minima, Wall. cat. no. *$ 13.* P. flexuosa, and P. angulata, Russel, herb. P. anguL Heyne, herb. P. flexuosa, and P. Sugunda, Hamilt. herb. · Dill. elth. p. 13. t. 12. f. 12.—Mor. hist. 3. p. *527.* sect. 13. 3. f. *27.* ?—Rheed. mal. 10. p. 139. t. 70. Corolla small, short, somewhat campanulate, yellow. Berry size of a cherry, globular, yellow ?

Var. ft, pdtula; leaves oblong-lanceolate, acuminated at the base and apex; stem diffuse. ©. H. Native of Vera Cruz and Brazil. P. patula, Mill. diet. no. *12.*

Var. y, *Bonariensis;* leaves oblong, almost quite entire. ©. H. Native *of* Buenos Ayres. P. angulata, *ft,* foliis integerrimis, Lin. spec. 262. Rcem. et Schultes, syst. 4. p. 676.—Dill, elth. p. 12. t. 11. f. 11.

Jngular-calyxed Winter Cherry. Fl. June, Sept. Clt. 1732. PL 1 to 2 feet.

18 P. INDICA (Lam. diet. 2. p. 102. no. 14.) herbaceous, annual; stem erect, divaricately dichotomous, and is, as well as the branches, flexuous, and the petioles clothed with fine viscid pubescence, roughish ; leaves ovate, or oblong, a little toothed ; corolla spotless ; anthers yellow; fructiferous calyx ovate, rather angular; the segments triangular under florescence, and not half as long as its tube. ©. H. Native of the East Indies, and New Holland. Nees in Linnaea, 6. p. 476. P. parviflora, R. Br. prod. p. 447. Roem. et Schultes, syst. 4. p. *680* P *minima,* Roxb. fl. ind. 2. p. 242. Mill. diet. no. 11. Nicdndra I'ndica, Roem. et Schultes, syst. 4. P- 682. P. Alkekengi, Lour. coch. 1. p. 164. P. pseudo-angulata, Blum, bijdr*. p. 706. P. angulata, Willd. P. Peruviana, Wall. cat. no. *2634.*—Rumph. amb. 4. p. 61. t. *25. f.* 1. Stem dwarf, usually violaceous, scabrous from short, glandular pubescence, as well as the branches, which are also viscid. Leaves twin, unequal. Flowers size and form of those of P. *angulata,* but more tubular. Calyx scabrous from viscid down.

Var. ft, microcdrpa (Nees, in Linnaea, 6. p. 476.) flowers and fruit not above half the size of those of the species ; fructiferous calyx almost globose. ©. H. Native of Nipaul. P. divaricata, D. Don, prod. fl. nep. p. 97. P. Peruviana, Wall, cat. no. 2634. P. angulata, var. *ft,* Hamilt. herb.

Indian Winter Cherry. Fl. July, Aug. Clt. 1820. PI. 1 **to 2** ***feet.***

19 P. MINIMA (Lin. hort. cliff, p. *62.* spec. *262.)* herbaceous, annual, loosely villous, diffusely branched ; leaves cordate, or ovate, acuminated, serrately toothed, or almost entire, pilose ; corolla spotless ; anthers yellow ; fructiferous calyx ovate, angular, hairy : the segments triangularly acuminated under florescence, and shorter than its tube. ©. H. Native *of* the East Indies, and Vera Cruz, Miller. ? Roxb. fl. ind. 2. p. 242. Nees in Linnaea, 6. p. 479. in Lin. trans. 17. p. 89. P. parviflora, Lag. gen. et spec. nov. diagn. p. 11. no. 147. Willd. enum. suppl. p. 11. P. Lagaseae, Rcem. et Schultes, syst. 4. p. 679. P. villosa, Roth. nov. spec. p. 122. P. Rothiana, Rcem. et Schultes, syst. 4. p. *627.* P. Peruviana, Wall. cat. no. 2634. B. et J. P. angulata, P. Peruviana, and P. pubescens, Heyne, herb. P. Barbadensis, and P. Peruviana, Wight, herb. P. pubescens, Willd. herb. Pee Inota-jnodien, Rheed. mal. 10. t. 140. f. 71.? The whole plant is covered with long, white, clammy hairs. Corolla tubularly campanulate, yellow.

Far. ft, parviflora; fruit smaller, ovate, almost globose ; leaves almost entire. ©. H. P. parviflora, Willd. herb. P. Abyssinica, et P. parviflora, Willd. herb. Corolla yellow, hardly spotted at the throat.

Least Winter Cherry. Fl. July, Aug. Clt. 1759. PL \ to 1 foot.

20 P. PROSTRATA (Lher. stirp. p. 43. t. 22.) herbaceous, annual; stem much branched, prostrate, villous, as well as the leaves ; leaves cordate, or ovate-elliptic, repandly-toothed, on long petioles ; corollas large, blue; fructiferous calyx globose, membranous, ribbed. ©. H. Native of Peru, Jacq. coK '. p. 99. icon. rar. 1. t. *38.* Andr. bot. rep. t. *75.* Ruiz, t. Pav. fl. per. *2.* p. 41. Lam. ill. t. 116. f. *2.* P. Limensis, Retz, obs. 5. p. 22. Physaloides prostrata, Mcench. Corollas campanulately funnel-shaped, lj inch in diameter, blue, painted with deeper purple veins. Berry small, yellowish.

Prostrate Winter Cherry. Fl. July, Aug. Clt. 1782. D1. prostrate.

§ 2. *Fructiferous calyx open, and filled with the fruit.*

21 P. PHILADE'LPHICA (Lam. diet. 2. p. 101.) herbaceous, annual, smoothish ; stem erect, dichotomous, and is, as well as the branches, strict; leaves obliquely ovate, acuminated, repandly angular; corollas spotted, and veiny; fructiferous calyx when mature open, girding the berry. ©. H. Native of North America, from New England to Virginia, in dry places on the banks of rivers, Pursh. Pursh, fl. amer. sept. 1. p. 157. Physalis chenopodifolia, Willd. spec. 1. p. 1023. enum. suppl. p. 11, but not of Lam. Physalis ovata, Poir. suppl. 2. p, 348. P. atriplicifdlia, Jacq. fragm. p. 58. t. 85. f. a. Poir. suppl. 2. p. 348. P. megistocarpos, Zucc. obs. cent. no. *56.* in Roem. coll. p. 130. Calyx 5-cleft to the middle, having the base and veins violaceous. Corolla yellow, marked with 5 violet spots at the bottom, which emit more obscure veins. Calyx not inflated, as in the other species, but like that of *Saracha,* of which it is probably a species.

Philadelphian Water Cherry. Fl. July, Aug. Clt. 1800. to 1½ foot.

Sect. III. ANOMALY. Roots perennial. ? Stems herbaceous, sectin[a] can JP[anulat]ely funnel-shaped, not plicate as in the other [ns]- -Perhaps a distinct genus.

2 ins[2] ** °RINOCE'NSIS (H. B. et Kunth, nov. gen. amer. 3. p. [an]»*ar> bairy ; leaves quite entire, ovate, sub-acu- beneath ; unequal at the base, hairy on the veins and nerves [s ha]Ped. nowers twin ? ; teeth of calyx acute ; corollas funnel- f^chuna, and Native on the banks of the Orinoco, near [10nge]r tha[n] the cataract of the Atures. Corolla 5 times Pea • [t]tle cal[y]x> pilose. Berry globose, size of a large Pea, inclosed in the bladdery, reticulated calyx.

Onnocc> Winter Cherry. PL

glabrou[S>] [o]r the LAPE,NSIS (H- B- et Kunth, 1. c. 13.) stem angular ? oblon[n0]. branches are marked by a pilose line; leaves bellatf[aC]ummated> entire, rather pilose, ciliated; flowers um- S. ^[t] ?[edu]culate 5 corolla campanulately funnel-shaped. %.? tude • of 7oo°l Mexico> between Perote and Xalapa, at the alti- spec:o ;i- ^[exa]P[ods]- Flowers size of those of the preceding [L]^e fruit also resembling it. Xalapa Winter Cherry. PL ?

t *Species hardly known, or very imperfectly described.*

24 p. [Su]bcordatel[ar] (? fl* [bl]oer** amer** /* P- 1490 leavess stem herb[6, a]-[st] orbicular, acuminated, unequally toothed ; ©• H. \r[aC]^[OUS]> divaricate, much branched ; branches angular. & Pubeso[T.]of Lower Carolina, in sandy fields. P. obscura, p. 99. [pi] Vi[- fl. 1. p. 157. P. angulata, Walt. fl. car. [5] brown ^ [o] [with] viscid down. Corolla yellow, with *pruinosa.* [SP]otS[J] and bluish others. Nearly allied to *P.*

9We Winter Cherry. PL 1 to *2* feet.

Stem ana[1] ^[UKA] (Kuiz. et Pav. fl. per. 1. t. 1/8. i. b.j cles 2-3-fl[ar] ; *eave*s ovate, acute, quite entire, villous; pedun- [n]°t belong? [Were]c* ; fruit drooping.—Native of Peru. Perhaps *Subtrif*[t0] [Se]nus« Winter Cherry. PL

26 P. [Pa'ruv.] branch*'** ^^ dict# no, 12^ much branched ? sP*ead- t(>othed. p[S J\n&ular> glabrous ; leaves lanceolate, pinnatefy- Lea[ves wooil i? Native of Vera Cruz> Houston. Humble. *SPreadinJxv-* * W r s small, white. Berry small, yellowish. 2[P j J^ W m i «r Cherry. PL humble. * villou[s ; leav]es ^[Mill, dict* no# 13-) much branched; branches Na[tive of Ver*r]ate, acuminated> serrately toothed. ©. H. ^[err]y elobo*e, ^[n]rUZ> Houston. Flowers small, pale yellow. *Pilous* Wim[PL] Wi8h [cr]e[s]n size of a cherry.

28 P. [coRr]'[C]herry. PL ? leaves ovate [2]T[A] ^[Mill> dict# ncf, 14^ stem erectj branched; ©• H. ^[']^rrate*toothed ; petioles and peduncles very long. [at]^tumn, like tlf °^ ^[era] ^[ruz]» Houston. Leaves purple in *[ar]ge, size of [f]e °^ *Lamium.* Flowers small, white. Berry *CordatP U*[a] 7[f] [or]y» greenish yellow, striped with purple.

29 P. M[V] [inter] Cherry- PL 2 feet- [lea]ves ovat[e-l]IMA ^Mill# dict* no- 15') stem erect> branched ; [Na]tive of V[p]eolate» clammy ; fruit large, cordate. ©. H. high. Leav[Cra]TUZj Houston. Stem glabrous, almost *3* feet [Berr]y pale y^l[011] long P[e]tioles. Flowers small, cream-coloured. [Le]

30 Tl^[inte]^[herr]y- PL *3* feet.

calyxes p[ea]r[f]A ^[Medic]-[ac]t. palat. 4. phys. p. 186.) fructiferous [las] spotless. °^[ne]tf [uno]P[en]» [a]lmost filled by the berry; corol- +• H. Native country unknown. Said to be allied to *P. viscosa,* but differs in the fructiferous calyx being oblong, with 10 elevated angles.

Yellow Winter Cherry. PL ?

31 P. RAMOSA (Forsk. fl. arab. p. 204.) leaves solitary and twin, broadly ovate, acute, sinuately toothed, rather villous. ©. H. Native of Arabia, at Uahfad. Habit of *P. alkekengi,* but the calyx is much inflated and pentagonal. Corolla yellow. Berry dry, red.

Branched Winter Cherry. PL ?

32 P. NU'TANS (Walt. fl. carol, p. 99.) leaves alternate, ovate, and are, as well as the stem, which is rather angular, tomentose; flowers solitary, drooping. ©. ? H. Native of Carolina.

Drooping Winter Cherry. PL ?

33 P. MUCRONA^TA (Willd. enum. suppl. p. 11, without any diagnosis.) Nothing is known of this plant but the name.

Mucronate Winter Cherry. PL 1 foot.

34 P. MICRA'NTHA (Link, enum. 1. p. 181.) hairy; leaves cordate, acute, toothed ; peduncles axillary, at length refiexed ; calyx angular, with acute segments. ©. H. Native country unknown. P. parvifldra, Willd. enum. suppl. p. 11. Nearly allied to *P. pubescens,* and probably only a variety of it. Corolla small, yellow.

Small-jlowered Winter Cherry. FL July, Aug. Clt. 1826. PL 1 to 2 feet.

Cult. For culture and propagation see *Solanum,* p. 442.

VI. SARA'CHA (named by Ruiz, and Pavon, after Fsodore Saracha, a Benedictine monk much attached to the study of botany, and who enriched the royal gardens at Madrid with many rare plants.) Ruiz, et Pav. fl. per. 2. p. 42. t. 178. prod. p. 349. Bellinia, Roem. et Schultes, syst. 4. p. lvi. and p. *687.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx campanulate, 5-angled, 5-cleft; segments ovate, permanent. Corolla campanulately rotate: with *5* equal, reflexed lobes, and furnished with *5* nectariferous pits at the base. Anthers cordate, straight, dehiscing lengthwise. Stigma capitate. Berry globose, 1-2-celled, half inclosed in the hardly inflated calyx, almost to the middle; placenta fleshy. Seeds many, compressed, reniform.—Usually herbaceous, procumbent, or erect plants. Leaves alternate, petiolate, entire, usually twin, especially the upper ones. Peduncles from the forks of the stem, or axils of the leaves, %> or many flowered, usually umbellate and drooping. *Saracha* only differs from *Solanum* in the filaments being woolly at the base, and closing up the mouth of the tube of the corolla; and by its cordate anthers, with the cells opening lengthwise.

* *Annual Plants.*

1 S. PROCU'MBENS (Ruiz, et Pav. fl. per. *2.* p. 43. t. 180. f. b.) herbaceous, procumbent; leaves- twin, unequal, ovate, quite entire, glabrous in the adult state, but when young villous on the margins and back ; flowers umbellate, drooping ; filaments glabrous. ©. H. Native of Peru, in the valley of Canta. A'tropa procumbens, Cav. icon. 1. p. 53. t. 72. Jacq. hort. schoenbr. t. 492. A'tropa plicata, Roth, catalect. 2. p. 24. Physalis solanacea, Mentens ex Roth, 1. c. Solanum procumbens, D. C. fl. fr. 3. p. 611. Bellinia procumbens, Roem. et Schultes, syst. 4. p. 687. Stem dichotomous, furrowed, downy, angular. Leaves rarely solitary. Peduncles axillary, 2-3-4-flowered ; pedicels and calyxes villous. Corolla cream-coloured, with a green centre, and downy margin. Berry shining, size of a pea.

Procumbent Saracha. Fl. June, July. Clt. 1822. PL proc.

2 S. UMBELLA'TA (D. C. cat. hort. monsp. 1813. p. 142.) herbaceous, erect, hairy, much branched; leaves ovate, wrinkled, entire, shining, acute, scabrous : floral ones twin ; flow-

ers umbellate, drooping; filaments bearded at the base. ©. H. Native of Peru. Sweet, fl. gard. t. 85. A'tropa umbellate, Roth, catal. 2. p. «6. Jacq. schoenbr. t. 493. A'tropa Rdthii, Poir. suppl. 1. P- *b10,* Bellinia umbellata, Rcem. et Schultes, syst. 4. p. 688. Stem solitary, dichotomous. Leaves canescent beneath, green above, entire, and sometimes slightly angular. Umbels pedunculate, 7-10-flbwered, axillary, solitary. Corolla plicate, cream-coloured, or greenish-white, smaller than those of *S. procumbens.* Berry dark purple.

Umbellate-flowered Saracha. Fl. June, July. Clt. 1822. PL *2* to 4 feet.

3 S. CONTORTA (Ruiz, et Pav. fl. per. 2. t. 180. f. a.) herbaceous, erect; leaves ovate, angularly toothed, downy, and quite entire : upper floral ones twin ; flowers umbellate drooping, pedunculate ; filaments villous at the base. 0. H. Native of Peru, from Canta to Obragillo. Bellinia contorta, Roem. et Schultes, syst. 4. p. 689. A'tropa contorta, Spreng. syst. 1. p. *699.* Stem furrowed, glabrous, branched, of a livid violaceous colour at bottom ; branches dichotomous, downy. Peduncles and pedicels twisted. Umbels 6-10-flowered. Corolla cream-coloured, rather large. Berry black, globose, size of a pea.

Twisted-pedicelled Saracha. PI. 3 to 4 feet.

* * *Shrubby Plants.*

4 S. PUNCTATA (Ruiz, et Pav. fl. per. 2. p. 42. t. 178.) suffruticose, erect; leaves ovate-oblong, quite entire, glabrous above, and powdery beneath ; pedicels 1-flowered, unequal, aggregate, axillary and terminal; corollas spotted. T? . G. Native of Peru, in elevated places. Bellinia punctata, Roem. et Schultes, syst. 4. p. *688.* A'tropa punctata, Spreng. syst. 1. p. 698. Branches angular, downy while young. Pedicels a little longer than the corollas. Calyx glabrous. Corolla large, campanulate, powdery outside, yellowish, and marked with small purple spots.

Dotted-Bowered Saracha. Shrub *2* to 3 feet.

5 S. ZUCCAGNIANA ; frutescent, erect; stem villous, 4-5-angled ; leaves solitary or twin, ovate-cordate, rather villous, entire ; common peduncle villous, between the petioles of the twin leaves, bearing an umbel of pedicellate drooping flowers. F? . G. Native of America ? A'tropa erecta, Zucc. cent, in Roem. coll. p. 129. no. 41. Angles of stem violaceous. Leaves glabrous above, but the margins and nerves beneath are villous. Umbels 2-3-4-flowered. Segments of calyx ciliated. Corolla greenish-yellow, rotate, marked by 10 twin green spots at bottom ; limb pentagonal, ciliated, revolute. Filaments villous at the base. Berry globose, glabrous, 2-celled.

Zuccagni's Saracha. Shrub.

6 S. VILLOSA ; stem frutescent; leaves cordate-ovate, acuminated, quite entire, very villous : rameal ones twin, unequal; umbels axillary, many-flowered, drooping; limb of corolla 5-cleft. Ij . G. Native of Peru ? A'tropa villosa, Zucc. in Roam, coll. p. 130. no. 42. Roem. et Schultes, syst. 4. p. 684. Stem pentagonal, violaceous at the base, furrowed, villous, as well as the branches, which are tetragonal. Common peduncle horizontal, solitary, between the petioles of the twin leaves; pedicels *8-9* papillose. Corolla greenish-yellow, rotate ; limb pentagonal ; segments ciliated. Evidently a species of *Saracha.*

Villous Saracha. Shrub erect.

7 S. DENTATA (Ruiz, et Pav. fl. per. 2. p. 176. f. b.) herbaceous, procumbent, downy ; leaves entire and toothed, ovate, twin • peduncles usually 4-flowered, subumbellate, lateral and terminal, inclinate. %. G. Native of Peru, along with *S. punctata.* Bellinia dentata, Ram. et Schultes, syst. 4. p. *689.* A'tropa dentata, Spreng. syst. I. p. 699. Pedicels unequal, short - Corolla whitish-violet, villous, campanulate, marked by 5 green spots. Berry copper-coloured, size of a pea.

Toothed-leaved Saracha. PL procumbent.

8 S. BIFLORA (Ruiz, et Pav. fl. per. 2. p. 42. t. 179.) herbaceous, erect, downy ; leaves ovate, usually twin ; peduncles axillary, 2, rarely 3-flowered ; flowers pendulous. %. G. Native of Peru, in corn-fields. Bellinia biflora, Room, et Schultes, syst. 2. p. 689. Branches angular. Corolla greenish-yellow. Stamens twice as long as the corolla. Berry white, size of a pea, a little compressed.

Two-Jlorvered* Saracha. PL 2 *feet.

9 S. VISCOSA (Schrad. cat. sem. hort. goett. 1832. D. *Don,* in Sweet, fl. gard. n. s. t. *323.)* clothed in every part with glandular pubescence, and viscid; stem erect, suffruticose; leaves twin, cordate, acuminated, sinuately toothed, and sometimes entire; peduncles umbellate ; throat of corolla woolly; fructiferous calyx coloured. 1? . G. Native of Mexico, Spangenberg. Umbels solitary, nearly sessile. Calyx 5-cleft, large. Corolla large, with acute lobes, valvate in aestivation, cream-coloured, and marked towards the base with numerous olive-coloured spots. Anthers cordate, violet. Berry globose, size of a cherry, scarlet.

Clammy Saracha. Fl. June, Sept. Clt. 1835. PI. 1 to 2 feet.

10 S. PUBESCENS (Willd. rel. ex Rcem. et Schultes, syst. 4. p. 689.) shrubby, downy ; leaves ovate, acute ; umbels pedunculate, terminal. J?. G. Native of Peru. Humb. et Bonpl. Bellinia pubescens, Roem. et Schultes, syst. 4. p. 689.

Downy Saracha. Shrub ?

N.B. What are Saracha micrantha, D. C. hort. monsp. 1813. and S. Peruviana, Dietr. gart. lex. 8. p. *522.* ?

Cult. The shrubby species of *Saracha* require protection m a frame or greenhouse in winter ; but they may be planted out in open ground in summer ; they are increased by cuttings and seeds. The seeds of annual species only require to be sown m the open ground in spring.

VII. WITHERI'NGIA (named by L. Heritier, in honour of William Withering, M.D., author of "A Botanical Arrangement of the Vegetables of Great Britain." 2 vols. 8vo. Birmingham, 1776. First edition.) Lher. stirp. 1. p. 33. t. 1. Dun. sol. p. 107. H. B. et Kunth, now gen. 3. p. 13. Mart. bras. 3. p. *73.*—Solanum species of Lin, and other authors.

LIN. SYST. *Penldndria, Monogynia.* Calyx urceolately campanulate, 4-5-cleft. Corolla rotate; tube short; limb 4-5-cleft. Stamens 4-5 ; anthers conniving, dehiscing lengthwise. Stigma subcapitate. Berry 2-celled, propped by the permanent calyx, many-seeded ; placentas adnate. Seeds lenticular. Trees, shrubs, or herbs, with soft wood, and large medulla, having the habit of *Solanum.* Branches opposite or alternate, thickened at the nodi. Leaves alternate, usually twin, (one in each pair smaller than the others,) quite entire, or sinuately-toothed, rarely pinnatifid. Inflorescence umbellate, racemose, or panicled, rarely having the flowers solitary. Peduncles lateral or extra-axillary. Corollas whitish, rose-coloured, yellow, greenish, or bluish.

* *Stems shrubby.*

1 W. STRAMONIIFOLIA (H. B. et Kunth, nov. gen. 3. p. 13.) arboreous ; branches angularly winged ; branchlets downy ; leaves ovate, acuminated, unequally cordate, dentately angular, hairy, twin ; umbels extra-axillary, sessile; filaments bearded at top. \i. S. Native *of* Mexico, near La Bandarilla ; and the city of Xalapa, at the altitude of 750 hexapods, where it is called *Oja Peluda* by the natives. Leaves 4-5 inches long, and *2-8* broad. Umbels many-flowered. Flowers nutant, pentamerous and pentandrous. Corolla yellowish, hairy outside, size of those of *Capsicum fruteacens.* Berry globose, red, size of a pea.

Str'amonium-leaved Witheringia. Fl. May, Aug. Clt. 1823. Trec 10 to 20 feet.

by\W* oRASSIFOLIA (Du«- sol. p. 108. syn. p. 2.) stem shrub-angnl[lY]\ / arfer sarmentose ; leaves ovate, entire, or sinuately-Nati'ar, Jr'luntish 5 panicles subdichotomous, reclinate. \?. G. Lam in° the Cape of Good Hope- Solanum crassifolium, Sol^n no / 2323, SoL dulcamara, var. /3, Lin. spec. p. 264. 273. f^r African>um Mill- "0. 26.—Dill. hort. elth. *365.* t. pilose' P' • ^rancnes hispid, rather angular at top. Leaves pentV - anic^es subcymose, and nearly terminal. Flowers colou^0118 and Pentan(irous. Corolla of a violaceous purple Wred' seSments ovate, subconnivent. Anthers copper-co-

Witheringia. Fl. May, Aug. Clt. 1706. PI. 1 to 2 feet.

3 W. [illegible] Mart bras, 3* P- *74f, *' 227,*) arborescent; branches and branchlets spreading, viscid and pilose, as well as the leaves, acTillesit leaves alternate and twin, broad-ovate, short-acuminate, avlllary, at l^e base 5 peduncles solitary, and some aggre-2]1, in th • Shorter than the leaves* ^ * S< Native of Bra" of Joao rpTp6 provinces on Serra do Mar; and near the town Serous c 1 y> &C,J in dry exPose(l P^ces. Flowers penta-C°rolla, pentandrous- Calyx with lanceolate segments. broad lan1 spotted with violet in the throat; segments War" p e > acutish, exceeding the anthers, which are P \ Berry yellowish.

4 \y *~^u Witheringia. Shrub 6 to 8 feet.

the whole XV;ABy» CATA (Mart- bras- 3, P- 72, *' 228t) suffruticose, °vate ac Co t..ei W^^ ^ne ^own 5 leaves ovate-lanceolate, or flowered r iniatecl» rounded at the base; racemes simple, *few*-with the' a crnl exceeding the leaves. ^. S. Native along Precrd ng, on Serra do Mar; and on the descent t0 tlie valley of *th-* site. Flow enVer ^ara^ba# Branches for the most part oppo-calyx ovate 61S ^entamerous and pentandrous. Segments of the Segments l' aCUte cinated, and often serrulated. Corolla white ; ^te anthers ate> acute, twice as long as the inflated lanceo-

Witheringia. Shrub 4 to 5 feet,

glabrous • j^oCONos (Mart. bras. 3. p. *76.* t. 229.) suffruticose, Cer«es alaV ^^ Ovate» acuminated, cordate at the base; ra-in he^es anr1 onger than the leaves« ^ • S« Native of Brazil» ple 5 also on S woods ^Te Juca» and elsewhere ; near Sebastino-quefid, of ^erra oo Mar. Leaves twin. Corollas semiquin-nerve, or wh nestaceous rose-colour, with a violaceous middle segments trian i Violaceus, size of those of *SoL tuberbsum;* tbers, which a uf» twice as long as the ovate, ventricose an-verted cone in glanduIar at a Pex- Pistil referrible to an in-oculated on tli a Cone* Se Sments of the calyx ovate, acute, den-

Double-co ar glnS, Perhaps a species of *Dunalia.*

6 W. MAPO W)theringia. Shrub 3 to 4 feet.

11 B- et Knn. °if HYILA (Dun« syn- P. I- sol. ed. 2d. ined. t. *77.* rat ner an ffu la P, no V- ^en. amer. *3.* p. 14.) shrubby; branches nated, rather ^uberulous ; leaves ovate-elliptic, subacumi-sessile, two re and, smoothish : superior ones twin ; umbels S- Native as Ort as the Petioles ; filaments bearded. J? . 180 bexapod W Granada> near Turbaco, at the altitude of rather down^ aves about 8 inches long, and about 4 broad, those of *Sol^* on v^e P^mary veins beneath. Flowers size of ^-toothed. a MW ?*£*rum*> tetramerous and tetrandrous. Calyx me nts. Arjfi ^-cleft, greenish, with oblong, acute seg-pepper berrie^ m Va te lanceo ate Berries globose, red, size of it is very lij^gf*. This species differs from *W. solandcea,* which branches • j 5 in the shrubby stem ; larger leaves, and smoother tbe smaller flUmbels being shorter than the petioles ; and in

Long-leaved Witheringia. Shrub.

7 W. CILIATA (H. B. et Kunth, nov. gen. amer. 3. p. *]5.)* shrubby ; branches terete, glabrous ; leaves oblong, acute, narrowed at the base, quite entire, ciliated, glabrous, twin; peduncles extra-axillary, solitary or twin, elongated. T?. S. Native of New Granada, on the Andes of Pasto, near Tulcan, at the altitude of 1580 hexapods. Young branchlets downy. Flowers size of those of *Solanum nigrum.* pentamerous and pentandrous. Calyx downy, 5-toothed. Corolla white ; limb angularly 5-lobed ; lobes acute. Filaments glabrous ; anthers oblong, obtuse. This species has much the habit of *Solanum phillyreoides,* with which at first sight it might be readily confounded.

Ciliated-leaved Witheringia. Shrub.

8 W. MOLLIS (H. B. et Kunth, 1. c.) shrubby ; branches terete, clothed with hoary tomentum ; leaves ovate, acuminated at both ends, quite entire, downy above, clothed with soft tomentum beneath, and canescent, twin ; peduncles 2-3-4 together, elongated. F? . S. Native of Peru, near the town of Caxamarca, at the altitude of 1500 hexapods. Leaves l£ to 2 inches long. Flowers drooping, size of those of *Solanum nigrum,* pentamerous and pentandrous. Calyx 5-toothed, hoary. Corolla hairy outside ; limb angularly 5-toothed : teeth acute. Anthers oblong, obtuse, on glabrous filaments. Berry size of pepper, globose. Very like the two preceding, but differs in the form of the leaves.

Soft Witheringia. Shrub.

9 W. RHOMBOIDEA (Dun. syn. p. 1. H. B. et Kunth, 1. c.) shrubby; branches terete, tomentose; leaves ovate, acutish, rounded at the base, and unequal, quite entire, clothed with soft pubescence above, and hoary tomentum beneath, twin ; umbels sessile, 4-G-flowered, longer than the petioles ; filaments glabrous. *2. S. Native on the Andes of Quindiu, on El Machin, at the altitude of 1030 hexapods. Leaves an inch long, green above. Flowers size of those of *Solanum nigrum,* pentamerous and pentandrous. Calyx clothed with hoary tomentum, 5-toothed : teeth linear, remote. Corolla glabrous, 5-cleft, with oblong, acute segments, which are hairy at top. Anthers linear-oblong.

Rhomboid-leaved Witheringia. Shrub climbing.

10 W. DUMETORUM (Dun. sol. p. 1. sol. ed. 2d. ined. t. 7i). H. B. et Kunth, 1. c. p. 16.) shrubby ; branches rather angular, tomentose while young; leaves ovate, subacuminated, cuneated at the base, hairy above, clothed with hairy tomentum beneath, and canescent: superior ones twin; peduncles twin or tern, 1-flowered, much longer than the petioles; filaments glabrous. *2 . S. Native of New Granada, among bushes in the province of Pasto, between Chumban and Tusa, at the altitude of 1500 hexapods. Leaves 12-16 inches long. Flowers size of the preceding, pentamerous and pentandrous. Calyx like that of the last species, from which it is principally distinguished in the form of the leaves.

Bush Witheringia. Shrub.

11 W. RIPARIA (H. B. et Kunth, 1. c. p. 16.) shrubby; branches angular ? hispid from pili; leaves somewhat obliquely obovate-oblong, acuminated, acute at the base, glabrous, pilose on the nerves beneath, twin ; flowers extra-axillary, crowded, about equal in length to the petioles; filaments pilose at the base. *2 • S. Native of New Granada, on the Andes of Quindiu, near the river Toche, at the altitude of 1050 hexapods. Leaves %\ to ?>\ inches long. Flowers extra-axillary, size of those of *Lycium Bdrbarum.* Calyx obsoletely 5-toothed, glabrous. Corolla greenish-white, glabrous ; tube funnel-shaped ; limb 5-parted.

River-side Witheringia. Shrub.

1£ W. ANGUSTIFOLIA (Dun. syn. p. 2. sol. ed. 2d. ined. t. 80. H. B. et Kunth, 1. c. p. 17.) shrubby; branches flexuous,

terete ; branchlets tomentose ; leaves lanceolate, acuminated, acute at the base, glabrous ; racemes few-flowered, twin ; filaments glabrous. \ . S. Native of New Granada, at the foot of Mount Catopaxo, in sandy places, at the altitude of 1600 hexapods. Leaves solitary, *2* to *2^* inches long, clothed with canescent tomentum while young. Racemes extra-axillary, solitary or twin. Flowers size of the preceding. Calyx 5-cleft, clothed with hoary tomentum ; with subovate acute segments. Corolla blue, clothed with hoary tomentum outside ; limb 5-parted, with oblong segments. Anthers linear-oblong. Berry globose, size of those of *Soldnum nigrum.* Perhaps a distinct genus.

Narrow-leaved Witheringia. Shrub 4 to 6 feet.

13 W. PE'NDULA (Rcem. et Schultes, syst. 3. p. *522.)* frutescent ; leaves ovate, entire, acuminated, glabrous above, but clothed with downy tomentum beneath ; racemes terminal; peduncles long, reflexed. J? . S. Native of Brazil. Solànum pendulum, Link. herb. Stems angular, and pubescently villous at top. Leaves 3 inches long, and \\ broad, thickish, subrepand, ciliated. Peduncles 3 inches long, downy. Calyx smoothish, hemispherical, obsoletely 4-5-cleft. Corolla 4-5-parted ; segments linear-lanceolate, obtuse. Anthers 4-5, generally unequal.

Pendulous-Cowered Witheringia. Shrub.

* * *Stems herbaceous.*

14 W. SOLANA'CEA (Lher. stirp. 1. p. *S3.* t. 1.) root composed of fusiform tubers ; stem subherbaceous, pilose, rather angular ; leaves ovate-oblong, or ovate-lanceolate, rather pilose : superior ones twin ; umbels axillary, sessile, longer than the petioles. 3/. G. Native of South America. Lam. ill. t. *82.* Leaves acute, entire, rather pilose. Calyx 4-toothed. Corolla pale yellow, 4-cleft. Stamens 4 ; filaments white, glabrous outside, and hairy inside. Tube of corolla suburceolate, with 4 gibbosities, bluntly tetragonal.

Solanaceous Witheringia. Fl. May, Sept. Clt. 1742. PI. 1 foot.

15 W. UMBELLA'TA (Dun. syn. p. *2.* sol. ed. 2d. ined. t. *27.)* stem herbaceous, winged, pilose; leaves ovate, attenuated at both ends, sinuately toothed, pilose ; racemes axillary, usually solitary ; pedicels umbellate. 1/. S. Native of St. Domingo. Poir. suppl. 5. p. 505. Calycine segments 5, acute. Nearly allied to *W. montana.*

Umbellate-Cowered Witheringia. PI. 1 foot.

10 W. MONTAVA (Dun. syn. p. *2.* Poir. suppl. 5. p. 505.) root tuberous; stems herbaceous, pilose; leaves pilose, ovate, entire, or dentately repand, or sinuated ; peduncles 1-flowered. %. G. Native of Peru, on hills, where it is called Papa montàna. Solanum montànum, Lin. spec. *266.* Dun. sol. p. 145.—Solànum tuberòsum minus, Atriplicis folio vulgò Papa montàna, Feuill. per. 3. p. *62.* t. 46. Root ovate. Stem bifurcate. Leaves on long petioles, subcordate. Flowers in the fork of the stem. Corolla campanulate, 5-cleft, rose-coloured. Stamens purple.

Far. /3, arenària (Dun. sol. p. 146.) peduncles many-flowered, bracteate; leaves lobed. %. G. Native of Peru, on sandy hills, and among rocks about Lima and Chancay, where it is called Papas de Loma. Solànum montànum, Ruiz, et Pav. fl. per. *2.* t. 160. f. b. This variety is nearly allied to *W. phyllantha.* Stem larger than in var. a, hispid. Calyx 5-parted. Corolla flat, blue. Perhaps a distinct species.

Mountain Witheringia. Fl. May, Aug. Clt. 1822. PL ± to ¡ foot.

17 W. PHYLLA'NTHA (Dun. syn. p. *2.* Poir. suppl. 5. p. 505.) stem herbaceous, winged; leaves pilose, cuneiform, a little lobed at apex, decurrent; racemes rising with the leaves. ©.? %*A* G. Native of Peru, in cultivated fields near the town of La Magdalena, Cav.; sandy places of Lima, Chancay? and Lurin, Ruiz, et Pav. SoVanum phyllànthum, Cav. icon. 4. p. *35.* t. 359. f. 1. Ruiz, et Pav. fl. per. *2.* p. *32.* Root fusiform. Leaves 5-lobed at top; lobes ovate, acute. Peduncles rising from the decurrent disk of the leaves. Calyx 5-cleit. Corolla pale blue, marked by a 5-rayed star, spreading, 5-angled. Berry round, red, size *of* a pea.

Leaf-flowered Witheringia. Fl. July, Aug. Clt. *1822.* W. 1 foot.

18 W. PINNATI'FIDA (Dun. syn. p. *2.* Poir. suppl. 5. p. *ovo.)* stem herbaceous, winged ; leaves rather pilose, decurrent, pinnatifid: segments obtuse, sinuated ; peduncles bractless; flowers panicled. %. G. Native of Peru : in sandy places in the provinces of Lima and Chancay; plentiful in Torre blanca ana Jequan, on hills. Solànum pinnatifidum, Ruiz, et Pav. fl. per. *2.* p. *37.* t. 170. f. b. Dun. sol. 138. but not of Lam. Flowers drooping. Calyx 5-parted, with linear, obtuse segments. Corolla pale blue or white, flat. Berry yellow, size *of* a pea.

Pinnatifid-leaved Witheringia. Fl. June, Aug. Clt. *1822.* PL 1 foot.

19 W. MULTI'FIDA (Dun. syn. p. 3. Poir. suppl. 5. p. 506.) stem herbaceous ; leaves rather pilose, bipinnatifid, running into the petioles ; petioles stem-clasping ; peduncles long, panicled, leafy beneath the middle. 1/. G. Native of Peru, on hills at Pungo, in the province of Cumana. Solànum multifidum, Ruiz. et Pav. fl. per. *2.* p. 37. t. 17. f. a. but not of Lam. Dun. sol. p. 138. Stem juicy, furnished with a few simple hairs, as well as the leaves. Segments of the leaves blunt, toothed. Peduncles multifid, terminal and lateral, very long, furnished each with an entire or trifid leaf, which is clasping beneath the middle. Corolla blue. Berry larger than the calyx.

Multifid Witheringia. PI. 1 to *2 feet.* ?

Cult. For culture and propagation see *Soldnum,* p. 442.

VIII. NETOU'XIA (named by Kunth, in honour of H. Netoux, author of" Dissertationes de Cassiis Egyptiacis.") H. B. et Kunth, nov. gen. amer. 3. p. 10. t. 193.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted, regular, with linear segments. Corolla salver-shaped ; limb 5-parted ; throat furnished with a tubular, short, entire, or obsoletely-toothed corona. Stamens 5, inclosed; anthers dehiscing lengthwise. Stigma emarginate. Fruit baccate ?.—A fetid erect herb. Leaves scattered : superior ones twin, cordate, quite entire. Peduncles extra-axillary, solitary, 1-flowered. Corolla yellow, becoming blackish on drying. This genus is more nearly allied to *A'tropa* and *Petunia* than any other; but it differs from them, as well as all others of the order, in the corolla being furnished with a corona faucis.

1 N. FORMOSA (H. B. et Kunth, I.e.) %. G. Native of Mexico, in woods near Real del Monte. A'tropa arenaria, Willd. rel. ex Roem. et Schultes, syst. 4. p. *686.* Flowers size of those of *Finca major.*

Beautiful Netouxia. PI. £ to § foot.

Cult. This singular plant will grow in any light rich soil; and may be readily increased by cuttings or divisions.

IX. MANDRA'GORA (The English name Mandrake is a corruption of the Greek appellation *Mavdpayopog,* compounded of yuaj/^pa, *mandra,* an ox-stall, something relating to cattle ; and *ayavpog, agauros,* cuiel; from its effects on cattle when accidentally gathered with their fodder in the countries where the plants abound. It is a venomous plant, and was an important engine in the days of medical charlatanry, from the roots being supposed to bear a resemblance to the human form.)

Tourn. Inst. 76. t. 12. Lin. hort. cliff. p. 51. Blackw. t. 364. Schk. handb. rom. 1B. L. Juss. Gen. P. 125. Gaertn. fruct. 9. P. 87. *U. ISU.* f. 1. D. C. syn. fl. gall. p. 236. A'tropa species, Lin. gen. and most other authors.

Gen. Ch. Calyx turbinate, 5-angled. Corolla campanulate, 5-cleft. Stamens 5. Filaments hairy at the base and connivent, but filiform and divaricate at the apex. Ovarium furnished with a circular gland round the base. Style drawn out into 2 horns. Stigma capitate, having the rudiments of 2 valves. Berry globose, apple-shaped, fleshy, solid, 1-celled, Uniform in texture. Placentæ rather prominent inside. Seeds many, fetid. Hilum peripheric, disposed in a simple series.—Stemless, forked roots. Leaves broad radical leaves; lanceolate, ovate, usually always cauline; and numerous side-flowered scapes, which are shorter than the leaves.

1. A. OFFICINA'RUM (Lin. spec. ed. 1st. P. 1810. leaves obovate and ovate, acute, a foot long, undulated, quite entire, at first erect, then spreading; root and flowers white; segments of corolla lanceolate, linear, acuminated; segments of calyx lanceolate, acuminated; &c. Bart. Veg. Native of Spain, Switzerland, Italy, &c. Bot. mag. t. 1824. P. 6. M. officinalis, Mill. dict. no. 1. Bot. hort. bon. 1824. P. 6. M. officinalis, Mill. dict. no. 2. Curt. bot. mag. t. 131. f. *Curt. U 175.* M. acaulis, Gsertn. fruct. 2. p. 236. Specific name, vernalis. Spreng. A'tropa Mandragora, Lin. spec. 2. p. 258. Willd. herb. fc. 145. Plenk. off. t. 126. Corolla bluish, pale. Root white, fleshy, usually bifid, 3-4 feet long. The roots are supposed to bear a resemblance to the human figure, and are figured as such in old herbals, being with a forked root the male with a long beard, and the female under a head of hair. It has been fabled to grow where the matter falling from the dead body gave the root the space of a man's utter a shriek or groan at digging up; and it was asserted that he who would dig to it for the purpose should in common prudence tie a dog to it for the purpose, for a man should do it himself he would surely die soon after, ex Linnaeus. The whole plant is reputed poisonous, though in small doses it was used medicinally, and particularly as an opiate.

Officinal. Common Mandrake. Fl. May, June. Clt. 1548. Pl. 2 foot.

2. A. OBTUSIFO'LIA (Sweet, fl. gard. t. 1198.) leaves lanceolate-oblong, at the same time wrinkled, villously pubescent, rising acute, keeled, with the flowers; calycine segments lanceolate, apes agare, segments of Corolla spreadingly reflexed, acute; Mandragfea fl. f. Native of Switzerland. A'tropa Mandragora, var. *feminea*, Bull. herb. t. 146. M. officinalis, *wooly* of a yellowish-brown, tinged with blue. This plant also much smaller than *Mt vernalis*, spreng. and is

3. A. MANDRAGO'RA, Mandrake. Fl. March, April. Clt. 1819. Pl. \ foot. D. (Bertol. el. pl. hort. bon. 1820. p. 6. D. wrinkled, undulated, *A. gard.* n. s. fc. 325. leaves oblong, pilose, face, as well as the calycine segments lanceolate, acuminated, keeled, obtuse, sewed; corolla spreading, with elliptic, obtuse segments; berry globose, smooth, ripening in the South of Europe, likewise found in Italy; and Greece, about Athens and Elis, and in some of the Islands of the Archipelago.

4. A. MACROCA'RPA, Bertol. Shapes pale purple, shorter than the *V^^dwred*, not unlike those of a species of Campanula. This plant is chiefly distinguished from M. officinalis by its much larger berry. It is moreover, altogether a larger plant. This is probably the Mandrake mentioned in the Scriptures, in the 30th chapter of Genesis.

Autumnal Mandrake. Fl. Dec. Clt. 1548. Pl. \ foot.

Cult. The species of Mandrake thrive best in a deep light soil, in a shady situation. They are only to be increased by seed. The roots are extremely apt to rot during winter.

X. A'TROPA (from *arponog, atropos,* one of the destinies; derived from *a* priv.; and *Tpeirw, trepo,* to turn; in reference to the poisonous effects of the species.) Lin. gen. no. 249. Schreb. gen. no. *335.* Juss. gen. *125.* ed. Usteri, p. 140. Gaertn. fruct. *2.* p. 240. t. 131. Lam. ill. t. 114. f. *2.* H. B. et Kunth, nov. gen. amer. 3. p. 11.—Belladonna, Tourn. inst. t. 13.

LIN. SYST. *Pentandria, Monogynia.* Calyx loose, 5-cleft, permanent. Corolla campanulate; limb usually 5-cleft, rarely 10-cleft, spreading. Stamens 5, generally exserted, conniving at the base; anthers dehiscing lengthwise. Stigma peltately depressed. Berry globose, propped by the permanent spreading calyx; placentas free, and distant from the dissepiment. Seeds numerous, reniform.—Caulescent shrubs or herbs. Leaves scattered, twin, entire. Peduncles extra-axillary, 1-2, or many-flowered. Corolla violaceous or greenish.

§ 1. *Limb of corolla 10-cleft or 10-toothed; the alternate lobes or teeth smaller.*

1 A. VIRIDIFLO'RA (H. B. et Kunth, nov. gen. amer. 3. p. 11. t. 196.) stem suffruticose, twining; leaves twin, elliptic-ovate, subacuminated, quite entire, hairy; peduncles 2-flowered; flowers, drooping; limb of corolla 10-cleft. F?. ^. S. Native of New Granada, between the town of Pasto and Chilanquer, at the altitude of 850 hexapods. A'tropa flexuosa, Willd. rel. ex Rcem. et Schultes, syst. 4. p. *686.* Corolla tubularly funnel-shaped, green, 3-4 times longer than the calyx, hairy, furnished with 5 tubercles on the outside at the base. Filaments glabrous, dilated at the base. This and *A. dspera* of Ruiz, et Pav. might probably form a distinct genus.

FIG. 39.



Green-flowered Deadly Nightshade. Shrub twining.

2 A. A'SPERA (Ruiz, et Pav. 2. p. 45.) stem herbaceous, angular, pilose; leaves twin, unequal, oval-oblong and lanceolate, quite entire or subsinuated, hairy; peduncles 1-flowered, drooping; limb of corolla 10-cleft. %. S. Native of Peru, on hills about Lima. Stem dichotomous, branched. Peduncles extra-axillary, or in the forks of the stem. Corolla yellowish-blue, violaceous in the centre, with 5 of the segments acute, and the alternating 5 emarginate. Filaments hairy, violaceous. Berry white, size of a pea. Seeds red.

Rough Deadly Nightshade. Pl. 2 feet.

3 A. HIRTE'LLA (Spreng. syst. 1. p. 699.) herbaceous; leaves ovate, acute, scabrous; branches rough; peduncles elongated, 1-flowered, filiform. ©. H. Native of Brazil.

Hairy Deadly Nightshade. Pl. ?

§ 2. *Limb of corolla 5-cleft. Stems frutescent.*

4 A. UMBELLA'TA (Ruiz, et Pav. fl. per. 2. p. 44. t. 181. f. a.)

stem frutescent; leaves ovate and cordate, quite entire and angular ; peduncles many-flowered, umbellate, drooping ; limb of corolla 5-cleft. J?. S. Native of Peru, on hills about Lima. A. revoluta, Dietr. lex. 1. p. 422. Stem glabrous ; branches dichotomous, downy. Leaves solitary or twin, downy. Peduncles short, axillary, downy, bearing 8-12 pedicellate flowers. Corolla yellow, melliferous; tube cylindrical, purple; limb reflexed, ciliated. Stamens inclosed. Style exserted. Berry whitish, globose, size of a pea.

Umbellate-Cowered Deadly Nightshade. Shrub 4 feet.

5 A. BIFLORA (Ruiz, et Pav. fl. per. 2. p. 44. t. 181. f. b.) stem frutescent; leaves ovate, acute, quite entire: upper ones twin; peduncles 2-flowered, drooping?; limb of corolla 5-cleft. h_c . *S.* Native of Peru, in humid places. Shrub rather downy. Branches pendulous, rather angular. Corolla suburceolate, villous, striated ; tube greenish, white, or purplish ; limb greenish-yellow, erect. Anthers and stigma blue. Berry white, size of that of *Belladonna,* a little compressed.

Tivo-fiowered Deadly Nightshade. Shrub *2* feet.

6 A. BICOLOR (Ruiz, et Pav. fl. per. 2. p. 45.) stem frutescent ; leaves ovate, angular, glabrous ; peduncles 3-4-flowered ; limb of corolla 5-cleft. ^ . S. Native of Peru, in shady places. Branches angular. Leaves acute, usually twin. Corolla tubular, reddish green ; limb green.

Two-coloured-fiowered Deadly Nightshade. Shrub 6 to 7 feet.

7 A FRUTE'SCENS (Lin. spec. p. *260.* Lam. ill. t. 114. f. 2.) stem shrubby; leaves ovate-cordate, obtuse, downy ; flowers 1-3 together, pedicellate, axillary; limb of corolla 5-cleft to the middle, reflexed. J? . G. Native of Spain. Physalis suberosa, Cav. icon. *2.* p. 1. t. 102. Physalis frutescens, D. C. fl. fr. 3. p. 611. Belladonna frutescens, rotundifolia, Hispanica, Tourn. inst. p. 77.—Barrel, icon. p. 1173. Habit of *Physalis somnifera,* but differs from it in the calyx being 5-cleft, and in the flowers being 6 times larger, and campanulate, and in the leaves being smaller, and in the berry not being inclosed in the calyx. Leaves solitary. Corollas yellowish, divided into 5 reflexed segments beyond the middle. Anthers not exserted, ex Lam. Perhaps this will form a new genus.

Frutescent Deadly Nightshade. Fl. June, July. Clt. 1787. Shrub 4 to 6 feet.

8 A. ARISTVTA (Poir. suppl. 1. p. 609.) stem frutescent; leaves oblong, entire, almost glabrous ; branches, petioles, and peduncles woolly; peduncles solitary, 1-flowered, hardly as long as the petioles ; limb of corolla 5-cleft. T? . G. Native of the Canaries. Physalis aristata, Ait. hort. Kew. 1. p. 244. Willd. spec. 1. p. 1020. Branches compressed, somewhat angular. Leaves solitary, or twin, ovate-lanceolate, acuminated. Corolla yellow, campanulate, with lanceolate, acuminated segments. Calycine teeth or segments awned. Berry globose.

4wned-ca\yxed Deadly Nightshade. Fl. June, Aug. Clt. 1779. Shrub 3 to 4 feet.

§ 3. BELLADONNA. Limb of corolla 5-cleft. Stems herbaceous.

9 A. BELLADONNA (Lin. spec. 260.) herbaceous, erect; leaves twin, ovate, quite entire, glabrous ; peduncles solitary, 1-flowered. 2f. H. Native throughout Europe, frequent in woods ; with us it is not very common. Smith, engl. bot. t. *\92.* Oed. fl. dan. t. *758.* Curt. fl. loud. fasc. 5. t. 16. Jacq. fl.austr. 4. t. 309. Mill. icon. t. 62.—Plenck. icon. 125.—Bull, herb. t. *29.*—Heyne, getr. darst. t. 43. Belladonna baccifera, Lam! fl. fr. 2. p. *255.* Bell, trichotoma, Scop. earn. ed. 2d. no. *255.* Solanum melanocerasus, Bauh. pin. p. 166. Belladonna, majoribus foliis et floribus, Tourn. inst. p. 77.—Blackw. t. 564.—Sabb. hort. 1. t. *3.* Solanum lethale, Clus. hist. 2. p. 86. Mor. hist. sect. 13. t. 3. f. 4. Root thick, branching. Stem trichotomous, tinged with purple ; the branches dichotomous. Leaves rather large, soft to the touch, a little hairy *on* both surfaces. Corolla large, lurid, dusky purple within, and streaked, with a yellow variegated base, but greenish-red, or dusky brown outside. Berry size of a cherry, black when ripe, full of purple juice. The plant inhabits churchyards, dunghills, and gloomy lanes, and uncultivated places in England, but in other countries it is said to be common in woods and hedges.

When this plant was found to differ *from* the genus *Solanum,* it assumed the Italian name of *Belladonna,* which was given to it, according to some, because it was used as a wash among the ladies, to take off pimples from the skin ; or, according to others, from its quality of representing phantasms or beautiful women to the disturbed imagination. The qualities of the plant are malignant, and it is extremely poisonous in all its parts* Numerous instances have occurred of the berries proving fatal, after causing convulsions and dilirium. Buchanan relates the destruction of the army of Sweno, the Dane, when he invaded Scotland, by the berries of this plant, which were mixed with the drink which the Scots, according to truce, were to supply the Danes. The Danes became so inebriated that the Scottish army fell on them in their sleep, and slew such numbers, that there were scarcely men enough left to carry off their king. The case related by Ray is remarkable, that is, the dilatation of the pupil of the eye caused by a part of the leaf applied outwardly, and which took place successively on the repetition *of* the experiment. With respect to the berries, they have been frequently known to have been fatal to children, and also to adults, if a considerable number be eaten. The symptoms are said to occur in half an hour after taking them, and consist of vertigo, great thirst, dilirium, swelling, and redness *of* the face, difficulty of breathing. The general sensibility *of* the system is said to be weakened to a great degree, so that the stomach will bear a far larger dose of emetic medicines than it would otherwise have done. Vinegar liberally drank has been found efficacious in obviating the effects of the poison. A remarkable instance of the malignant powers of the young shoots occurred in the presence of Professor Martyn, in the botanic garden at Cambridge, which fully proved that they are not less deleterious than the berries.

The leaves are said io have been sometimes successfully applied to cancerous tumours. Belladonna, notwithstanding its deleterious nature, is not totally excluded from medicine ; some diseases, and those of the most malignant kind, have been known to yield to the anodyne and anti-spasmodic virtues of the plant when administered with caution. Bergius relates, that he has often given relief in epilepsy and convulsions, by the internal use of the powder of the dried leaves, taken in doses of from one to four grains: and Gesner, in his medical epistles, recommends the expressed juice of the berries boiled with sugar into a syrup, and given by a teaspoonful at a time, as excellent in every case requiring an opiate, and as peculiarly efficacious in the cure of dysentery.

Belladonna has been best analyzed by Mr. Brandes, an apothecary at Salz Uffelm, who has discovered a new alkaloid upon which its narcotic virtues depend, which he calls atropia. He urges the necessity of caution in the examination of atropia and its salts. Even the vapour of their solutions causes dilatations and paralyses of the pupil; and during the whole time of the experiments Mr. Brandes experienced violent headach, vertigo, pain of back, and nausea, so that he could scarcely continue them. On tasting a small quantity of sulphate of atropia, which was rather salt than bitter, he had extreme confusion of head, trembling in all his limbs, pulse weak, and at last retching. But the most severe of these symptoms abated in half an hour.

Medical use of Deadly Nightshade.—Under proper manage-

Reside[illegible] virulent poison may become an excellent remedy. [illegible]s exhibited in narcotic power> it promotes all the secretions; but continuiPH [illegible] requires the greatest caution, for it is apt, when [illegible] dr[illegible]ynes[illegible] A[illegible]an[illegible]? length of time> even in small doses> to cause When [illegible] and tension in the throat, vertigo, dimness of sight. for som^f- [illegible] symptoms occur its use must be suspended Nifhtsli[illegible]ri[illegible] u[illegible] and afterwards resumed in smaller doses. Deadly obstinat[illegible] has been exhibited in several febrile diseases, in in Palsy [illegible] loss of speech from apoplexy, in chorea, epilepsy, dice[illegible] [illegible]o me^ancholy, mania, dropsies, and obstinate jaun- antidot[illegible] to be amaurosis» ophthalmia, scirrhus, and cancer; and as an best exhibited in contagion of scarlatina. Deadly Nightshade is the leaves "* Substance, beginning with a very small dose of root ever [illegible] or root# ^n hydrophobia Munch gave the powdered grains tn\^ond morning to the extent of from one to five The war [illegible]en> and from fourteen to fifteen grains to adults. *Belial.* Inflislon is als<> a powerful remedy.

July. B ^ £ or Common Deadly Nightshade. Fl. June, [illegible] [illegible] [illegible]

dehiscing lengthwise. Stigma peltately-depressed, or capitate, bisulcate, ex Juss. or 2-lobed. Berry roundish, 2-celled, propped by the permanent calyx ; placentas adnate. Seeds numerous, reniform.— Trees or shrubs usually spinose. Leaves entire, or nearly entire, alternate, solitary, or in fascicles. Peduncles extra-axillary, or terminal, solitary, twin, or umbellate, rarely corymbose. Corollas white, yellow, rose-coloured, purple, blue, or scarlet.

SECT. I, EULY'CIUM (from *ev, eu,* well or good; and *Lycium;* this section contains the true species of the genus.) Calyx urceolate, irregularly 3-6-cleft. Corolla tubularly funnel-shaped ; with a 5-parted, spreading, or reflexed limb. Genitals exserted.—Shrubs or trees, usually spinose. Flowers extra-axillary, solitary, twin, or umbellate.

1 L. EUROPIUM (Lin. syst. 228. mant. p. 47.) branches erect, loose ; buds spinescent; leaves.fascicled, obovate-lanceolate, obtuse, or spatulate, bent obliquely ; flowers twin, or solitary ; corolla funnel-shaped; stamens exserted, but shorter than the limb, f? . H. Native *of* the South of Europe; and the North of Africa; in the Grecian Islands, common in hedges, but scarcely indigenous. Willd. enum. 1. p. 246. Sibth. et Smith, fl. graec. t. 236. L. salicifblium, Mill. diet. no. 3.—Mich. gen. p. 224. t. 105. f. 1.—Mill. fig. t. 171. f. 2. Calyx 5-cleft, ruptured at the side. Corollas pale violet, reticulated with red veins ; tube greenish. Clusius says, that the young shoots are eaten in Spain with oil and vinegar.

Var. a ; berries yellow or fulvous.

Var. j3 ; berries red.

European Boxthorn. Fl. May, Aug. Clt. 1730. Shrub 10 to 12 feet.

2 L. BA'RBARUM (Lin. spec. *277.)* branches dependent; buds spiny ; leaves lanceolate, flat,* glabrous, acute : flowers twin, extra-axillary, pedicellate ; corolla funnel-shaped ; stamens exserted, about equal in length to the limb. fj . H. Native of the North of Asia, Africa, and South of Europe. Willd. spec, exclusive of Shaw, and the syn. of Lam. Wats, dendr. brit. t. 9. L. hali mi folium, Mill. diet. no. 6. L. Barbarum a vulgare, Ait. hort. kew. 1. p. 257. Schkuhr, handb. 1. p. 147. t. 46. Hayne, term. bot. t. 10. f. 5.—Dun. arb. 1. p. 306. t. 121. f. 4.—Mich. gen. t. 105. f. 1. Branches angular. Buds often without spines. Calyx 2-3-lobed. Corolla with a purple limb, and yellowish base. Stigma 2-lobed. Berry ovate, yellow. Stamens bearded near the base. There is a variety of this, having livid or pale corollas, and reddish yellow berries.

Barbary Boxthorn. Fl. May, Aug. Cit. 1696. Shrub cl.

3 L. CHINE'NSE (Mill. diet. no. 5.) branches pendulous, prostrate, striated; buds spinescent; leaves by threes, ovate, acute, attenuated at the base; peduncles much longer than the calyx, which is entire; stamens exserted. *?. H. Native of China, about Pekin and Canton ; and of Cochinchina. Bunge in mem^ acad. petersb. 2. p. 123. Lam. ill. t. 112. f. 2. Wats. dend. brit. t. 8. L. Barbarum, /3, Chinense, Ait. hort. kew. 1. p. 257. L. ovatum, Duh. arb. ed. nov. p. 117. L. Barbarum, Lour, coch. 1. p. 165.? Said by Bunge to be nearly allied to Z. *Ruthenicum,* but differs in the leaves being broad-ovate. Corollas purple. Berries orange-coloured. Shoots very long, ex Mill. The Chinese use a decoction in wine, or an infusion in water of the berries, as a tonic, analeptic, and cephalic. We know not whether the plants described by Miller and Bunge be the same; the plant here meant is that of Bunge.

Chinese Boxthorn. Fl. May, Aug. Clt.? Shrub climbing.

4 L. RUTHE'NICUM (Murr. comm. goett. 1779. p. 2. t. 2.) branches dependent; buds spinescent; leaves linear-lanceolate, fleshy, obtuse, attenuated at the base, solitary, or subfasciculate; peduncles longer than the calyx ; calyx with 5 unequal teeth , stamens exserted, equal to the limb. F? . H. Native *ot* Siberia, in nitrous places; and at the Volga ; and in Hyrcania. Bieb. fl. cauc. 1. p, 166. L. Tata'ricum, Pall. fl. ross. 1. P-. '». t. 49. Calyx usually irregularly 5-toothed, rarely 2-3-lobed, as in *L. Bdrbarum.* Corolla with a white tube, and purple limb. Leaves grey, like those of *L. A'frum.*

Var. /?, Cdspicum (Pall. fl. ross. t. 49. f. A.) leaves shorter, buds more spinose ; flowers smaller. f? . H. Native a the Caspian Sea.

Russian Boxthorn. Fl. ? Clt. 1804. Shrub climbing.

5 L. SHAVII (Rcem. et Schultes, syst. 4. p. 693.) branches dependent, rather tomentose at apex; buds spinescent; leaves ovate-lanceolate, thickish. ^. H. Native of Barbary. Europoeum, Mill. diet. no. 4.—Shaw. afr. p. 349. *t.* Branches scattered. Prickles strong. Leaves short, tn > scattered. Flowers lateral, small, white.

Shaw's Boxthorn. Fl. June, July. Clt. 1700. Shrub / 8 feet.

6 L. TREWIA^NUM (Duh. abr. nov. ed. p. H6- t. *30.* under L. Chinense, as in Pers. ench. 1. p. 231.no. 9.) erect; branch diffuse, angular; buds spinose; leaves petiolate, lanceolate, acute; peduncles 1-flowered, solitary, or twin, extra-axillary, calyx 2-3-cleft; corolla funnel-shaped ; stamens exserte H. Native of China. L. Barbarum, Lam. diet. 3. p. Poir. suppl. 3. p. 427.—Trew. Ehret. t. *68.* exclusive of the synonymes. This species differs from *L. Chinense,* Mill, in tn spines, and from *L. Barbarum* in the leaves. Branches rutes cent. Spines *few,* Corolla fine purple, with a white star in tn centre. Filaments pilose at the base. Berry ovate.

Trew's Boxthorn. Fl. May, Aug. Clt. 1818. Shrub 6 feet.

7 L. LANCEOLA TUM (Poir. suppl. 3. p. 429.) branches dependent, reflexed ; buds spinescent; leaves lanceolate, nearly sessile, acute at both ends; flowers solitary, extra-axillary, pedicellate; corolla funnel-shaped ; stamens exserted. J? . H. Native of the South of Europe, as of Naples, Greece, &c. L. Europium, *(3,* D. C. fl. fr. no. 2699. Pers. ench. 1. p. 231. no. 8. —Duham, arb. nov. edit. p. 123. t. *32.* Calyx unequally 5-toothed. Corolla purple, with a white bottom. Berry oblong, red.

Lanceolate-leaved Boxthorn. Fl. May, Aug. Clt. ? Shrub climbing.

8 L. TURBINA'TUM (Duh. arb. nov. edit. p. 119. t. 31. Pers. ench. 1. p. 231, exclusive of the syn. of Lam. no. 3.) stems erect, fascicled; branchlets dependent, terete; buds spiny; leaves sessile, lanceolate, acuminated ; flowers aggregate, pedicellate, extra-axillary ; corolla funnel-shaped ; stamens exserted; calyx trifkl; berry turbinate. P? . H. Native of China. L. halimifolium, Mill. diet. no. 6. ? L. Barbarum, /3, D. C. fl. fr. no. 2700. Corolla violaceous, with a white bottom. Berries red.

Turbinate Boxthorn. Fl. May, Aug. Clt. 1709. Shrub climbing.

9 L. CILIA'TUM (Schlecht. in Linnaea, 8. p. 69.) branches elongated, subscandent; branchlets sometimes spiny ; leave* alternate, broad-ovate, acute, denticulately ciliated, glabrous ; flowers axillary, solitary, on short pedicels ; calycine segments linear, acute, exceeding the berry, which is globose ; corolla funnel-shaped, puberulous ; genitals exserted. J?. G. Native of the South of Brazil, at the Rio Negro, Sello. Calyx deeply 5-cleft. Filaments villous, as in *L. Barbarum.* Corolla beset with glandular down, purple ?

Ciliated-leaved Boxthorn. Shrub climbing.

10 L. OBOVA'TUM (Ruiz, et Pav. fl. per. 2. p. 46. t. 183. f. c.) branches spreading; spines stiff, leafy while young ; leaves obovate, obtuse, petiolate, scattered, or fascicled; peduncles

limb h* extra-axillary 1-flowered, drooping ; corolla tubular : Peru. T. fr. ; cal. villous. 5-cleft. J. G. Native of Calvcin. ges at Tarma. Stem cinereous, much-branched, small. K. 6gments reflexed. Corolla purplish violet. Berry *OhS*, orange-coloured. Old spines naked.

J^«te-leaved Boxthorn. Shrub.

SALSUM (Ruiz* et Pav. L c* *. 183, f. b.) branchies long, pr. spines leafy ; leaves flowers. obovate-oblong, sessile ; corolla ^xtra-axi^lary, drooping, solitary, on short pedicels; per. j^nnel-shaped; stamens exserted. ^. G. Native of toothed p. s near Lurin. Reaves small, fascicled. Calyx 5-cl. atruil. Corolla small, whitish purple ; segments oblong, 2-cellil. ?. spreading. Berry small, ovate-oblong, acute, ffi* -ur. py- Seeds small. y.

12 L. ° T. / Shrub.

Joose. H UNBE,RGII ; leaves lanceolate-elliptic; branches Hone. p. lnose. *. G. Native of the Cape of Good Tr. branches. mT. OJ. b. w. S. n. P*. 52. Stem terete, l^. erect* Usually. ^T. P. s. inv. b. t. s. g. elongated, usually simple. Leaves Br. anches. m. y. beneath the s. pines, glabrous, 1|. inches long, Admore.

Thunberg', Boxthorn. Shrub.

Sect. II.

?0D0NTIA (from *itroc, isos,* equal; and *odovc;. OSOP-* *odour* *? *aon*os* a tooth ; in reference to the calyx being ^"toothed * p. ot. ed. 0 Calyx urceolately campanulate, regularly 5.-toothed. Corolla tubularly campanulate ; limb 5-cleft, erect. Genitals in. —P. y. slr. bs. Leaves in fascicles. Pedun. cles aim. most axillary, solitary. Flowers drooping.

13 T. p. 698.) ?. VIF6UUM (Willd. rel. in Roem. et Schultes, syst. 4. brous ; spiny; leaves in fascicles, obovate, obtuse, glaflowers a^most axillary, solitary, pendulous; corollas of Pe,.^ b ^ ems. almost inclosed. T?. F. Native of the Andes 8000 hexapod. ? ^a5camarca and Magdalena, at the altitude of not of Dul. S* T. microphyllum, Humb. et Bonpl. mss. but P* 52. but not of Thunb. ^aves small. Calyx obsoletely 5-t0othed, or. entire* Corolla tubular, a little curved, *6-7* longer. thicken. ?. G. cal. ^laments capillary, glabrous. *Hen^ fr* Pedicels longer than the calyxes.

u L. *heaved* Boxthorn. Shrub *5* to 6 feet.

£led» linear P. Lin. Sp6C. 277<) erect) spiny ; leaves fasci. Vers almost. ne. So. nt> attenuated at the base, obtuse, fleshy ; tl. nes longer. il axi*lary» solitary, drooping ; corolla tubular, *3* the North A. al^x ; semens inclosed. ^. H. Native !CO. n. t. 171. ia> as of Palestine; and of Spain. Mill. 354. Lam. 6tj fli. ard. n. s. t. 324. Ker. bot. reg. ^Trew. ehrJf. f< i-—Duh. arb. ed. nov. p. 107.-110. Ien* P. 224. t# U. f. ^.-Plenck. icon. t. 127.—Mich. L. k. §re. y coi. ^. f. 2. Nis. act. Par. 1711. P. 42o. 1. 12. Leaves gl. auo. 0Urec* ? the smaller branches frequently spiny. • true species. Filaments bearded near the base, as in all tlCh. Purple u'. g. ma slightly 2-lobed. Corolla violaceous, t0othed. above. Berry globose, violaceous. Calyx 5-t0 10. St. Boxthorn. Fl. June, July. Clt. 1712. Shrub 6 l. f. t.

n. ar. ma. E. uB. (Willd< enum. !• P. 242 0 erect> spiny; ^aves l. late> solita. J'm fascicles 5 flowers almost axillary, pedi. en. oth to thp r. pooping; corolla tubular; stamens equal in S. e. t. pros. of corolla. F. Native count. ry unS. e. a^d sho. aWy of the Cape of Good Hope. Leaves narthe calvx. n an in *L. Afrum*. Pedicels a little longer y*. Calyx 5-toothed; teeth adpressed. The corolla is said by Willd. to be nearly like that of *Z. Bârbarum,* and the stamens a little longer than the limb, and, therefore, probably belongs to the last section.

Slender Boxthorn. Fl. June, July. Clt. 1819. Shrub 5 to 6 feet.

16 L. PROPINQUUM ; leaves linear-elliptic; branches strict; peduncles longer than the leaves. 1?. H. Native of the Cape of Good Hope. L. AYrum, Thunb. prod. *37.* and in Lin. trans. 9. p. 158. but not of Lin. Stem stiff, erect; branches spinescent, somewhat verticillate, short, strict. Leaves fascicled, glabrous, a nail in length. Peduncles capillary, 1-flowered, about equal in length to the flowers. Corolla short, campanulate.

Allied Boxthorn. Shrub.

17 L. RIGIDUM (Thunb. prod. *37.* Lin. trans. 9. p. 153. t. 14.) erect, spiny ; leaves linear, obtuse, in fascicles ; peduncles shorter than the leaves and flowers ; corolla tubular ; stamens inclosed ; calyx 5-toothed ; teeth ciliated. T?. F. Native of the Cape of Good Hope, about Cape Town. Willd. enum. 1. p. 245. L. carnôsum, Dub. arb. ed. nov. p. 111. Pers. ench. 1. p. 231. Poir. suppl. 3. p. 427. L. A^frum, /3, Lam. diet. 3. p. 509. L. Italicum, Mill. diet. no. 2. ?—Trew. ehret. t. 24. f. 1. Stem flexuous, glabrous, grey; branches rugosely angular, cinereous, spiny at top. Leaves glabrous, curved, a nail in length. Flowers solitary, pedunculate, drooping. This species' hardly differs from *L. A'frurn,* unless in the pedicels being very short, the much dwarfer habit of the shrub, in the fewer spines, and in the leaves being paler. Pedicels solitary, or by threes. Calyx campanulate, 5-toothed ; teeth acute. Corolla tubular, violaceous. Berry globose, size of a pea, and 2-celled.

Stiff Boxthorn. Fl. April, May. Clt. 1795. Shrub 3 to 4 feet.

18 L. ? MICROPHY'LLUM (Dub. arb. nov. ed. p. 112. Pers. ench. 1. p. 231.) erect, spiny, stiff, quite smooth ; branches reflexed ; leaves solitary, or in fascicles, parabolic ; flowers axillary, solitary, pedicellate, drooping ?; corolla funnel-shaped ? ; stamens inclosed ?. T?. F. Native of the East of Africa, and in India. Branches cinereous, terminated each by a strong spine. Leaves glaucous, small, linear ?. Berry globose, dark blue. Perhaps not belonging to the present section.

Small-leaved Boxthorn. Fl. June, July. Clt. 1795. Shrub.

19 L. CINE'REUM (Thunb. prod. 1. p. 37. in Lin. trans. 9. p. 154. t. 16. Willd. spec. 1. p. 1059. enum. 1. p. 245.) branches terete, spreading, filiform; branchlets spiny, short; leaves lanceolate, obtuse, glaucous, glabrous, in fascicles; flowers axillary, solitary, drooping; corolla tubular; stamens inclosed. *hc*. F. Native of the Cape of Good Hope. Pedicels shorter than the calyx, and twice as short as the leaves. Corolla purple ?

Cinereous Boxthorn. Fl. June, July. Clt. 1818. Shrub.

20 L. HORRIDUM (Thunb. prod. *37.* in Lin. trans. 9. p. 154. t. 17. Ait. hort. kew. ed. 2d. vol. 2. p. 4.) branches strict; leaves obovate, fleshy, glabrous ; flowers nearly sessile. Tj. F. Native of the Cape of Good Hope, in Saldanha Bay. Stem stiff, much branched, 3 feet high ; branches nodulose, grey, spinescent. Leaves fascicled, *3-7* in each fascicle, flat above, and convex beneath, white, small. Flowers solitary, pedicellate. Pedicels terete, glabrous, a line long.

Horrid Boxthorn. Fl. July, Aug. Clt. 1791. Shrub 3 to 4 feet.

21 L. TETRA'NDRUM (Thunb. prod. p. *37.* Lin. suppl. 150. Thunb. in Lin. trans. 9. p. 154. t. 15.) spiny, erect; branches angular, strict; leaves fascicled, ovate, obtuse ; flowers nearly sessile ; corollas quadrifid, tetrandrous. ^. F. Native of the Cape of Good Hope, about Cape Town. Stem twisted, glabrous, angular, grey, stiff; branches horizontal, spiny. Leaves a line long. Flowers solitary, rising from the fascicles of leaves on short pedicels. Very like *L. Afrum,* but is distinguished

from that species in the leaves being more fleshy, and in the flowers being tetramerous and tetrandrous. It is also, perhaps, the *L. capense,* Mill. diet. no. 7, of which he gives the following description. " Leaves oblong-ovate, thickish, crowded ; spines strong, leafy. Leaves scattered, solitary, or fascicled, thick, pale green, permanent." This shrub has stood the open air **throughout the winter in Chelsea botanic garden, but did not** flower.

Tetrandrous-flowered Boxthorn. Fl. June, July. Clt. ? Shrub 6 to 7 feet.

SECT. III. ANISODÒNTIA (from *avtoog, anisos,* unequal; and *oBovg O^OVTOC, odous odontos,* a tooth ; in reference to the irregularly 5-toothed, or 5-cleft calyx.) Calyx urceolate, generally irregularly 5-cleft, or 5-toothed. Corolla tubular; limb erect, plicate, 5-10-toothed, rarely 5-cleft, or 5-lobed. Genitals inclosed, or nearly so.—Unarmed trees or shrubs. Leaves scattered. Flowers sub-axillary, or terminal, fasciculately umbellate.

§ 1. *Calyx 5-toothed, 5-cleft, or 5-lobed.*

22 L. FUCHSIOI'DES (Humb. et Bonpl. pi. sequin. 1. p. 147. t. 42. H. B. et Kunth, nov. *gen.* amer. 3. p. *52.)* branchlets puberulous ; leaves obovate-oblong, bluntish, glabrous; umbels extra-axillary and terminal, sessile; corollas tubular, with a 5-toothed limb, glabrous; stamens hardly exserted. J?. G. Native of the province of Quito, in cold places near Delay, Cumbe, and Cuenca, at the altitude of 1400 hexapods. Branches angular. Flowers pedicellate, pendulous. Calyx campanulate, 2-lobed, one of the lobes bidentate, and the other tridentate, or entire. Corolla purple. Filaments dilated and villous at the base. Stigma 2-lobed. Berry ovate, 1-celled, many-seeded, girded by the calyx.

Fuchsia-like Boxthorn. Fl. Aug. Shrub 6 to 8 feet.

23 L. GESNERIOÌDES (H. B. et Kunth, nov. gen. amer. 3. p. *53.)* branchlets villously tomentose ; leaves ovate, acute, glabrous above, and clothed with powdery pubescence beneath ; umbels sub-axillary and terminal, sessile ; corollas tubular, with a 5-lobed limb, downy ; stamens hardly exserted. J? . G. Native of the Andes of Quito, in temperate places near El Machin, and in the valley of the river Toche. Branchlets terete, glabrous. Pedicels villous. Calyx 5-toothed, downy. Corolla yellow ; limb 5-lobed and plicate, downy. Berry girded by the calyx. Filaments a little dilated, and downy at the base. Stigma sub-capitate, 3-lobed.

Gesneria-like Boxthorn. Shrub 6 to 8 feet.

24 L. UMBELLA^TUM (Ruiz, et Pav. fl. per. *2.* p. 45. t. 182. f. b.) branchlets downy; leaves oblong-lanceolate, glabrous, but powdery beneath ; umbels axillary, on short peduncles ; corolla tubular, with acute segments ; stamens inclosed. J?. S. Native of Peru, in the valley of Canta, in hedges by way sides. Leaves 6 inches long. Pedicels unequal. Corolla violaceous ; segments of the limb acute. Filaments glabrous. Berry globose, orange-coloured, size of a pea. Seeds reniform.

Umbellate-flowered Box-Thorn. Shrub 10 to 15 feet.

25 L. CESTROI'DES (Schlecht, in Linnaea, 8. p. 70.) branches spinescent; leaves alternate, and falsely fascicled, broad, lanceolate, acute at both ends, glabrous ; flowers pedicellate, rising in fascicles from the axils of the upper leaves, hence they are sometimes falsely umbellate; calyx tubular : teeth short, triangular, very acute ; corolla tubular, glabrous, with downy margins ; genitals inclosed ; stamens unequal; berry nearly globose, exceeding the calyx a little, which is cleft at the side. *fy . H.* Native of the South of Brazil, near San José do Uruquay, Sello. Largest leaves *2* to *2* inches long. Flowers large. Calyx downy, 5-toothed, at length cleft at the side. Limb of corolla bluntly 5-lobed. Berry globose, red. Seeds compressed. Embryo annular.

Cestrum-like Boxthorn. Shrub.

§ *2. Calyx 10-toothed.*

26 L. LOXE'NSE (H. B. et Kunth, 1. c.) arboreous; branchlets pubescently tomentose ; leaves ovate, somewhat acuminated, downy on both surfaces ; umbels nearly axillary, and terminal, sessile ; corollas tubular, with an obsoletely 10-toothed limb* downy ; stamens inclosed. T? . G. Native of Peru, near Loxa, at the altitude of 1050 hexapods. Branches terete. Leaves 3-*3* inches long. Pedicels clothed with hoary tomentum. Calyx campanulate, 5-toothed, downy. Corolla yellow, downy ; hmu plicate ; alternate teeth very minute. Filaments a little dilated, and downy at the base. Stigma capitate. Berry ovate-oblong, girded by the calyx, 1-celled.

Loxa Boxthorn. Shrub 10 to *12 feet.*

27 L. CORNIFÒLIUM (H. B. et Kunth, 1. c. p. 54.) arboreous; branchlets clothed with hoary tomentum ; leaves roundish-ovate, sub-acuminated, complicate, puberulous above, but clothed with soft rufescent tomentum beneath ; umbels almost axillary, and terminal, sessile; corollas tubular, with a 10-toothed limb, downy; stamens inclosed. J?. G. Native *of* the province of Quito, in bushy places between Tiscan and Alausi, at the altitude of 1300 hexapods. L. ovàle, Willd. rel. ex Rcem. et Schultes, syst. 4. p. 698. Leaves *3* inches long. Pedicels tomentose. Calyx downy, tubularly campanulate, 5-cleft. Corolla downy; limb plicate, the alternate teeth very minute. Filaments downy at the base. Stigma sublobate. Berry girded by the calyx.

Dogwood-leaved Boxthorn. Shrub 15 to *18 feet.*

28 L. UMBRÒSUM (H. B. et Kunth, 1. c.) arboreous ; branchlets clothed with hairy down ; leaves oblong, acuminated, smoothish: floral ones ovate-rhomboid ; umbels almost axillary and terminal, sessile ; corollas tubular, with a 10-toothed limb, hairy ; stamens almost inclosed. ^ • Gr. Native of New Granada, in shady places near La Vega de St. Lorenzo, and Almaguer, at the altitude of 1200 hexapods, where it is called by the inhabitants *Upaquanda.* Branches rather angular. Leaves 6 inches long. Pedicels hairy. Corolla scarlet, widened at top, a little curved; the teeth of the limb obtuse and fimbriately ciliated. Filaments membranous at bottom and downy. Stigma obsoletely 3-lobed. Berry ovate, 1-celled, many-seeded. The plant is used in the cure of erysipelas.

Shaded Boxthorn. Shrub 12 to 16 feet.

** Species hardly known.*

29 L. CAPSULA'RE (Lin. amcen. acad. 4. p. 308.) leaves lanceolate, thin, glabrous ; peduncles and calyxes downy ; pericarp capsular. f? . G. Native of Mexico, Miller. Willd. spec. 1. p. 1061. Lam. diet. 3. p. 510. Branches terete, furnished with spreading, axillary, simple spines. Leaves on short petioles. Peduncles simple, axillary, 1-flowered, shorter than the leaves. Calyx downy. Corolla rotate. Stigmas 2, straight, slender. Capsule ovate, mucronate, 2-celled. Certainly not a species of *Lycium,* from the capsular fruit and rotate corolla.

Capsular Box-Thorn. Shrub.

30 L. CAROLINIA^NUM (Walt. fl. carol, p. 84. Michx. fl. bor. amer. 1. p. 95.) unarmed; leaves narrow, spatulate-oblong; flowers quadrifid, tetrandrous, bluish. ^ • H. Native of Carolina, Georgia, Florida, by the sea shore, among rushes.

Caroline Box-Thorn. Fl. July, Sept. Clt. 1806. Shrub 4 to 5 feet ?

31 L. OBTU'SUM (Willd. rel. ex Rcem. et Schultes, syst. 4. p.

698.) leaves obovate> on long petioles; pedunc[illegible] crowded; [illegible]

«nMeaved Box-Thorn. Shrub.

cles a. GRANDIFL^A (Willd. rel. 1. c.) leaves elliptic ; pedun- aggregate ; calyx 3-lobed. I? . S. Native of Caraccas.

Perrxian I NERME (Mill. dict. no. 9.) leaves lanceolate, alternate, thick Petiolate. *2 . S. Native country unknown. Stem to 3 in I branches numerous, short, brown. Leaves 3 Perlfanc g, dark green. Flowers white. Fruit unknown.

£"" Box-Thorn. Shrub.

1. CHINE'NSE (Lour. coch. p. 134. ed. Willd. minal. ovate, obtuse; stem unarmed; cymes ter- cet'bra' native of Cochinchina, in woods. Shrub deft' n Leaves thick, glabrous, alternate. Calyx 5- about i m length t0 the coroll a, clothed with many long ha ps belon UP the tube* Berry roundish> 2-celled. Per-

hours o dy kinds of Box-Thorn are well fitted for £, trained against trellis-work or walls. The sec tion arp of the Ca e s Pecies belonging to the same and flower•-f ery handsome vvliile in flower ; and they will thrive "^ey are trained against a wall, with a south or west aspect. hand-gl ass reac% increased by ripened cuttings, under a be treated Sanc* me sto ve and greenhouse species should stove and greenhouse shrubs.

^TUS (meaning unknown to us.) Schotte, in nnae, 7. P' lso- Linnaea, 6. p. 54. Schlecht, in thors! * Cestrum Lycium and A'tropa species of

^toothed r i Monogynia, Calyx campanulate, dilate<l at th t re S ular- Corolla funnel-shaped ; tube short, Cate aestiv flr aSe U imb 5" P arted> reflexed or spreading, imbri- he base. Amv! On P enitals exserted 5 filaments naked, dilated at el-8haner1 n ptic> cordate> dehiscing lengthwise. Stigma globo se, adnat y 2"celled» many-seeded; placenta semi- ren iform, co y the middle to the dissepiment. Seeds and Ranches PreSSed* Embr yo ?—Unarmed shrubs. Leaves acted r a p m r M, quite entire. Flowers fascicled, or in Car, Coro a, rom the axils of the leaves of the preceding black» globose eet. scented at night. Berry red, o?

X** eHintip"^*11^ (Schlecht, in Linnaea, 7. p. *67,)* shrubby ; tk othed with wh , CUte> d o W n ^ above> but at length green, and T axils of ^lt V ? 1 mentllm beneath ; racemes umbellate, from 7^ai ca, B J. ne 'alien leaves. F? . S. Native of Martinico, 4 ullfl or USj Sch u> Peru> as about Lima and Chancay. Acnistus a ' P* 307 ' T o j Ct A'tropa arbor6scens. Lin. amcen. acad. ggreg at turn p dlct ^ P- 396. Swartz, obs. p. 91. Lycium

J ' ^ S n S T V Pa r fl P- 2 P- 45 fc Im r a ^

Altioni. Bellndonna frutescens, flore albo, Nicotianae foliis, Plum. spec. 1 icon. t# 46> f, L Leaves 3 7 inches lon^ white to mentul Powdery when young, but at length green. ments re— e diffribi ndurn, H o S tO the base, L y tium Guayaquilense, and T ^ub from t G Present Plant. A Acnistus. Fl. May, June. Clt. 1821. Shrub 3 to 6 feet.

2 A. GUAYAQUILE'NSIS ; arboreous ; leaves elliptic-oblong, acute, downy above, but clothed with soft tomentum beneath ; umbels extra-axillary, sessile. J? . S. Native of Quito, near Guayaquil, in humid places. Lycium Guayaquilense, H. B. et Kunth. nov. gen. amer. *3.* p. 50. Branches terete, canescent, tomentose. Stigma capitate, somewhat 2-lobed. Corolla glabrous.

Guayaquil Acnistus. Tree or Shrub.

3 A. FLORIEU'NDUS ; shrubby ; leaves oblong, acute, glabrous above, and downy beneath ; umbels extra-axillary, sessile, approximate. T? . S. Native of Peru, on the Andes, between Caxamarca and the river Magdalena, at the altitude of 800 hexapods. Lycium floribundum, H. B. et Kunth. nov. gen. *3.* p. 51. Branches glabrous, white. Flowers larger than those of the preceding. Corolla downy outside. Stigma capitate, somewhat 2-lobed.

Bundle-flowered Acnistus. Shrub 3 to 6 feet.

4 A. SPATULA^TUS ; glabrous ; leaves obovate-spatulate, scattered or fascicled ; umbels nearly axillary, sessile ; corolla with acute downy segments. ^ • S. Native of Peru, about Huanuco, in hedges. Lycium spatulatum, Ruiz, et Pav. fl. per. *2,* t. 183. f. a. Branchlets angular. Leaves 1-2 inches long. Berry roundish, reddish-yellow, size of a pea.

Spatulate-leaved Boxthorn. Shrub.

5 A. SIDEROXYLOI'DES ; leaves oblong-ovate, acute at both ends, downy beneath ; umbels lateral, sessile. J? . S. Native along the banks of the river Magdalena. A'tropa sideroxyloides, Herb. Willd. ex Roem. et Schultes, syst. 4. p. 686.

Iron-wood-like Acnistus. Shrub.

Cult, For culture and propagation see the stove species of *Lycium,*

XV. JABORO'SA (a name given by Jussieu, derived from the Arabic word Jaborose, which was applied to the Mandrake, from its affinity to it.) Juss. gen. 125. ed. Usteri, p. HO. Lam. t. 114. Gill, et Hook. bot. misc. 1. p. 347. t. 71.

LIN. SYST. *Pentdndria, Monogynia,* Calyx short, 5-cleft; segments acute. Corolla campanulate or tubular, 5-cleft; segments acute. Stamens 5, inserted towards the top of the tube ; filaments short, flat. Stigma capitate. Berry globose, 3-celled, ex Cav., 2-celled, ex Hook.; placenta fixed to the longitudinal dissepiment.—Herbs natives of Chili and Buenos Ayres. Leaves radical. Scapes 1-flowered. Corollas white.

1 J. CAULE'SCENS (Gill. et Hook, in bot. misc. 1. p. 347, t. 71.) stems many, decumbent; leaves lyrately pinnatih'd, spinulosely-toothed, petiolate ; bracteas subulate, verticillate ; corolla narrow, campanulate, hairy inside. %, G. Native of Chili, in the valleys *of* the Andes towards Mendoza. Root long, descending, nearly fusiform. Limb of corolla spreading, with acute segments. Capsule globose ; receptacle fixed to a longitudinal dissepiment. Seeds numerous, black.

Caulescent Jaborosa. PI. prostrate.

2 J. INTEGRIFOLIA (Lam. diet. 3. p. 189. ill. t. 114.) stemless ; leaves petiolate, oval, nearly entire ; corolla with a long tube and acuminated segments. <• %, G. Native of Buenos Ayres. Hook. bot. mag. t. 3489. J. Bonariensis, Gmel. syst. 1. p. 380. Leaves radical, *3-6* inches long. Scapes length *of* petioles. Corolla 2 inches long.

Entire-leaved Jaborosa. PI. \ to \ foot.

3 J. RUNCINA'TA (Lam. dict. 1. c. Link, et Otto. pi. sel. p. 103. t. 48.) usually stemless ; leaves petiolate, oblong-obovate, sinuately pinnatifid ; corolla campanulate, with acute segments. % . G. Native of Monte Video, and Buenos Ayres, in the flats called Pampas. Leaves like those of *Tarâxacum,* 2-4 inches long, and hardly H broad. Scapes a little shorter than the

leaves. Corolla hardly an inch long; segments of the limb spreading or reflexed. The specimens collected by Dr. Gillies [illegible] stem 4-5 inches high, from which both the leaves and flowers arise; but in Gillies's specimens the leaves and flowers spring at once from the root.

* *Buzzleaved* Jaborosa. PL \ to ± foot.

*Cult** For culture and propagation see *Petunia,* p. 454.

TRIBE II. NICOTIA'NEJE. Limb of corolla plicate in aestivation. Stamens equal in number to the segments of the corolla. Fruit capsular, 2-celled. Calyx and corolla 5-cleft.

XVI. NICOTIA'NA (this genus takes its name of Jean Nicot, of Nismes in Languedoc, agent from the king of France to Portugal, who procured the seeds from a Dutchman, who had brought them from Florida, and sent them to France.) Tourn. inst. 1. p. 117. t. 41. Lin. gen. no. 248. Schreb. gen. no. 334. Juss. gen. 125. ed. Usteri, 139. Vent. tabl. 2. p. 369. St. Hil. fam. nat. 1. p. 286. t. 46. Lam. ill. 2. p. 6. t. 113. Schkuhr, handb. 1. p. 141. t. 44. Gaertn. fruct. 1. p. 264. no. 331. t. *55.* f. 11. Lehm. nicot. p. 12. H. B. et Kunth, nov. gen. 3. p. 1.—Tabacus, Mcench. meth. p. 448.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-cleft. Corolla funnel-shaped or salver-shaped ; limb 5-lobed, plicate, spreading. Stamens 5, length of the tube of the corolla. Anthers dehiscing lengthwise. Stigma capitate. Capsule 2-celled, covered by the permanent calyx, 2-valved ; valves bipartite, therefore the capsule opens by 4 parts at the apex; placentas free, distant from the dissepiment. Seeds very numerous, minute.—Usually herbs, rarely subshrubs, generally clothed with clammy hairs or down. Flowers terminal, racemose or panicled, white, greenish or purplish.

SECT. I. TA'BACUM (the name Tobacco, which has superseded all others, is the appellation of a district in Mexico.) Leaves large. Flowers funnel-shaped, red; limb of corolla spreading, acuminated or acute; throat inflately ventricose.—Plants clothed with clammy down. Flowers disposed in short, many-flowered racemes, the whole constituting terminal subcorymbose panicles.

1 N. TA'BACUM (Lin. spec. 258.) herbaceous; leaves sessile, oblong-lanceolate, acuminated : lower ones decurrent; throat of corolla inflately ventricose ; segments of the limb acuminated. ©. H. Native of America. Desf. fl. atl. 1. p. 109. Pursh, fl. 1. p. 141. Ruiz, et Pav. fl.per. 2. p. 15. Lam. ill. t. 113. Woodv. med. bot. p. 162. t. 69. Stev. et Church, med. bot. 1. t. 37. N. Havanensis, Lag. elench. pi. hort. reg. madr. 1796.—Bull, herb. 3. t. 285.—Blackw. 1.1. 146.—Sabb. hort. rom. 1. t. *89.* —Regn. bot. 1.1. 31. Plant downy, clammy. Leaves half stem-clasping. Calyx oblong, with lanceolate, acute, unequal segments. Corolla downy outside ; limb rose-coloured. Capsule length of calyx, or a little longer.

The Spaniards are said to have first become acquainted with tobacco in the West Indies. It early attracted the notice of the English settlers in Virginia, especially after the founding of James Town in 1607. Shortly after this, it appears that tobacco was introduced in lieu of specie, as the tavern-keepers were compelled to exchange a dinner for a few pounds of tobacco; and government officers were paid in the same commodity—180.

The species of Nicotiana, principally grown as tobacco, are *N. Tdbacum, N. macrophylla* and *N. rustica.* The two first are, however, generally preferred. The popular narcotic which it furnishes is probably in more extensive use than any other, and its only rival is the betel of the east. According to Linnaeus, tobacco was known in Europe from 1560, being brought by the Spaniards from America, and was cultivated at Lisbon in the same year. It was brought to England from Tobago, in the West Indies, or from Tobasco, in Mexico (and hence the name), by Sir Ralph Lane, in 1586, but only the herb for smoking. Afterwards, according to Hakluyt, seeds were introduced into the same quarter. Sir Walter Raleigh first introduced smoking in the house in which he lived at Islington were his arms, on a shield, with a tobacco plant on the top. Smoking has, consequently, been common in Europe for upwards of two centuries. Pallas, Rumphius, and Loureiro, are of opinion, that in China the use of tobacco is more ancient than the discovery of the world.

Tobacco, from being the solace only of the Red Indians of America, has become one of the luxuries *of* the rich, and a necessary of life for the poorer inhabitants of a great portion of the globe. The Hindoo, slow to adopt strange customs, has been caught with the general infection, though some religionists abstain from its use: their nobles, as well as their women, may be seen inhaling it in the midst of perfumed essences ; while labouring bearer, and hard-working boatmen, seem to derive fresh vigour from their ever-in-hand hooqqas: the Mongol tribes, finding it inconvenient to carry such an apparatus over their rugged roads, makes a hole in the ground, through which he smokes. " Tobacco, as used by man," says Du Tour (Nouveau cours d'Agriculture, &c.) " gives pleasure to the savage and the philosopher, to the inhabitant of the burning desert and the frozen zone. In short, its use, either in powder, to chew, or smoke, is universal; and for no other reason than a sort of convulsive motion (sneezing) produced by the first, and a degree of intoxication by the two last modes of usage. A hundred volumes," he adds, " have been written against it, *of* which a man has preserved the titles. Among those books is that of James Stuart, king of England, who violently opposed its introduction. The grand duke of Moscow forbade its entrance into his territory under pain of the knout for the first offence, and death for the next. The emperor of the Turks, the king of Persia, and Pope Urban VIII., issued similar prohibitions, all of which were as ridiculous as those which attended the introduction of coffee or Jesuits'bark. At present, all the sovereigns of Europe, and most of those of other parts of the world, derive a considerable part of their revenue from tobacco."

Tobacco is cultivated in Europe as far north as Sweden; and is also grown in China, Japan, and other eastern countries. The sort preferred is *N. Tdbacum,* which is an elegant plant, grown also in gardens as a border flower. *N. rustica,* the fausse tabac of the French, Bauern taback of the Germans, and "Dacca cimarosa of the Spanish, is also frequently cultivated, especially in Europe, it being considered hardier than the Virginian sort. Parkinson says he has known Sir Walter Raleigh, when prisoner in the Tower, prefer it to make good tobacco, « which [illegible] so rightly to cure." Tobacco has been successfully [illegible] and [illegible] in this country ; but [illegible] courage our commerce with America. It is [illegible] a curiosity, or for border flowers, or by [illegible] struction of insects. In Germany, and other northern countries, most families who have gardens grow enough of *rustica* for their own use ; but as they do not know how to cure it, it is not much valued, and is never made into chewing tobacco. The cultivation of tobacco for commerce » «»efly carried on in Virginia, Maryland, &C or almost from 35° to 40° north latitude. The other places of America celebrated for tobacco are Cuba, Vera Cruz and Cumana ; but in these places it is always grown

these i- te(l S round> where the temperature alone suits it in beds. In the cu ture of tobacco in America, the plants are reared on thev m Sp ring; and when they have acquired about 4 leaves, feef d-, are P lanted in the field> in well prepared earth, about *3* •stance every way. Every morning and evening the plants *ejo* be looked over, in order to destroy a worm, which invades the bud. When 4 or *5* inches high, they are ready to ^' ^S soon as tne y nave ^ or 9 leaves, and are ttaketh P;Ut fo lth a stalk, tbe t0P is niPPed off> in order t0 gies of l l°nger and thicker, by diverting all the ener- from the plant to them. After this, the buds which sprout ^ufler d6 ^olnts o^ tne leaves are all plucked, and not a day is caterpiU ° ^S without examining the leaves to destroy a large they ar w ^i cn is sometimes very destructive to them. When leaves, ^ cutting, which is known by the brittleness of the lyinff s y are cut with a knife close t0 the ground ; and after Plants ar^h tlmG> arG carried to the drying-shed, where the that the Up ^ Pairs, upon lines having a space between, to sweaf ma 7 nOt touch each other. In this state they remain and cove abl y# When Perfectly dry the leaves are stript, for whicl Wlth blankets* Care is taken not to overheat them ; tim e, and reaSOn the Iiea Ps are laid open to the air from time to mo re he t - Spread abroad - This operation is repeated till no stowed IS perceived in the heaps ; and the tobacco is then Jn Persia" for exPortation - Long- Jamaica, *3.* p. 719. in a dark t \ ^^ °^ t^le ^hiraz tobacco is sown in December, ground i ^n^ manured ; and to protect the seeds, the plants ar ° V6re^ w bushes, which are removed when the are watp A or ^ mc hes hitgh ; and during this period the plants afterwards t ^^ 4 or 5 d^Si if the weather is dry- They are of ridges i ransP^anted into a well moistened soil, on the tops buds are pi^h ^of ^len)- As soon as the flowers appear, the tinued, andth °^" ^^ter this operation the irrigation is con- °r Septemb ° s increase in size and thickness till August again stuck fi T^^n each P^ant *IS* cut c^ose to tne root) and night; and Vi into *the* ground - At tnis season dews fall at change fro m ^ ex posed to these, the colour of the leaves stage no w ^r een t° the desired yellow colour ; during this the plants S given, and wlen they are sufficiently yellow, while they ** * from the earth earl y in the morn ing ; and in a shed, th^ ^ wet with the dew, and heaped on each other are freely ex i of whicli are made with buslfes» where they days, those l Po St tO *the* wind>—while there, and in *3* or 4 pale yellow c T^ WhlCh Were still green> become of the desired removed and°t) r# Tlle stalks and centre of each leaf are now ther in the dr Ow n awa V- The leaves are again heaped toge- a fit state for "I" for *S* or 4 days more» when they are in ^uHy spread ag- ^or this purpose the leaves are care- fee t in circumf GaCh other> and formed into a sort of cake, 4-5 laken not to j n- e ence» and S-4 inches thick, great care being bags. T)e } ^ r^ tne leaves : these cakes are finally packed in tough, and ce tne Shiraz tobacco is valued for being thick, *n the man a Uniform y ell°w colour.

from any earth ture of tobacco, the leaves are first cleansed Moistened *with* or decay ed Pai ts; next they are gently other inured Sa an(water » or water in which salt along with the fabricator^T^8 be€n diss olved» according to the taste of °peration is ^S liquor is called tobacco sauce. The next are rnixed to riemo Ve the rnidrib of the leaf 5 then the leaves may be the fial - n order to render the quality of whatever for smoking- b pplication equal. It is then cut into small shreds cords for ^e ? a mac hine like a straw-cutter,or formed into small snuffs. Xhe W n^ Or dried and ground for numerous varieties of Scotch or Sn -le princiPal sorts of snuffs are called Rappees, Panish, and Thirds. The first is only granulated, the second is reduced to a very fine powder, and the third is the siftings of the second sort. The large Havannah cigars are probably made from the leaves of *N. macrophylla,* or Oronoko tobacco ; the smaller, or Queen's, are said to be made from those of *N. repånda.* The Indians of the rocky mountains of North America use the leaves of *N. quadrivålvis* and *N. nãna,* and the Indians on the banks of the Columbia use those of *N. multivdlvis. N. rustica* is the tobacco of Salonica, and probably also that of Latakkia, which is so much esteemed. Manilla has long been celebrated for its tobacco. Niebuhr describes it as very fine. Many smokers prefer Manilla cheroots to any other. The next tobacco which has obtained reputation in England is that of Darabjird in Fars, (Shiraz,) *N. Persica.* Still farther north, the tobacco commonly denominated Turkish, the produce of *N. rustica,* and grown on the coasts of the Mediterranean, is highly valued in India. There is an excellent kind of tobacco called Arracan, or Martaban. Dr. Ainslie states, that the finest tobacco in India, and perhaps in the world, is grown near the village of Woodanum, in the northern circars, in some of those low sandy islands formed at the mouth of the river Krishna (from which is made the famous Masulipatam snuff) ; also in the Delta of Godavery, where the soil is particularly rich and fertile. The Chunar and Bhilsa tobaccos are also celebrated in India.

The active constituents of tobacco are supposed to be an essential oil; for by long boiling, the decoction and extract *of* tobacco become inert, and by distillation an oil is obtained from it so active, that small animals are almost instantly killed when wounded by a needle dipped in it. Vauquelin has analysed tobacco, both in its fresh and prepared state. The expressed juice is manifestly acid, and contains a great quantity of albuminous matter, supermalate of lime, acetic acid, nitrate and muriate of potass, muriate of ammonia, and a red matter soluble in alcohol, and an acrid principle called narcotin, which is also soluble in alcohol and water. Narcotin is obtained in a state nearest to purity in the distilled water of the infusion of the dry, or of the expressed juice of the fresh plant.

Tobacco is capable of producing deleterious effects on the living body, whether taken into the stomach in substance or solution, or into the lungs in the form of smoke, or applied to abraded surfaces. The system, however, becomes easily habituated to the action of tobacco ; and many people use very large quantities of it in several ways as a luxury, without experiencing any other bad effect than what arises from their being unable to relinquish it after the habit is confirmed. In medicine it is exhibited in various forms ; when chewed, it causes an increased flow of saliva, and sometimes relieves the toothache ; and reduced to powder, it proves an excellent errhine and sternutatory when snuffed up the nostrils. An infusion of it in water and wine, in small doses, so as to have little effect on the stomach, proves powerfully diuretic, and is employed with great success in dropsy and dysuria. The infusion is also applied externally for the cure of psora, tinea, and other cutaneous diseases. It is employed both in infusion and smoke, in the form of clysters in cases of obstinate constipation. An infusion of the leaves forms a powerful lotion for obstinate ulcers. The oil applied to a wound is said by Redi to be as fatal as the poison of a viper. The decoction, powder, and smoke *of* tobacco are used in gardening to destroy insects, and in agriculture for the same purpose, and to cure cutaneous eruptions in domestic animals.

Far. a, *attenudtum* (Schrank, in Hoppe's bot. zeit. 1807. p. *260.)* flowers attenuated ; leaves lanceolate, acute, subdecurrent, attenuated at the base : lower ones large. ©. H. Flowers red.

Far. /J, *macrophijllum* (Schrank, 1. c.) corollas obtuse, flatly mucronate at the angles ; petioles short, winged, at length

dilated and stem-clasping. 0. H. Flowers pale red, suborbicular, or with the margin obsoletely pentagonal. Perhaps not distinct from the species under the same name.

Far. y, *pallescens* (Schrank, 1. c.) corollas acute; leaves ovate, acuminated, attenuated at the base, sessile, subdecurrent. ©. H. Corolla white, with a rose-coloured margin, white beneath.

Var. $, dlipes (Schrank, 1. c.) angles of corolla acuminated ; teaves ovate, acuminated, attenuated into the petioles at the base, which are broadly winged ; wings reflexed, at length half stem-clasping, and a little decurrent. ©. H. Flowers pale red. Leaves all large. Perhaps the same as *N. macrophylla,* Spreng.

Var. t, *serotinum* (Schrank, 1. c.) leaves ovate, short-acuminated, subpetiolate, auriculately stem-clasping, and a little decurrent. ©. H. This is the latest flowering of all the sorts.

Var. f, *gracilipes* (Schrank, 1. c.) flowers acute; leaves lanceolate, acute, very much attenuated at the base, running into a short-winged petiole. ©. H. Flowers as in var. a, and the leaves as in var. *6.*

Var. t), Verdan (Schrank, 1. c.) leaves petiolate, ovate-lanceolate, longish, acute; petioles semi-terete, two-edged, somewhat decurrent at the base. ©. H. Flowers late.

Var. 6, linqua (Schrank, 1. c.) corollas long, acute ; leaves ovate, petiolate, longish, acute ; petioles long, obsoletely margined, auricled at the base.

Common *Tobacco,* or Virginian or Sweet-scented Tobacco. Fl. July, Aug. Clt. 1570. PL 4 to 6 feet.

2 N. LOXE'NSIS (H. B. et Kunth, nov. gen. amer. 3. p. 3.) leaves sessile, decurrent, oblong, acuminated, clammy and pilose ; corolla 3 times longer than the calyx, greenish-white; lobes acuminated. ©. H. Native of New Granada, in shady places between the town of Loxa and Mount Uritusinga, at the altitude of 1060 hexapods. N. Tabacum, var. ?. Herb clammy and pilose. Leaves 5 inches long, and *2* broad. Calyx 5-cleft, rather unequal. This hardly differs from *N. Tabacum,* unless in the colour of the flowers.

Loxa Tobacco. PL 3 to 4 feet.

3 N. FRUTICOSA (Lin. spec. 258.) stem suffruticose, almost simple; leaves ^petiolate, lanceolate, obliquely acuminated ; throat of corolla inflately ventricose: segments of the limb acuminated. *2 • G. Native of the Cape of Good Hope. Lehm. nicot. p. 23. no. 5. N. frutescens, Cav. elench. pi. hort. madr. 1807. Plant pubescent and viscid. Axillary branches short. Leaves tapering into the petiole at the base. Calyx ovate, with unequal, lanceolate segments. Limb of corolla rose-coloured. Capsule conical, longer than the calyx.

Var. /3, angustifblia (Ehrh. beytr. 5. jfc 169. Mill. icon. t. 185. f. 1.) leaves lanceolate, acute, sessile; calyxes acute; tube of corolla long. h_c . G. In Mill. diet. no. 5. there is mentioned a var. alba, which has broad leaves and white flowers, which is now unknown.

Shrubby Tobacco. Fl. July, Aug. Clt. 1699. Shrub 3 to 4 feet.

4 N. MACROPHY'LLA (Spreng. ind. hort. hal. 1807. p. 45. Lehm. nicot. p. 10.) herbaceous; leaves stem-clasping, ovate, acute, auricled at the base; throat of corolla inflately ventricose : segments of the limb short, acuminated. ©. H. Native of America. Horn. hort. hafn. 1. p. 214. Lehm. nic. p. 19. N. latissima, Mill. diet. no. 1. D. C. hort. monsp. 1813. p. 128. N. gigantea, Enum. pi. hort. dorp. 1814. Plant downy, clammy. Stem branched from the base. Calyx ovate, with rather unequal, lanceolate, acute segments. Limb of corolla rose-coloured. Capsule ovate, obtuse, a little longer than the calyx.

Large-leaved, or Oronoko Tobacco. FL July, Aug. Clt. ? PL 5 to 7 feet.

5 N. CHINE'NSIS (Fisch. in litt. ex Lehm. me. P-. 18[1]) J[em] suffruticose ; leaves petiolate, ovate-lanceolate, quite e[n]. throat of corolla inflately ventricosey. segments of the acute b . G . Native of China. N. fruticosa, Lour, cocn.* J. 111 ? exclusive of the synonymes. ^J^^^fSSi Stem branched at top. Calyx oblong, with nearly eq Srumens late-acute segments. Ximb of corolla rose-coloured, a little exserted. ^ pl *0* t0 6

China Tobacco. Pl. July, Sept. Clt. 1819. PL 3 feet.

"6 N. LANCIFOLIA (Willd. herb, ex Lehm. me., p. 26.) herbaceous; leaves sessile, linear-lanceolate, narrowly acuminated; throat of corolla inflately ventricose ; segments of the um the minated. ©. H. Native of Quito, near Villa de Bar ra-a altitude of 1180 hexapods. N. Ybarrensis, «• *. et icll- 3, p. 4. Plant clothed with clammy hairs. * lowers lately corymbose. Calyx tubularly campanulate. ^oroi i plish or rose-coloured. Capsule inclosed in the cal y*' pj# %

Lance-leaved Tobacco. Fl. July, Sept. Clt. 18*>- to *3* feet. ?

7 N. AURICULA^TA (Bertero, ined. ex Mor. elenc ,* d all aU. Linnsea, 5. p. 93.) leaves oblong-lanceolate, ^ K 'inflated ricled at the base, and stem-clasping ; corolla wi ^ Sardinia. throat; segments acuminated. ©. H. dative r uppn intro- Spontaneous on the edges of fields, but has probably Dee duced.

***Auricled-leaved* Tobacco. PL ?**

SECT. II. RU'STICA (from *rusticus,* rustic. *N.* rAsitC V^iit rally grown by the peasants in the country, being mu than any of the other species.) Corollas yellow, funnel-snap salver-shaped, or tubular ; segments bluntish, or acute.

§ 1. *Corolla funnel-shaped or tubular ; tube inflated at top,* mouth contracted.

8 N. PUSI'LLA (Lin. spec. 258.) stem herbaceous, die oto^ mous ; leaves sessile : radical ones oblong-oval; ^ short; tube of corolla subcylindrical, *3* times longer ^ y efa calyx; segments of the limb acute. ©. H. Native Cruz. Lehm. nicot. p. *29.* N. humilis, Ehret, D?yy\ f s 169. Mill. diet. no. 10. Plant pubescent. Radical i rosulate, 2-3 inches long; cauline leaves half stem-c r^ Racemes terminal. Calyx villous, 5-toothed ; teeth ^^ Capsule ovate, obtuse, glabrous, longer than the calyx, rollas small, of a yellowish-green colour.

Var. /3, humilis (Lehm. nicot. p. 29.) stem more hurTible, v j ^ lous ; leaves narrower, dilated at the base ; flowers sma segments of corolla oblong, bluntish. ©. H. Native ot IVIO Video.

Small Tobacco. FL July, Aug. Clt. 1733. PL 1 foC T

9 N. UNDULA'TA (Ruiz, et Pav. fl. per. *2.* p. 16. *i0 b. Lehm. nicot. p. 31.) stem herbaceous, angular ; leail tiolate, lanceolate, undulated ; tube of corolla length ot segments of the limb ovate, bluntish. O. H. Native ot in Tarma. Plant downy, clammy. Flowers disposed in nal racemes. Corolla yellow ; tube length of calyx, vem at top, with a contracted mouth, and a short limb. &tig lobed. Capsule ovate, inclosed in the calyx. Calyx SUD-U biate, 5-toothed; upper tooth large, and very long.

Undulated-tewed Tobacco. PL *3* feet.

10 N. PANICULVTA (Lin. spec. 259.) stem herbaceous, newly simple ; leaves petiolate, ovate, cordate, e n t ^ t u ^ " " ^ ish, quite glabrous, clavate ; t u M ^ ™ ^ S X t e f ^ the calyx ; segments of the limb^very ^^ pat ^ Lehm., obtuse, ex Lin. 0. H. JName oi bilca, on the sea shore. Lin. in act. holm. 1753. vol.

Ruiz, et Pav. fl. per. 2. t. 129. f. b. Lehm. nicot. p. *36.* £• vindiflora, Cav. elench. madr. 1803.—Feuill. P^er- *• 10, la^nt pubescent, clammy. Leaves petiolate. Flowers disposed ^n a terminal panicle. Filaments downy at the base. Capsule ate, bluntish, glabrous. Corolla salver-shaped, with a con- acted throat, green, or yellowish-green.

_ ^amc/ec/-flowered Tobacco. Fl. July, Sept. , Cftr-1752. P1,2 to 3 feet. . • »

12 N. CERINTHOIDES fHomi hort. hafn. 1. p. 214. Lehm. k^ot« p. 38. t. *2.)* stem herbaceous, branched from the base; ^Ves Prolate, all cordate, quite entire; tube of corolla cla-* ve^G> ^ 'mucll longer than the calyx; segments of the limb bau short, acute r- ©. H. Native country unknown, but pro- in ^nt America. Plant downy, clammy. Flowers disposed roH tGrrminal Panicle- Calyx 5-toothed; teeth unequal. Co- tract *T* olar' greenish-yellow» having the throat a little con- eon ' .^""cnts subcordate, roundish, acute. Stamens nearly Ioh Vaus at the base. Capsule conical, obtuse, a little ion £'than the calyx.

*k*oneyn,ort-like* Tobacco. Fl. Aug. Clt. 1821. PI. 1 to 2

erect ^l' GLAU'CA (Graham, in bot. mag. 2837.) arboreous, nak^d !|anc^e^> glabrous; leaves unequally cordate-ovate, Win' Ta^rous» on ^ong petioles; panicles terminal; corolla niouth tUbe sli^htly curved, the throat slightly inflated, the se2 con tracted, the limb small, cup-shaped, with short, acute in eve^8, ^ 'H, Native of Buenos Ayres. Plant glaucous gree^^y Pait. Leaves sometimes slightly sinuated. Corolla Ca]yx \the bud> afterwards yellow, covered with soft down. cili ated °|)Scurely an glec^ with 5 sharp, unequal, erect, somewhat

Tobacco. Fl. Au<*. Oct. Clt. 1827. Shrub 10 feet.

* LANGSD6RFFII (Weinm. in litt. ex Ream, et Schultes, °btuse, P* 8? f^ Stem herbaceous, branched; lower leaves ovate, °f coroll Ilate: superior ones almost sessile, decurrent; tube tive of R -i Vate: segments of the limb obtuse. ©. H. Na- Pilose, v*ra^ SimSj bot* ma 2' *222lt* and *2555,* Plant downy or Superior Lower leaves tapering into the petioles, undulated: green, onGS *anceolate, acute. Flowers terminal, panicled, long^er °^ g^reems^"yellow. The two superior teeth of calyx blue, ' p- ule of coro Ha an inch long; limb subplicate. Pollen [an 5a Pi ule vate, obtuse,

feet. **aor ff** Tobacco. Fl. Aug. Clt. 1819. PL 3 to *5*

y 2- *Corolla salver-shaped; tube inflated, cylindrical*

^aves pet'l RUSTICA ^m- spec. 258.) stem herbaceous, terete; longer th lf ovate, ^lu*te entire; tube of corolla cylindrical, O.^H xj le Calyx: segments of the limb roundish, obtuse, fl. atl, '] iNatlve of Europe, Asia, Africa, and America. Desf. Blackw \P, u 190, Moench, meth. 448. Lehm. ittcot. p. 34.— t- 90 *J.R* tg 437.—Bull. herb. t. 289.—Sabb. hort. rom. 1. thick'fl le* bov*1# t# 52- Plant villous» ^amm y- leaves srr c ih Panicle composed of terminal racemes. Corolla scenish y Stamens villous at the base. Capsule nearly globose, y a tule longer than the calyx. This is com- monly 2 E nglish Tobacco, from its having been the first in- troduced h its having ins and being much more hardy than the other sorts, insomuch S has become a weed in many places. It came, however, -- lias y from America, by the name of Petum.

Var (3 Ol S! nally *dlica* (Schultes, obs. p. 43. Lehm. nicot. p. 34.) lower ieav 6S Ovate: faces • fl superior ones cordate, pilose on both sur- cracov nowers obtuse, mucronate. ©. H. N. Tatarica, Hort. VOL. 1v; • Sibirica, Hort. parm. pi. hort. florent. 1797. N.. scabra, Cav. elench. matr. 1813. N. rugosa, Mill, diet no. 7. There are several other varieties of this species.

Rustic, Common or English Tobacco. Fl. July, Sept. Clt. 1570. PI. 2 to 4 feet.

16 N. HinviiLis (Link, enum. 1. p. 178. but not of Ehret.) stem nearly simple; leaves ovate, obtuse, repand, equal at the base; corolla with a cylindrical tube, which is twice as long as the calyx, and hairy, and the limb 4 times shorter than the tube. ©. H. Native country unknown. Very like *N. rustica;* but differs in the proportions of the corolla, and in the more slender habit.

Humble Tobacco. Fl. July, Sept. Clt. ? PI. | to 1 foot.

17 N. PULMONARIOIDES (H. B. et Kunth, nov. gen. amer. 3. p. 2.) leaves petiolate, oblong, acute, running into the petioles at the base, rather pilose; flowers panicled; corollas salver-shaped, exceeding the calyx a little: limb obtuse. ©. H. Native of the Province de Los Pastos, near Rio Blanco, between Guachucal and Tulca, at the altitude of 1620 hexapods. Plant clammy and hairy. Calyx 5-cleft, with ovate, acute segments. Corolla green; tube ventricose at top. Capsule subglobose, acute, glabrous, inclosed in the calyx.

Lungwort'like Tobacco. Pi. 3 feet.

18 N. ANDICOLA (H. B. et Kunth, nov. gen. 3. p. 1.) herbaceous; leaves sessile, lanceolate, acutish, narrowed at the base, smoothish; panicles terminal, nearly simple, spreading, clammy, and pilose; corolla somewhat salver-shaped, exceeding the calyx a little: lobes of limb obtuse, emarginate. ©. H. Native of the Andes of Peru, near Micuipampa, at the altitude of 850 hexapods. Herb clammy, and rather pilose. Calyx 5-cleft, with ovate, obtuse segments. Corolla green; tube ventricose at top. Stamens pilose at the base. Capsule glabrous, covered by the permanent calyx.

Andicolous Tobacco. PI. 3 to 6 feet.

SECT. III. PETUNIOIDES. Corollas salver-shaped, white; tube subcylindrical; segments of the limb obtuse or acute. Plants densely clothed with clammy villi. Flowers disposed in racemes or panicles, terminating the stem and branches.

19 N. SUAVEOLENS (Lehm. nicot. p. 43.) stems herbaceous, nearly simple; leaves subpetiolate, ovate-lanceolate, undulated; tube of corolla cylindrical, much longer than the calyx; segments of the limb rather unequal, roundish, obtuse. ©. H. or 1/. G. Native of New Holland. N. undulata, Vent. malm. t. 10. Jacq. fragm. t. *56.* Sims, botv mag. t. *673.* R. Br. prod. p. 447. Stem villous at the base, and smoothish at top. Leaves with a few scattered soft hairs on the veins and midrib; radical ones subspatulate, bluratish, rosulate. Calyx deeply 5-cleft; segments acute, unequal. Limb of corolla white. Capsule ovate, obtuse, glabrous, inclosed in the calyx.

Sweet-scented Tobacco. Fl. May, Sept. Clt. 1800. PI. 1 to 2 feet.

20 N. VINCTEFLORA (Lag. hort. madr. ex Link, enum. 1. p. 179.) leaves nearly sessile, oblong-lanceolate, attenuated at both ends, a little serrulated, glabrous; calycine segments equal, acuminated; tube of corolla elongated; segments of the limb blunt; stem rough at top. %. G. Native of South America. Very nearly allied to *N. suaveolens;* but differs in the plant being glabrous, and in the stem being warted at top.

Periwincle-flowered Tobacco. Fl. July, Sept. Clt. 1820. PI. 2 feet.

21 N. LONGIFLORA (Cav. descr. p. 106. D. Don, in Sweet, fl. gard. n. s. no. 196.) scabrous; cauline leaves stem-clasping, cordate-lanceolate, acuminated; tube of corolla long, filiform, 5 times longer than the subfoliaceous calyx; lobes of corolla ovate-lanceolate, acute. ©. H. Native of Chili and Buenos

Ayres. Corolla at first of a dirty white, afterwards tinged with purple, greenish-yellow, and pubescent outside ; inside of limb pure white. The whole plant is said to be villous, and the lower leaves petiolate, by Cavanilles.

Long-flowered Tobacco. Fl. July, Oct. Clt. 1832. PI. *2* to 3 feet.

22 N. NOCTIFLORA (Hook. bot. mag. t. *2785.* Sweet, fl. gard. t. *262.)* glandular and clammy, and beset with adpressed hairs; leaves petiolate, oblong-lanceolate, acute, undulately curled ; tube of corolla cylindrical, much longer than the calyx; segments of corolla equal, obcordately emarginate. %. F% Native of Chili. Flowers disposed in terminal panicles. Corollas white, purple beneath, sweet-scented.

Night-flowering Tobacco. Fl. Aug. Clt. *182G.* PL *2* to 3 feet.

23 N. PE'RSICA (LindL bot. reg. 1592.) clothed #'ith clammy down; radical leaves oblong-spatulate : cauline ones sessile, half stem-clasping, acuminated, hardly repand ; calyx acutely 5-toothed; corolla salver-shaped, with a long clavate tube, and ovate, obtuse, emarginate, rather unequal segments. ©• H. Native of Persia. Radical leaves cordate at the base. Flowers racemose, extra-axillary, on short pedicels, sweet-scented at night. Tube of corolla green, ventricose at top; limb green outside, and white inside. This kind of Nicotiana furnishes the far-famed Shiraz tobacco. The *N. Tdbacum* is, however, also cultivated in Persia.

Persian or Shiraz Tobacco. Fl. Sept. Oct. Clt. ? PI. \\ to 3 feet.

24 N. ACUMINA'TA (Sims, bot. mag. 2919.) downy; leaves broad-lanceolate, acuminated, undulated, on longish petioles ; panicles few-flowered; calyx clothed with glandular down ; calycine segments narrow ; corolla with an elongated tube, and roundish obtuse segments. ©. H. Native of Valparaiso. Petunia acuminata, Graham, in edinb. phil. journ. July, 1828. Corolla with a spreading white limb.

Acuminated-lesLved Tobgcco. Fl. June^, Sept. Clt. 1827. PI. 2 feet.

25 N. ANGUSTIFOLIA (Ruiz, et Pav. fl. per. 2. p. 16. t. 130. f. a. Lehm. nic. p. 25.) herbaceous, branched ; leaves petiolate : superior ones linear ; tube of corolla widened and subventricose at top : segments of the limb spreading, acute. ©. H. Native of Chili, about Conception. Horn. hort. hafn. 1. p. 215. Pers. ench. 1. p. 218. Plant pubescent, clammy! Branches slender. Flowers disposed in diffuse, terminal panicles. Calycine segments unequal, lanceolate-linear, acute. Limb of corolla milk-coloured, nearly equal; tube greenish. Capsule conical, obtuse.

Narrow-leaved Tobacco. PI. 2 to 3 feet.

26 N. DILATA'TA (Link, erwm. 1. p. 179.) stem herbaceous, rather tomentose, clammy ; leaves sessile, lanceolate, attenuated towards the base, but dilated at the base, repand; tube of corolla much longer than the calyx, subclavate ; segments of the limb acute. ©. H. Native country unknown. Lower leaves afoot long, and more than 3-4 inches broad; cauline leaves smaller, dilated at the base, all long-acuminated, and rather tomentose. Limb of corolla white. Link received this species **under the name of *N. angustifolia.***

Dilated-leaved Tobacco. Fl. July, Sept. Clt. 1820. PI.

27 N. PLUMBAGINIIFOLIA (Viv. elench. pi. hort. dinegro, p. 26. t. 5.) stem herbaceous ; leaves sessile : lower ones obovate-spatulate, bluntish : superior ones half stem-clasping, undulated; tube of corolla very long, subclavate; segments of the Jimb ovate, acute. 0. H. Native country unknown, but probably of South America. Lehm. nicot. p. 41. N. crispa, Jacq. frao-m. p. *57.* t. 84. Desf. cat. hort. par. 1804. p. *67.* N. certnthoides, Vittmann. Plant rather scabrous and hairy. Branches slender. Superior leaves oblong, the [illegible] fanceolate-linear. Racemes disposed in a ter[illegible] Calyx 5-cleft, 10-stnped; segments unequal. Limb [illegible] white above, and fuscescent beneath. Capsule ovate, glabrou length of calyx.

Plumbago-leaved Tobacco. Fl. May, June. Clt. 1810. 1 to 2 feet.

28 N. [illegible] (Willd. herb, ex Lehm. nicot. p. 40. t. 3.) stem herbaceous ; leaves stem-clasping, repandly undulated, sometimes lyrate ; tube of corolla very Ion- : segments of the limb ovate, tive of Cuba, near Havannah. Sims hot. H. B. et Kunth, nov. gen. amer. 3. p. 4. brous, except the young leaves, which are downy, distant, disposed in terminal, elongated racemes, on being examined by a lens, 5-cleft; segments equal, of corolla clavate at top ; limb white above. Capsu, obtuse, shorter than the calyx. The small Havannai or queen's, are said to be made of this species.

Repand-lesLved Tobacco. Fl. June, July. Clt. i»~i•

29 N. VISCOSA (Lehm. nicot. p. 28.) clammy ; leaves sessile, somewhat cuneiform, ODI[illegible] wards the base, half stem-clasping; tube of corolla cal, twice as long as the calyx: segments [illegible] tuse. 0. H. Native of Buenos Ayres. Stem an illary branches short, terminated by flowers. Corolla long. Calycine segments unequal, short, obtus. white ? tube widened a little at top.

Clammy Tobacco. Fl. July, Sept. Clt. 18~i. feet?

30 N. BONARIE'NSIS (Lehm. nicot. p. ~'- [illegible] ceous; leaves sessile, lanceolate, acute, broader base, subrepand; tube of corolla cylindrical; segm limb ovate, obtuse. ©. H. Native of Buenos Ayres pubescently pilose. Leaves half [illegible] Flowers racemose, terminating the stem and Corolla cine segments nearly equal, narrow-lanceolate, a downy, white ; tube a little dilated at top.

Buenos Aijrean Tobacco. Fl. July, Sept. W*- to 3 feet.

SECT. IV. POLYDI'CLIA (from TTOXVC, V[illegible] ti?Ziy, a valve ; in reference to the capsule being valved.) Corolla tubular, ventricose at the and livid outside. Capsule 4 or many-valved. lary, solitary.

31 N. QUADRIVA'LVIS (Pursh, fl. amer. sept. 1- Spreng. syst. p. 48. no. 95. Lehm. nicot. p. 45. herbaceous, branched ; leaves petiolate, oblong; tu twice as long as the calyx ; segments of the limb o ish ; capsule 4-valved, nearly globose. ©• North America, at the Missouri river. Sims, bot. mag. The whole plant is clammy and pilose, with a bad sme rior leaves nea% sessile. Calyx deeply 5-cleft; se equal. Corolla tubular, white inside.

iW-t;«fo«?tf-capsuled Tobacco. Fl. July, Aug. PI. 1 to 1| foot.

32 N. NANA (Lindl. bot. reg. t. 833.) plant lanceolate, pilose : radical ones longer than the solitary corolla longer than the calyx, with obtuse segments. Native of North America, among the rocky mountains. turbinate, clothed with glandular hairs. Corolla outside. Flowers rising from the axils of the leaves. dians are said to prepare the finest of their tobacco trom leaves of this species.

JW/Tobacco. Fl. June. Clt. 1823. PL \ foot.

. [3]? N. MULTIVA'LVIS (Lindl. bof! reg. t. 1057.) clothed with [Vls]cui hairs or down ; leaves fleshy, ovate-lanceolate: lower [o]nes Prolate; flowers axillary, solitary ; calyx many-parted; capsule many-celled ; segments of corolla obtuse, deeply veined, th[ick]. ^ [l'S] species is cultivated by the Indians, who inhabit [c]? [banks] of the Columbia, for tobacco; for which purpose the [*] yx, which is very fetid, is selected in preference to any other {j £ Calyx inflated, ribbed. Corolla ventricose at the base ; roo spreading, usually 6-cleft. Stamens equal in number to :if [segments of tbe] corolla.

Pl *d* ^~[ra]^-capsuled Tobacco. FL Aug. Sept. Clt. 1826. '• * feet.

f *Species not sufficiently known.*

[cu]^[4]-N-CRISPA (Cav. descr. p. 105.) leaves lanceolate-linear, jj [fec]Jl [v]!^[ous]> clammy, petiolate ; panicles dichotomous. ©. hard [n]*}?e* [of] North America, about San Bias. Stem slender, sho*I* [St] Branches alternate, forked at top. Leaves of *n* [llan in] #. *angustifolia,* undulated. Calyx villous. Tube 7 ° ^ 5 inches long; limb small.

[e]l T [p] pL

dula l .^LANTA (Link et Otto, abbild. p. *63.)* stem erect, glan- scab ^ ^ [eaves] oWong and lanceolate, repandly-toothed, of [roU]S i' [glandularly] ciliated ; teeth of calyx long, acute; tube Braz[Very long; segments] obtuse. ©. H. Native of

ff[n] &[ed] Tobacco. Fl. Aug. Oct. Clt. 1829. PL 2 feet ? filifo [NE]'^LA (Cav. descr. p. 105.) stem herbaceous, sun J™ ; leaves sessile, acute : radical and lower ones ovate : A[on6S lanceolate]- ©• H. Native of Mexico, about l o [Stem] solitary, simple. Radical leaves 2 inches distant [1 inch broad> Flowers] solitary, axillary, pedicellate, the limb [of corolla] slender, lj inch long; segments of

Pl. 1 foot.

lanceol t [SIEXRI] (Ram, et Schultes, syst. 4. p. 323.) leaves shruhh [sub]Petiolate, stem-clasping; flowers acute; stem cosa p [c%Gt] Native of the South Sea Islands. N. fruti- p. 51. [orStt floral- insul- austr- Prod- P- 17-] Lehm. nicot«

Tobacco. Shrub

281.) j " MINIMA (Molina, voy. du. chili, p. 153. ed. 2d« p. [of-Chili] [sessile]» ovate 5 flowers obtuse. ©.?H. Native Chili Leaves ver[like those of Dictamnus Critica.]

^Tobacco. PL small,

late. [p)] [RU]p[o]SA (Mill. [dictn0]* [7]0 leaves ovate, rugose, petio- foliis r[ ]" Native country unknown. Nicotiana minor those of iV[1OribuS arn]P[liori]hus, Vaill. Stem tall. Leaves like [o]n lonjr [m?cr(]>*phylla,* but twice their size, deeper green, and [f]orm is th [Petioles]* Flowers larger than in *N. rusiica,* but the *IVi, -.e/f.* Perh[ ] [ ]ety of *N. rustica.*

[1]0 ^W-leaved Tobacco. PL 4 feet.

[e]d. 2d [o]«^[LENOI%1)ES] (Hort- Prince, Salm. Dyck. Dum. Cours. [fruit] L p. 148. Perhaps the same as *Ni suaveolens.*

N.B. The ? Tobacco. PL?

[su]Ppl following names are given in Loud. hort. brit. only [P*. IJ,4J] of which we know nothing; they are probably Otto o[let]S of, *N. Tdbacum.* 1. N. Nepalensis, Link et [A]gar'dh~' [Brasin]ensis, Link et Otto. 3. N. petiolata, *Cult ' T* [san]g^inea, Link et Otto.

blossom [i]St of tne kinds of *Tobacco* are snowy, wnen ^ borders' [Some ot tnem answer we^ for decoratmg flower- of [a]ii [ar tlc]ularly the white flowered species. The seeds [w]hen th[p]^[1]^[t0] be reared on a hot-bed in spring, and are grown with 2 or 3 leaves, they should be planted separately into small pots, and placed again in the frame ; and about the end of May those which are intended for the flower border should be planted out in conspicuous situations, and those intended for leaves in rows 3 feet distant, with the balls entire.

XVII. SAIRA'NTHUS (from (raipw, *sairo,* to clean; and *avdoc, antJios,* a flower ; with reference to the ringent corolla which separates this genus from *Nicotiana.)* Nicotiana glutinosa, Lin.

LIN. SYST. *Didyndmia, Angiosperma.* Calyx campanulately ventricose, sub-bilabiate ; limb 5-cleft, with linear-lanceolate, acutish, unequal segments. Corolla somewhat funnel-shaped, twice as long as the calyx ; tube ventricose above, a little curved ; limb 5-lobed, rather ringent, spreading a little ; lobes ovate, acutiah, nearly equal. Stamens 5, inserted in the tube, exserted a little, unequal, directed all to one side of the flower; filaments filiform, dilated and downy at the base. Anthers dehiscing lengthwise inside. Style curved at top. Stigma capitately thickened, green. Capsule roundish-ovate, acute, covered by the permanent calyx, and hardly exceeding it, 2-celled, 2-valved; valves at length bipartible at top. Placentas free, remote from the dissepiment. Seeds very minute, oblong, angular, verrucosely warted.—An erect, branched, villously clammy herb. Leaves petiolate, ovate-cordate, acuminated. Racemes terminal, erect, secund. Corollas rose-coloured, clothed with clammy hairs outside.

1. S. GLUTINOSUS ; ©. H. Native of Peru, in temperate places near Guancabamba, and elsewhere in South America. Nicotiana glutinosa, Lin spec. 259. Andr. bot. rep. 484. Ruiz, et Pav. fl. per. 2. p. 16. Lehm. nicot. 32. N. militaris, Lin. act. holm. 1753. vol. 15. p. 44. t. 2. Tabacus viridis, Mcench. meth. p. 448. The whole plant is clammy and villous.

Clammy Sairanthus. FL July, Sept. Clt. 1759. PL 2 to 4 feet.

Cult. For culture and propagation see *Petunia* below.

XVIII. LEHMA'NNIA (named in honour of Professor John George Christian Lehmann, of Hamburgh ; author of Aperifoliae nuciferse, and Generis Nicotianarum Historia, and many other botanical papers.) Spreng. anleit. ed. 2d. 1817. 1. p. 458. Nicotiana species, Ruiz, et Pav.

LIN. SYST. *Pentdndriay Monogynia.* Calyx 5-cleft, bilabiate ; segments nearly equal, spreading. Corolla irregular; with a very narrow incurved tube, which exceeds the calyx a little ; throat thickened; limb campanulate, with acute segments. Genitals exserted, recurved. Capsule ovate, half covered by the calyx.^ Seeds angular, wrinkled.—An erect, woody, rather clammy shrub, divided into many angular branches. Leaves scattered, lanceolate, decurrent, acute, quite entire, white, with purple veins. Panicles large, diffuse, clammy, villous. Corolla glabrous, purple.

1 L. TOMENTOSA (Spreng, 1. c.) T?. G. Native of Peru, in corn fields, and in waste places. Nicotiana tomentosa, Ruiz, et Pav. fl. per. 2. p. 16. t. 129. f. a. Poir. suppl. 4. p. 94.

Tomentose Lehmannia. Shrub 15 to 20 feet.

Cult. For culture and propagation see *Petunia* below.

XIX. PETIPNIA (Petun or Petum is the name of tobacco in Brazil; the name is given to this genus on account of its affinity with *Nicotiana.)* Juss. in ann. mus. 2. p. 215. t. 47. f. 2. Pers. ench. 1. p. 218. Sweet, fl. gard. 119.—Nicotiana species of authors.

LIN. SYST. *Pentandria, Monogynia.* Calyx deeply 5-cleft; segments oblong, subspatulate. Corolla salver-shaped, with a cylindrical tube, which is a little widened at top, and a spread-

ing, dilated, 5-lobed, obtuse, unequal limb. Stamens unequal, inclosed ; anthers roundish, dehiscing lengthwise. Stigma capitate, slightly 2-lobed. Capsule girded by the calyx below, 2-celled, 2-valved at apex, many-seeded. Seeds minute.—Diffuse, pubescently villous, evergreen, herbaceous plants. Leaves alternate, on short petioles. Flowers axillary, pedicellate, white, shape of those of *Mirdbilis dichotomus.*

1 P. NYCTAGINIFLORA (Juss. 1. c. p. 216. t. 47. f. 2.) herbaceous, diffuse, clothed with clammy, glandular villi ; lower leaves alternate, ovate-oblong, obtuse, pubescent, attenuated into the petioles at the base : floral leaves sessile, cordate-ovate, opposite ; flowers axillary, pedunculate ; corolla large, having the tube 3-4 times longer than the calyx, and the limb broad and obtuse. 1£. F. Native of South America, at the mouth of the river Plata. Poir. suppl. 4. p. *375.* Tratt. tab. t. 72. Sweet, fl. gard. 119. Sims, bot. mag. t. 2552. Nicotiana axillaris, Lam. ill. no. 2287. Nicotiana nyctaginiflora, Lehm. nicot. p. 20. Branched. Stem hairy. * Leaves pubescent. Pedicels villous, furnished with 2 opposite leaves at the base. Calyx pubescently villous, with unequal, oblong, obtuse, spreading, foliaceous segments. Corollas large, white, clammy, downy outside, similar to those of *Mirdbilis,* hence the specific name.

Marvel-of-Peru-flowered Petunia. Fl. June, Oct. Clt. 1823. PI. 2 to 4 ieet.

2 P. PARVIFLORA (Juss. 1. c. p, 21G. t. 47. f. 1.) herbaceous, prostrate; leaves sessile, oblong, obtuse, thickish ; corollas small, hardly longer than the calyx ; segments of the limb obtuse. %. F. Native of South America, at the mouth of the river Plata. Pers. ench. 1. p. 218. Stems many from the same root, rather villous. Leaves small, size of those of a species of *Cerdstium,* downy. Segment of calyx oblong, bluntish, foliaceous, spreading. Corolla coarctate in the middle, red ; limb plicate. Capsule inclosed in the calyx.

Small-flowered Petunia. PL prostrate.

3 P. INTERMEDIA ; clothed with short, glandular, clammy, hoary pubescence; leaves linear, obtuse ; peduncles opposite the leaves, or terminal ; corolla funnel-shaped, having the tube hardly longer than the calyx, and the segments emarginate ; style clavate; capsule 5-ribbed ; calycine segments foliaceous, unequal. ^ • or "}/. F. Native of Buenos Ayres, on the banks of the Parana. Nierembergia intermedia, Graham, in edinb. phil. journ. 1833. D. Don, in Sweet, fl. gard. n. s. t. *237.* Salpiglossis linearis, Hook, in bot. mag. no. 3256, in a note. Tube of corolla yellow, striated ; throat ventricose, yellow within ; limb 5-lobed, of a rich purple.

Intermediate Petunia. Fl. Aug. Sept. Clt. 1832. PI. \ foot.

4 P. VIOLATE A (Lindl. bot. reg. t. 1626.) prostrate, clothed with clammy hairs or down ; leaves ovate, on short petioles, acute; corolla ventricose, with ovate, acute segments ; flowers solitary, axillary, pedunculate. %. F. Native of Buenos Ayres, on the Uruquay. Nierembergia punicea, D. Don, in Sweet, brit. fl. gard. n. s. t. 193. Salpiglossis integrifolia, Hook. bot. mag. t. 3113. Calycine segments linear-spatulate, obtuse, foliaceous. Corollas large, of a rose purple colour; limb irregular. Stamens inserted in the middle of the tube. Embryo short, straight; albumen copious.

Far. /3, Atkinsiana (D. Don, in Sweet, fl. gard. n. s. t. *268.)* leaves ovate, acutish ; calycine segments ligulate; tube of corolla twice as long as the calyx. %. F. A hybrid between *P. nyctaginiflora* and *P. violacea.* In habit it is much like the former, but the flowers are nearly intermediate between the two parents, but the colour is almost that of the latter.

Violaceous-flowered Petunia. Fl. July. Clt. 1831. PI. 1 foot.

Cult. The species are all exceedingly elegant plants when in blossom. In the open border they succeed very well from xMay to September ; and large patches of them have a very gaudy appearance. In autumn a few plants of each species should be put into pots, and removed to the greenhouse, so as they may be preserved from the frost of winter. All succeed best in a light rich soil, and are readily propagated from cuttings. Seeds of them are also sometimes ripened in this country, by which they may be increased.

XX. NIEREMBERGIA (named in honour of John Eusebius Nieremberg, a Spanish Jesuit; author of Historic Naturae maximè peregrinae. 1. vol. in folio. Antwerp, 1635.) Ruiz, e Pav. fl. per. 2. p. 13. t. 123. H. B. et Kunth, nov. gen. amer. 3. p. 8. t. 198.

LIN. SYST. *Pentdndria, Monogynia.* Calyx tubular, 5-cJett, segments lanceolate, acute. Corolla somewhat salver-shaped; with a very long, cylindrical, slender tube ; and a 5-lobed, plicate, equal, blunt limb. Stamens 5, exserted; filaments connate at the base; anthers dehiscing lengthwise. Stigma pel" tately 2-lobed. Capsule 2-celled, 2-valved in the bottom *ot* the permanent calyx ; dissepiment parallel with the valves, at length *free.*—Stems suffruticose, or herbaceous, filiform, pr°" cumbent, and often creeping. Leaves scattered, solitary, sometimes twin, entire. Flowers extra-axillary, or opposite the leaves, solitary, almost sessile, white, and tinged with blue or red.

1 N. CALYCINA (Hook. bot. mag. t. 3371.) clothed with glandular pubescence ; stems herbaceous, procumbent; leaves opposite and alternate, roundish-obovate, petiolate; peduncles lateral, 1-flowered, extra-alar, short; calyx large, campanulate, with obovate, 3-nerved, foliaceous segments ; corolla with a very long, slender, cylindrical tube, and a 5-lobed, campanulate limb. 1/. F. Native of Buenos Ayres, on the Uruquay. Sweet, fl. gard. n. s. t. 319. Corolla rising from the broad calyx ; limb white, its base alone yellow.; tube yellowish. Habit *of Petunia.*

Large-calyxed Nierembergia. Fl. Sept. Oct. Clt. 1834. PI. procumbent.

2 N. SPATULATA (H. B. et Kunth, nov. gen. amer. 3. p. 8.) stems woody, creeping; leaves petiolate, elliptic-spatulate, glabrous, rather downy, and somewhat ciliated while young ; calycine segments lanceolate, acute : lower ones a little smaller and reflexed ; capsule few-seeded. J?. F. Native of New Granada, near Santa Fe de Bogota, and Loxa, at the altitude of 1000 and 1300 hexapods. Stems filiform, prostrate; branches short, erect, puberulous. Leaves solitary or twin, obtuse or rounded at apex. Flowers pedicellate. Calyx pilose at bottom, a little arched. Corolla glabrous ; tube slender, half an inch long, 4 times longer than the calyx ; limb campanulately £innel-shaped. Stamens glabrous, membranous, linear. Capsule in the bottom of the ventricose calyx.

Spatiilate-\eaved Nierembergia. PI. creeping.

3 N. REPENS (Ruiz, et Pav. fl. per. 2. p. 13. t. 123. f. c.) stems creeping at the base, but erectish at top, and filiform; leaves in fascicles of 5 or 6, oblong, obtuse, rather pilose; flowers sessile. %. F. Native of Chili, about Conception, in dry sandy pastures. Leaves \ an inch long, and 2-3 lines broad. Corolla white, with, a yellow throat, and with 3 purple lines on each of the segments of the limb.

Creeping Nierembergia. Fl. Cult. PI. 1 foot.

4 N. ANGUSTIFOLIA (H. B. et Kunth, nov. gen. 3. p. 9. t. 198.) stems herbaceous tufted, diffuse ; leaves sessile, linear-lanceolate, glabrous; calycine segments linear, acute, equal; capsule many-seeded. %. F. Native of Mexico, near Real del Monte, at the altitude of 1430 hexapods. Flowers opposite the leaves, on short pedicels. Corolla glabrous, white; tube longer than the calyx ; limb campanulately urceolate, not plicate.

Narrow-leaved Nierembergia. PI. diffuse.

SOL'

by sapreng. syst. 1, p. 615.) leaves oblong- glandular hairs; capsule 2-valved, many- %, diffuse. J; . F. Native of Monte Video, nbergia. Shrub diffuse-. *

K oil* (Hook- l>ot. mag. t. 3108.) downy; stems isl). j linear, subspatuiate, obtuse; calycine segments . Wu is I'! t« tube of the corolla; S the young brandies; lobes of corolla rounded, F. Native of Buenos Ayrcs, ahout the Uruquay. *>. Don, in Sweet, ft. gard. n. s. t. 172. Corolla with a very long slender tube; the limb white, streaked with purple, with a yellow centre.

Slender Nierembergta. Fl, July, Aug. Clt. 1831. PL 4 foot.

7 N. FILICAD'LIS (Lind!. bot. reg. 1649. Hook. bot. mag. t. 3370.) glabrous, erect, filiform j leaves linear-lanceolate, **acute,** or obtuse; peduncles opposite the leaves, 1-flowered"; tube of corolla glandular, as well as the filaments, if. F, Native of Buenos Ayres. D. Don, Sweet, fl. gard. no. 243. N. linarisefolia, Graham. Stems ascending. Corolla with a slender tube. **Calf cine** segments acuminated, equal in length to **the** tube of the corolla. Limb of corolla lilac, with a ycilow centre. Stamens as if they were monadelphous, as in the rest. Corolla variable in colour from almost white to purplish.

Thread-stemmed Nierembergia. Fl. Clt. PI. J to 1 foot,

8 N, ARISTATA (D. Don, in Sweet, fl. gard. n. s. t. 255.) smoothish ; leaves linear, acuminated ; ealycine segments acuminated, much shorter than the tube of the corolla; stigma peltate; peduncles opposite the leaves ; limb of corolla spreading : lobes rounded, slightly crenulated. 1j. F. Native of Buenos Ayres, on the banks of the Parana. Corolla white, suffused **with** purple, with the mouth of a deeper colour, glandular outside.

-4w«erf-ca]yxed Nierembergia. Fl. July, Aug. Clt. 1833. PI. *I* to % foot.

Cult. For culture and propagation see *Petunia,* p. 488.

XXL SALPIGLO'SSIS (from ***«\irty&*** *salp'mx,* a tube; and *yKtaoaa, gloisa,* a tongue ; in reference to the tongue-shaped style in the tube of the corolla.) Ruiz, et Pav. syst. **1**. P- 163. **Pera. encb.** 2. p. 1G9. Hook. exot. fl. t. 229.

LIN, SYST. *Didynamia, Angiospcrmia.* CaSyx 5-angied, 5-cleft, funnel-shaped, gradually widening to the top ; limb 5-cjeft, plicate; segments 2-lobed. Stamens 4, 2 long, and 2 short, **with** the rudiment of a fifth between the two longer ones. Myle tongne-shapcd at apex ; stigma truncate, transverse. **flP'** ovate, 2-celled, 2-valved ; valves bipartible; dissepiment contrary, pi ace ntifero us on ooth sides. Seeds erect, angular, a little compressed, truncate, scabrous from elevated dots. Embryo arched, with short oval cotyledons.—Annual or biennia! plants clothed with glandular, clammy hairs, natives of **Chili.** Stem panicu- Uiteiy branched at top ; branches wfwtomoits, forked. Corolla large P ple, or straw-coloured, or negated. L ves alternate: lowei ones petiolate, sinuated: upper neS narrower entire.

FIG. 40.



A (Ruiz, et Pav. syst. 0.plant clothed with glanc "airs ; wer leaves petiolate, elliptic-oblong, sinuated: upper ones sessile, lanceolate-linear, quite entire; stem paniculately branched at top ; branches racemose, dichotomous; filaments glandularly pilose, *$.* H. Native of Chili, S. atropurpurea, Graham in bot. mag. 2811. Sweet, fl. gard. 271. Corollas large, dark purple, sometimes almost black, orange-coloured in the centre, and striped with deeper coloured veins.

Far. [i,picta; corolla elegantly variegated with yellow ami bluish purple, *g* . H. Native of Chili. S. picta, Sweet, fl. gard. t. 258. S. strammea, ft picta, Hook. bot. mag. t. S3G5.

var.yMrain&nea; corolla cream-coloured, veined with blue. *$.* H. Native of Valparaiso. S. straminea, Hook. exot. fl. t. 229. Sweet, fl. gard. t. 231.

Var. S, Bardayana; corolla striped with brown and yellow. i ' n H. A Wx-'d- S. intermedia, Sweet, fl. gard. n.s. t. 112. ft. Barc]ayana, Penny, mss.

Sinualed-lezved Salpiglossis. Fl. Aug. Sept. Clt. 182*. PL 1 to 2 feet.

Cult. For culture and propagation see ***Schiz&nthus,*** below, bhowy plants, worth the cultivator's care.

XXII. SCHIZA'NTHUS (from ***^ t ^ , tckt*o,*** to cut; and *avdoc, anthos,* a flower; in reference to irregularly cut or divided corolla.) Ruiz, et Pav. fl, per. 1. p. 13. t. 17. Hook. exot. bot. 3044. D. Don, in Sweet, fl. gard. n. s. no. 201.

LIN, SVST. ***Didndria,*** *Monogtjnia.* Calyx 5-parted, nearly equal. Corolla **with** a narrow, short tube, and a **4-parted,** irregular, shapeless limb, **which** is plicate in aestivation. Stamens 4, the 2 upper ones sterile ; filaments altogether adnate ; anthers inserted by the base, 2-celIcd ; celJs confluent at apex, Ovarium 2-cclled, seated on a fleshy disk ; stigma compressed, obtuse : lobes connate. Capsule 2-celled, many-seeded ; valves bifid. Dissepiment parallel. Placentas 2, spongy. Seeds cochleate, tubercled. Albumen fleshy. Embryo arched, with a cylindrical, obtuse radicle, which is twice as long as the cotyledons.—Annual glandular herbs, natives of Chili. Leaves bipinnatifid. Flowers somewhat racemose, variegated. A peculiar acid secretion is given out by the glandular hairs, first pointed out by Miss Murray, a young lady of eminent botanical taste and knowledge.

1 *B.* PiNNA'ius{Ituiz. et Pav. fl. per. 1. p. 13. t. 17.) fructiferous peduncles inflexed at top, secund ; lateral segments of the lower lip of the corolla longer than the intermediate one, which is obcordate : upper segment of the corolla **cuneate,** emarginate. ©. H. Native of Chili. Hook. exot. fl. 73. Ker. bot. reg. 725. Hook. bot. mag. t. 2404. Corolla rose-coloured, almost approaching to white towards the centre ; the 2 lateral segments cut into blunt, spatidate, sometimes emarginato lobes ; the **lower** iip deep, red dish-purple ; the lower part of the upper segment yellow and spotted.

Far. ($, humilis (Lind!. bot. reg. 1562. D. Don, in Sweet fl. gaTd, t. 197.) stature more humble; leaves lyrate : segments roundish, crenated, or entire ; racemes crowded, 0 H. Corollas as in the species.

PhnatcAcaved Schizanthus. Fl. June. Oct. C!t. 1..32. PI 2 feet.

2 S. roRRiGENS (Graham, in Hook. exot. fl. t. 86.) fructiferous pedicels spreading, straightish; tube of corolla shorter than the calyx; lateral segments of the lower lip longer than the middle one: upper segment oblong, obtuse. 0. H. Native of Chili. Hook. bot. mag. 2521. **Lateral** segments of corolla doubly lobed ; lobes bifid, obtuse, but not deep. Lower lip of flower violet or purple ; **the** rest of the corolla pale red, except the centre of the upper segment, which is yellow.

*Spreadhig-nci]*uncled Schizanthus. Fl, June, Oct. Clt. 1822. PI. 2 feet.

3. S. RETITSUS (Hook. bot. mag. 3045. Lindl. bot. reg. 1544. D. Don, in Sweet, fl. gard. n. s. t. 201.) fructiferous peduncles erect; tube of corolla longer than the calyx; lateral segments of the lower lip shorter than the middle one, which is sagittate; upper segment rhomboid-oblong, retuse. ©. H. Native of the Andes *of* Chili, Dr. Gillies. Plant lively green. Leaves like those of the other species, deeply and interruptedly pinnatifid, almost pinnate, similar to those of *Tansy ;* the segments lanceolate, rather blunt; and the primary ones deeply pinnatifid. Corolla pale violet; the lateral segments of an uniform lake colour, doubly 2-lobed ; the lobes blunt, unequal, and divaricate ; lower lip of a deep reddish purple, tripartite; the lateral segments linear, obtuse : the upper segment of the corolla yellow, marked with dark brown spots, veiny beneath, the edges revolute, with a cucullate base ; the ends lilac.

Betuse-fiowered Schizanthus. Fl. June, Oct. Clt. 1831. PI. *2* feet.

4 S. HOOKE'RI (Gillies, mss. Graham, in edinb. phil. journ. 1830. Hook, in bot. mag. 3070.) pedicels erect; tube of corolla much longer than the calyx, and about equal in length to the limb ; middle segment of the lower lip bicornute, much longer than the lateral ones, which are linear ; upper segment, or upper lip long-acuminated. ©. H. Native of Chili. The whole corolla is of a pale rose-colour, except the middle of the upper segment, which is yellow. Leaves interruptedly bipinnatifid, like those of the other species.

Hooker's Schizanthus. Fl. June, Oct. Clt. 1828. PI. 2 feet.

5 S. GRAHA'MII (Hook, in bot. mag. 3044.) fructiferous peduncles erect; tube of corolla equal in length to the calyx; lateral segments of the lower lip equal in length to the middle one, which is bifid: upper lip or segment ovate, acuminated. 0. H. Native of Chili, Dr. Gillies. Lateral segments of the corolla doubly bifid, obtuse, like those of other species, *of* a lilac coleur, as well as the lower lip: upper lip or segment yellow, tipped with lilac. Leaves like those of the other species.

Graham's Schizanthus. Fl. June, Oct. Clt. 1831. PI. *2* feet.

Cult. Schizanthus is a genus of the most elegant, most handsome, and showy annual plants. They succeed well if the seed be sown in the open border early in spring; or the plants may be reared in autumn, and preserved in a greenhouse or frame during winter if they are wanted to blossom early in summer; they may also be reared on a hot-bed in early spring, and the sets in part planted out in the open border, and the remainder grown singly in pots, and placed in the greenhouse. A light fresh earth, not too rich, will be found to suit the species best; and if they are to be kept in the greenhouse, a free admission of air and light is absolutely necessary to preserve them in health and vigour, and to give the flowers their proper tints of colour.

XXIII. SCOPO'LIA (named in honour of John Anthony Scopoli, a celebrated professor, and author of Methodus Plantarum, in 8yo. Vienna, 1754, Flora Carniolica, 1 vol. 8vo. Vienna, 1760, and a second edition in 1772, and several other botanical works.) Jacq. obs. 1. p. *32.* t. 20.—Scopolina Schultes, cestr. fl. ed. 2d. vol. 1. p. 335.—Hyoc^amus Scopolia, Lin.

LIN. SYST. *Pentdndria, Monogynia.* Calyx campanulate, 5-cleft, miuic. Corolla campanulate, 5-cleft, 3 times longer than the calyx; segments obtuse, rather deep. Stamens approximate, bent towards the lower side of the corolla. Capsule circumcised, or opening transversely. Seeds reniform, scabrous. —An erect, glabrous plant, with many stems rising from the same root, which are bifid at top. Leaves petiolate, wrinkled a little, alternate, solitary, or twin. Flowers shc~n have a ver) pedunculate, drooping, rising from the two as the campanulate, dingy, or dusky purple. -»ceed best.^lf^'

1 S. CARNIOLICA (Jacq. obs. 1. p. 32. t. 20.) ,ttings. St *of* Carniola, Hungary, Bavaria, &c. in woods., Scopolia, Lin. spec. St. Hil. 20. t. 6. Sims, 1126. Scopolina atropoides, Schultes, cestr. fl 844. Rcem. et Schultes, syst. 4. p. 312. Leaves entire: cauline ones alternate, solitary; but those fork of the stem are 3 in a whorl, or 3 together : on the branches they are twin, having a solitary, pedunculate, drooping flower rising from between each of the pairs *of* leaves.

Carniolian Scopolia. FL April, May. Clt. 1780. PL 1 foot.

Cult. A light dry soil, and a shady situation suit this plant best. It is very desirable, as it flowers early in spring when very few hardy herbaceous border flowers are in blossom. It is easily increased by divisions *of* the root.

XXIV. PHYSOCHLATNA (from *tyvo*, physa,* a bladder ; and *yXaiva, chlaina,* an outer garment ; in reference to the inflated calyx.) Hyoc^amus species of authors.

LIN. SYST. *Pentandria, Monogynia.* Calyx sub-inflated, 5-toothed; teeth ovate, obtuse. Corolla campanulately funnel-shaped, widening gradually to the mouth, slightly 5-lobed; lobes short, obtuse. Stamens *5,* exserted ; filaments fixed to the bottom of the corolla, hairy at the base. Stigma dilated. Anthers dehiscing lengthwise at the sides. Capsule similar to that of *Hyocijamus.*—Herbaceous perennial plants. Stems simple, many from the same root. Leaves alternate, solitary, entire. Flowers fascicled, capitately corymbose, terminal. Corollas dark purple.

1 P. PHYSALOI'DES ; leaves petiolate, ovate, acute, somewhat repand, or quite entire; flowers pedicellate, terminal, capitately corymbose ; genitals a little shorter than the corolla; fructiferous calyx inflated, angular, glabrous, mutic, much larger than the capsule. %. H. Native of several parts of Siberia, as among rocks on the mountains at the river Tscharysch and Irtysch ; and also on Mount Arkat, in the Kirghisean steppe. Hyoc^amus physaloides, Lin. amoen. acad. 7. t. 6. *f. I.* Curt, bot. mag. t. 852. Sweet, fl. gard. t. 13. A'tropa physaloides, Georgi, beschr. russ. Reichs. nachtr. p. 261.—GmeL fl. sib. 4. p. 93. no. 49. Root creeping a little. The whole plant glabrous. Stems simple or branched, scaly at the base. Leaves dark green, smoothish, ovate, truncate at the base, quite entire or repand. Corolla purplish-violet.

Physalis-Uke Physoclaina. Fl. March, April. Clt. 1777. PL 1 to U foot.

2 P. ORIENTALS ; leaves petiolate, deltoid-ovate, repand, or entire, acute, downy ; flowers pedicellate, fasciculately and capitately corymbose; genitals a little exserted ; fructiferous calyx tumid, downy, mutic, much larger than the capsule. %. H. Native of Iberia, in hidden places about Narzana. Hyocyamus orientalis, Bieb. fl. cauc. 1. p. 164. Sweet, fl. gard. t. 12. Sims, bot. mag. 2414. Hyocyamus orientalis betae folio tuberosa radice, Tourn. cor. p. 5. Stem villous. Corolla pale purplish-blue. This is very like *P. physaloides ;* but differs in the higher stature, and more robust habit; in the herb being pale green, and more downy ; the calyx being longer ; and in the tube of the corolla widening gradually to the top; in the genitals being usually exserted ; and in the calyx being less inflated, and hardly twice as long as the capsule.

Oriental Physoclaina. FL March, May. Clt. 1821. PL 1 to 1| foot.

Cult. The species of *Physochlaina* are extremely desirable plants; being early flowerers, and elegant when in blossom. They will grow in any soil, and are readily propagated by divi-

of the root, or by seed. They are well adapted for decoration; borders in early spring.

f. HYOCY^AMUS (from *hg hog, hys hyos,* a hog; and *amos*, a bean, hog-bean ; these animals, according to and u fi it, unless drenched with water without t. 109 T. gen. no. *24i7,* Schreb. gen. no. *333.* Juss. gen. Usteri, p. 139. Gsertn. fruct. 1. p. *369. t. 76.* Perm SYST, *Pentdndria* > *Monogynia.* Calyx tubular, 5-cleft, Ventricose at the base. Corolla campanulately fun- oblique, 5-cleft; segments obtuse, one than the rest. Stamens inclinate. Capsule immersed in the calyx, 2-celled, many- fixed to the dissepiment. Seeds clammy, downy, fetid, canes- decurrent, stem-clasping, sinuated. Flow- rows veined with purple, or yellow with a dark spec. 257. hort. cliff. *56.* fl. suec. no. branched ; leaves sessile, sessile ; corolla stem-clasping, sinuated ; flowers almost sessile ; calyx mucronate. *$* . H. Native **habitation of man; in** among rubbish, and on dunghills. Oed. *52t* Smith engl. bot. t. 591. Pursh, fl. amer. Woodv. med bot. 143. t. *53.* Blackw. herb. leaves pinnatifidly sinuated. Corollas pale beautifully reticulated with purple veins; and **bottom. Linnaeus says it is not touched by** perhaps the goat. The English name of derived from its being noxious to poultry. plant is called *Bthenhraut;* in Dutch *Buhen-* and *Honsebane;* in Swedish *Bolwort La Jusquame;* in Italian *Guisquiamo,* Spanish *Helena* and *Velena;* in Portuguese *amo ;* in Russian *Belena.*

The leaves have a strong and peculiar smell when like tobacco especially when burnt; and on as if they contained a nitrate. From the others, it appears to have been long of medicine. By Celsus it was applied ex- in ophthalmiae, for allaying the pain of internally as an anodyne. Its virtues principle discovered by M. Brandes, The use of henbane was for a long until revived by Dr. Stoerk, of where there are cases where an anodyne is requisite ; and to the use of opium, it is now much dose it often produces sweat, and pustules, generally sound sleep, suc- and recruited vigour of the body ; instead of these, it sometimes gives rise be, and general uneasiness. With some indi- vomiting, cholic pains, &c. In excessive of the eyes, convulsions, and death. it is powerful anodyne; and, like effects, having rather a employed in wandering rheumatic pains, in indurations of the mammae, painful swellings—whether schirrous or not, scrofulous and cancerous ulcers, &c.: under the form of a cataplasm of the bruised leaves, with bread and milk ; of an ointment made of powder of the leaves, with wax and oil; of a simple powder sprinkled on the sore, or of a decoction with milk as an injection. An infusion, prepared by digesting the bruised leaves in olive oil, is also usefully applied in inflammations of the bowels, kidneys, urethra, &c. An extract from the leaves, or from the seeds, is the form in which it is given internally ; and it has been used with advantage in a variety of nervous affections, as mania, melancholia, epilepsy, hysteria, &c. ; in glandular swellings ; in obstinate ulcerations ; to allay inordinate action, or to mitigate pain. Its dose may be gradually increased from half a grain : Cullen pushed it to the length of 30 grains to a dose.

The extract of henbane has lately been much used by oculists, for dilating the pupils of the eyes ; in order to facilitate the extraction or breaking down of the cataract; to diminish sensibility ; to destroy adhesions ; to reduce protrusions of the iris, and to dilate contraction of the pupil. The mode of application is by dropping a few drops of solution of the extract into the eye, or applying them with a camel's-hair pencil. The greatest effect is produced in about 4 hours, and it is generally over in *12* hours; and vision is not impaired during its action.

Black or Common Henbane. Fl. June, July. Britain. PL *2* to 4 feet.

2 H. AGRE'STIS (Kit. ex Schultes, oestr. fl. ed. 2d. p. *383.)* stem simple, downy ; leaves smoothish, sessile, semi-decurrent, sinuately toothed ; flowers sessile ; corolla reticulated. ©. H. Native of Bohemia, Austria, Hungary; as well as of the North of India, in corn-fields. Mart, et Koch. fl. germ. *2.* p. *225.* Sweet, fl. gard. 1. t. *27.* H. niger, Roxb. fl. ind. *2.* p. *237.* H. niger, /J, agrestis, Nees, in Lin. trans. 17. p. *77.* H. niger, /3, annuus, Sims, bot. mag. 2394. H. Bohemicum, Schmidt, fl. bohem. no. 230.? Flowers rather smaller than those of *H. niger,* and darker in colour.

Field Henbane. Fl. April, May. Clt. 1820. PI. 1 foot.

3 H. PA'LLIDUS (Waldst. et Kit. ex Willd. enum. 1. p. *228.)* leaves stem-clasping, angular; radical ones angularly toothed ; flowers sessile; corolla one colour. ©. H. Native of Hungary. Very like *H. niger;* but differs from it in the root being annual, and in the flowers being yellow, without any purple veins.

Pafe-flowered Henbane. Fl. April, May. Clt. 1815. PI. 1 to 2 *feet.*

4 H. A'LBUS (Lin. spec. *257.* hort. cliff. *56.)* leaves petiolate: lower ones orbicular, entire; the rest from cordate to ovate at the base, sinuated; flower sessile. ©. H. Native from the South of Europe to Tauria, among rubbish, on walls, and on road sides near the sea. Lam. ill. t. 117. f. 2. Mill, fig. t. 149. Sibth. et Smith, fl. grsec. t. 230. St. Hil. pi. fr. 45. t. 5.—Bull. herb. t. 99.—Sabb. hort. 1. t. 191.—Blackw. t. 111.—Besl. eyst. 8. t. 8. f. 2. Plant clothed with white hairs. Calycine segments ovate: lower ones the smallest. Corolla yellow, or greenish-yellow, with a white or greenish bottom. The corolla varies, with the base dark purple or green; hence Miller has made two species, *H. major* and *H. dlbus.* The first of these having the flowers on short pedicels, of a pale yellow colour, with very dark purple bottoms ; and growing naturally on islands of the Archipelago. This is the H. major, albo similis, umbilico floris atropurpureo, Tourn. cor. p. 5; the plant figured in Flora Grseca. The second has the flowers in larger bunches, sessile on the ends of the branches, of a greenish-yellow colour, with green bottoms. T us is a native

of the South of Europe ; and is the H. major albo similis, urabilico floris virente, Jussieu, and is the plant figured by Miller. There is also the var. minor. Clus. hist. 2. p. 84. f. 1.

White Henbane. Fl. July, Aug. Clt. 1570. PI. 1 to 2 feet.

5 H. VA'RIANS (Vis. in bot. zeit. 1829. p. 7.) plant woolly, viscid ; leaves petiolate, sinuately lobed, obtuse : lower ones subcordate: floral ones ovate, attenuated at the base, almost entire ; flowers racemose, secund, almost sessile : lower ones on long pedicels; tube of corolla incurved, dark purple inside, at length becoming green ; limb irregular ; the 3 superior lobes large and flat. ©. H. Native of Dalmatia, on walls, and in waste places.—An intermediate plant between *H. dlbus* and *H. aureus.* Anthers lilac, at length white.

Varying Henbane. PI. 1 to 2 feet.

6 H. AU'REUS (Lin. spec. 257. syst. 220. hort. cliff. *56.)* leaves petiolate, cordate-ovate, acute, angularly toothed ; flowers pedicellate ; the 3 larger segments of the corolla undulated. %. F. Native of the Levant, Candia, and the South of France. Curt. bot. mag. 87. Sibth. et Smith, fl. grsec. t. 231.—Bull, herb. t. 20. H. Creticus luteus major et minor, Tourn. inst. p. 118. H. Créticus, Park, theatr. 362. f. 8.—Mor. hist. sect. *5.* t. 11. f. 4.—Alp. exot. 99. t. 98. The whole plant is clothed with clammy hairs. Leaves undulated. Teeth of calyx short, roundish-ovate, mucronate. Corolla yellow, with a deep violaceous bottom ; limb cleft at the side. Stamens and anthers violaceous. Capsules drooping.

FIG. 41.



Golden-Cowered Henbane. Fl. March, Oct. Clt. 1640. PL 1 foot.

7 H. SENECIONIS (Willd. enum. 1. p. 228.) leaves petiolate, somewhat 3-lobed, deeply toothed; flowers pedicellate; segments *of* the limb of the corolla equal, flat. *2/.* F. Native of Egypt. The whole plant is clothed with clammy hairs. Calycine segments ovate, acute. Corolla yellow, purplish in the bottom, as well as the base of the stamens; limb not cleft at the side. Anthers white.

Groimdsel-like Henbane. Fl. March, Oct. Clt. 1812. PL 1 foot.

8 H. MI/TICUS (Lin. mant. p. 45. syst. 220.) leaves petiolate, ovate, acute-angled ; flowers pedicellate; calyxes mutic; bracteas undivided. *$* . H. Native of Egypt and Arabia ; and the Levant. H. albus jEgypticus, Alp. exot. 193. t. 192.? H. minor, Mill. diet. no. 4. H. betsefolius, Lam. diet. 3. p. 329. H. minor, albo similis, umbilico floris atropurpureo, Tourn. cor. p. 5. Plant downy. Corolla yellow outside, dark purple inside ; the 2 lower segments white, smaller, at length the whole becomes white ; limb cleft. Stamens purple.

Ato'c-calyxed Henbane. FL March, April. Clt. 18*2. PL 1 foot.

9 H. DAT6R;E (Forsk. a^gypt. arab. p. 45.) leaves petiolate, ovate-lanceolate, a little toothed ; flowers nearly sessile; floral leaves or bracteas entire, *fy* • *• Native of Egypt, in deserts about Cairo. Plant villous. Calyx 5-toothed. Flowers disposed in long secund spikes, 3 at the top of each stem. Corolla villous outside, and yellowish, violaceous inside, white between the lower segments. Stamens villous at the base. The corolla in the plant cultivated is yellow, with a dark purple bottom, very like those *of H. aureus.* It is perhaps the Nepenthes ot Homer.

Datora Henbane. Fl. May, July. Clt. 1829. Shrub *U* foot.

10 H. CANARIE'NSIS (Ker. bot. reg. t. 180.) shrubby, pilose; lower leaves petiolate, cordate-ovate, angular, obtuse: nora^ ones ovate or elliptic, entire ; flowers pedicellate. J? • G. Native of the Canaries. Corolla yellow, with a dark purple, o almost black eye or throat.

Canary Island Henbane. FL Year. Clt. 1816. Shrub Jj foot.

11 H. PUSI'LLUS (Lin. syst. 220. mant. p. 339.) leaves petiolate, oblong-lanceolate, a little toothed; flowers pedicellate; teeth of calyx mucronulately and spinosely-cuspidate. ©• Native of Persia. Lin. hort. cliff. *56.* ups. p. 44.—Plukn. phyt. t. 37. f. 5. Plant pilose. Leaves tapering into the petioles ; floral ones entire. Calyx nearly as long as the corolla. Corolla small, yellow, with a violaceous bottom ; the lower side divided beyond the limb, ex Lin.

Least Henbane. Fl. July. Clt. 1691. PL J to 1 foot.

12 H. MICRA'NTHUS (Ledeb. mss.) leaves petiolate, oblong: radical ones pinnatifid : cauline ones toothed, or entire; flowers nearly sessile; teeth of calyx mucronate. ©. H. Native of Altaia, on the dry and rocky mountains of Arkaul, and Dolenkara, Tschingis-tau; and on the mountains of Kalmy-Tologoi, in the Kirghisean Steppe, Falck. H. pusillus, Led. fl. alt. 1. p. *228f* but not of Lin. Stem simple, or branched, sparingly pilose. Leaves nearly glabrous. Calyx attenuated towards the base; teeth elongated, lanceolate, mucronate. Corolla small, hardly longer than the calyx, yellow, with a deep violet bottom; the lower side cleft even to the middle of the tube. Capsule shorter than the calyx.

Small-flowered Henbane. Fl. June, July. Clt. 1829. PL ± foot.

13 H. AURICULATUS (Tenore, fl. nap. prod. p. 16. syn. p. 38.) stem erect, simple ; leaves ovate, petiolate, sinuated, acute ; petioles winged, auricled at the base ; flowers sessile ; corollas yellow, reticulated with purple veins at bottom. 0. H. Native of Naples, in the fields of Abellino.

Auricled-petioled Henbane. FL June, July. Clt. 1823. PL 1 foot.

Cult. The species of Henbane are plants of the most easy culture. The seeds of the annual and biennial kinds only require to be sown in the open ground. The half shrubby, or herbaceous kinds are well fitted for decorating rockwork during summer; but in winter they need protection by being covered with haulm of other plants, or by being preserved in pots in the green-house ; and they are readily increased by cuttings and seeds.

TRIBE III. DATITREJE (the plants contained in this tribe agree with the genus Datura in the characters given below.) Limb of corolla plicate in aestivation, repandly 5-10-toothed. Capsule coriaceous, succulent, 2-celled, 4-valved ; placentas septiform, free. Seeds reniform. Stamens 5, inclosed.

XXVI. DATURA (said to be a corruption of the Arabic name of one of the species *tatorah.)* Lin. gen. 246. Schreb. gen. 332. Juss. gen. 125. ed. Usteri. p. 139. H. B. et Kunth, nov. gen. amer. 3. p. 5. Nees, in Lin. trans. 17. p. *73.* —Stramonium, Tourn. inst. 43, 44.

LIN. SYST. *Pentdndria, Monogijnia.* Calyx tubular, angular, 5-toothed, falling off at top, leaving only the orbicular base ; limb 5-cleft, irregular. Corolla conically funnel-shaped ; limb plicate, repandly 5-10-toothed ; teeth drawn out. Stamens

inclosed, Stigma 2-lobed. Capsule coriaceous, succu- free, 2-celled, 4-valved, many-seeded. Placentas septiform, ila ' ' reniformr—Poisonous annual herbs. Flowers ar, solitary, white, or violaceous.

Sect. 1. STRAMONIUM (a syncope of *trrpvxvov fxavitcov,* the of tV, i lame for the madapple ; given to this plant on account acut being the size of a small apple Limb of calyx tub 5-angled and acute ty 5-lobed, or 5-toothed at apex, Stamens & of corolla acutely 5-angled, or 5-toothed. celled Inclosed 5 anthers remote. Capsule erect, ovate, 2- apex> but 4-celled beneath the apex> (but in *D.* press d Vfed at the base,) dehiscing regularly. Seeds com- LPIXe blac> opaque, wrinkled.—Herbaceous annual plants. Ves ovat toothed. Flowers oblique.

§ 1. *Corollas purplish outside, and white inside.*

D. DI,SCOLOR (Bernhardi, in Linnsea, 8. p. 138.) leaves ovate, toothed, clothed with hoary down beneath ; the W tA cated with prickles. 0. H. Native of folio T Stramonium americanum minus, Alkekengi Curassa rn n8t, ? U9, Boerh ind< l, P- 26U Stramonium with a fiJJa humilior> hyocyami folio, Herm. par. bat. p. *233,* t.

o-co/oWmZ-flowered Thorn-apple. PL 2 to 3 feet.

§ 2. *Corollas white.*

D. angulari NERMIS (Jacl' hort. vind. 3. p. 44. t. 82.) leaves ovate, H. V f- toothed, glabrous ; capsule smooth, unarmed. 0. spec. i. V of Abyssinia. D. laevis, Lin. suppl. 146. Willd. *Unarm'd* Stramonium laeve, Moench, meth. p. 456. Pi. 2 feet Psuled Thorn-apple. Fl. June, Sept. Clt. 1780.

toothed c Rox n amcen. 3. p. 403.) leaves ovate, angularly Une qual' r ei ormat he base, glaucous ; capsule furnished with Native of n f tle upper prickles large and erect. ©. H. Stramni6ni, hinchina and Nipaul. Mill. diet. no. 4. D. Stram6niu canscens> Wall, in Roxb. fl. ind. 2. p. 229. hist. 3, fiA7 Zan' hist. ed. Mont. p. 212. t. 162. Mor. inst- 119] Sect* 15, t- 2- f- 4- Bocc. rar. p. 50. Tourn. feet. ?erce Thorn-apple. Fl. July, Sept. Clt. 1731. PL 2 to 3

toothed, cnn AV5NIUM ^Lin- spec, 255-) leaves ovate, angularly- hishe<* with orm i at the base> smoothish, green; capsule fur- Native0f A y 6qual sized spines or P"ckles. 0. H. ?nd north nr!e!IC a> but now found almost throughout Europe, Gills> having and Africa> among rubbish, and on dung ^ man , L. ?Sca Pe(1 from gardens ; always near the habitation * P- Hi iZ, et Pav- fl* Per- 2- P- 15. Pursh, fl. amer. sept. /7, Sven«L u U, 43, Oed- fl- dan- t- 436, Woodv. med. Hull« herb f 124, Hayne, arz. 4. t. 7. Blackw. offF. t. 313. ^rnonium*- . 13- Plenck, off. t. 96.—Sabb. hort. 1. t. 92. m> Scon vulgare, Mcench. meth. p. 456. Stramonium fce ti- fructs* ^. p gf/ 11 2* P- 252- Stramonium vulgatum, Gsertn. P* ^56. j\ t# ^^* Stramonium spinosum, Lam. fl. fr. 2. Sieb« herb , uncata» sieb. coll. sem. D. pseudo-stramonium, tpinoso obln 28G- D- Capensis, Hort. Stramonium fructu 586. D i?ngo, flore albo, Tourn. inst. p. 119.—Hall. helv. no. He^n- »*x, 9 arUm> BesLevst. 3. 2. fol. 12. f. 1. a. Thlapatl, The lea ^78, With a %ure.

Sagreeable **- ^ommon *Thorn-apple,* or *Stramonium* have a voi,. IV% smell and nauseous taste. Every part of the plant is a strong narcotic poison, producing vertigo, torpor, and death. Dr. Barton mentions the cases of two British soldiers, who ate it by mistake for *Chenopbdium álbum;* one became furious, and ran about like a madman; and the other died with all the symptoms of tetanus. The best antidote to its effects is vinegar. The seeds contain the narcotic principle which pervades the whole plant, but in a more uniform degree than the other parts, and hence are more to be depended upon for internal use. An excellent analysis of the seeds has been published by Mr. Brandes, in Buchner's repertorium for 1821, and in which it is shown that its peculiar properties depend upon a peculiar alkaloid called Daturia.

Dr. Stoerk first tried Stramonium as a remedy in mania and melancholia with considerable success. It has also been employed in convulsive and epileptic affections. Dr. Barton of Philadelphia gives it in powder, beginning with doses of a few grains, and increasing them in some days to the extent of 15 to *20* grains. In a case in which it was exhibited to the extent of 30 grains it dilated the pupil of one eye, and produced paralysis of the eyelids, which was removed by a blister. Hufeland gave it in the form of a tincture prepared of two ounces of the seeds in four ounces of wine, and one of diluted alcohol, in diseases of the mind. The inspissated juice of the leaves has been most commonly used, but its exhibition requires the greatest caution. At first a quarter of a grain is a sufficient dose. An ointment prepared from the leaves has been said to give ease in external inflammations and haemorrhoids. And the bruised leaves, according to Plenck, soften hard, inflamed tumours.

The smoke of *Stramonium* has been much extolled for the cure of asthma. Its use in this manner has been derived from the East Indies, where, however, other species of *Datura* are employed. It is the root and lower part of the stern which is used in this way. This is dried quickly, and cut into slips, and used in the manner of tobacco. The smoke excites a sense of heat in the chest, followed by copious expectoration, and sometimes attended with temporary vertigo and drowsiness. In some cases a perfect cure is effected, but more commonly the relief is only temporary. Dr. Marcet, med. chirurg. trans. 7. p. 551, used Stramonium in the form of extract, and the result of his experience is, that the most common effect of it, when administered in appropriate doses from -L to 1 grain, in cases of chronic disease, attended with acute pain, is to lessen powerfully, and almost immediately, sensibility and pain; and it almost always excites those symptoms which are produced by intoxication.

Stramonium, or Common Thorn-apple. Fl. July, Sept. Britain. PL *2* to 3 feet.

5 D. TRAPE'ZIA (Nees, in Lin. trans. 17. p. 74.) leaves ovate, trapezoid, acute, repandly-toothed, and are, as well as the stem, downy ; fruit furnished with nearly equal spines or prickles. 0. H. Native of the East Indies, on the banks of the Irrawaddy, Gomez. D. Stramonium, Wall. cat. suppl. no. 278.

Trapezoid-leaved Thorn-apple. PL 2 to 3 feet.

§ 3. *Corollas violaceous. Stems purplish.*

6 D. TA'TULA (Lin. spec. *256.* Mill. diet. no. *2.* Sweet, fl. gard. t. *S3.)* leaves cordate-ovate, angularly toothed, unequal at the base, glabrous; capsule furnished with nearly equal spines or prickles. ©. H. Native of America, but has now become naturalized in almost all the places along with *D. Stramonium,* but is less frequent. Pursh, fl. amer. sept. 1. p. 141. Stramonium Tatula, Moench, meth. p. 456. Stramonium fructu spinoso oblongo, flore purpureo, Tourn. inst. p. 119.

Tatula, or Purple Thorn-apple. Fl. July, Sept. Clt. 1629. PL 2 to 3 feet.

7 D. QUERCIFO'LIA (H. B. et Kunth, nov. gen. amer, 3. p. 7.) Jeaves sinuately pinnatifid, hairy on the veins beneath ; capsule furnished with unequal prickles : the upper prickles the largest. ©. H. Native of Mexico, in temperate places near Zelaya and Molino de Sarabia, at the altitude of 930 hexapods. Branches hairy.

Oak-leaved Thorn-apple. PI. 1 to 2 feet.

SECT. II. DU^NTRA (an alteration of the generic name.) Limb of calyx tubularly ventricose, angular, or terete, 5-lobed at apex. Margin of corolla 5-10-toothed. Stamens inclosed, or a little exserted ; anthers remote. Capsule nearly globose, more or less drooping, or reflexed, 2-celled at apex, but 4-celled below the apex, dehiscing irregularly. Seeds pale, or brownish opaque, compressed, flat in the disk, convex on the margin, surrounded by 3 wrinkled ribs.—Annual herbs. Flowers oblique, showy.

8 D. A'LBA (Nees, in Lin. trans. 17. p. *73.)* leaves ovate, acuminated, repandly toothed, unequal at the base, and are, as well as the stem, smoothish ; stamens inclosed ; fruit prickly. ©. H. Native every where in the East Indies ; as of Nipaul, Silhet, Tavoy. D. Me'tel, Roxb. fl. ind. 2. p. 238. Wall. cat. *2639,* Fleming, in asiat. res. 11. p. 165. Hardw. in asiat. res. 6. p. 351. under D. Stramonium. Stramdnia 1'ndica prima seu Du'tra alba, Rumph, amb. 5. p. 242. t. *87.* f. 1. Humalu, Rheed. mal. *2.* p. 47. t. 28. Corollas white.

Wh'te-flowered Thorn-apple. PI. 2 to 3 feet.

9 D. FASTUO'SA (Mill. diet. no. 6. Lin. spec. p. *256.)* leaves ovate, acuminated, repandly-toothed, unequal at the base, and are, as well as the stem, downy ; fruit tubercled. 0. H. Native of the East Indies, and Egypt, and of Caraccas. Roxb. fl. ind. 2. p. 238. Stramonium fastuosum, Mcench, meth. p. 456. D. Coutarena, Alp. exot. p. 181. icone. D. iEgyptiaca, Vesl. pi. aegypt. p. 203. icone.—Lob. icon. 264. Corolla violaceous outside, and white inside; teeth of the limb subulate.

Var. j3 ; corollas double and triple, purple outside, and white inside. 0. H. Native of Malabar. Stramonium Malabaricum, fructu glabro, flore duplici et triplici, Tourn. inst. 119. —Sabb. hort. rom. 1. t. 93. Mudela-Nila Hummatu, Rheed. mal. 2. p. 51. t. 30.

Var. y, rubra (Bernhardi, in Linnsea, 8. p. 142.) corolla violaceous ; fruit muricated ; leaves dentately sinuated. 0. H. Native of the East Indies. Stramonium fructu spinoso rotundo; flore violaceo simplici, Tourn. inst. 118. There is also a double flowered variety of this, the Dutra rubra, Rumph. amb. 5. p. 243. t. *87.* f. 2. Stramonium seu Datura iEgyptiaca flore pleno Ponse, Mor. hist. 3. p. 15. t. 2. f. 9. Stramonium fructu spinoso rotundo, flore violaceo duplici triplicive. Tourn. inst. 119.

Var. S, parviflbra (Nees, in Lin. trans. 17. p. 74.) corolla smaller; calyx more than twice as short as the tube of the corolla. ©. H. Native of the East Indies, at Prome, Gomez. Wall. cat. suppl. no. 278.

Proud Thorn-apple. Fl. July, Sept. Clt. 1629. PI. 2 to 3 feet.

10 D. DU'BIA (Pers. ench. 1. p. 216.) leaves quite entire, glabrous, as well as the stem; limb of corolla 5-6-toothed ; stamens inclosed; capsule smooth, unarmed. 0. H. Native of the East Indies. D. fastuosa, e>, capsulis muticis, Poir. diet. 7- P- 4^1 ' D. Tatula, />, Poir. 1. c. D. Hammatu, Bernhardi, in Linnsea, 8. p. 141. Stramonium Malabaricum, fructu glabro, flore simplici violaceo, Tourn' inst' 119' N,la Hummatu, Rheed. mal. 2. p. 49. t. *29.* Corolla violaceous. Perhaps a variety of *D. fastuosa.*

Doubtful Thorn-apple. PI. 2 to 3 feet.

11 D. MURICA'TA (Bernh. sem. 1818. gart. mag. 4. p. 163, with a figure. Link. enum. 1. p. 177.) leaves ovate, repand, when young toothed, glabrous ; fruit muricated with strong short prickles, erectish. ©. H. Native country unknown, but probably of America. D. hiimilis, Desr. hort. par. D. hybrida, Tenore. ? D. lseVis, Schkuhr, handb. 1. p. 140. under D. fastuosa. D. fastuosa, fl. albo, Mcench. meth. 456. D. Metel, and D. innoxia, Mill. diet. no. 3 and 5.—Knor. del. 1. t. s. 12—Besl. hort. eyst. 2. fol. 11. f. 1. a. Corolla Ions?, white. The whole plant green. Leaves unequal at the base. Perhaps the same as *D. alba,* Nees.

Muricated-fruited Thorn-apple. Fl. July, Sept. Clt. 1820. PI. 2 to 3 feet.

12 D. ME'TEL (Lin. spec. p. 256.) leaves cordate, quite entire, or a little toothed, and are, as well as the stem, downy; limb of corolla 10-toothed ; calyx terete; capsule furnished with prickles. 0. H. Native of the East Indies, in hot regions ; Africa, and the Canary Islands. Sims, bot. mag. t. 1440. D. Metel, and D. fruticosa, Horn. hort. hafn. 1. p. 212. D. Metel, et D. innoxia, Mill. diet. nos. 3 and 5, partly. Dutra nigra, Rumph. amb. 5. p. 243. Stramonium, fructu spinoso rotundo, flore albo, Tourn. inst. p. 118.—Ludw. ect. t. 158.—Knip. cent. 1. t. 24. D. Stramonium, Thunb. jap. p. 91, ex Lour. Corollas large, white.

Metel, or Hairy Thorn-apple. Fl. June, Sept. Clt. 1596. PL 2 feet.

13 D. GUAYAQUILE'NSIS (H. B. et Kunth, nov. gen. 3. p. 8.) leaves ovate, very unequal at the base, quite entire, or obsoletely and angularly toothed, downy, as well as the stem and branches ; limb of corolla angularly 10-toothed; stamens a little exserted; capsule muricately spinose. 0. H. Native of America, in humid places near Guayaquil. Stem and branches reddish. Calyx tubular, downy ; limb cleft on one side. Corolla large, white. Perhaps a variety of *D. Metel.*

Guayaquil Thorn-apple. Fl. July, Sept. Clt. 1826. PI. 2 to 3 feet.

SECT. III. CERATOCAI/LIS (from *Kspag KeparoQ, Jceras keratos,* a horn; and *KavXog, kaulos,* a stem; shape of stem.) Calyx nearly terete, entire, dehiscing by a lateral fissure at the apex. Limb of corolla 10-toothed. Stamens exserted a little ; anthers contiguous. Capsule obovate, unarmed, pendulous. Seeds compressed, subovate, fuscescent, shining, rather scabrous.—An annual herb. Leaves ovate-lanceolate, toothed, hoary beneath. Corollas white, purple outside.

14 D. CERATOCAU'LON (Ort. dec. p. 11. Jacq. hort. schoenbr. 3. p. 48. t. 309.) ©. H. Native of Cuba and Mexico. Hook, bot. mag. t. *3352.* D. macrocaulis, Roth, beitr. p. 159. Stem terete, purplish, dichotomous, horn-formed, pilose at the base. Corolla smaller than that of *Brug?ndnsia Candida,* with a green tube, white limb, and purplish outside, sweet-scented. Capsule size of a nut, glabrous, smooth.

Horn-stemmed Thorn-apple. Fl. July, Sept. Clt. 1805. PI. 2 to 3 feet.

Cult. The seed of all the commoner kinds of *Stramonium* only require to be sown in the open ground in April; but the rarer kinds answer better if reared on a hot-bed, and afterwards planted out in the open border about the middle of May, like other tender annuals.

XXVII. BRUGMA'NSIA (named in memory of Sebald Justus Brugmans, author of Dissertatio de plantis inutilibus et benenatis, 1. fasc. in *8vo.* Groningen, 1783.) Pers. ench. 1. p.

sv / A , in Sweet, fl< Sard- n* s- 272, Roem- et Schultes, *Y*- 4. p. xxiii. Datura species of authors.

INf SYST- *Pentdndria, Monogynia.* Calyx tubular, ventricose, permanent, coarctate at top, and 2-3-5-lobed. Stamens lunnel-shaped, 5-plicate, 5-lobed; lobes cuspidate. Germen thick, ovate, seeded, coarctate; anthers conglutinate. Stigma manlobed, revolute margins. Capsule 2-celled, smooth, on the outside, reniform, obsoletely trigonal, flat convex, and tuberculately wrinkled, a little ribbed on the opposite sides; testa corky, very thick.—Trees or shrubs natives of the warmer parts of the world. Flowers extra-axillary, pedunculate, or from the forks of the branches, as in *Datura,* large, white, or blood red, hanging. Fruit oval, pendulous, golden yellow.

1 B. SUAVEOLENS; leaves elliptic-oblong, quite entire, glabrous above, and scarcely downy beneath; points of corolla and capsule muricated. *h. S.* Native of Mexico, Chili, and the warmer parts of America. Datura suaveolens, Willd. enum. 1. p. 227. Flowers large, white, Sweet-scented Brugmansia. Fl. Aug. Sept. Clt. 1733. Tree 10 to 15 feet.

2 B. CANDIDA (Pers. ench. 1. p. 216.) leaves elliptic-oblong, entire, as well as the petioles and branches, glaucous with pubescence; points of corolla elongated, acute. Native of Granada, Peru, and Chili. Datura candida, Pers. ench. 1. p. 216. Ruiz, et Pav. fl. per. 2. p. 15. t. 128. Willd. enum. 1. p. 227.—Feuill. per. 2. p. 761. t. 46. Calyx 5-cleft. Corollas white, *7-8* inches long, Shrubby 7 to 10 feet.

3 B. SANGUINEA (Pers. ench. 1. p. 216.) leaves sinuately lobed, sub-tomentose, as well as the branches and petioles: points of corolla 1*, Granada, Peru, and Chili. Datura sanguinea, Ruiz, et Pav. fl. per. 2. p. 15. t. 129. Native of New Spain, whence it has been introduced to Chili. Datura sanguinea, Don, Sweet, fl. gard. n. s. t. 272. Datura Willdenowii, Schultes, syst. 4. p. 588. Pav. fl. per. 2. p. 15. H. B. et Kunth, nov. gen. et amer. 3. p. 26. In Peru the Plant is called *Floripondio* and *Campanillas encarnados,* and in New Spain it is called *Bovochevo.* From the bruised leaves an ointment is prepared which is said to possess superior healing properties. Pared, *Q'* and the fruit a highly narcotic liquor is prepared, inches long, pubescent, with 15 straight, pro- yellow, erect, thick and fleshy, with 5 blunt angles, orange Side 5 little furrows towards the base; throat inflated and pitted outside, scarlet, or orange red. Shrubby 10 to 12 feet.

All these species of *Brugmansia* are free flowerers, and are desirable plants for large conservatories, on account of their fine fragrant blossoms. The pet-shaped, white, orange, or scarlet pendulous flowers grow best in a rich soil and should have plenty of water given to them during winter, as they are during summer. They also succeed well in the open ground luxuriantly, and in a warm, sheltered situation; here they grow and flower freely, and the blossoms become larger, more speckled, and brighter than when grown under glass, but here they are liable to be destroyed by severe frosts or winter if not protected. All the species strike readily from cuttings if placed in a moist heat.

XXVIII. SOLANDRA. In honour of JONAS CHARLES SOLANDER, L.L.D. F.R.S., a Swede, and disciple of the celebrated Linnaeus; companion of Sir Joseph Banks in his voyage round the World, and the laborious collector of the botanical descriptions made during that celebrated expedition. His manuscripts are preserved among the mss. in the British Museum, and attest his learning, diligence, and skill.) Lin. fil. in Swartz. act. holm. 1787. t. 11. prod. 42. fl. ind. occ. 1. p. 387. t. 9. Schreb. gen. no. 1732. Correa de Serra, in ann. mus. 8. p. 389. t. 4. f. 1, but not of Lam. Poir. nor Willd.

LIN. SYST. *Pentdndria, Monogynia.* Calyx spathaceous, splitting on one side, 3-5-cleft at apex. Corolla large, clavately funnel-shaped; tube long; throat inflated; lobes fringed, a little acuminated. Berry or capsule globosely conical, 4-celled, many-seeded.—Erect or scandent trees, with broad, alternate leaves, and large, extra-axillary flowers, which are much like those *of Brugmansia.*

1 S. GRANDIFLORA (Lin: fil. in Swartz. act. holm, 1807. p. 300. t. 11.) leaves alternate, close together, viscid, and pubescent, petiolate, obovate-oblong, acuminated; flowers terminal, drooping, usually solitary, rarely *2-3*; anthers a little lunate, 4-cornered, pointed, a little cloven at the base. f?. w. S. Native of Jamaica; climbing and rooting on trees and rocks. Jacq. hort. schcenbr. 1. p. 21. t. 45. Sal. in Lin. trans. 6. p. 100. t. 6. Meen, exot. bot. t. 6. Sims, bot. mag. 1874. Tratt. tab. t. 352. Solándra scándens, Willd. rel. ex Rcem, et Schultes, syst. 4. p. 700. Swártzia grandiflóra, Gmel. syst. p. 360. Datúra sarmentósa, Lam. ill. 2. p. 9. no. 2295. Branches and stem radicant. Leaves, tender branches, and calyxes clothed with viscid down. Calyx and petioles pale, purplish green: the latter tubular, cornered, unequally cloven at 2-3 of the angles. Corolla 7-8 inches Long; tube pale, yellowish green, widening gradually above, 5-cornered; limb white, the undivided part indistinctly 10-cornered, 5 of the corners painted with a dusky purple fillet; the segments are of a purplish colour outside, having the interstices minutely suborbicular at the base, and very finely ciliated. Genitals exserted. Fruit pyramidal, pale, yellowish green, 4-celled almost to the top, then 2-celled. Seeds reniform, sessile. The fruit ripens in August and September, and is of a sweet, sub-acid flavour.

Great-flowered Solandra. Fl. March, April. Clt. 1781. Shrub climbing.

2 S. NITIDA (Zuccagn. cent, in Roem. coll. p. 128. no. 40.) leaves quite glabrous, shining, tapering into the petioles, crowded, oblong, acuminated, with revolute edges; flowers terminal, drooping, usually solitary, rarely 2-3-together; lateral anthers bicornute. J?. S. Native country unknown. Portlandia grandiflóra, Hort. batav. Datúra sarmentósa, /3, Lam. ill. 2. p. 9. no. 2295. Petioles violaceous, furnished with a few hairs. Calyx 4-cleft; segments unequal, with scarious brown edges. Corolla half a foot long, yellowish white, with *6-7* nerves, brown inside, green outside; tube 6-7-angled; limb 6-7-cleft, with roundish crenately-undulated segments, violaceous outside, at first erect, but at length revolute. Stigma capitate, green. This species differs from *S. grandiflóra* in the leaves being quite glabrous and shining, in the bicornute anthers, and the calyx and corolla being glabrous outside. Stem arborescent, with chinky bark; branches elongated, flexile, divaricate, with deciduous bark.

Shining-leaved Solandra. Fl. ? Clt. 1820. Tree or shrub.

3 S. VIRIDIFLORA (Sims, bot. mag. 1948.) leaves elliptic-oblong, attenuated at both ends, acuminated, glabrous; flowers terminal, solitary, pedunculate; calyx 5-cleft; the segments lanceolate, acute, and equal; tube of corolla suddenly swelling out into the throat, and again a little contracted; the segments elongated, and revolute. Fj. S. Native of Brazil, about Rio Janeiro. Leaves deciduous. Branches rugged from the elevated cicatrices occasioned by the falling of the leaves. Corolla green, drooping. Genitals much exserted.

Green-flowered Solandra. Fl. May, July. Clt. 1815. Shrub 2 to 3 feet.

4 S. GUTTATA (D. Don, in bot. reg. t. 155.) leaves broad, 3 p 2

elliptic-oblong, acute, downy beneath; flowers terminal, solitary ; segments of corolla crispately crenated, spreading ; tube about twice the length of the calyx, which is tubular and 3-lobed. I?. S. Native of Mexico. Tecomaxochitl, Hern, mex. p. 408, with a figure. Shrub erect, branched. Branches rugged from the elevated cicatrices occasioned by the falling of the leaves. Leaves acute, or short-acuminated, 3-6 inches long, and *2-3* broad, Flowers erect, on short peduncles. Lobes of calyx ovate, acute, the third smaller. Corolla large, funnel-shaped, pale yellow, but marked with purple spots in the throat; lobes of limb very broad, roundish. Stamens hardly drawn out beyond the throat of the corolla. Style exserted. Ovarium 4-celled. Stigma capitate.

Spotted-flowered Solandra. Fl. Clt. Shrub 10 to 12 feet.

f *A species not sufficiently known.*

5 S. OPPOSITIFOLIA (Hort. ex Loud. hort. brit. p. 71.) leaves opposite. Jj . S. Native of Ceylon. Corolla large, white.

Opposite-leaved Solandra. Fl. ? Clt. 1820. Shrub 6 to 10 feet.

Cult. The species of *Sol&ndra* are very handsome when in flower ; the foliage very fine, and the blossoms large, much like those of *Brugmdnsia.* If allowed plenty of space and moisture they grow rapidly, but produce no blossoms : the best way to avoid this is to plant them in loamy soil, and to encourage them to grow rapidly at first by giving plenty of water, and then withhold water altogether till their leaves drop off from drought, and they will then produce plenty of blossoms. Cuttings taken off from the plant, and planted in mould or tan will strike root without further care. The best way to have plants flower when small is to take the cuttings from flowering shoots.

XXIX. ULLO'A (named after Antonia Ulloa, a Spanish naturalist.) Pers. ench. 1. p. 218. Juanulloa, Ruiz, et Pav. fl, per. 2. p. 47. t. *85.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx large, inflated, ovate, 5-parted ; segments concave, lanceolate, acute, coloured, permanent. Corolla tubular, gibbous under the throat, contracted above ; limb small, 5-lobed ; segments rounded, spreading. Stamens 5 ; filaments villous at the base. Stigma oblong, somewhat emarginate at apex. Berry ovate, girded by the large calyx, 2-celled, many-seeded. Seeds oblong, reniform.—A parasitical, frutescent, pendent plant, with oblong, acuminated, alternate, thickish leaves ; and dichotomous, hanging racemes of scarlet flowers and fruit.

1 U. PARASITICA (Pers. ench. 1. p. 218.) ^ • s- Native of Peru, in groves. Juanulloa parasitica, Ruiz, et Pav. fl. per. 2. p. 47. t. 185. Stems simple, woody, pendent. Berry size of a cherry. Said to be nearly allied to *Tancecium parasiticum.*

Parasitic Ulloa. Fl. ? Clt. 1824. Shrub parasitical.

Cult. This plant will grow well in decayed wood, or vegetable mould ; and may be increased by cuttings.

TRIBE IV. FRANCISCEA (this tribe contains plants agreeing with *Franciscea* in the characters given below.) Limb of corolla plicate in aestivation, 5-lobed, rather, unequal. Stamens 4, didynamous, that is, 2 long and 2 short, inclosed, without any rudiment of a fifth. Ovarium girded by a cupulate disk. Capsule 2-celled, 2-valved ; valves bipartible at top. Placentas inserted into the dissepiment. Seeds numerous, angular. Embryo straight, terete.

XXX BRUNFE'LSIA (SO named by Plumier, from Otho or Otto Briinfelsius, of Mentz, first a Carthusian monk, and afterwards a physician. He published the first good figures of plants in 1530, and died in 1534.) Plum. gen. *22.* Lin. gen. no. 260. Schreb. gen. 1013. Juss. gen. 127. ed. Uster. p. 142. Lam. ill. t. 548.

LIN. SYST. *Didynamia, Angiosperma.* Calyx campanulate, 5-toothed, short. Corolla large, funnel-shaped; with a long tube, and a flat, 5-lobed, obtuse, nearly equal limb. Stamens 4, didynamous, with the rudiment of a fifth ; anthers reniform. Stigma capitate. Capsule (berry, Lin.) larger than a cherry, 1-celled, ex Lin. but probably 2-celled, many^seeded ; placenta large, central, fleshy.—Shrubs with alternate, entire leaves, and solitary, axillary, or terminal numerous flowers.—" Pericarp baccate outside, 1-celled, 2-valved, but since it opens by a distinct suture from the top to the base, it is jather a capsule than a berry. Seeds many, compressed, convex on one side, angular on the other, wrinkled from dots. Receptacle fastened to the bottom of the capsule, chaffy ; palea coadunate, subulate at the tip, separating the seeds," ex Mart. Mill.

1 B. AMEIUCAYNA (Lin. spec. 276.) leaves obovate, elliptic, -acuminated, longer than the petioles; corolla with an erect tube and entire segments. T? . S. Native of the West Indies, in various islands. Swartz, obs. 90. t. 4. f. 2. Curt. bot. mag. 394. Brunfelsia flore albo, fructu croceo molli", Plum. gen. 12. icon, t. *65.* Catesbaea, &c. Browne, jam. 141. Leaves glabrous or downy. Axillary flowers solitary: terminal ones numerous. Corollas at first yellow, then white, very sweet-scented. There are broad and narrow-leaved varieties of this species.

American Brunfelsia. Fl. June, July. Clt. 1735. Shrub 4 to 6 feet.

2 B. UNDULATA (Swartz, prod. p. 90. fl. ind.occ. *2.* p. 1035.) leaves lanceolate-ovate, tapering at both ends ; petioles very short; corolla with a curved tube and undulated segments. J?. S. Native of Jamaica. Ker. bot. reg. 228. Andr. bot. rep. 167. Corolla at first yellow, then white.

Undulated-dowered Brunfelsia. Fl. Juno, July. Clt. 1780. Shrub 4 to 6 feet.

3 B. GRANDIFLORA (D. Don, in edinb. phil. journ. 1829. July.) leaves elliptic-oblong, acuminated ; flowers corymbose, terminal ; tube of corolla hardly longer than the limb. F? . S. Native of Peru, at Uchiza, Tafalla. Branches twiggy. Leaves pale green, *3-6* inches long, and 1J to 2 inches broad. Teeth of calyx acute. Limb of corolla 2 inches in diameter. Stamens nearly equal.

Great-Jlowered Brunfelsia. Shrub.

f *A species hardly known.*

4 B. VIOLACEA (Lockl. bot. cab. 792.) leaves and petioles deeply stained with purple. J? . S. Native of the West Indies. Corolla of a livid colour.

Violaceous Brunfelsia. Fl. July, Aug. Clt. 1815. Shrub *2* feet.

Cult. The species are elegant free flowering shrubs, and are worth cultivating for the beauty and fragrance of their blossoms. A light rich soil, or one composed of loam and peat, answers them well ; and cuttings of them strike root readily if planted in sand, with a hand-glass placed over them, in heat.

XXXI. FRANCFSCEA (named by Pohl, after Francis I. emperor of Austria, a great patron of botany.) Pohl, bras. 1. p. 1. Sims, bot. mag. 2828.

LIN. SYST. *Didyndmia, Angiosperma.* Calyx permanent, inflated, campanulate, 5-toothed ; teeth equal. Corolla salver-shaped ; limb 5-parted, nearly equal; lobes rounded, repand, with incumbent anthers ; tube inflated at the apex, incurved. Style thickened at top; stigma 2-lobed. Capsule ovate, 2-celled, 2-valved; valves indivisible ; dissepiment parallel with the valves, membranous, thin, separating at the base from the

of the capsule at maturity.—Erectish, middle-sized s. Leaves alternate, simple, oblong, entire. Peduncles permanent, somewhat geniculated, axillary and terminal, bracteates r lowers bracteate, usually crowded, cymosely racemose, ?»tary, violaceous or lilac, somewhat resupinate. Tube of rolla inflated. Receptacle nearly terete, spongy, scrobiculate, nate to the dissepiment. This genus is said to be nearly led to *Browallia;* but differs in the calyx being campanulate J inflated, equally 5-toothed, permanent, &c.

1 *; ^NIFLORA (Pohl, bras. 1. p. 1. t. 1.) branches diffuse, Pleading; leaves elliptic, acute; bracteas lanceolate, and are, tive f pf th^ calyxeSj g labrous ; flowers solitary. J?. S. Nath "raz il» among bushes in the province of Rio Janeiro, in road to Sumidorio and Governo, &c. F. Hopeana, Hook. with "fi" ~828, Lodd* bot, cab* 1532 Piso bras P- 85. n a figure—Margr. bras. p. 69. with same figure. Leaves ie green below. Branches greenish, hoary. Corolla with a tube, and bluish-violet or purple limb.

^flowered Franciscea. Fl. June, Aug. Clt. 1826. Shrub to 3» feet.

«hort P,IJA TM 5UA (Pohlj bras- lf P- *s- u* 2>) branc]>es ver y late, a Spr. In 8 5 leaves broad-elliptic, acutish ; bracteas lanceo- flower 0" ? 111 ^603, and are as well as the calyxes, quite **glabrous** ;; at i y , and not ^ar ^rom ^° Janeiro. Leaves canescent, viol? ueneatb> 6"7 inches long, and 2 to 2f broad. Corolla ^ceous or purple.

^ad-leaved Franciscea. Shrub 2 to 3 feet.

8 Pleadi ACUMINAVTA (Pohl bras. 1. p. 4. t. 3.) branches erectly base T/V leaves °blong, acuminated, attenuated a little at the We]l*a^ abrous; bracteas lanceolate, acuminated, and are, as terminal ty xes» quite glabrous; flowers few, subcymose, Janeiro * ^ • ^. Native of Brazil, in the province of Rio Leaves' ^ ° n ^ Pushes at Mandioca. Branches greenish-brown. ^latec^ when examined by a lens, yellowish-green be- corolla with a bluish-violet limb. Calyx brownish.

4 ^"^ed-leaved Franciscea. Shrub 1 to 2 feet.

twioay. V M0SISSIMA (Pohl, bras. 1. p. *5.* t. 4.) branches ekvated f leaves ^anceolate, attenuated at the base, rough from base> ha ots bracteo^es petiolate, oblong, attenuated at the ^ative of h . : y flowers cymose i axillary and terminal. J? . S. Pushes k ?^' ln the province of Minas Geraes, among °^ Rio J °U^ ^a^ i cca ; and "on Serra Tingua, in the province K* v ^era^dia Brasiliensis, Spreng. syst. 2. p. 806. obovata Montevidensis, Spreng. syst. 3. p. 699. y on / w j s^ brown- Leaves yellowish-green beneath, Corolla*: r inci P al nerves. Calyx dark brown, hairy. *toucf,* blui sh-violet limb.

5 p. *oranc' <ed* Franciscea. Shrub 3 to 4 feet.

^ectish; i FERTIFLOR A (Pohl, bras. 1. p. 6. t. *5.)* branches } ase) rath -i near^ sessile, oblong, acute, attenuated at the l n<? atten ^A c»liated; bracteas oblong ; bracteoles ob- with at ^le base? anc^ are» as we^ as tbe ca^yxes> h - S. x rust y hairs; flowers cymosely crowded, terminal, 8 Wy r> [ative o^ Brazil, in the province of Rio Janeiro, in cipe. £ Jj °n the road to Villa Fanado, and Villa do Prin- to P* Leav Grm S generally brownish-yellow, and pilose at nea th. es y e bvv ish-green above, and brownish-green be- neath. Calyx yellowish-brown. Corolla bluish-violet. Seeds ovate, angular.

Divaricate Franciscea. Shrub 1 to *2* feet.

7 F. HYDRANGE;EF6RMIS (Pohl, bras. 1. p. 7. t. 7.) stem a little branched ; leaves oblong, acute, cuneiform at the base, quite glabrous ; bracteas lanceolate, pilose, ciliated and scale-formed, aggregate ; calyx hairy ; cymes of flowers terminal, hemispherical, large. F? . S. Native of Brazil, in the province of Rio Janeiro, among bushes ; in shady places at Olana and Sumidorio, and on the way to Rio Parahybuna. This is the most elegant species of the genus, with the aspect of *Hydrangea hortensia.* Leaves yellowish-green beneath, subverticillately aggregate, broad, a foot long. Racemes corymbose, terminal. Corolla of a beautiful bluish-violet.

Hydrangea-like Franciscea. Shrub 1 to 3 feet.

8 F. MACROPHY^LA (Cham, et Schlecht. in Linnaea, *2.* p. 601.) leaves oblong, acuminated, cuneiform at the base, rugosely veined, downy beneath ; bracteas scale-formed, ciliated, and are, as well as the inflated calyxes, clothed with glandular down ; tube of corolla twice as long as the calyx ; cymes terminal, compound, many-flowered, rather loose. T? . S. Native of tropical Brazil. Very like *F. hydrangeceformis.* Leaves nearly a foot long, and 3j broad.

Long-leaved Franciscea. Shrub *2* to *3* feet.

9 F. PAUCIFLORA (Cham, et Schlecht. in Linnaea. *2.* p. GOO.) leaves obovate-oblong, acuminated, cuneated at the base, on short petioles, glabrous ; bracteas leaf-formed ; bracteoles scale-formed, and are, as well as the calyxes, inflated, loose, and clothed with glandular down ; tube of corolla hardly exceeding the calyx ; cymes terminal, few-flowered, simple. J? . S. Native of the South of Brazil, Sello. Leaves 6|- inches long, ciliated with glandular hairs in the young state.

Few-flowered Franciscea. Shrub 2 to 3 feet.

Cult, The species are much more showy than those of *Brunfelsia;* and are more free flowerers ; they are also more hardy, but require almost similar treatment.

XXXII. BROWA'LLIA (named by Linnaeus, in honour of John Browallius, bishop of Aboa, who defended the sexual system of Linnaeus, against Siegesbeck, in a book entitled "Examen epicriseos, &c." Aboa, 1739, and Leden, 1744. 8vo.) Lin. gen. no. 773. Schreb. gen. no. 103G. Gaertn. fruct. t. *53.* Juss. gen. 123. ed. Usteri, p. 138. Lam. ill. *535.* D. Don, in edinb. phil. journ. July, 1829.

LIN. SYST. *Didynamia, Angiosperma.* Calyx membranous, tubular, 10-ribbed, 5-toothed, more deeply cleft on both sides: teeth obtuse, keeled. Corolla salver-shaped, resupinate from the contortion of the peduncle; tube 15-nerved, ventricose at top; limb oblique, 5-lobed : lobes obtuse, emarginate, plicate in aestivation; upper segment (but more properly the lower one) larger, and 3-nerved; the others 1-nerved. Stamens 4, didynamous, without any rudiment of a fifth ; filament flattened] bearded at top. Anthers of the upper filaments reniform : of the lower ones parallel with the filaments, having the upper cell the smallest, and sometimes abortive. Ovarium surrounded at the base by a large, cup-shaped, fleshy disk. Stigma 2-lobed, 4-tubercled, with *2* excavations on the back for the reception of the upper anthers ; lobes glutinose, depressed at top. Capsule oblong, 2-celled, 2-valved, many-seeded ; valves bipartible ; dissepiment contrary. Placentas 2, fleshy, scrobiculate, inserted into the dissepiment. Seeds angular, scrobiculate from depressed dots. Albumen fleshy, white. Embryo terete, straight, with short rounded cotyledons.—Herbs or shrubs, with alternate leaves, and axillary and terminal blue or white flowers.

1 B.'VISCOSA (H. B. et Kunth, nov. gen. anier. *2.* p. 3$_{73}$,)

leaves roundish-ovate; peduncles axillary, 1-flowered ; branches, peduncles, and calyxes, clothed with clammy hairs. ©. G. Native of New Granada, near Loxa and Gonzanama, at the altitude of 1060 hexapods. Herb diffuse. Leaves obtuse, hairy, 1 to 1\ inch long. Peduncles crowded at the tops of the branches. Calycine segments lanceolate, acute. Limb of corolla violaceous, with obovate, emarginate segments ; the largest segment spotted with white at the base ; tube inflated at top, whitish.

Clammy Browallia. PI. 1 to 2 feet.

2 B. DEMI'SSA (Lin. spec. 879. hort. cliff. 318. t. 17. H. B. et Kunth, nov. gen. *2.* p. *373.)* leaves ovate-oblong, acuminated, oblique at the base ; peduncles axillary, 1-flowered, and are, sa well as the branches, downy ; calyx glabrous. 0. G. Native of Panama, and other parts of South America; on Mount Avita, between Caraccas and La Venta Grande, Humb. et Bonpl., where it js called *Botanera.* Sims, bot. mag. 1136.— Sabb. hort. rom. *2.* t. 100. Dalea, phil. trans, no. 452. Leaves rather hairy. Calycine segments lanceolate. Corollas of a bright but pale blue colour, sometimes inclining to a purple or red ; and often there are flowers of all three colours on the same plant. The segments are, like the rest, obovate, emarginate : the larger one white at the base.

Low Browallia. Fl. June, Sept. Clt. 1735. PI. \ to 1 foot.

3 B. ELA'TA (Lin. spec. 880.) leaves oval, acuminated; peduncles axillary, one or many-flowered. ©. G. Native of Peru. Curt. bot. mag. t. 34. This species is higher than the first, and has stronger stalks, and sends out a great number of branches. The flowers are of a deep blue, and the calyx is beset with glandular hairs. Linnaeus observes that the lower branches are almost the length of the stem, and that the floral leaves are almost smooth.

Tall Browallia. Fl. July, Sept. Clt. 1768. PI. l-£ foot.

4 B. ELONGA'TA (H. B. et Kunth, nov. gen. amer. *2.* p. *372.)* leaves ovate, acuminated, rounded at the base ; peduncles 1-flowered, axillary ; branchlets, peduncles, and calyxes, clothed with hairy pubescence. ©. G. Native of New Granada, between the town of Mariquita and the mine of Santa Ana. B. lactea, Hort. Herb much branched. Branches rather angular, downy. Leaves rather hairy. Teeth of calyx lanceolate, erect. Limb of corolla blue, with obovate, emarginate segments : the larger segment spotted with white at the base. Nearly allied to *B. demissa.*

Elongated Browallia. Fl. July, Sept. Clt. ? PL lj foot.

5 B. GRANDIFLORA (Graham, in 'bot. mag. 3069. but not of bot. reg.) leaves ovate, acute, attenuated into the petioles at the base; peduncles 1-flowered, axillary, racemose at the tops of the branches; branches and adult calyxes glabrous. ©. G. Native of Peru, near Yazo, in the valley of Canta. Leaves acuminated. Stem much branched. Calyx and peduncles beset with glandular villi while young, with unequal, spreading, linear segments. Corolla with a greenish-yellow tube, which is clothed with glandular villi, and a white or very pale lilac limb ; segments of the limb obovate and emarginate, like the other species.

Great-flowered Browallia. Fl. June, Dec. Clt. 1829. PI. 1 to *2* feet.

6 B. CORDATA ; leaves cordate-ovate, acuminated; peduncles 1-flowered, racemose at the tops of the branches ; branches and adult calyxes glabrous. ©. G. Native of Peru, near Yazo, in the valley *of* Canta. B. grandiflora, Lindl. bot. reg. t. 1384. but not of Graham. Leaves obscure green. Racemes secund," bractless. Limb of corolla pale blue, with obovate, emarginate segments, which are of a livid yellow colour beneath.

***Cordate-teaved* Browallia. Fl. July, Nov. Clt. 1829. PI. 1 to *2* feet.**

f' A doubtful species.

7 B. ALIENA'TA (Lin. syst. 478.) superior leaves opposite; stamens *2,* length of corolla. ©. G. Native country unknown. Browallia foliis lanceolatis petiolatis longis, caule ramoso, radice annua, Mill. icon. t. 68. Miller has omitted this species in the last edition of his dictionary.

Alienated Browallia. PI. 1 foot?

Cult. The seeds of all the species should be reared in a hot-bed frame ; and when the plants are large enough, they may be set in the greenhouse, where they make a showy appearance during the time the greenhouse plants stand out of doors.

TRIBE V. ANTHOCE'RCE.E (this tribe agrees with the genus *Anthocércis* in the characters given below.) Corolla not plicate, regular. Stamens didynamous, with the rudiment of a fifth. Embryo arched. Pericarp capsular or baccate, 2-celled, 2-valved.

XXXIII. ANTHOCE'RCIS (from *CLVQOQ, anthos,* a flower; and *KepKLCy kerkis,* a ray ; in reference to the radiated corolla.) Labill. nov. holl. *2.* p. 19. t. 158. R. Br. prod. p. 448.

LIN. SYST. *Didynamia, Angiosperma.* Calyx 5-cleft. Corolla campanulate ; tube coarctate at the base, staminiferous; limb 5-parted, equal. Stamens inclosed, didynamous, with the rudiment of a fifth. Stigma capitately emarginate. Capsule 2-celled, 2-valved ; valves bent in at the edges, inserted in the parallel placenta. Seeds reticulated. — Smoothish shrubs. Leaves alternate, attenuated into the petioles or base, articulated with the branches, thick, sometimes glandularly dotted. Flowers axillary, generally solitary, usually loosened at the points ; peduncles minutely bracteate. Corolla white or yellow, showy ; tube striated inside ; limb sometimes 6-8-parted f

1 LITTOREA (Labill. nov. holl. *2.* p. 19. t. 158.) leaves obovate, dotless, with smooth margins, quite glabrous on both surfaces, as well as on the branchlets ; segments of corolla longer than the tube; capsule oblong, twice as high as the calyx. ^. G. Native of New Holland, on the south coast. Ker. bot. reg. t. 212. Sweet, fl. austral, t. 17. Corollas pale yellow, large, streaked with purple inside the tube.

Sea-shore Anthocercis. Fl. May, Aug. Clt. 1803. Shrub 1 to 2 feet.

FIG. 42.



2 A. A'LBICANS (Cunningh. in Fields' New South Wales, append. 5. p. *335.* with a figure. Sweet, fl. austral, t. 16.) leaves oblong, obtuse, densely tomentose on both surfaces, as well as the branches ; segments of corolla longer than the tube. J?. G. Native of New South Wales, frequent upon pine hills in the interior, Cunningham. Flowers fragrant, white, streaked with bluish-purple inside the tube.

tVhitish-leaved Anthocercis. Fl. April, July. Clt. 1824. Shrub lj to *2* feet.

3 A. VISC6SA (R. Br. prod. p. 448.) leaves obovate, glandularly dotted, with rather scabrous margins ; young leaves and branches clothed with fine down; capsule ovate, equal in length to the calyx. ^ • *&'* Native of New Holland, on the south coast. Corollas large, white.

* *Clammy* Anthocercis. Fl. May, June. Clt. 1822. Shrub to 0 feet.

wo tl^ IS a 8enus °f elegant early flowering shrubs, «n cultivating in every collection. A light rich soil, or a tin*"^ ? Sand> loam, and Peat> suits tnem very vvell. Cllt« placed over them. roOt readily if Planted in sand> with a bell"glass

«^y XXXIV. DUBOI'SIA (named after Louis Dubois, author of a co ep rouv^e avec laquelle on peut parvenir facilement ans S6 lantes des environs d'Orleans," 1 vol. 8vo. Orle- DarL i« ; and of "Du Pommier du Poirier et du Cormier," *2* on Paris> 1804.) R Br prod 448.

short SYST# *Didynamia, Angiosperma.* Calyx bilabiate, equal Cm Panulately funnel-shaped; limb 5-parted, nearly dated rJamens inserted into the bottom of the corolla; filament ay lanuS, Berry 2 celled, many-seeded. Seeds sub- leaves la small labro" s tree, with the habit of *Myoporum.* cles axill tonate, ar ticulated with the branches, entire. Pani- Flowers ur nished with deciduous bracteas at the divisions. Ue^r ke those of *Myoporum.* Tube of corolla stri- «e. Berry small, oval, black.

°f New C IYO^°^OIVDES (R. Br. prod. p. 448.) J?. G. Native A^e\South Wales, about Port Jackson.

n-hke Duboisia. Shrub.

>r culture and propagation see *Anthocércis* above.

with Ao/a/ -^^^F'iE (this tribe contains plants agreeing ^tivation'^111 ! ^ c^aracters given below,) Corolla plicate in Col*olla. b ^e(^- Stamens 5, adnate to the tube of the ar*nular dj ij ana \ to 5, or more, crowded, seated on a fleshy Cor ttainin<r Sngma capitate. Drupe solitary, or 5 together, g>ra te sm a 2"4"celled, bony putaraen. Embryo filiform, u metinies peripheric.

little bell N0LAX NA (so named by Linnaeus, from *nola,* a gen 9 0 cc Unt off the bell-shaped form of the corolla.) *n* 13 jn* S hreb gen. no. 254. Gaertn. fruct. 2. p. 242. Vrd ge^lS2 ed, Usteri, P- 147 D- V™> ^ Sweet, P n u I a 7 e ^ r / Calyx 5-cleft. Corolla the corolh bed, 5"P^cate. Stamens 5, adnate to the tube VIS> Ovari^f yGqUaL Anthers 2-celled, dehiscing length- Sk* Sti ffma or more> crow(led, seated on a fleshy annular each aV4- **?"**' Dru Pe s usually *5* at maturity, contain- 3*5 littlp K f Don y Putamen, marked by *3-5* grooves, ran ou s test ole? undei> neath. Seeds roundish, with a mem- f?rate» som i Albu men fleshy, copious. Embryo filiform, li} "suallv P^ere P^eric—Herbs, natives of Peru and Soltar y n p / ann ual Leaves alternate, quite entire. Flowers 1 N. Sir^UnCUate, show y blue> alar, or axillary.

n# S, t. 305 NLICIF6LIA (Hortul. ex D. Don, in Sweet's fl. gard. J^ulate, wj'th Stems Procumbent, rather villous ; calyx cam- Ovate"lanceolate, acute, connivent segments ; radical ones large. ©. H. Native of Peru. Flowefs large, colour of those of *Con-* leaves are large, and greatly resemble those of spinach. near *Nis P^ulata,* and *N. coronata,* Ruiz, et Pav. Noiana. Fl. June, Sept. Clt. 1834. PI.

TA (Ruiz* et Pav- fl- P^er, ~- P; 7, u U3, f- a0 t U? a Ve L cordatel y triangular; calycine segments spa- Native of Peru, on hills. The whole plant is downy. Branches angular towards the top. Leaves petiolate, alternate, twin, fleshy, obliquely obtuse, subsinuated. Calyx pentagonal, hispid. Corollas large, whitish-purple, villous inside the tube. Carpels or drupes 4.

A$£>a/w/ate-leaved Nolana. PL 1 foot.

S N. CORONÀTA (Ruiz. et. Pav. fl. per. 2. p. 6. t. 112. f. b.) stems prostrate ; leaves ovate-cordate, rather oblique ; calycine segments subcordate; corolla with a villous throat. ©. H. Native of Peru, on hills, in arid sandy places. Root fusiform. Stems terete, much branched, rather villous. Leaves on long petioles, shining, and rather villous on both surfaces. Peduncles generally longer than the leaves. Corolla *3* times larger than the calyx, with a white bottom and blue border. Drupes elongated, filiform.

Crowned-flowered Nolana. PL prostrate.

4 N. PROSTRA'TA (Lin. fil. dec. 1. t. 2.) stems prostrate; leaves ovate-oblong; calyx pyramidal, with triangularly sagittate segments, furnished with spur-like processes at the base. 0. H. Native of Peru, in sandy places near the sea. Ruiz. et Pav. fl. per. 2. p. 7. Curt. bot. mag. 731. N. prostrata gallinàcea, Pers. ench. 1. p. 168. A'tropa, Gouan, hort. monsp. 82. with a figure. Walkēria, Ehret, phil. trans. 1763. p. 130. t. 10. Zwingēra, Act. helv. *5.* p. *267.* t. 1." Neudorfia, Adans. p. 219. Tegànium procumbens, Schmidel, icon. *67.* t. 18. Leaves twin, rhomb-ovate, entire. Corolla pale blue. Drupes 2-4-celled.

Prostrate Nolana. FL July, Sept. Clt. 1761. PL prostrate.

5 N. PARADÒXA (Lindl. bot. reg. *865.* but not of Hook.) stems prostrate, hairy ; leaves ovate, obtuse, pilose ; segments of calyx triangular; corolla campanulately funnel-shaped ; drupes cumulated, 1-seeded. ©. H. Native of Chili, on the sea shore, about Conception. Corollas blue.

Paradoxical Nolana. FL Aug. Clt. 1825. PL prostrate.

6 N. TENE'LLA (Lindl. hort. trans. 7. p. 252.) clothed with viscid down ; stems filiform ; petioles ciliated ; leaves ovate, obtuse at both ends ; calyx campanulate, 2-lobed, 5-angled, one of the lobes emarginate, the other tridentate ; ovarium 5-lobed. ©. H. Native of Chili. N. paradòxa, Hook. bot. mag. t. 2604. but not of Lindl. Peduncles hairy, filiform. Corolla pale blue, with a paler eye. Stamens villous, inclosed. This species differs from *N. prostrata* in the want of spur-like processes to the calyx.

FIG. 43.



Slender Nolana. Fl. July, Sept. Clt. 1824. PL prostrate.

7 N. INFLA'TA (Ruiz, et Pav. fl. per. 2. p. 7. t. 112. f. a.) stem prostrate ; radical leaves on long petioles, ovate-lanceolate ; calyx inflated, ovate, striated. 0. H. Native *of* Peru, on sandy hills about Cumana. Stems purple, angular, branched. Leaves downy, sinuated : radical ones entire, rarely toothed, 4-5 inches long, and *3* broad; lower stem leaves solitary, subpetiolate, and rather oblique at the base : upper cauline ones twin, hardly petiolate, ovate, cordate, quite entire. Panicle terminal, leafy ; peduncles longer than the leaves. Corolla whitish-violet, *3* times longer than the calyx. Anthers blue. Drupes 4.

//z/foted-calyxed Nolana. PL prostrate.

8 N. REVOLUXTA (Ruiz, et Pav. fl. per. 2. p. 8. t. 113. f. b.)

stems procumbent; leaves crowded, linear, with revolute margins; calyx ventricose, ovate, with lanceolate segments. ©. H. Native of Peru, in sandy places. Stems white, angular. Leaves sessile, twin, unequal in size, white beneath, obtuse. Peduncles very short. Corolla bluish-violet, thrice as long as the calyx.

Revolute-leaved Nolana. Pl. procumbent.

Cult. All the species of *Nolana* are showy when in blossom, much like the more showy trailing species *of Convolvulus,* and are, therefore, well adapted for decorating flower borders, The seeds should be sown on a gentle hot-bed in spring; and the plants, when of sufficient size, or about the middle ot May, should be finally transplanted to the open ground, where they will flower and ripen seed; or the seeds may be sown at once in the open border, in a warm sheltered situation.

XXXVI. TRIGUEXRA (so named by Cavanilles after D. Triqueros, a Spanish botanist, first discoverer of the plant; Cav. diss. 2. t. A. Schreb. gen. no. 282. Juss. gen. p. 1^. ed. Usteri, p. 140. Lam. ill. t. 114.

LIM. SYS?/ *Pentdndria, Monogynia.* Ca yx £ d e f t to>th middle ; segments unequal, acute, permanent. Coiolla campanulate, irregular; threat dilated into short^e-ncose, subbilabiate, plicate limb, which is [illegible] than th unequal : 2 superior ones sub-reflexed, Stamens 5 ; filaments very short, [illegible] at the base by a 5-toothed, epipetalous membrane, which surrounds the ovarium. Anthers sagittate, conniving into a cone, delhiscing by 2 pores at the apex, ex Juss. Stig capitate. Drupe small, globose, half covered by the calyx, elled ; cells 2-seeded. Seeds ovate, compressed, usually only one in each cell coming to maturity.—A [illegible] herb -ox pre, 2-flowered peduncles.

TI A^MB.:o^A^v.iss. 2. append. 2. t. A.) stem furrowed, winged : .uperior leave^^obovate, [illegible] or acrrated, II 1 o «Unnt Cordova. Lam. ill. t. 114. T. bacin gravelly places about <£r Osbeckii, Lin. spec. 255. ™.a,Gmel.syst.p.338. f™o Tonm. ilin. £. p. 8§. icone< —Buxb. 5. t. 17

Stem hard^Vranched. 'Radical leaves obovate, entire. Peduncles twin, or bifurcate. Corolla like that of / / ^ o c ^, purplish-violet; segments of the limb roundish, crenated. Drupe dry. Cotyledons of *Datura,* ex Poir. The plant has a strong scent of musk.

Ambrosiacal Triquera. PI. 1 foot.

2 T. INODORA (Cav. diss. 2. append. 3.) leaves ovate-lanceolate, quite entire, glabrous, hardly decurrent. ©. H. Native of Spain, along with the preceding. The whole plant is glabrous. The flowers are prettier than those of the preceding ; the tube of the corolla is shorter ; the throat and rays pale violet; the limb cream-coloured ; the lobes neither acuminated nor emarginate ; the urceolus is larger, and almost wholly hides the ovarium.

Scentless Triquera. PI. J to § foot.

Cult. *For culture and propagation see *Nolana* above.

XXXVII. CRABO'WSKIA (named in honour of H. Crabowski, M.D., one of the editors of Flora Selesiaca.) Schlecht, in Linnsea, 7. P- 72. Lycium species, Lin. Ehrètia species, Juss. SYST# ***Pentdndria, Monogynia.*** **Calyx sub-campanulate, 5-toothed, valvular in aestivation. Corolla with short, funnel-shaped tube and a 5-parted limb; segments of the limb spreading, or reflexed, 4 of which are convolute in estivation, the fifth exteina with the margins covering the edges of those next it. Stamens exserted. Style terete; stigma capitate. Drupe [illegible] cells 2-celled, 2-seeded, wood putamens. Embryo bent, curved, cylindrical.**—A shrub? with the habit of the genuine species of *Lycium,* much branched, furnished with axillary spines. Leaves scattered, quite entire, fascicles of leaves, or evolute branchlets, or sub-corymb from the tops of the branchlets, hence they appear as if were disposed in terminal panicles.

J C. BORHAAVLBFOLIA (Schlecht, in Linnaea, 7. p. 70. Native of the South of Brazil, in woods where collected by Sello, but has been introduced from gardens of this country. Lycium borhaaviaefolium, Lin. sp. p. 150. Lam. diet. 3. p. 510. Ehrètia hmifolia, Lh. 1. p. 45. t. 83. Duham. arbr. 1. p. 306. no. 5. ophyllum, Murr. comm. gcett. 1783. p. 6. t. 21. aceous, glancegcent, with a saltish, bitterish white, having the throat veined with green. Stigma green! Nuts form of those of *Coffea Arabica* on one side, marked by a slender furrow in the middle, at top, and perforated by 2 roundish holes at the hence it is tridentate, the first tooth from the back, the other 2 from the sides, sometimes, but only tion, 1-celled. Albumen copious, fleshy.

Borhaavia-leaved Crabowskia. Fl. April, May. U*. Shrub 6 to 10 feet.

• *Cult.* This singular shrub is of the most easy propagation. A light rich earth suits it best; and strike root readily under a hand-glass.

TRIBE VII. CESTRrNE^ (this tribe contains ing with the genus Cestrum in the characters given Limb of corolla plicate, valvate, or induplicate in Calyx 5-toothed. Corolla funnel-shaped, 5-lobed, tube elongated ; limb usually spreading. Stamens 5 ; filaments inserted on the tube. Anthers oblong, dehiscing lengthwise. Ovarium seated on a disk-like body. Pericarp capsular or baccate. Placentas adnate to the dissepiment. Embryo nearly straight, with a cylindrical radicle, and roundish leafy cotyledons.

§ 1. *Pericarp baccate.*

XXXVIII. CE'STRUM (from *Keorpoy,* Aesculus is name of betony, but for what reason unknown to us.) Lin. gen. no. 261. Juss. gen. p. 126. ed. Usteri, p. 141. Gaertn. fruct. 1. p. 378. t. 162.

LIN. SYST. ***Pentdndria, Monogynia.*** Calyx tubular, subcampanulate, 5-toothed, almost regular, valvate in aestivation. Corolla with an elongated tube, widening gradually upwards, limb 5-parted, subplicate, spreading, or revolute in aestivation. Genitals inclosed ; filaments attached to the base, or nished with a small tooth, or villi, where the parts are adnate to the corolla. Anthers bose, dehiscing lengthwise. Ovarium Stigma subcapitate, concave, or girded by the permanent calyx, the dissepiment having vanished, ex centas double, free, central. Seeds 3-sided, ish, with a cylindrical radicle, and dons.—Unarmed shrubs. Leaves and branches former quite entire, and usually racemes teas, or small leaves in their axils, flowers Vorvmbs, bracteate, axillary, elongated, or short, disposed spikes, or fescicL. Corollas never blue, nor red sweet-scented, having the sides of the segments mentose. Berries black, or blackish blue. The leaves exhale a fetid, nauseous smell when bruised.

y 1 • ***Filaments toothless and naked, and sometimes villous at their insertion.***

**** Flowers solitary, or aggregate, sessile,***

l C. BUXIFOLIUM (H. B. et Kunth, nov. gen. amer. 3. p. 57.) leaves approximate, elliptic, bluntish, rather cordate, glabrous, shining.; axillary flowers solitary : terminal ones crowded, sessile ; filaments naked and toothless. *?. S. Native of New Granada, near the monastery of Mont Serrat, at the altitude of 1200 hexapods. Branchlets clothed with fuscescent tomentum. Leaves 7-8 lines long. Corollas white.

Box-leaved Bastard Jasmine. Shrub.

C. MARIQUITE'NSE (H. B. et Kunth, 1. c.) leaves oblong, acute, glabrous; axillary flowers solitary: terminal ones crowded, nearly sessile; segments of corolla ovate, acute ; filaments naked and toothless. *2. S. Native of New Granada, near Santa Ana and Mariquita, at the altitude of 550 hexapods. C. Bonplandianum, Willd. rel. ex Roem. et Schultes, syst. 4. p. 807. Branches downy. Leaves 2-8 lines long. Corollas white. Berry ovate-elliptic, size of a pea.

Mariquita Bastard Jasmine. Shrub.

C. PENDULINUM (Jacq. schoenbr. 3. p. 42. t. 327.) branches flowering leaves ovate-oblong, sub-acuminated, rather hairy; flowers crowded at the tops of the branches, almost sessile ; segments of corolla oblong, obtuse, with reflexed edges ; filaments naked and toothless. *?. S. Native of New Granada, near Tunbaco and Mahates ; and of Caraccas. H. B. et Kunth, loc. cit. P. 57. Branches rather downy. Leaves 2 inches long. Corymbs terminal, few-flowered. Corolla greenish white. Berry elliptic, size of those of *Ficus alba,* blue. The branches are said to be pendulous.

Upright-branched Bastard Jasmine. Fl. June, July. Clt. 1804. Shrub 4 to 8 feet.

C. UCIFLORUM (Nees, et Mart, in act. bonn. 11. p. 79.) leaves ovate-lanceolate, acute, downy beneath; flowers axillary, sessile ; filaments naked, toothless, fj . S. Native of Brazil, at the river Uheos. Young branches muricated, downy at the tips. Leaves 3-4 inches long ; petioles short. Corymbs terminal, few-flowered, scabrous. Each flower is furnished with bracteole. Segments of calyx and corolla linear-lanceolate, keeled. Corolla yellowish, 4-5 lines long. Berry 2-celled, 4-seeded. *C. Mariquitensis* differs from this in having smaller and glabrous leaves, in the segments of the corolla being broader, glabrous, and ovate, and it differs from other species in the axillary, solitary flowers.

Privet-leaved Bastard Jasmine. Shrub.

C. LAURIFOLIUM (Schlecht. in Linnsea, 7. p. 57.) glabrous ; leaves rather coriaceous, ovate-lanceolate, cuneated at the base, with tri-nerved veins ; corymbs terminal, sessile ; calycine segments very short, bearded at the tip ; segments of corolla acute, villous at the adnate part; berries globose, rusty, of the size of a large pea.

Laurel-leaved Bastard Jasmine. Shrub, 6 to 8 feet.

C. FLORIBUNDUM (Lin. syst. 227.) glabrous ; leaves elliptic ; flowers naked, aggregate, sessile, terminal, and axillary; filaments villous. C. hirsutum, Willd. rel. ex Roem. et Schultes, syst. 4. p. 807. C. Jacquinianum, Schoenbr. dict. comm. P. 43. t. 328. Lher. stirp. 1. p. 72. Murr. nov. comm. Goett. 6. p. 41. t. 8. C. confertum, Mill. diet. no. 5. C. Patavinum, Sm. exot. bot. 1. p. 687. C. ramosissimum, Hort. ed. Bull. Cestrum, Sloane, hist. 2. p. 96. t. 204. f. 2. ? Plum, pict. 16. f. 177. f. 8. Ixora alternifolia, Jacq. amer. 157. t. 1. white, with acute segments ; tube long, filiform. Berry disposed in short, crowded spikes.

Evening Bastard Jasmine. Fl. May, July. Clt. 1759. Shrub 10 to 12 feet.

C. HIRSUTUM (H. B. et Kunth, 1. c. p. 59. t. 197.) leaves oblong, bluntish, clothed with soft down on both surfaces; peduncles axillary and terminal, ? 4-6-flowered ; flowers sessile, crowded into involucrated heads ; calyx tubular, 5-cleft, downy ; segments of the corolla ovate, narrow-acuminated ; filaments naked, toothless. J?. S. Native of Mexico, in frigid places, near Real del Moran and Hacienda de Regla, at the altitude of 1200 hexapods. Young branches clothed with villous down. Leaves 2 to 2| inches long. Calycine segments lanceolate, acute, unequal, reflexed at top. Corolla glabrous, rose-coloured. Segments of corolla reflexed. Berry unknown.

Rose-coloured-flowered Bastard Jasmine. Shrub 6 feet.

**** * Flowers spicate, or racemose. Spikes and racemes axillary and terminal.***

8 C. CALYCINUM (Willd. rel. ex Rcem. et Schultes, syst. 4. p. 809. H. B. et Kunth, 1. c. p. 58.) branches and under sides of leaves clothed with canescent, stellate tomentum ; leaves ovate-elliptic, glabrous and shining above, sub-acuminated, stiffish ; peduncles axillary and terminal, many-flowered, short, spicate ; flowers sessile; calyx elongated, 5-cleft; corollas tomentose ; filaments naked, toothless. ^2 • S. Native of Peru, near Gonzanama ; and of Brazil, Sello. Leaves 2-3 inches long. Calycine segments ovate-lanceolate, acuminated. Corolla pale green. Stamens inserted at the top of the tube, glabrous. Habit of *Sessea.* Very like *C. stipulalum,* Ruiz, et Pav.

Large-calyxed Bastard Jasmine. Shrub 10 feet.

9 C. PETIOLA'RE (H. B. et Kunth, 1. c.) branches and the nerves on the under sides of the leaves clothed with powdery tomentum ; leaves on long petioles, glabrous above, elliptic-oblong, sub-acuminated, costately veined ; peduncles axillary and terminal, few-flowered, very short, spicately approximate ; flowers sessile ; filaments naked, toothless. ? *fy* . S. Native of Peru, in shady places between Ayavaca and Yanta, at the altitude of 800 hexapods. C. venosum, Willd. herb. no. 4438. ex Roem. et Schultes, syst. 4. p. 807. Sessea petiolaris, Spreng. syst. 1. p. 584. Branches glabrous: floriferous ones clothed with fuscescent tomentum. Leaves 5-7 inches long, and 2-3 broad. Petioles of the upper leaves biauriculate at the base; auricles lunate. Peduncles spicately approximate at the tops of the branches, tomentose. Teeth of calyx short, acute.

Petfio/ate-leaved Bastard Jasmine. Shrub.

IOC. CONGLOMERA'TUM (Ruiz, et Pav. fl. per. 2. p. 29. t. 156. f. a. H. B. et Kunth, 1. c. p. 60.) leaves oblong-lanceolate, acute, reticulately veined, stiff, glabrous, having the veins beneath prominent; spikes axillary, short, sessile ; calycine teeth ovate, acute; filaments naked, toothless. Jj . S. Native on the western declivities of the Andes of Peru, among the debris of rocks. C. reticulatum, Willd. rel. ex Rcem. et Schultes, syst. 4. p. 808. Branches subtrigonal. Leaves 3"4 inches long. Spikes approximate at the tops of the branches. Corolla greenish yellow, with ovate, acute segments. The plant of Ruiz, et Pav. is probably the same as that of H. B. et Kunth, 1. c.

Conglomerate-ftowered Bastard Jasmine. Shrub.

11 C. AFFI'NE (H. B. et Kunth, 1. c.) leaves lancfeolate, or lanceolate-oblong, acuminated, membranous, glabrous; spikes axillary, short, sessile, approximate ; flowers sessile ; segments of corolla ovate, acute; filaments naked, glabrous. *h.* S. Native of Peru, on Mount Tinguragua: also near Ayavaca. C. Peruvianum, Willd. rel. ex Roem. et Schultes, syst. 4. p. 807. Branches trigonal, smooth. Leaves 5 inches long, and lj inch broad. Spikes approximate at the tops of the branches. Corolla whitish green, glabrous, leetn of calyx

ovate, acute, with pilose edges. There is also a variety of this having hexamerous, hexandrous flowers. Very nearly allied to C. *Pdrqui* and *C. conglomerate.*

Allied Bastard Jasmine. Shrub 10 to 12 feet.

12 C. PIU'RNUM (Lin. spec. 277. Lher. stirp. 1. p. 74.) leaves oblong, acute, membranous, glabrous ; spikes axillary, on long peduncles; flowers sessile, approximate ; segments of corolla ovate, obtuse, reflexed ; filaments naked, toothless. *I?* . S. Native of Cuba, near the Havannah. Jasminoides, Dill. elth. 186. t. 154. f. 180. Leaves 3 inches long. Flowers sweet-scented, small, white. Teeth of calyx acute, a little ciliated.

Day-smelMng Bastard Jasmine. Fl. Nov. Clt. 1732. Shrub 10 to 12 feet.

13 C. ODONTOSPE'RMUM (Jacq. schoenbr. 3. p. 44. t. 331.) glabrous ; leaves oblong, acute, rather coriaceous; racemes short, axillary and terminal; flowers nearly sessile; segments of corolla lanceolate, acute, revolute ; filaments naked, toothless. J? . S. Native country unknown. Nearly allied to *C. diurnum,* but the flowers are only sweet-scented at night, not in the day time. Seeds small, compressed, marked by a short tooth at the side. Leaves 3-4 inches long. Corolla white ; . tube cylindrical, with the mouth hardly dilated. Berry blackish, size of a small pea.

Tooth-seeded Bastard Jasmine. Fl. July, Aug. Clt. 1793. Shrub 6 feet.

14 C. FASTIGIA'TUM (Jacq. schcenbr. 3. p. 44. t. 330.) leaves ovate-oblong, acute, coriaceous, glabrous, shining above ; peduncles elongated, axillary, spiked at top, equal in length to the leaves ; corolline segments ovate, obtuse, reflexed, 5 or 6; filaments naked, toothless. T? . S, Native country unknown. Leaves pale beneath. Spurious stipulas small, obtuse. Flowers white, sessile, sub-fastigiate on the tops of the peduncles, sweet-scented both by day and night. Berry roundish, size of a pea, blackish.

Fastigiate-fiowered Bastard Jasmine. Fl. Nov. Clt. ? Shrub 4 to 6 feet.

15 C. FCETIDISSIMUM (Jacq. schcenbr. 3. p. 43. t. 329.) glabrous ; leaves ovate and lanceolate, acute, petiolate ; peduncles axillary and terminal, usually 3-6-flowered, racemose; flowers pedicellate, or sessile; teeth of calyx slender ; segments of corolla short, ovate, emarginate; filaments bearded at the base, toothless. *2 • S. Native of the West Indies. Stem rough from dots, much branched. Leaves 2-4 inches long, very fetid. Flowers sweet-scented at night. Corolla yellowish. Berry oblong-cylindrical, black, containing 2 oblong seeds.

Very-fetid Bastard Jasmine. Fl. May, Aug. Clt. ? Shrub 10 feet.

16 C. TENUIFLORUM (H. B. et Kunth, 1. c. p. 61.) leaves ovate, acuminated, membranous, rather tomentose on the veins beneath; spikes axillary, very short, sessile, 8-12-flowered; flowers sessile ; corolla with a very slender tube, and lanceolate, acuminated segments, having the edges revolute ; filaments naked, toothless. T? . S. Native of the Orinoco, on the declivities of Mount Duida, near Esmeralda ; and of Para, in Brazil. C. floribundum, Willd. herb, ex Rcem. et Schultes, syst. 4. p. *807.* C. ov&tum, Willd. rel. 1. c. A much branched, suffruticose shrub. Branches terete, clothed with powdery tomen-- turn. Leaves about 4 inches long. Petioles, branches, and rachis of spikes tomentose. Corollas sweet-scented, white, glabrous. Calyx glabrous, irregularly 4-5-toothed. Filaments pilose at the base.

Slender-flowered Bastard Jasmine. Shrub.

17 C. TINCTORIUM (Jacq. schcenbr. 3. p. 45. t. 332.) leaves ovate-lanceolate, glabrous, shining; racemes axillary and terminal; flowers on short pedicels ; segments of corolla lanceolate, acute, at length reflexed,but at first spreading; filaments naked, toothless, adhering the whole length of the tube of the corolla. T? . S. Native about Caraccas. Leaves coriaceous, 3 inches long. Corollas white, sweet-scented. Berry deep violet, roundish.

Dyer's Bastard Jasmine. Fl. April, June. Clt. 1823. Shrub 4 feet.

18 C. LATIFOLIUM (Lam. ill. 2. p. 5. no. 2275. Vahl, eclog. p. 25.) leaves elliptic, acute, glabrous above, clothed with powdery villi beneath; racemes axillary, very short; filaments toothless. J? . S. Native of the Island of Trinidad. Petioles and branches clothed with powdery villi, as well as the peduncles, pedicels, and calyxes. Corolla with a filiform tube, and lanceolate, acute segments. Stigma capitate. Vahl says this species differs from *C. hirtum* in the leaves not being cordate at the base, and in the segments of the corolla being acute, not obtuse, and in the stigma being capitate, not bifid.

Broad-leaved Bastard Jasmine. Fl. June, July. Clt. 1818. Shrub 6 to 12 feet.

19 C. L^VIGA'TUM (Schlecht. in Linnsea, 7. p. *58.)* glabrous ; leaves elliptic, acuminated, rather papery, and rather opaque, petiolate ; racemes subspicate, axillary, much shorter than the leaves, but sometimes these racemes are reduced to axillary fascicles ; calyx nearly glabrous, ciliated on the margin, with very short, or no teeth; corolla glabrous, 6 times longer than the calyx; segments of the limb obtuse; filaments inserted in the upper part of the tube, rather pilose in the middle of the tube; berry ovoid. Tj . S. Native of Brazil, near Rio Janeiro and elsewhere. Cestrum racerndsum, Ruiz, et Pav. ? Leaves 4-6 inches long. Spurious stipulas sometimes present. Corolla an inch long. Hairs on the filaments retrograde.

Far. a, *evolutum* (Schlecht. 1. c.) leaves larger, on longer petioles ; and the racemes axillary, and on longer peduncles than in var. /3.

Var. /3, *paupérculurn* (Schlecht. 1. c.) leaves smaller, on shorter^ petioles ; racemes short; flowers sometimes sessile in the axi s of the leaves.

Smooth Bastard Jasmine. Shrub.

20 C. AMI'CTUM (Schlecht. in Linnaea, 7. p. 64.) quite glabrous ; leaves lanceolate, acute at both ends, shining, petiolate ; racemes subspicate, short, bracteate; calyx glabrous, with acute teeth, which are ciliated at top; corolla with a wide, glabrous throat, 6 times longer than the calyx ; and the segments of the limb are ovate, acutish, with tomentose sides; filaments inserted in the upper part of the tube, furnished with fascicles of retrograde hairs at their insertion. f?. S. Native of Brazil, Sello. Spurious stipulas small, reniform. This is distinguished from C. *bractedtum* in the smoothness of the parts. Corollas greenish yellow, an inch long. Leaves almost 5 inches long.

Decked Bastard Jasmine. Shrub.

21 C. BRACTEA'TUM (Link, et Otto, abbild. 1. p. 11. t. 6. Graham, in bot. mag. t. 2974. Schlecht, in Linnsea, 7. p. 64.) leaves lanceolate, undulated, downy ; flowers fascicled, axillary and terminal, pedicellate; false stipulas obliquely cordate, reniform; bracteas spatulate; filaments bearded at the base. *2 • S. Native of Brazil, about Rio Janeiro and elsewhere. Length of racemes variable, but hardly ever exceeding the leaves. Nearly allied to *C. petioldre.* Branches covered with dense, greenish tomentum. Peduncles an inch long ; pedicels short. Corolla salver-shaped, pale yellow ; tube an inch long ; segments ovate, acute.

Bracteate-fiowered Bastard Jasmine. Fl. June, July. Clt. 1818. Shrub 8 to 10 feet.

22 C. SCHLECHTENDA^VHLII ; glabrous; leaves elliptic, acuminated at both ends, acute at apex, rather coriaceous, opaque, on short petioles ; racemes axillary, sub-spicate ; calyx gla-

brous, with short, obtuse teeth, which are densely ciliated on the margins ; corollas glabrous outside, 6 times longer than the calyx ; segments of the limb reflexed, triangular, acute; "laments inserted in the middle of the tube, where they are also villous; tube of corolla marked by a villous ring inside j* the base. J?. S. Native of Brazil, Sello. C. multinorum, Schlecht. in Linnsea, 8. p. 59. but not of Rcem. et kchultes. Leaves 3§ to 5 inches long. This species differs from £• *Icevigdtum,* in the shorter corolla, in the flowers being If C0P*0US> anc* in the leaves being coriaceous, &c.

Many-flowered Bastard Jasmine. Shrub.

* *Racemes compound, or panicled; or the peduncles are racemosely panicled.*

23 C. PA'LLIDUM (Lam. diet. 1. p. 688.) glabrous; leaves Ovate, acute; racemes compound, axillary ; filaments toothless • ; berry obovate. ^ • S. Native of Jamaica. C. venef^a tu! Mill. diet. no. 6—Plukn. aim. 35. t. 64. f. 5.—Sloane, hist. 2. p. 96. t. 204. Flowers small, like those of *C. laurifolium,* pale yellow. Leaves like those of *C. launfôlium,* fruit like that of *C. vespertinum.* Leaves \\ inch g^gj dark green. Racemes dense, shorter than the leaves. Segments of corolla short, bluntish. Berry, violaceous, or dark Due, poisonous, ex Sloane.

fate-flowered Bastard Jasmine. Shrub 7 to 8 feet.

24 C. PANICULA'TUM (H. B. et Kunth, 1. c. p. 62. Willd. rel. ttoem. et Schultes, syst. 4. p. 807.) twining; leaves twin, ate-joblong, acute, glabrous ; panicles terminal, simple; branches divaricate ; flowers pedicellate ; tube of corolla very nal? A" segments linear-lanceolate, acuminated ; filaments b f• toothless. J?. ^. S. Native in humid places, on the anks of the river Guayre, near Caraccas. Branches trian- ^abrous* Leaves sometimes solitary, 3-4 inches long, ao * b^ad. Flowers sweet-scented. Teeth of calyx ovate, " ed. Corolla greenish white.

Panicled-flowered Bastard Jasmine. Shrub twining.

25 C. SCANDENS (Vahl, eclog. 1. p. 24. Willd. spec. 1. p. branches scandent; leaves ovate, attenuated, glabrous ; erries axillary, rather compound; filaments naked, toothless. brou^' S. Native of St- Martha, Rohr. Branches terete, glaleaves petiolate, remote, solitary. Spurious stipulas Segments of the limb subulate.

Climbing Bastard Jasmine. Shrub climbing,

b.) 26 C. MACROSUM (Ruiz, et Pav. fl. per. 2. p. 29. t. 154. f. Com leaves lanceolate-ovate, acute, glabrous; racemes short, filam solitary, or by threes ; the middle one very long ; Trunt^ tOothless - ? *? S- Native of Peru, in groves, twisted gnarbOUSj H foot high; branches elongated. Petioles tain;„ f * Calyx small. Berry violaceous, globose, cori- ng 4 oblong brown seeds.

Cremo^-flowered Bastard Jasmine. Shrub.

27 C. LONGIFL6RUM (Ruiz, et Pav. fl. per. 2. p. 28. t. 154. f. a. WQolf^es ovate-oblong, acute, shining and glabrous above, but rac^ beneath while young; peduncles terminal, paniculately tnnfW? corolla with a very long, curved tube ; filaments down I S, Native of Peru, in Groves« Branches Br^' Branches of panicle bearing 4-6 pedicellate flowers. acte as solitary, lanceolate. Corolla \\ inch long, purplish; glns of limb woolly; tube glabrous. Berry rather large, ov te , obscure, purple, containing many small, angular seeds.

Long-florvered Bastard Jasmine. Shrub.

cloth 1 28 C. STRIGILLANTUM (Ruiz, et Pav. fl. per. 2. p. 29. t. 156.) pedun l With S*lOrt stri Sose tomentum ; leaves cordate, acute ; other «l tWin? racer«osely panicled, the one shorter than the grove; Tments naked, toothless. * • S, Native of Peru, in • Leaves pendulous, glabrous above. Flowers almost sessile, furnished each with 3 small bracteas. Corolla white, with a long, incurved tube, very like *Jasmine.* Berry truncate, ovate, obscure violet.

Strigillate Bastard Jasmine. Shrub 10 to 12 feet.

* * * * *Peduncles corymbose, axillary, or terminal.*

29 C. THYRSOI'DEUM (H. B. et Kunth, 1. c. p. 63.) leaves ovate-oblong, acute, glabrous above, but clothed with fine down beneath ; panicles terminal, corymbose, much-branched, leafy; flowers sessile ; tube of corolla scarcely exceeding the calyx; segments of corolla ovate, acute, with inflexed edges; filaments naked, toothless. ^ • G. Native of Mexico, in the high plains near the town of Chalco, at the altitude of 1170 hexapods. Branches trigonal, canescent from powdery down. Leaves 3-4 inches long, running into the petioles at the base. Teeth of calyx short, ovate, acute, unequal. Corolla white. Said to be nearly allied to *C. Pdrqui.*

Thyrsoid-fiowered Bastard Jasmine. Shrub.

30 C. AURICULA'TUM (Lher. stirp. 1. p. 71. t. 35. Ruiz, et Pav. fl. per. 2. p. 28. t. 155. f. a. H. B. et Kunth, nov. gen. 3. p. *63.)* leaves oblong, acuminated, glabrous ; petioles biauriculate; corymbs axillary and terminal, approximate ; corolla downy, with a very slender tube, and ovate-oblong, acute segments, having inflexed edges; filaments naked, toothless. J?. S. Native of Peru, in temperate places between Loxa and Malacates, at the altitude of 1040 hexapods ; and about Lima, where it is used by the natives externally to cleanse foul ulcers, and internally in the venereal disease ; they also look upon it as a pectoral; but it seems to be a plant of suspicious character, on account of its belonging to *Solanàcece.* Cestrum Hediùnda, Lam. diet. 1. p. *687.* Rcem. et Schultes, syst. 4. p. 551. C. auriculàtum afflne, Pers. ench. 1. p. 230. Hediùnda Jasminiano flore, Feuill. per. 2. p. 25. t. 20. f. 2. Branches terete, glabrous. Leaves 4 inches long. Calyx, peduncles, and pedicels downy. Corolla white.

Auricled-\eaved Bastard Jasmine. Fl. June, July. Clt. 1774. Shrub 10 to 12 feet.

31 C. MULTIFLÒRUM (Rcem. et Schultes, syst. 4. p. 553.) leaves ovate-lanceolate, acute, glabrous ; corymbs axillary, pedunculate, one-half shorter than the leaves ; filaments toothless. J?. S. Native country unknown. Branches quite smooth, green. Leaves rather membranous, 2| inches long. Peduncles downy; pedicels glabrous. Segments of corolla erect, acute, rather connivent.

Many-flowered Bastard Jasmine. Shrub.

§ 2. *Filaments furnished each with a sessile gland at the base.*

32 C. TOMENTÒSUM (Lin. suppl. p. 150. Ait. hort. kew. ed. 2d. vol. 2. p. 3.) leaves ovate-oblong, acuminated, smoothish above, but clothed with pilose down beneath, and canescent ; peduncles axillary, short, 4-6-flowered, approximating in the manner of a spike ; flowers sessile ; calyx tubular, 5-cleft, and is, as well as the branches, villously tomentose; filaments furnished each with a gland. J?. S. Native of Peru, between Vinayaca and the town of Loxa, at the altitude of 1060 hexapods. C. Granadénse, Willd. rel. ex Roem. et Schultes, syst. 4. p. 807. Branches terete, villously tomentose, hoary, as well as the peduncles. Leaves membranous, green above, glabrous, and rather scabrous, about 5 inches long, and 2 broad. Segments of corolla lanceolate, oblong, acute, nearly equal. Corolla glabrous, greenish ; segments ovate, acute, with reflexed edges. Stigma capitately peltate. Berry oval, bisulcate at top, 2-4-celled, many-seeded, small, almost covered by the permanent calyx.

Tomentose Bastard Jasmine. Fl. June, July. Clt. 1790, Tree 12 to 18 feet.

33 C. PA'RQUI (Lher. stirp. 1. p. 73. t. *36.)* leaves lanceolate, glabrous, attenuated at both ends, acute, or bluntish, subundulated ; peduncles terminal, corymbose ; filaments villous at the base, and furnished with a tooth. h_c . G. Native of Chili, and the South of Brazil. Schmidt, oestr. baumz. 3. p. 138. t. 15. Sims, bot. mag. 1770. C. Jamaicense, /3, Lam. diet. 1. p. 688. C. virgatum, Ruiz, et Pav. fl. per. 2. p. 27. Parqui, Feuill. per. 2. p. 72. t. 32. f. 1. Leaves *3-5* inches long, attenuated at both ends, glabrous. False stipulas narrow. Flowers whitish yellow, very fragrant at night. Berry black, nearly globose. " Peduncles and calyxes sometimes tomentose, but also sometimes truly naked, except the orifice of the calyxes. Corolline segments usually reflexed and tomentose on the edges." Schlecht, in Linnasa, 7. p. *56.*

Parqui Bastard Jasmine. Fl. June, July. Clt. 1787. Shrub 6 to 8 feet.

§ 3. *Filaments furnished each with a tooth or toothlet at their insertion.*

34 C. SALICIFOLIUM (Jacq. schcenbr. 3. p. 42. t. 326.) leaves lanceolate, acuminated, glabrous; racemes axillary, much shorter than the leaves ; flowers pedicellate ; filaments furnished each with a toothlet at the base. Tj. S. Native of America, in frigid places near La Venta Grande, between Caraccas and the port of La Guayra, at the altitude of 760 hexapods. Branches terete, glabrous. Leaves membranous, 5 inches Jong, and 1 broad. Racemes glabrous. Berry ovate-oblong, size of a berbery, girded by the calyx at the base. Calyx 5-toothed. Corolla greenish white, with a slender tube, and spreading, lanceolate, acutish segments. Filaments free only at top.

Willow-leaved Bastard Jasmin. Fl. April, June. Clt. ? Shrub.

35 C. EUA'NTHES (Schlecht. in Linnaea, 7. p. 60.) glabrous ; leaves elliptic, or oblong, attenuated at the base, acutish at the apex, shining, rather coriaceous, petiolate; racemes axillary, rather compound, leafy at the base; calyx puberulous, with short, obtuse teeth, which are tomentose at apex ; corollas glabrous, 6 times longer than the calyx; segments of the limb oblong, bluntish ; filaments inserted a little above the base of the tube, glabrous, rather denticulated. ^ • S. Native of the South of Brazil, Sello. Leaves 3-4 inches long. Margins of the segments of the corolla tomentose. Habit of *C. multiJldrum,* but differs from it in the racemes being sub-compound and leafy at the base, and in the filaments being glabrous and sub-denticulated.

Well-flowered Bastard Jasmine. Shrub.

36 C. HIRSU'TUM (Jacq. schoenbr. 3. p. 41. t. 324.) leaves oblong, acute, downy above, and tomentose beneath; spikes axillary, longer than the petioles ; flowers sessile ; filaments furnished with a little toothlet at the base. J? . S. Native country unknown. Branches and calyx beset with white hairs. Leaves acute at both ends, *3-5* inches long. False stipulas falcate. Flowers fascicled in small, axillary corymbs. Calyx 5-toothed. Corolla with a glabrous, green tube, and spreading, lanceolate, acute, yellowish segments. Stigma capitate. Filaments bearded at the base.

Hairy Bastard Jasmine. Shrub 8 feet.

37 C. ALATERNOIDES (Hort. par. ex Poir. suppl. 2. p. 183. Hamilt. prod. p. *25.* Reem. et Schultes, syst. 4. p. *555.)* leaves ovate-roundish, obtuse, or subelliptic undulated, coriaceous, shining, and glabrous above, and cinereous beneath, undulated ; flowers fascicled, sessile, axillary, lateral, and terminal; filaments tooth-letted at the base. J? . S. Native of the Antilles and Trinidad. Hook. bot. mag. *2929.* Said *to* be nearly allied to *C. macropkyllum* by Hamilt. 1. c. and the leaves size and shape of those of *Rhamnus alaternus.* Branches terete, cinereous. Leaves 1^ inch long. Corymbs shorter than the leaves. Corolla greenish yellow ; segments of the limb straight, acutish.

Alaternus-like Bastard Jasmine. Fl. Feb. April. Clt. 1824. Shrub 6 feet.

38 C. EXSTIPULA'TUM (Ledeb. in Schrad. nov. journ. 4. p. *65.)* leaves acuminated, villous; spikes terminal; filaments each furnished with a toothlet at the base. J? . S. Native country unknown. False stipulas none. Habit of *C. auriculatum.*

Exstipulate-leaved Bastard Jasmine. Shrub.

39 C. UNDULA^TUM (Ruiz, et Pav. fl. per. 2. p. *28.* t. 155.) leaves ovate, acute, undulated, glabrous ; peduncles axillary and terminal, few-flowered ; filaments each furnished with a tooth at the base. T? . S. Native of Peru, in waste places at the town of Huanaco. Trunk granular. Peduncles generally 8-flowered. Corolla yellow ; limb downy outside. Anthers tetragonal. Berry violaceous, 2-celled, about 6-seeded. Seeds angular, truncate.

Undulated-\e<ive& Bastard Jasmine. Fl. ? Clt. 1825. Tree 15 feet.

40 C. SUBEROSUM (Jacq. schcenbr. 4. p. 26. t. 452.) leaves oblong, acute, glabrous ; racemes axillary and terminal, compound ; flowers sessile, or nearly so, aggregate; filaments each furnished with a bifid tooth at the base. T?. S. Native country unknown. Trunk cinereous, corky. Leaves 3-4 inches long. Corollas pale yellow, sweet-scented. Stigma capitate, umbilicate.

Cor%-barked Bastard Jasmine. Fl. June, July. Clt. 1815. Shrub 5 to 6 feet.

41 C. HI'RTUM (Swartz, prod. p. 49. fl. ind. occ. 1. p. 478.) leaves subcordate, acute, glabrous above, but hairy beneath, as well as the branches; spikes axillary, short, subracemose, 4-6-flowered; filaments each furnished with a toothlet at the base ? *2. S. Native of Jamaica, in woods. Bracteas none. Corolla with a long slender tube, and ovate, obtuse, connivent segments, without any toothlets between. Berry black, ovate, downy, 2-seeded. Calyx 5-toothed. Said to be nearly allied to *C. nocturnum;* but is distinguished from it in the larger, broader, wrinkled leaves, and by the spicate crowded flowers.

Hairy Bastard Jasmine. Fl. June, July. Clt. 1800. Shrub 6 to 9 feet.

42 C. NOCTU'RNUM (Lher. stirp. 1. p. 70.) leaves ovate, or ovate-lanceolate, acute, glabrous; peduncles subracemose, axillary, about equal in length to the leaves ; filaments each furnished with a tooth at the base. F?. S. Native of Jamaica and Chili; and Mexico, near Jalapa, Schiede. Lam. diet. 1. p. 687. Jasminoides foliis pishaniinis, flore virescente, noctu odoratissimo, Dill. elth. p. 183. t. 153. f. 185.—Plukn. aim. t. 64. f. 3. ? Bark of trunk grey, corky at base. Branches terete, glabrous, dotted, green or greyish-brown. Leaves very like those of the orange. Corolla glabrous, greenish-yellow, with a slender, curved tube, and bluntish, rather irregular segments. Berry nearly globose, size of a pea, white, ex Lam.

Night-smelling Bastard Jasmine. Fl. Nov. Clt. 1732. Shrub 6 to 9 feet.

43 C. MACROPHY'LLUM (Vent, choix. t. 18.) leaves ovate-oblong, acuminated, quite glabrous ; flowers fascicled, sessile; filaments each furnished with a toothlet at the base. J? . S. Native of the Antilles, Porto Ricco, Riedle. Pers. ench. 1. p. 230. Poir. suppl. 2. p. 183. This is nearly allied to C. *laurifolium,* and is probably a variety of it; the leaves are, however, much larger, and less approximate, hardly coriaceous. The flowers are cream-coloured at the time of expansion, but at length pale yellow, or rusty, rising above the articulations of the petioles. Bracteas linear, clothed with rusty tomentum deciduous.

Long-leaved Bastard Jasmine. Fl. May, Aug. Clt. 1812. Shrub 6 to 7 feet/

44 C. VESTWDES (Scblecht, in Linnaea, 7. p. *65.)* branches downy; leaves oblong, nearly sessile, much attenuated at the base, bluntisb at apex, ratber coriaceous, glabrous above, and puberulous beneatb ; racemes terminal, leafy ; calyx glabrous, with short, broad, subbarbately mucronulate teeth; corollas glabrous, 3-4 times longer than the calyx: segments of the limb °vate, bluntish ; filaments furnished each with a villous tooth at ^heir insertion, villous upwards to the middle of the tube. T? . s- Native of Brazil, Sello. This is an elegant and showy species.

^ Bastard Jasmine. Shrub.

45 C, HIRTE'LLUM (Schlecht, in Linnaea, 4. p. 62.) branchlets hairy; leaves acute, and attenuated at the base, acuminated at the apex, membranous, shining, petiolate, downy on the primary nerves while young, but at length glabrous; racemes short, axillary, ^ubspicate; calyx hairy, with elongated, triangular, very acute teeth» having the edges ciliated ; corolla glabrous outside, 8 lines longer than the calyx: segments of the limb narrow, £cutish ; filaments inserted in the superior part of the tube, glabrous, each furnished with an emarginate or 2-lobed toothlet. ^* Ş. Native of Mexico, in the province of Jalapa, near the hacienda de La Laguna. Corolla slender, greenish-white.

Hat of *C.dumetorum.*

Hairy Bastard Jasmine. Shrub.

u\ri C. DUMETORUM (Schlecht, in Linnaea, 7. p. 61.) branches rather rigid; leaves elliptic, acuminated, acute at the base, and axillary petiolate; racemes axillary and terminal, usually twin ; ^ax villous, with acute, rather unequal segments, which are tomentose at top; corollas glabrous outside, 3 times longer than the calyx ; segments of the limb acute ; filaments inserted in the upper part of the tube, glabrous, furnished each with a short, broad scale. T. 10Wer part of tube clothed with retrograde down. ^ • PaKl'ebolive. of Mexico, among bushes near Vera Cruz and San Socio, bchiede and Deppe. Tube of corolla slender. Leaves 2-3 inches long. Fruit ovoid, conical, glabrous.

***h* Bastard Jasmine. Shrub.

leaves AURIFOLIUM (Lher. stirp. 1. p. 69. t. 34.) glabrous ; branches decussate, coriaceous, shining, ovate or elliptic, obtuse ; flowers fascicled, peduncled, axillary, and terminal, the peduncles much shorter than the petioles. Tube of corolla naked on the inside. Segments each furnished with a toothlet at the base. Lam. ex Willd. enum. 245. ^ • S. Native of South America. Smith, spicil. 2. t. 2. C. venenatum, Lam. ill. 688, no. 5t exclusive of the synonyms. C. aureola latifolia floribus albicantibus odoratis, Plukn. Phyt. t. 68, f. 4. ex Willd. ; but according to Lam. it refers to Cestrum. Leaves dark green, 1^ inch long; petioles rufescent. Flowers yellowish, in axillary, subsessile fascicles at the branches ; segments ovate, bluntish, spreading.

Willd-leaved Bastard Jasmine. Fl. May, Aug. Clt. 1691. 8 to 9 feet.

f *Species hardly known.*

C. FETIDUM (Medic, act. palat. 4. phys. p. 192.) corymbs terminating the branches. ^ • S- Perhaps the same

^d Bastard Jasmine. Shrub.

site, with NERVOSUM (Mill. dict. no. 3.) leaves lanceolate, opposite, with transverse nerves ; peduncles branched. F? . S. Native of Carthagena. Leaves 4 inches long, smooth, pale green beneath. Flowers white. Jasminoides Americanum lauri folio, flore albo odoratissimo Plum. Nov. gen. 6. t. 108. f. 2.

Broad-leaved Bastard Jasmine. Shrub 5 to 6 feet.

50 C. SPICATUM (Mill. dict. no. 4.) leaves ovate-lanceolate; flowers spicate, alar, and terminal. ^ . S. Native of Carthagena. Leaves 2\ inches long, and 1| broad. Flowers inodorous. Berry globose, purplish, size of a pea; pulp grateful to the taste. Seeds flat.

/Spicate-flowered Bastard Jasmine. Shrub 10 to 12 feet.

51 C. MUTI'SII (Willd. rel. ex Roem. et Schultes, syst. 4. p. 807.) leaves oblong, acuminated at both ends ; peduncles many-flowered, lateral, aggregate. Tj. S. Native of America, on Mount Quindiu. Humb. et Bonpl.

Mutis's Bastard Jasmine. Shrub.

52 C. PARVIFOLIUM (Willd. rel. ex Roem. et Schultes, 1. c. p. 808.) leaves elliptic, subundulated, glabrous, coriaceous, shining above ; flowers aggregate, sessile, nearly terminal. ^ • S. Native country unknown.

Small-leaved Bastard Jasmine. Shrub.

53 C. PAUCIFLORUM (Willd. rel. ex Roem. et Schultes, syst. 4. p. 808.) leaves oblong-ovate, downy ; heads terminal, few-flowered. ^2 • S. Native country unknown.

Few-flowered Bastard Jasmine. Shrub.

54 C. AUGUSTIFOLIUM (Lodd. bot. cab. 618.) J? . S. Native of the West Indies. Flowers white. This species is hardly known, and may be synonymous with some other species.

Narrow-leaved Bastard Jasmine. Fl. June, July. Clt. 1820. Shrub 6 feet.

Cult. These are shrubs of the most easy culture ; they grow well in any rich light soil; and are readily increased by cuttings, under a hand-glass, in heat.

XXXVI*ll(a).* ACOKANTHERA (fromak*w^,acocc, amucrone ; and *avdrjpa, anthera,* an anther; anthers mucronate.) Lycium species, Thunberg.

LIN. SYST. *Pentdndria, Monogynia.* Calyx divided even to the base into 5, segments. Corolla with a villous throat. Anthers terminated by a mucrone. Stigma elongated, papilliform, pilose. Ovarium 2-celled; cells 1-ovulate.—Shrubs, natives of the Cape of Good Hope. Leaves nearly opposite, as in *Apocynece.* Branches terminated by a spine, as in *Lycium.* Flowers in axillaryf sessile fascicles, rarely solitary.

1 A. VENENA'TA ; leaves lanceolate-oblong, coriaceous ; corymbs sessile, axillary, usually 8-flovvered? ^ • G. Native of the Cape of Good Hope. Cestrum venenatum, Thunb. prod. 1. p. 36. fl. cap. 1. p. 193. Cestrum citrifolium, Retz. phyt. bl. 1. p. *36.* Leaves shining, glabrous. Bracteas subulate. Corolla yellowish. Segments of corolla convolute, subulate, erect, tipped with brown, expanding in the afternoon. C. fascicularis, Hort. berol ?

Poisonous Aconanthera. Fl. Feb. April. Clt. 1787. Shrub 6 to 7 feet.

2 A. LAMA'RKII ; leaves lanceolate, nerved, rather coriaceous ; flowers in axillary sessile fascicles. \/ . G. Native of Africa Sonnerat. Cestrum oppositifolium, Lam. ill. 2. no. 2279. /. 112. f. 2. Poir. suppl. 2. p. 182. Branches terete, striated! Leaves nearly sessile, *2* inches and more long. Corolla small' with a slender tube, and short segments.

Lamark's Aconanthera. Shrub.

3 A. LYCIOIDES; leaves elliptic, obtuse, narrowed at the base, in fascicles ; flowers axillary, solitary, almost sessile. *h* G. Native of the Cape of Good Hope*. Cestrum lycioides, Lichtenst. spicil. fl. cap. mss. ex Roem. et Schultes, syst. 4. p. 558. Branches obsoletely tubercular, when young glabrous and leafy. Calyx 5-cleft; segments erect, linear, acute, hardly attaining the height of the middle of the corolla. Corollas white • tube an inch long; segments of the limb acute, revolute. Anthers incumbent, exserted. Stigma capitate.

Box-Thorn-like Aconanthera. Fl. June, Sept. Clt. 18°4 Shrub 5 to 6 feet.

4 A. PUBE'SCENS ; leaves oblong-lanceolate, obtuse, attenuated at the base in fascicles, pubescent; flowers axillary, solitary, nearly sessile. *2 • G- Native of the Cape of Good Hope. Cestrum pubescens, Licht. 1. c. Stature of the preceding ; but the branches are more rigid ; the branchlets short, and pungent at top, or leafy. Spines as those of some species of *Lycium.* Flowers size, colour, and shape of those of *A. lycioides;* but the calyx is downy, and more deeply divided.

Downy Aconanthera. Shrub 5 to 6 feet.

Cult. For culture and propagation see *Crabowskia,* p. 481.

XXXIX. DUNAXIA. (named in honour of Michael Felix Dunal, M.D. professor of botany at Montpelier; author of " Histoire Naturelle, Medicale, et Economique des Solanum, et des genres qui ont ét6 confondus avec eux." Paris, 1813 ; and several other works.) H. B. et Kunth, nov. sen. 3. p. *55.* t. 194.

LIN. SYST. *Pentdndria, Monogynia.* Calyx urceolate, 5-toothed. Corolla funnel-shaped ; tube elongated, nearly cylindrical; limb 5-cleft, plicate. Stamens 5, inclosed; filaments tripartite ; lateral segments capillary : middle one antheriferous. Anthers dehiscing lengthwise. Style exserted ; stigma capitate, emarginate. Berry globose, 2-celled, propped by the permanent calyx ; placentas adnate to the dissepiment. Seeds many, lenticular, reniform, compressed, smooth.—A shrub, with alternate, solitary, nearly entire leaves, floccosely tomentose from stellate down. Umbels extra-axillary, sessile. Corolla whitish.

1 D. SOLANA'CEA (H. B. et Kunth, 1. c. p. 56. t. 194.) J?, S. Native of New Granada, in shady places near Fusagasuga, at Hato del Quemado, at the altitude of 800 hexapods. Habit of *Witkerwgia;* but the structure of the flowers is that of *Cestrum ;* distinguished from all the other genera of the present order by the tripartite filaments. Branches glabrous. Leaves petiolate, ovate-oblong, acuminated, rounded and unequal at the base, glabrous and green above, nearly 10 inches long.

Solanaceous Dunalia. Shrub.

Cult. For culture and propagation see *Cestrum*^ p. 485.

XL. MEYE'NIA (meaning unknown to us.) Schlecht, in Linngea, 8. p. 251.

LIN. SYST. *Pentdndria, Monogynia.* Calyx campanulate, almost regular, 5-toothed, permanent, valvular in aestivation. Corolla clavately tubular ; limb 5-toothed, contracted, erect, conduplicate in aestivation. Genitals inclosed. Stamens 5, regular ; filaments free from the middle of the tube, naked; anthers oval-roundish, fixed by the back, 2-celled ; cells near each other. Ovarium girded by a fleshy ring ? Stigma sub-bilobed, subcapitate. Berry propped by the permanent spreading calyx, which is sometimes cleft lengthwise, 2-celled. Some of the seeds irregularly oval. Embryo straight, with roundish, foliaceous, flat cotyledons in the centre of the albumen, having the radicle pointing to the hilum.—Shrubs, natives of Mexico. Leaves alternate, quite entire, beset with articulated hairs. Flowers red, irregularly cymose.

1 M. FASCICULA'TA (Schlecht, 1. c.) shrub clothed with tomentose down ; flowers cymosely fascicled. T?. S. Native of Mexico, near Chiconquiaco. Leaves petiolate, broad, ovate, acute, very variable in size, usually 8-4 inches long, and 1½ to *2* broad. Flowers scarlet, forming fascicles or racemes at the tops of the branches. Berry cuneated at the base. Seeds variable in shape from position and compression, wrinkled longitudinally.

Fascicled-Bowered Meyenia. Shrub.

2 M. CORYMBO'SA (Schlecht, 1. c. p. *252.)* glabrous; flowers disposed in elongated corymbs. F?. S. Native along with the preceding, which it is very like ; but differing in being glabrous. Leaves variable, the largest one 5 inches long, and *2* broad, but generally smaller. Calycine segments nearly subulate. Corolla red or scarlet.

Corymbose-Cowered. Meyenia. Shrub.

Cult. For culture and propagation see *Cestrum* above.

XLI. DA'RTUS (from *ZapTog, dartos,* excoriated; bark of fruit deciduous.) Lour. coch. p. 124. ed. Willd. 1. P- 16/# Rcem. et Schultes, syst. 4. p. *55.*

LIN. SYST. *Pentandria, Monogynia.* Calyx 5-cleft; segments ovate, membranous. Corolla with a subglobose tube, which is longer than the calyx, and a 5-cleft limb; segmei ovate, spreading. Filaments inserted into the middle of the tube, inclosed. Style very short ; stigma 5-lobed. Berry small, round, excoriated, diaphanous, 1-celled, many-seeciea. Seeds small, unequal.—A shrub, with alternate, serrated, large leaves ; and small, axillary, oblong racemes of white flowers. Root reddish, rather aromatic.

1 D. PERLA^RIUS (Lour. 1. c.) \7 . G. Native of Cochinchina, in shady places on the banks of rivers. Perlanus alter, Rumph. amb. lib. 6. cap. 62. p. *122. t. 57.* Branches ascending. Leaves oblong-ovate, soft from tomentum beneath, witn oblique ribs ; petioles rufous.

iW/-berried Dartus. Shrub 6 feet.

Cult. For culture and propagation see *Cestrum,* p. 486.

§ *2. Pericarp capsular.*

XLII. VE'STIA (named after Dr. Vest, of Clagenfurth.) Willd. enum. 1. p. 208. D. Don, in edinb. phil. journ. 18^. Schlecht, in Linnaea, 7. p. *53.*

LIN. SYST. *Pentdndria, Monogynia.* Calyx campanulat^ regular, 5-toothed, permanent, valvular in aestivation. por? tubular; limb 5-parted, regular, conduplicate in sestivat'n* Genitals exserted : filaments free from the middle of the tu»» villous under the place of insertion, the rest glabrous, varioi sty curved before the expansion of the flowers ; anthers oval, d* hiscing lengthwise. Ovarium girded by a fleshy, glabrous, 5* tubercled ring, 2-celled, many-ovulate ; ovula fixed to a taicK central placenta. Stigma capitate ? hardly bifid. CapsU^ girded by the calyx, and hardly larger than it, cylindrical, yetf blunt, marked lengthwise by 4 smooth furrows, which are disposed crosswise, 2-celled, 2-valved ; valves at length bifid ; placentas *2,* adnate to the middle of the dissepiment, semi-globose* Seeds numerous.—A deciduous, erect, glabrous, fetid shrub, with ovate-lanceolate, entire leaves. Peduncles solitary, ^' flowered, terminal, and from the axils of the upper leaves, drooping. Corolla tubular, yellow, with a villous throat.

1 V. LYCIOI DES (Willd. 1. c.) *? . H. Native of Chili, about Conception, and elsewhere. Cantua ligustrifolia, Juss. ann. mus. 3. p. 118. Cantua foe'tida, Pers. ench. 1. p. 187. Periphragmos foe'tidus, Ruiz, et Pav. fl. per. *2.* p. 17. t. 132. Cestrum vespertinum, Hort. valent, Calyx violaceous. Capsule pendulous, 2-3-celled.

FIG. 44.



Box-Thorn-like Vestia. Fl. June. Clt. 1815.- Shrub 3 to 6 feet.

Cult. Vestia is a very pretty hardy shrub, growing freely in summer, but requiring a little protection in winter, if severe. It is readily propagated by cut-

tings, under a hand-glass, or by seeds, which ripen in plenty in this country.

XLIII. SE'SSEA (named in honour of Martin Sesse, formerly director of the botanic garden of Mexico.) Ruiz, et ^ay. fl. per. 2. p. 9. t. 115. f. b. and t. 116.

•LIN. SYST. *Pentdndria, Monogynia.* Calyx tubular, pentagonal, 5-toothed ; teeth ovate. Corolla funnel-shaped; tube twice as long as the calyx, with a globose orifice, and plicate limb ; segments straight, ovate, with convolute margins. Filaments curved at the base, villous. Stigma 2-lobed; lobes unequal. Capsule cylindrical, a little arched, twice as long as the calyx, 2-celled, 2-valved; valves bifid. Seeds numerous, imbricate, oblong, compressed, with membranous edges.—Branched, fetid shrubs, natives of Peru, with the habit of *Cestrum.* Leaves alternate, entire. Racemes axillary and terminal; pedicels corymbose. Corollas yellow.

1 S. STIPULA'TA (Ruiz, et Pav. fl. per. 2. p. 9. t. 115. fig. b.) Leaves lanceolate and cordate ; false stipulas large, ovate, obtuse, deciduous; racemes axillary and terminal; pedicels corymbose, T? . G. Native of Peru, on the mountains. Leaves petiolate : superior ones narrower, ovate, acuminated, *3-5* inches long, and 1-2 broad, glabrous above, and clothed with white tomentum beneath. Racemes and calyxes woolly. Corolla villous, yellow, twice as long as the calyx.

Stipulate Sessea. Shrub 5 to 6 feet.

* S. DEPE'NDENS (Ruiz, et Pav. fl. per. 2. p. 9. t. 116.) Leaves cordate-oblong; false stipulas wanting; racemes very often Pendulous; pedicels usually 3-flowered. J? . G. Native of Chili, on the banks of rivers« Branches pendent. Leaves like those of the preceding, but powdery beneath, 3-4 inches long, and 2 broad. Calyx powdery. Corolla yellowish, twice as long as the calyx.

Hanging-branched Sessea. Tree *25* to 30 feet.

Cult. For culture and propagation see *Cestrum,* p. 486.

XLIV. FABIANA (named in honour of Francisco Fabiano, a Promoter of botany in Spain.) Ruiz, et Pav. fl. per. 12, *U l22,* f* b, Hook, et Arn. in Beech, voy. pt. bot. p. 35'

LINt SYST. *Pentdndria, Monogynia.* Calyx tubular, 5-angled (or 5-toothed) Permanent. Corolla funnel-shaped, with a very long tube, and a short, 5-cleft, Plicate, revolute limb. Stamens inserted on the tube, unequal, one of the *3,* shorter than the other. Stigma capitate, emarginate. Capsule ovate, 2-valved, many-seeded. Seeds wrinkled, dotted.—A shrub, with a habit like *Tdmarix.* Leaves scattered, or in fascicles, ovate or linear. Flowers terminal, solitary, peduncu-late.

IMBRICA'TA (Ruiz et Pav. 1. c.) leaves small, ovate, sessile, concave, scale-formed, imbricate; flowers terminal, solitary; Nat. of Chili, in fields. Pers. ench. 1. p. 176. Poir. suppl. 2, p. 625. Shrub much branched. Corolla lilac, about an inch long.

Imbricate-leaved Fabiana. Shrub.

3 F. LANUGINOSA (Hook, et Arn. in Beech, voy. pt. bot. p. 35) Branches woolly from white tomentum ; leaves linear, very blunt, fleshy, spreading; calyx woolly; segments of Corolla oblong, reflexed. ^ . F. Native of Chili, at Coquimbo. Flowers axillary, pedunculate, hardly the length of the leaves. Calyx tubular, 5-cleft, with unequal, obtuse segments. Corolla glabrous. Stigma oblong, capitate.

Woolly Fabiana. Shrub.

F. VISCOSA (Hook, et Arn. in Beech, voy. pt. bot. p. 36) clothed with clammy down ; leaves scattered, narrow-linear, spreading, obtuse, channelled on the back ; peduncles terminal; fruit-bearing ones erect. T? . F. Native of Chili, near Barasca, where it is called Pichanilla. This comes very near *F. thymifolia,* St. Hil, Capsule 2-valved ; margins of the valves bent in so as to form 2 cells, and bifid at apex. Receptacle central, becoming free from the dissepiment, and split through the middle, entire at the summit.

Clammy Fabiana. Shrub.

4 F. THYMIFOLIA (St. Hil. in mem. mus. 12. p. 317. t. 9.) plant hairy and clammy ; leaves small, linear, nerveless, scattered, bluntish; peduncles subaxillary, at first erect, but at length bent. Tj . S. Native of Brazil in the province of Rio Grande do Sul. Corolla yellow at bottom, and dirty purple above.

Thyme-leaved Fabiana. Shrub \ to 1 foot.

Cult, These are very singular shrubs ; they will grow in any light rich earth. They are rather hardy, and may be grown in the open air during summer ; and they probably would stand our winters if protected by a mat, or the haulm of herbaceous plants, during frosts ; and they will be readily propagated by cuttings, under a hand-glass, or by seed.

XLV. LAURE^RIA (meaning unknown to us.) Schlecht, in Linnaea, 8. p. 513.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted, alately pentagonal, permanent. Corolla tubular, with a short, 5-lobed, straight limb. Stamens 5, inclosed, villous at their insertion ; anthers linear, fixed by the base. Stigma bilamellate. Capsule 2-celled, 2-valved ? Seeds numerous, full of impressed dots, fixed to short lamelliform processes or placentas, which are attached to the dissepiment. Embryo cylindrical, curved.—A shrub, with alternate leaves, beset with stellate hairs. Flowers lateral, solitary.

1 L. MEXICA'NA (Schlecht, 1. c.) *Vi* . G. Native of Mexico, at the Hacienda de La Laguna. Leaves ovate or broad-lanceolate, 4-6 inches long, and 2-3 broad.

Mexican Laureria. Shrub 6 feet.

Cult. For culture and propagation see *Cestrum,* p. 486.

XLVI. LAMA'RKIA (named in honour of Jean Baptist Monet de la Mark, author of " Flore Francaise." 3 vols. Paris, 1778. " Encyclopedic Methodique Botanique." 4 vols. 4to. Paris, 1783—1796, (but vol. 5 to 8 of this work is by Poiret, Paris, 1804—1808. He is author of many other works on botany, and other branches of natural history.) Roam. et Schultes, syst. 4. p. 28. Markea, Richard, in act. soc. hist, nat. par. J07.

LIN. SYST. *Pentdndria, Monogynia.* Calyx long, tubular, pentagonally prismatic, semiquinquefid. Corolla nearly funnel-shaped ; limb spreading, equally and bluntly 5-parted. Stamens equal, length of tube. Capsule oblong, terete, coarctate at top, many-seeded.—A glabrous shrub, with oblong-obovate, acuminated, shining leaves, which are bluntly rounded at the base. Corollas scarlet.

1 L. COCCINEA (Richard. 1. c. under Markea. Poir. suppl. 3. p. 293.) *2 • S. Native of Cayenne.

A Scarfcf-flowered Lamarkia. Shrub.

Cult. For culture and propagation see *Cestrum,* p. 486.

f *Addenda to Order Solanacece.*

1 SOLANUM QUERCIFOHUM (Schum. pi. guin. p. 121.) suffruticose, unarmed ; leaves twin, ovate, somewhat repand, clothed with stellate down ; racemes simple, infra-foliaceous, distich. *?.S. Native of Guinea. Stem 2 feet. Leaves 4-8 inches. Corolla white, size of those of *S. dulcamara;* segments ovate-lanceolate. Berry tomentose, 2-4- celled, size of a plum.

Oak-leaved Nightshade. Shrub.

2 SOLA^NUM DI'STICHUM (Schum. pi. guin. p. 122.) shrubby, unarmed, tomentose ; leaves ovate, subrepand; racemes simple, infra-foliaceous, distich. T? . S. Native of Guinea, at Aquapim. Leaves twin : tomentum stellate. Corollas size of those of *S. nigrum,* white. Fruit size of bilberries, globose, glabrous, scarlet.

Z)is^c/j-racemed Nightshade. Shrub 6 feet.

3 SOLA^NUM A'TROPO (Schum. pi. *gum.* p. 124.) sub-herbaceous, unarmed ; leaves obovate, cuneated, angularly-repand, acutish, glabrous ; peduncles opposite the leaves, usually twin, 1-flowered. ©. ? S. Native of Guinea. Stem branched, glabrous. Corollas pale blue, size of those of *S. tuberbsum;* limb entire, plicate, having the angles ending each in a subulate point. Berry size of an apple, dirty yellow. Leaves 3-6 inches long. *A'lropo* is the vernacular name of the plant. Allied to *S. Melongena.*

Atropo Nightshade. PL 2 feet?

4 SOLA'NUM EDU'LE (Schum. pi. guin. p. 125.) sub-herbaceous, unarmed; leaves ovate, repandly-toothed, oblique, clothed with stellate tomentum ; peduncles twin ; calyx rather prickly. 0. ? S. Native of Guinea. Stem beset with adpressed, stellate hairs. Racemes usually opposite the leaves. Corollas pale violet, size of those of *S. tuberosum;* limb of 5 acuminated angles. Berry size of an apple, nearly globose, yellow. Nearly allied to *S. Melongena* and *S. insanum.*

Edible Nightshade. PL 2 feet.

5 SOLA'NUM DASYPHY'LLUM (Schum. pi. guin. p. 126.) sub-herbaceous, rather prickly ; leaves broad-cuneated, angularly-lobed, hairy, and are, as well as the calyxes, prickly; racemes opposite the leaves, few-flowered. ©. S. Native of Guinea, where it is called by the natives *Atropo-Bah.* Leaves nearly sessile, almost a foot long. Prickles subulate, straight. Corollas rotate, blue, villous outside, size of those of *S. tuberosum ;* limb acutely 5-angled. Berry nearly globose, size of an apple. Allied to *S. Melongena.*

Thick-leaved Nightshade. PL 2 feet.

6 SOLA^NUM RUNCINA'TUM (Ruiz, et Pav. fl. per. 2. p. 36. D. Don, in Sweet, fl. gard. n. s. t. 177.) unarmed; leaves pinnatifid,'smoothish ; panicles cymose ; stigma clavate; calycine segments ligulate, recurved; stems herbaceous, diffuse. 2£f H. Native of Peru.—Feuill. per. 1. p. 722. t. 15. Corolla violaceous, 5-lobed. Perhaps the same as *S. pinnatum,* Cav.

RuncinateAeaved Nightshade. Fl. Sept. Oct. Clt. 1832. PL diffuse.

ORDER CLXX. VERBA'SCINJE (this order contains plants agreeing with the genus *Verbascum* in important characters.) Nees ab Esenbeck, in Lin. trans. 17. p. 78. Solaneae genera, Juss. gen. p. 123. edit. Usteri. p. 139. Scrophularineae, tribe A. Verbascese, Bartl. and Rchb.—See R. Br. prod. p. 444.

Corolla rotate, with a flat, 5-cleft, unequal limb, or ventricose, with a bilabiate limb. Stamens 5, of different forms ; of these the upper one is sometimes sterile or wanting. Anthers 1-celled, adnate to a hatchet-shaped connective. Carpels 2, joined into a capsule, which opens from the apex. Endocarp changing into a bipartible dissepiment. Placenta marginal, combined into a central column, which is free from the margins, and constituting the axis of the dissepiment, and which is rather prominent in the hollow of both carpels. Seeds many, reniform, albuminose. Embryo a little arched, central.—Perennial or biennial herbs, of a mucilaginous substance. Leaves alternate, usually decurrent or opposite, on a straight or twiggy stem. Flowers dispose[d] in terminal, usually elongated racemes or spikes, propped by [flo]decreasing leaves. Corollas white, yellow, or purple, A[*]ments usually bearded.

This order differs principally from *Solanacece* in the 1-celled[,] reniform, or oblong anthers, which are sometimes bent m[and] complicate, often unequal, and of different forms in the sa[me] flower ; it also differs from *Schrophuldrince* by the same reason.

Synopsis of the genera.

1 VERBA'SCUM. Calyx 5-parted. Corolla rotate or funnel-shaped. Stamens 5, inclinate, usually bearded, all antheriferous. Anthers lunate.

2 RAMONDIA. Calyx 5-parted, Corolla rotate, rather unequal. Stamens 5, all antheriferous, approximate, bearde[d] Anthers perforated at the apex.

3 CE'LSIA. Calyx 5-parted. Corolla rotate. Perfect stamens 4, didynamous, bearded ; anthers lunate.

4 ISANTHE^RA. Flowers polygamous. Corolla in the in[a]^ flowers rotate, in the female wanting. Stamens equal, glabrous, anthers reniform, dehiscing by a vertical chink.

I. VERBASCUM (of Pliny, who deduces it from *Verbena*; but according to others, it should have been *Barbdscum,* \ the bearded filaments. Hence it is called *Barbasso* in Italian, and one species is called *Thdpsus barbatus* by some old authors. Tourn. inst. t. 61. Lin. gen. no. 245. Schreb. *gen.* no. p. Juss. gen. p. 124. ed. Usteri, p. 139. Gaertn. fruct. Lam. ill. 117. f. 2. Schrad. verb, in colum. soc. goett. vd 1813. Nees, in Lin. trans. 17. p. 79.—Blattaria, Tourn.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-parted. Corolla rotate or funnel-shaped. Stamens 5, all antheriferous, declinate, usually bearded. Anthers all or only some of them the same flower, lunate. Capsule 2-valved; valves bent i[n] Seeds fixed to the central placenta.—Usually strong, erect, p[e]rennial, or biennial herbs. Leaves broad, usually decurrefltj decreasing in size as they ascend the stem, until they becom[e] bracteas. Flowers yellow, white, purple, or coppcr-coloureu» disposed in elongated, dense or loose, racemes or spikes.

§ 1. *Leaves decurrent. Flowers disposed in dense spikes**

1 V. THA'PSUS (Lin. spec. p. 252.) leaves crenulated, cte[c]rent, lanceolate-oblong, tomentose : superior ones acute; [ac]cemes spicate, dense ; calycine segments lanceolate, [ob]mentose above, equal in length to the fruit; corolla su[bro]with oblong, obovate,* obtuse segments; anthers [near]$. H. Native throughout Europe, Siberia, Tauria, and [Cau]sus, in sterile and waste places, especially on a gravelly [or] careous soil ; plentiful in Britain, in like situations ; [as] Nipaul and Kamaon. Smith, engl. bot. t. 549. Oed. [fl.] t. 631. Schkuhr, handb. 1. p. 136. t. 42. Woodv. [med.] p. 342. t. 125. V. lychnitis, Schultz, starg. no. 185. lidum, Nees, in flora, 2. p. 295. V. I'ndicum, Wall. [cat.] 2630. B. C. and F.—Gmel. sib. 4. p. 91. no. 415.—Han[no.] no. 581.—Blackw. herb. t. 3.—Mor. hist. 2. sect. 5. [t.] —Lob. icon. 1. p. 561. Plant soft from tomentum [part.] Lower leaves a foot long. Racemes densely spi[cicled,] simple, or branched, often 3 feet long. Corolla *y*

The 3 smaller filaments densely clothed with white hairs; but the 2 larger ones but sparingly so in the middle. This plant is very apt to run into mules by the impregnation of other species. The leaves and whole herb are mucilaginous, and recommended as emollients, both internally and externally. A pint of cow's milk, with a handful of the leaves, either of this or any allied species, boiled in it to half a pint, sweetened with sugar, strained, and taken at bed-time, is a pleasant emollient, and nutritious medicine for allaying a cough, and more particularly for taking off the pain and irritation of haemorrhoids. It is often applied externally in this disorder ; and is used as an injection in tenesnius with advantage. In diarrhoeas of an old standing, a decoction of it is useful to ease the pains of the intestines : two ounces of the leaves are boiled in a quart of water, and 4 ounces are given every 3 hours. In pulmonary complaints of cattle it is found to be of great use ; and hence its name of Cow's Lung-wort. It is well known to the country cow-leeches under the name of Murrain-grass, which is a corruption of Mullien. The French call it Bouillon blanc, and use an infusion of the flowers in coughs, supposing them to possess anodyne and pectoral virtues. It does not seem to have much of the narcotic powers for which the *Solanacece* are distinguished. The seeds, however, are said to stupify fish so much that they may be taken with the Hand.--\Voodville. In the East Indies, the natives have the superstitious notion of the efficacy of this plant in protecting them from the visitation of evil spirits.

The plant has many names in English. Gerarde enumerates *Cotton,* or rather *Woollen, Hig-taper, Torches, Lung-woort, Bullock's Lung-woort,* and *Hare's Bearde.* Withering adds *Ladies' foxglove.* It is probable that Gerarde's correction *of Mullien* to *Woollen* is right, especially as it is called in Dutch *Wullkraut.* The French *nameMolene* is probably borrowed from our word Mullien. *Hig-taper* is altered to *High-taper* in all modern books, supposing it to have been so named from its high tapering stem ; but in the North it is called *Hag-taper,* probably from its supposed efficacy in sorcery.

1 V. *thapsiforme* Schrad. verb. p. 21. flowers white. $. H. V. elongatum, Willd. enum. p. 223. V. IL flore albo, Tabern. krauter. P. 956. with a figure.

2 V. *Thapsus* Linn. sp. 177. Mill. fig. t. 7 ; leaves narrower. $. H. V. angustius, Dodon. pempt. p. 143, with a figure.—Mor. hist. 2. sect. 5. t. 9. f. 7. Schrank, in Hoppe, taschen. 1809. p. 90.

Common Mullien. Fl. July, Aug. Britain, in dry pastures. Perennial. 3 to 6 feet.

3 V. INDICUM (Wall. in Roxb. fl. ind. 2. p. 436. cat. no. 2630. Verbascum Indicum Linn. sp. 177. Mill. fig. t. 80. fig. 2.) leaves decurrent, elliptic, crenated, undulated, clothed with woolly tomentum ; flowers spiked, dense; bracteas and calyxes woolly, cuspidate, about the length of the tube; corolla subrotate, with roundish segments; filaments nearly equal. $. H. Native of Nipaul. V. Thapsus, Roxb. fl. ind. 1. c. Flowers yellow. Nearly allied to *V. lapsus,* but perfectly distinct.

Indian Mullien. Fl. July, Aug. Clt. ? PL 3 to 4 feet.

4 V. MACROPHYLLUM (Tenore, fl. neap. prod. 5. ex Linnaea, 3. p. 18.) leaves decurrent, elliptic, crenulated, clothed with white tomentum ; spike very dense and very long, usually simple; bracteas ovate-lanceolate, about equal in length to the calyx ; corolla funnel-shaped, with orbicular segments, which are woolly beneath; filaments clothed with yellow wool; anthers about equal. $. H. Native of Calabria, at the foot of the mountains. This species differs from *V. Thapsus,* in the spikes being more crowded; in the flowers being altogether sessile, appressed ; in the corolla being twice the size: in the filaments being equal, and densely woolly.

Long-tailed Mullien. Fl. July, Aug. PL 3 to 4 feet.

5 V. CRASSIFOLIUM (Hoffm. et Link, fl. port. 1. p. 213. t. 26. Schrad. mon. p. 22.) leaves decurrent, obsoletely crenulated, densely tomentose: superior ones acutish; racemes spicate, dense ; filaments glabrous ; 2 of the anthers oblong. $. H. Native of Portugal, in sandy places. V. Thapsus, Brot. fl. lus. 1. p. 270. Plant densely clothed with rusty yellow tomentum. Stem simple. Lower leaves obovate-elliptic. Very like *V. thapsiforme,* and agreeing with it in the form of the anthers ; but it is readily distinguished, in the filaments being all glabrous. V. crassifolium, of D. C. fl. gall. no. 2670. exclusive of the synonymes, may be the same.

Thick-leaved Mullien. FL July, Aug. Clt. 1818. PL 2 to 3 feet.

6 V. CUSPIDATUM (Schrad. verb. p. *23.* t. 1. f. 1.) leaves decurrent, crenulated, tomentose : superior ones cuspidate ; fascicles of racemes remote ; 2 of the anthers oblong. $. H. Native about Vienna, in mountain groves. V. Thapsus, Bot. vindob. The stem is usually more dwarf than in *V. Thdpsus,* less thick, and the leaves and the tomentum thinner. The upper cauline leaves are drawn out into long taper points. The disposition and form of the flowers come near to *V. phlomoldes.* Fructiferous pedicels about equal in length to the calyx, not twice as short as in *V. Thdpsus.* Corolla exactly rotate, with obovate unequal segments, larger than those of *V. Thdpsus,* but smaller than those of *V. phlomoldes.* The colour of the plant is pale green, as is generally observed in *V. Thdpsus.*

Cuspidate-leaved Mullien. FL May, June. Clt. 1817. PL 3 to 4 feet.

7 V. NI'VEUM (Tenor, fl. neap. p. 90. t. 22. syn. p. 36. prod, p. 16. Gussone, pi. rar. 103.) leaves crenated, clothed with white floccose tomentum ; racemes spicate, dense; anthers equal. Schrad. verb. p. 23. Radical leaves petiolate, obovate, cuneated : cauline ones stem-clasping, elliptic, crenated, clothed with white tomentum on both surfaces ; spike simple, compact; filaments bearded with white hairs. $. H. Native of Naples, in the province of di Bari e di Lecce, in pastures; and of the mountains of Lucania, and of Calabria. The whole plant white from tomentum, except the upper surfaces of the adult leaves, which are green. Flowers yellow, nearly sessile, fascicled. Raceme simple, not branched. All the filaments clothed with white wool. Leaves never decurrent. There are varieties of this having the tomentum either white or yellowish.

Snow-white Mullien. Fl. April, May. Clt. 1823. PL 3 to 4 feet.

8 V. DENSIFLORUM (Bertol. pi. rar. ital. 3. p. 52. Schrad. verb. p. 24.) leaves tomentose : radical ones long-lanceolate, crenated, deeply serrated at the base : upper cauline leaves acuminated, dentate, semidecurrent; racemes spicate, dense; anthers equal ? $. H. Native of Italy, on the top of Mount Bruciana, which is situated between Carraria and Massa. Upper part of plant clothed with fulvous tomentum. Radical leaves more than lj foot long, green above, but paler beneath. Raceme simple, more than a foot long, fascicled. Corollas large,

yellow. Filaments clothed with white wool. Capsule tomentose.

Dense-flowered Mullien. PL 4 to G feet.

9 V. THAPSOIDES (Hoffm. et Link, fl. port. 1. p. 214. exclusive of the synonymes. Schrad. verb. p. 25. t. 5. f. 2.) leaves crenulated, tomentose : radical ones oblong-lanceolate: cauline ones oblong, acute, semidecurrent; racemes subspicate ; fascicles of flowers rather crowded ; anthers nearly equal. %. H. Native of Portugal. Stem branched at top ; branches floriferous. Plant clothed with canescent tomentum. Upper surfaces of the leaves green in the adult state, and less tomentose. Radical leaves a span to a foot and more long. One or two of the flowers in each fascicle usually fertile, the rest sterile. Corolla yellow, size of those of *V. Lychnilis.* Filaments clothed with white wool. Perhaps *V% Lychnitis,* Brot. fl. his. 1. p. 272.

Far. ft, simplex; stem simple, and more humble. %. H. V. simplex, Hoffm. et Link. fl. port. 1. p. 216. V. dubium, Room, et Schultes, syst. 4. p. 330.

Thapsus-like Mullien. Fl. July, Aug. Clt. 1819. PI. 4 to 6 feet.

10 V. PLANTAGI'NEUM (Mor. elench. sard, ex Bull. 14. p. 348.) plant clothed with fulvous tomentum ; leaves obsoletely crenulated, thick : cauline ones decurrent, crowded, oblong : radical and lower leaves attenuated into the petioles, ovate-elliptic, obtuse; racemes densely spicate; filaments clothed with coppery villi. $. H. Native of Sardinia, on the hills of Cala and D'Ostia, Pula, in arid pastures. Said to be nearly allied to *V. thapsoides.*

Plantain-lewcd Mullien. PI. 4 to 5 feet.

11 V. GOSSYVI'NUM (Bieb. fl. cauc. suppl. p. 152.) leaves decurrent, crenulated, green, and rather woolly above, but clothed with white wool beneath ; racemes simple, tailed; pedicels fascicled, rather shorter than the calyx. $. H. Native of Iberia. Habit of *V. gnaphaloides ;* the down, inflorescence, flowers, and capsules, are also the same; but the leaves are narrower, and the crenac more minute. Filaments copper-coloured; the 2 shorter ones clothed with white tomentum above the middle; the other 3 longer, and naked. Corollas yellow.

Woolly Mullien. Fl. July, Aug. Clt. 1820. PI. 4 to 6 feet.

12 V. MACRA'NTHUM (Hoffm. et Link. fl. port. 1. p. 215. t. 27.) leaves crenulated, tomentose: radical ones elliptic-oblong, attenuated at the base : cauline ones oblong, acute, semidecurrent ; fascicles of racemes remote ; two of the anthers oblong. $. H. Native of the North of Spain, by way sides. Schrad. verb. p. *27.* Plant tomentose. Leaves green above : radical ones 3-4 inches long. Racemes a foot long, or more. Corollas large, showy, yellow, with broad, obovate-roundish, unequal segments. Filaments clothed with copper-coloured wool; but the 2 longer ones only at the base.

Large-flowered Mullien. Fl. June, July. Clt. 1820. PI. 3 to 4 feet.

13 V. AUSTRA'LE (Schrad. verb. p. 28. t. 2.) leaves crenated, tomentose: radical ones oblong-lanceolate, tapering into the petioles : cauline ones oblong, acute, decurrent: uppermost ones broad-ovate, cuspidate, semidecurrent; fascicles of racemes remote ; 2 of the anthers oblong. $. H. Native of the South of Europe. Plant clothed with tomentum, like *V. phlomoides.* Radical leaves a foot and more long. Racemes simple, \\ foot long; but sometimes, as in strong plants, it is branched at the base. Flowers sweet-scented. Corolla, calyx, stamens, and stigma, size, colour, and structure of those of *V. phlomoides.*

Southern Mullien. Fl. July, Aug. Clt. 1815. PI. 4 to G feet.

U V. PHLOMOIDES (Lin. spec. *253.)* leaves crenated, totnentose : radical ones elliptic, or ovate-elliptic, petiolate : cauline ones oblong, acute : superior ones broad-ovate, cuspidate, stem-clasping, decurrent; fascicles of racemes rather remote ; 2 of the anthers oblong. $. H. Native of Europe, Tauria, Caucasus, and Turkey, in sterile and uncultivated places. Sibtn, et Smith, fl. gnec. t. 224. Bieb. fl. cauc. no. 398. exclusive ot the syn. of Tabern. and Dodon. Moench, hass. no. 170. t. 4. Mill. fig. t. 273. V. tomentdsum, Lam. fl. fr. 2. p. 260. V. rugulbsum, Willd. enum. 1. p. 224. V. pulveruléntum, Spreng. hal. no. 233. V. Thápsus, Plenck, med. t. 109. V. thapsoides, Vill. dauph. 1. p. 490. V. grandiflórum, Mill. diet. no. *5.* Stem branched at top, tomentose, as well as the leaves and calyxes. Leaves usually yellowish-green : radical ones 3-4 inches long. Racemes from a span to a foot, or longer, branched a little at the base. Flowers sweet-scented. Corolla yellow, showy, size of those of *V. macrdnthum,* with broad obovate-roundish, unequal segments. The 3 smaller filaments clothed with dense purple wool; the 2 longer ones, for the most part, naked, or but rarely furnished with a few hairs in the middle. Capsule roundish-ovate, blunt.

Var. ft, albiflbrum ; flowers white. Lob. icon. t. 560. f. 2.

Phlomus-lUce Mullien. Fl. June, July. Clt. 1739. PI. 3 to 4 feet.

15 V. CONDENSA'TUM (Schrad. verb. p. 31. t. 3.) leaves tomentose : radical ones elliptic-oblong, attenuated at the base, unequally and doubly crenated : cauline ones oblong, acute, simply crenated ; superior ones roundish-ovate, cuspidate, decurrent ; racemes dense, fascicled ; two of the anthers oblong. <? . H. Native of Austria, in sterile places. Stem, divided at top into floriferous branches. Radical leaves 1 to 12 foot long. Racemes a foot to 1£ foot long. Flowers and fruit agreeing with *V. phlomoides.*

Close-ftowered Mullien. Fl. July, Aug. Clt. 1820. PI./5 to 6 feet.

16 V. NEMOROSUM (Schrad. verb. p. 32. t. 1. f. 2.) leaves acute, crenated, tomentose: radical ones oblong, attenuate^ at both ends : lower cauline ones lanceolate, narrowed at the base • middle ones oblong-lanceolate: and the superior ones oblong and decurrent; fascicles of racemes rather remote; *2* of the an* thers oblong. £ . H. Native of Austria, in groves, Schott* Nearly allied to *V. phlomoides,* but with a different habit- Radical leaves a span and more long: lower cauline ones more than a foot long. Racemes solitary, simple. Calyxes, corolla* and fruit, as in the two preceding species.

Grove Mullien. Fl. July, Aug. Clt. 1820. PI. 4 to 5 feet.

17 V. MONTA'NUM (Schrad. hort. gott. fasc. 2. p. 18. t. 12. verb. p. 33.) leaves tomentose : radical ones oblong-elliptic, crenulated, petiolate: cauline ones oblong, acutish, obsoletely crenulated : superior ones acute, decurrent; raceme subspicate ; fascicles of flowers rather crowded ; anthers nearly equal. $ • H. Native of the Pyrenees ; also of Switzerland and Germany. V. phlomoides, Spreng. hal. no. 231. Schleich. pi. rar. cent. 1. no. 27. Stem simple, clothed with rusty yellow tomentum, as well as the leaves and other parts. Radical leaves *3-5* inches long. Racemes 3 inches to \ a foot. Flowers sometimes solitary, but usually fascicled. Corolla size, colour, and form of those of *V. Thdpsus.* The 3 smaller filaments clothed with white wool: the 2 larger ones beset with scattered hairs, rarely naked. Capsule ovate, obtuse, about equal in length to the calyx. In shady places this plant becomes 6 feet high, and branched at top; and the leaves shining, green above; but in dry exposed places not above 2 feet, and unbranched.

Mountain Mullien. Fl. July, Aug. Clt. 1819. PL 2 to 6 feet.

. 18 V. COLLINUM (Schrad. verb. p. 35. t. 5. f. 1.) leaves crenate, tomentose: lower ones elliptic-oblong, petiolate : middle cauline ones oblong-lanceolate, acutish, attenuated at the base : superior ones oblong, acute, decurrent; fascicles of racemes remote; anthers equal. %. H. Native of the North of Germany, on dry grassy hills. Stem simple, reddish-green at .bottom, tomentose. Leaves pale green above, and canescent beneath : radical ones 4 or 4j inches long. Racemes 1 to 1 \ foot Jong, solitary; but in strong plants there are sometimes 1-2 small branches at the base. Calyx and corolla almost as in *V, nigrum;* and the filaments are clothed with purple wool as in [11]; pollen red. Capsule small, oblong-ovate, obtuse.

Hill Mullien. Fl. July, Aug. Clt. 1820. PI. 3 to 4 feet.

!9 V. VERSIFLORUM (Schrad. verb. p. *36.)* leaves crenated, tomentose: lower ones elliptic-oblong, petiolate: cauline ones oblong, acute, decurrent: upper ones acuminated; racemes panicled ; fascicles remote, few-flowered; anthers equal. 3/.? Native near Prague, in sandy places, Tausch. This elegant species comes very near the V. rubiginosum, Waldst. et Kit, but differs in the colour of the flowers. Plant clothed with greenish-yellow tomentum. Stem divided into many floriferous Ranches towards the apex. Radical leaves 3^ to 6 inches long. Kacemes more than a foot long, panicled. Flowers size of those of *V. phorniceum,* sweet-scented. Corolla of a reddish copper-colour, verging to yellow towards the tube, with obovate-roundish segments, furnished with yellow wool at the base of the smaller ones, as in *V. Blattaria,* as well as the smaller filaments ; but the 2 longer filaments are clothed with purple wool. Pollen white. Capsule ovate, obtuse, a little larger than the ^alyx. Corollas sometimes twice the size of those of *V. phlo-'noides.*

Party-flowered Mullien. Fl. June, July. Clt. 1823. PI. 3 to 4 feet.

20 V. RAMI'GERUM (Link, in litt. ex Schrad. verb. p. *37.* t. [4]«) leaves clothed with fine tomentum : radical ones oblong-lanceolate : cauline ones oblong, acute, doubly crenated, semidecurrent: upper ones acuminated ; racemes panicled ; fascicles [illegible] many-flowered; anthers equal. *$.* H. Native of Germany. Habit of *V. Lychnitis.* Stem much branched, tomentose. Leaves canescent beneath : radical ones often a foot long* Calyx as in *V. phlomoules,* but one half smaller, nevertheless larger than that of *V. Lychnitis,* but the stamens are the same.

Branch-bearing Mullien. Fl. July, Aug. Clt. 1824. PI. 4 to 6 ft et.

21 V. BASTA'RDI (Roem. et Schultes, syst. 4. p. 335.) leaves [illegible] long-lanceolate, downy or villous, crenated, and subdectirrent; flowers two or three glomerate; stem much branched. *$* . H. Native on argillaceous hills about Mayenne, near Montreuil-Bel-*J?y.'* V. blattarioides, *ft.* caule ramosissimo, Bast, suppl. fl. Main, et Loire, p. 42. ? V. ramosissimum, D. C. fl. fr. suppl. P* 416. no. 4679. a. but not of Poir. Stem purplish at bottom, downy. Leaves villous, particularly beneath, half stem-clasping* Branches of panicle elongated. Flowers pedicellate. Corolla yellow ; hairs of stamens purple. . Said to be nearly allied to *V. ramigerum,* and probably only a variety of it.

dastard's Mullien. Fl. July, Aug. Clt. 1824. PI. 5 to 6 feet.

22 V. MUCRONATUM (Lara. diet. 4. p. 218. Schrad. verb. P* [3]8.) leaves crenated, clothed with hoary tomentum: radical ones oblong-lanceolate: cauline ones oblong, acute, semidecurrent* upper ones ovate, long-acuminated; spikes panicled; flowers glomerate. *$* . H. Native of Candia, Labillardiere. Verbascum orientale, maximum, candidissimum, ramis candelabrum aemulantibus, Tourn. cor. p. 8. ? The whole plant clothed with hoary tomentum. Stem branched at top. Radical leaves in the cultivated plant U to 2 feet long. Flowers almost sessile. Corolla large, ex Lam., yellow, middle-sized, ex Spec. Filaments all clothed with white wool.

Afwcro;m/e-leavcd Mullien. Fl. July, Aug. Clt. 1814. PI. 6 to 8 feet.

23 V. CANDIDI'SSIMUM (D. C. fl. fr. suppl. p. 413. no. 2G7O.) leaves and whole plant white from floccose tomentum: louver leaves petiolate, oblong-lanceolate, attenuated at both ends, acute : upper cauline ones ovate, acuminated, all decurrent and finely crenated; racemes panicled; fascicles many-flowered, remote. *$* . H. Native near Montpelier, at Port Juvenal. The upper part of the plant is sometimes deficient of floccose tomentum. Calyx small. Corolla yellow, middle-sized. Perhaps the same as *V. mucronatum* or *V. niveum.*

Far. ft ; flowers approximate ; stem rubiginose.

Very-white Mullien. Fl. July, Aug. Clt. 1823. PI. 4 to 5 feet.

24 V. AURICULA'TUM (Smith, prod. fl. graec. 1. p. 149. Sibth. et Smith, fl. graec. t. 223.) leaves crenulated, elliptic-oblong, tomentose on both surfaces, auricled at the base : upper ones half stem-clasping ; racemes panicled, flexuous ; fascicles many-flowered, remote ; anthers equal. *$* . H. Native of the Island of Samos. Verbascum orientale, maximum, candidissimum, ramis candelabrum aemulantibus, Tourn. cor. p. 8. Corollas yellow. Filaments beset with cream-coloured wool. Anthers fulvous.

Auricled-leaved Mullien. PI. 3 to 4 feet.

25 V. SINUA'TUM (Lin. spec. p. 254.) leaves clothed with powdery tomentum : radical and lower cauline ones sinuated : superior ones crenated, decurrent; spikes panicled ; flowers subglomerate ; anthers equal. *$* . H. Native of Italy, South of France, Portugal, and Barbary, in arid stony places; very common in Greece. Sibth. et Smith, fl. graec. t. 227. Verbascum nigrum foliis papaveris corniculati, Tourn. inst. p. 147. Verbascum crispum et sinuatum, Bauh. hist. 3. p. 860. with a figure.—Mor. hist. 2. sect. 5. t. 9. f. 6. V. intubaceum, Tabern. kraut, p. 956. with a figure. Stem tomentose, branched at top. Radical leaves *3-5* inches long, obtuse. Leaves naked on the upper surface in the adult state. Spikes 1 to 1| foot long. Flowers on short pedicels. Calyx small. Corolla yellow, like those of *V. Lychnitis,* but a little larger. Filaments all clothed with purple wool. Anthers all reniform ; pollen of a vermilion colour.

Sinuated-lewed Mullien. Fl. July, Aug. Clt. 1570. PL 3 to 4 feet.

26 V. HY'BUIDUM (Brot. fl. lus. 1. p. 170.) leaves tomentose : radical ones obovate-lanccolate, undulated, and subsinuated : cauline ones subdecurrent, cordate, oblong, acute, crenated ; racemes panicled; flowers glomerate, each glomerule furnished with 3 bracteas. *$* . H. Native of Portugal, in hedges, and in shady, gravelly places about Coimbra. This is said to be a hybrid between *V. sinuatum* and *V. pulverulentum.* Stem branched from the base to the apex, villous. Radical leaves li foot long, and 7 inches broad. Corollas yellow ; the throat striped with purple. Filaments all clothed with purple villi. The plant is green, though tomentose.

Hybrid Mullien. Fl. July, Aug. Clt. *2* PI. 4 to 5 feet.

27 V. CONOCA'RPUM (Mor! elench. sard, ex Linnsea, 5. p. *93.)* clothed with white tomentum ; leaves somewhat crenated: lower ones elliptic or oblong, petiolate: upper ones ovate, acuminated, somewhat decurrent; fascicles of flowers loosely racemose ; capsule oblong-conical, acutish. 7/. H. Native of Sardinia, in the fissures of rocks by the sea shore. Corolla yellow, with a deep violet centre. Filaments bearded with violaceous hairs, the 2 longest ones naked at top.

Cone-fruited Mullien. PI. 4 to 5 feet.

§ 2. *Leaves not decurrent.*

* *Flowers glomerate.*

28 V. SYRI'ACUM (Schrad. verb. 2. p. 6. t. 1. f. 1.) leaves quite entire, clothed with woolly tomentum : lower ones obovate-lanceolate : superior ones lanceolate ; spike simple. *If.*. H. Native of Syria, in sterile waste places. The whole plant is clothed with woolly tomentum. Stem 2-3 from the same root, woody at the base. Radical leaves 3 or 3| inches long. Spike longer than the stem ; bundles or glomerules 5-7-flowered. Corolla middle-sized, yellow. Filaments all woolly ; anthers equal. Nearly allied to *V. simplex,* Labill.

Syrian Mullien. PI. 1 to 2 feet.

29 V. UNDULVTUM (Lam. diet. 4. p. 221.) leaves densely tomentose : lower ones lyrately sinuated, undulated: cauline leaves subsinuated : superior ones oblong-ovate, sessile ; spike solitary. 2/. H. Native of the Levant. Stems woody at the base, simple, a little divided, pale, yellowish from tomentum, as well as the leaves. Radical leaves 3-4 inches long. Spike a foot and more long; bundles 3-4-flowered. Corolla yellow. Filaments all woolly.

Undulated-leaved Mullien. Fl. July, Aug. Clt. 1819. PL 2\ to 3 feet.

30 V. CERATOPHY'LLUM (Schrad. verb. p. 7. t. 1. f. 2.) leaves tomentose *on* both surfaces : lower ones sub-pinnatifid: upper ones entire ; spikes panicled ; outer bracteas quite entire. £ . H. Native of the Levant. Stem branched at top, tomentose. Radical leaves a span or more long: uppermost cauline leaves half-stem clasping, unequally serrated. Spikes a foot and more long ; bundles remote, 3-4-flowered. Corolla like that of *V. blattdria,* yellow. Filaments all clothed with yellow wool. Pollen yellow.

Buckhorn-leaved Mullien. PI. *2*\ to *3 feet.*

31 V. PINNATI'FIDUM (Vahl, symb. 2. p. *39.* Bieb. fl. cauc. 1. p. 404. Schrad. verb. 2. p. 8.) leaves tomentose beneath : lower ones bipinnatifid : upper ones pinnatifid ; spikes panicled ; outer bracteas serrated. *$* . H. Native of Tauria, in the sea sand ; and of the Islands of the Archipelago. Sibth. et Smith, fl. graec. t. 228. V. bipinnatifidum, Sims, in Curt. bot. mag. t. 1777. V. sinuatum, Habl. taur, p. 156. Stems sometimes branched *from* the base, clothed with hoary tomentum. Radical leaves 3-4 inches long. Spikes a span and more long, but those *of* the branches shorter. Corollas like those of *V. blattaria,* yellow. Filaments orange-coloured, clothed with white or fulvous wool; pollen vermillion. Anthers all reniform.

Pinnatifid-lesLved Mullien. Fl. July, Aug. Clt. 1788. PI. 2\ to 3 feet.

32 V. PLICVTUM (Sibth. et Smith, fl. grsec. t. 226.) leaves tomentose, plicately pinnatifid : upper cauline ones sessile ; spike simple, interrupted, leafy ; anthers equal. *$* . H. Native of the Island of Hydra; plentiful near Athens. V. sinuatum, /3, Lin. spec. p. 255. V. pinnatifidum, Ait. hort. kew. ed. 2d. vol. 1. p. *386,* but not of Vahl. V. Greecum fruticosum, folio sinuato candidissimo, Tourn. cor. p. 8. itin. 1. p. 128, with a figure. Plant densely clothed with woolly, cream-coloured tomentum. Leaves obovate-oblong, lyrately sinuated : radical ones a span long, petiolate. Filaments bearded with yellow hairs. Corolla yellow.

Plicate-leaved Mullien. PL 2 to 3 feet.

* # *Flowers fascicled.*

***33* V. CHRYSE'RIUM (Schrad. verb. 2. p. 9.) leaves quite entire, tomentose : lower ones obovate-lanceolate, obtuse, tapering into the petioles : cauline leaves oblong-lanceolate, acutish,** nearly sessile: uppermost ones broad-ovate, acuminated, half stem clasping ; racemes panicled; pedicels about equal in length to the calyx ; anthers equal. *$* . ? H. Native of Palestine, Sieber. Plant clothed with yellowish tomentum. Stem simple, or divided a little at top. Leaves thick: radical and lower cauline ones 4-5 inches long. Racemes about a span long. Corolla yellow ; ? filaments glabrous.

Golden Mullien. PL 2 to 3 feet.

34 V. SCHOTTIANUM (Schrad. verb. 2. p. 13. t. 3. i. /•; leaves crenated, tomentose : lower ones oval-oblong, acutisn, petiolate ; middle cauline leaves oblong, acute, sessile : superior leaves ovate, acuminated, subcordate, half stem-clasping; racemes panicled ; pedicels twice as long as the calyx. o • H. Native of Austria, in groves. Allied to the preceding. Stem simple, or divided a little at top. Radical leaves a span to 1 foot long. Racemes a span long; fascicles 5-10-flowered. Calyx and corollas as in *V% specibsum.* Filaments clothed with purple wool. Anthers all reniform ; pollen vermillion. The leaves are nearly naked in summer.

SchotCs Mullien. PL 3 to 4 feet.

35 V. LEPTOSTA'CHYUM (D. C. fl. fr. suppl. no. 2676.) leaves oblorg, tomentose : lower ones bluntish, crenulated, tapering into the petioles : cauline leaves acute, quite entire, sessile: superior ones ovate, acuminated, half stem-clasping ; racemes elongated ; pedicels shorter than the calyx. # . H. Native near Montpelier, in stony fields near Port Juvenal, D. C. Schrad. verb. 2. p. 14. Plant clothed with white tomentum. Stem simple, terete. Radical and lower cauline leaves *3-5* inches long: the middle cauline leaves 2-3 inches long. Raceme solitary ; fascicles 5-7-flowered. Calyx nearly the size of *V.phlomoides.* Corolla like that of *V. specibsum,* yellow. Filaments all woolly ; anthers equal. In strong plants the stem is furnished with a branch or two at top.*

Slender-spiked Mullien. Fl. July, Aug. Clt. 1825. PL 3 to 4 feet.

36 V. ROTUNDIFOLIUM (Tenore, prod, suppl. 2. p. *66.* syn. p. *37.* fl. neap. p. 92. t. 23.) leaves crenated, sub-undulated, clothed with hoary tomentum : lower ones oval, petiolate: cauline leaves ovate-elliptic, nearly sessile : uppermost ones roundish-ovate, acute, half stem-clasping ; racemes subspicate ; pedicels shorter than the calyx. *$.* H. Native of Sicily; and of Capra Island. Schrad. verb. 2. p. 50.—Micheli. in Till. hort. pis. p. 171. Habit of *V. gnaphalodez,* but the tomentum is finer, and hoary. Upper leaves clasping at the base, adnate, not free. Racemes 1 to 1 \ foot, simple, or furnished with 1 or 2 small branches at the base ; fascicles remote, few-flowered. Corolla yellow. Filaments clothed with purple wool.

Round-leaved Mullien. Fl. July, Aug. Clt. 1823. , PL 4 to 5 feet.

37 V. LONGIFOLIUM (Tenore, fl. neap. 1. p. 89. t. 21. prod, p. 16. syn. p. *31.* Gussone, pi. rar. p. 102.) leaves quite entire, tomentose; lower ones oval-lanceolate, petiolate : cauline ones oblong, acuminated, half stem-clasping ; racemes elongated ; pedicels twice as long as the calyxes ; two of the anthers oblong. £. H. Native of Abruzzo, plentiful in mountain pastures. Verbascum montanum, tomentosum longifolium luteum, foliis non serratis, flore parvo, caule rotundo, Micheli, in Till. hort. pis. p. 171. Plant clothed with yellowish fioccose tomentum. Stem branched at top. Radical leaves 1| foot long. Racemes 2 feet or more long ; fascicles remote, many-flowered. Corollas rather mealy, and covered with stellate pili outside, yellow, like those of *V. pyramidale.* Filaments clothed with purple wool, but the 2 longer ones only at the base inside. The lower leaves in the cultivated plant are repand inside, rarely sub-sinuated, and the superior ones are crenulated. There are

varieties of this species having the stem simple, or branched, and the tomentum sometimes white.

Long-leaved Mullien. Fl. July, Aug. Clt. 1824. PI. 4 to 5 feet.

38 V. MICRA'NTHUM (Moretti, dec. pi. itin. 3. p. 6, Guss. pi. rar. p. 103.) stem branched; radical leaves petiolate, oblong-lanceolate, acute, crenulated, canescent beneath : cauline leaves scattered, sessile, becoming gradually narrower as they ascend the stem ; racemes compound ; fascicles remote. $. H. Native of Abruzzo, in stony and shady places on the mountains called Morone, Magella, Aquila, Chiarino. Filaments copper-coloured : the 2 longer ones from the base to the middle, bearded by white villi: the 3 shorter ones all their length. Anthers equal, copper-coloured.

£ma//-flowered Mullien. PL 3 to 4 feet ?

39 V. SPECIOSUM (Schrad. hort. gcett fasc. 2. p. 22. t. 16. verb. 2. p. 12.) leaves tomentose, quite entire : lower ones oval-lanceolate, tapering into the petioles: cauline ones auriculately cordate, sessile; racemes panicled; pedicels twice or thrice as long as the calyx ; anthers equal. $. H. Native of Hungary, Austria, and France, in mountain groves. V. longifolium, D. C. fl. gall, suppl. p. 414. Stem angular, and branched at top. Plant clothed with white tomentum. Radical leaves 1 to 1| foot long. Racemes 1-2 feet long; fascicles ^any-flowered. Corolla yellow. Filaments copper-coloured, clothed with white wool. Pollen vermillion, rarely copper-coloured.

Var. j3; stem much branched. $. H. Native of Austria. V. thapsoides, Host, fl. austr. p. 115. V. caeruleum, Schanz, cat. sem. hort. vind. 1822. It should have been *V. caulescens,* instead of *F. cceruleum.*

Showy Mullien. Fl. July, Aug. Clt. 1818. PL 4 to 7 feet.

40 V. GNAPHALODES (Bieb. fl. cauc. suppl. p. 152. Schrad. verb. 2. p. 15.) leaves crenated, clothed with dense, floccose tomentum beneath : lower ones oval-oblong, petiolate : cauline ones oblong, acute, nearly sessile: upper ones roundish-ovate, long-acuminated, half stem-clasping ; racemes terminal, very long; pedicels about equal in length to the calyxes. $. H. Native of the South of Tauria. V. Stevenii, Cat. sem. hort. vind. 1821. Very like *V. floccdsum,* but the habit is more Robust, and the leaves evidently crenated. Racemes 3 feet long and more, sometimes furnished with a few short racemes ; lower fascicles remote: upper ones crowded. Corolla yellow. Plant clothed with white floccose tomentum, except the upper surfaces of the adult leaves.

Onaphalium-like Mullien. Fl. July, Aug. Clt. 1825. PL 6 feet or more.

41 V. FLOCCOSUM (Waldst. et Kit. pi. hung. 1. p. 81. t. 71.) leaves undulately-crenulated, densely clothed with floccose tomentum : lower ones oblong-oval, petiolate : cauline ones oblong, acute, sessile: uppermost ones roundish-ovate, long-acuminated, half stem-clasping ; racemes panicled ; pedicels equal in length to the calyx. $. H. Native of Portugal, France, Switzerland, Italy, Sicily, shores of Austria, Hungary, and Calabria, in sterile, sandy places. D. C. fl. fr. suppl. no. 2673. a* Schrad. verb. 2. p. 16. V. pulverulentum, Hoffm. et Link, fl- port. 1. p. 217, exclusive of the syn. of Villars. V. pulvin^tum, Thuill. fl. par. p. 109.—Hall. helv. no. 583.—Bauh. hist. 3. p. 872. and 873, with a figure.—Mor. hist. 2. sect. 5. t. 9- £ 3. Stem simple, or a little branched at top. Plant clothed with floccose tomentum. Radical and lower cauline leaves | a foot, or a span or more long ; uppermost leaves sometimes cordate, half stem-clasping. Flowers size, colour, form, and disposition of *F. Lychnitis jlava,* as well as the structure of the stamens.

Far. ft ; flowers larger. $. H. Native of England. V. pulverulentum, Smith, fl. brit. 1. p. 251. engl. hot. t. 487.

Far. y, *nigro-pulverulentum* (Schrad. verb. 2. p. 16.) V. pulverulentum, *[3,* Smith, 1. c. V. mixtum, D. C. fl. fr. no. 2674. Said to be a hybrid from *F. jloccdsum,* impregnated by the pollen of *F. nigrum.* *

Floccose Mullien. Fl. June, Aug. Clt. 1805. |3 and y, England. PL 4 to 6 feet.

42 V. PULVERULE'NTUM (Vill. dauph. 2. p. 490, exclusive of the synonymes. Schrad. verb. 2. p. 17.) leaves doubly crenated, tomentose beneath : lower ones oblong-oval, petiolate : cauline ones ovate-oblong, acutish, nearly sessile : upper ones roundish-ovate, acuminated; racemes panicled; pedicels equal in length to the calyxes. $. H. Native of Dauphiny. This species has been confused with *F, Lychnitis jlava,* and *F. jloccdsum,* but differs from both in the stem being more humble and terete, and in the leaves being naked above, and in the smaller calyxes, and in the leaves being doubly crenated, and in the tomentum being finer.

Powdery Mullien. FL June, Aug. Clt. ? PL 2 to 4 feet.

43 V. LYCHNI'TIS (Lin. spec. p. 253.) leaves crenated, smoothish above, but clothed with powdery tomentum beneath: lower ones oval-oblong, bluntish, tapering into the petioles: superior ones ovate-oblong, acute, nearly sessile : upper ones ovate, acuminated ; racemes panicled; pedicels twice as long as the calyx. £ . H. Native of Europe, North of Asia, and Noi;th America, among rubbish, in waste fields and groves. Jaume, St. Hil. pi. fr. 4. t. 392. V. pulverulentum, Bieb. fl. cauc. no. 400, and of other Floras. D. C. fl. fr. no. 2672. Stem more or less branched. Radical leaves half a foot long : middle cauline ones 2-4 inches. Racemes a span long, or longer ; fascicles 5-7-flowered ; the superior fascicles 2-3-flowered. Flowers middle-sized, sweet-scented. Corolla yellow. Filaments clothed with white wool, the 2 longer ones only at the base. Anthers equal; pollen vermillion. *F. Weldemi,* Morelli is only a var. of *F. Lychnitis.*

Far. (3; flowers white. $. H. Native along with the species, also in many parts of Britain. V. Lychnitis, *(3,* Lin. spec. p. 253. Willd. spec. 1003. *(3.* and y. o. b. Lychnitis, /3, Lam. diet. 4. p. 218. Smith, fl. brit. 1. p. 250. engl. bot. t. 58. Oed. fl. dan. t. 586. V. Mce'nchii, Schultz, starg. suppl. p. 14. V. thapsoides of English authors. V. album, Mcench, meth. p. 447. Bess. fl. gal. no. 267.— Hall. helv. no. 583. *fi.* — Mor. hist. 2. sect. 5. t. 9. f. 4.—Bauh. hist. 3. p. 873, with a figure.—Tabern. kraut, p. 956. icone.—Lob. icon. 1. p. 562.

Far. y ; flowers without petals. $. H.

Lychnitis Mullien. FL June, Aug. Britain. PL 2 to 6 feet.

44 V. RAMOSI'SSIMUM (Poir. suppl. 3. p. 718.) lower leaves ovate-oblong, crenated, nearly glabrous, on short petioles ; panicle much branched, beset with glandular hairs; flowers solitary, pedicellate; stem angular, nearly glabrous. $. H. Native country unknown ; probably of hybrid origin. Plant deep green. Leaves at least 8 inches long : upper ones stem-clasping. Panicle 1 to 2 feet; branches a foot long. Flowers shorter than the pedicels. Corolla yellow. Filaments bearded with purple hairs.

Much-branched Mullien. Fl. July, Aug. Clt. 1824. PL 4 to 6 feet.

45 V. MONSPESSULA'NUM (Pers. ench. 1. p. *215.* Schrad. verb. 2. p. 20. t. 2. f. 2.) leaves glabrous above, clothed with fine tomentum beneath : cauline ones ovate-oblong, acutish, unequal, crenately serrated, petiolate : upper ones ovate-lanceolate, acute, sessile ; racemes panicled ; pedicels twice as long as the calyx. $. H. Native about Montpelier. Stem sim-

pie, tomentose. Lower cauline leaves 2\ inches long. Terminal raceme half a foot: lateral ones shorter; fascicles remote, 5-7-flowered : upper ones 3-flowered. Flowers yellow, like those of *F. Ltjchnitis,* but a little smaller.

Montpelier Mullien. Fl. June, Aug. PL 2 to *3* feet.

-46 V. OVA^TUM (Schrad. hort. gott. fasc. 2. p. 21. t. 15. verb. 2. p. 21.) leaves ovate, crenated, glabrous above, and clothed with fine tomentum beneath : lower and cauline ones obtuse, petiolate : superior ones acute, sessile, half stem-clasping;, racemes panicled; pedicels twice as long as the calyx. *$* • H. Native of Spain. Stem usually branched from the base, beset with fascicles of stellate hairs, which constitute fine tomentum at top. Radical and lower cauline leaves 3-4 inches long. Lower racemes a span long, leafy at base : superior ones shorter. Flowers scentless, smaller than those of *F. Lychmtis,* yellow. Filaments clothed with purple wool. Anthers equal; pollen copper-coloured.

Ovate-leaved Mullien. Fl. July, Aug. Clt. 1824. PL 2 to 3 feet.

47 V. AUSTRI'ACUM (Roem. et Schultes, syst. 4. p. 341. Schrad. verb. 2. p. 22.) leaves crenated, glabrous above, and pubescent beneath: lower and cauline ones oblong-ovate, petiolate : superior ones ovate, acute, nearly sessile ; racemes panicled ; pedicels about equal in length to the calyx. %. H. Native of Austria, and Hungary, on mountains among bushes. V. nigrum, Plenck. icon. pi. off/t. 110. Habit of *V. Lychmtis.* Stem°simple, or branched, beset with fascicles of small hairs, brownish purple. Leaves deep green : radical ones 4 inches to a span long. Racemes a span or more long: lower ones leafy, and often divided ; fascicles 5-7-flowered : upper ones 3-flowered. Flowers sweet-scented. Calyx, corolla, and stamens as in *F. nigrum,* but the capsule is larger, and the down stellate.

Austrian Mullien. Fl. July, Aug. Clt. 1818. PL *3* to 4 ***feet.***

48 V. ORIENTA'LE (Bieb. fl. cauc. no. 401. and suppl. p. 154. exclusive of the syn. of Schrad. and D. C.) leaves crenated, glabrous above, but clothed with fine tomentum beneath : lower ones oblong, tapering into the petioles : cauline ones oblong-ovate, cordate, on short petioles : upper ones acuminated, nearly sessile ; racemes panicled ; pedicels hardly exceeding the calyx. 1/. H. Native of the Ukrain, along with *F. nigrum.* Schrad. verb. 2. p. *23.* V. nigrum, Pall. ind. taur. ex Bie*b. Stem flexuous and branched. Leaves opaque. Corolla yellow.

Eastern Mullien. FL June, July. Clt. 1821. PL 2 to *3* feet.-

49 V. ALOPE'CUROS (Thuill. fl. par. p. 110. D. C. fl. fr. no. 2626.) leaves crenated, downy above, clothed with hoary tomentum beneath: lower ones oblong-ovate, subcordate, petiolate : cauline ones oval-oblong, on short petioles : upper ones oblong-ovate, nearly sessile; racemes simple; pedicels longer than the calyx. 1/. H. Native of France, in arid places. Schrad. verb. 2. p. 26. Very nearly allied to *V. nigrum.* Stem tomentose, as well as all the plant, with the exception of the upper surfaces of the leaves. Radical and cauline leaves a span long, doubly crenated. Racemes usually simple, a span or more long. Filaments clothed with white wool. The rest as in ***V. nigrum.***

Fox-tail-racemed Mullien. Fl. July, Aug. Clt. 1820. PL *3* to 4 feet.

50 V. CHA'IXII (Vill. dauph. 2. p. 491. t. 13. exclusive of the synonymes. Schrad. verb. 2. p. 27.) leaves oblong-ovate, cordate, petiolate, crenated, clothed with fine tomentum : lower ones pinnatifid at the base ; racemes panicled; pedicels longer than the calyx. *$* . H. Native of Piedmont, Dauphiny, southern provinces of France, in rocky places. Lam. diet. 4. p. 220. D. C. fl. fr. no. 2680. and suppl. p. 480. Very like *V. nigrum,* but is less robust, and usually branched above. Leaves deep green. Racemes more numerous, smaller, and more slender, disposed in a panicle, and the flowers are a little smaller.

Far. /3, *urticcefolium ;* lower leaves less cut. *$.* H. V. urticsefolium, Lam. diet. 4. p. 220.

Far. y, *dentatum* (Rcem. et Schultes, syst. 4. p. 339. /3.) stem twiggy, branched at top ; flowers racemosely spicate; corollas villous outside ; leaves lanceolate, sessile, tomentose beneath, and rather villous above, serrated : radical ones petiolate, doubly toothed. *$.* H. Native of the Pyrenees. V. dentatum, Lapeyr. fl. pyr. p. 114. D. C. fl. fr. suppl. no. 2680. a.

Chains Mullien. FL June, Aug. Clt. 1821. PL 3 to 4 feet.

51 V. NI'GRUM (Dodon. hist. p. 144. icon. Lin. spec. p. 253.) leaves crenated, nearly glabrous above, but clothed with fine tomentum beneath, or pubescent: lower and cauline ones oblong-ovate, cordate, petiolate : superior ones ovate-oblong, nearly sessile ; racemes elongated; pedicels twice as long as the calyx. %. H. Native throughout Europe and Siberia, in waste places, way-sides, and in hedges; plentiful in some parts of Britain. Smith, engl. hot. t. 59. Oed. fl. dan. 1088. Schrad. verb. 2. p. 24.—Hall. helv. no. 584.—Mor. hist. 2. sect. 5. t. 9. f. 5.—Bauh. hist. 3. p. 873. icone.—Lob. icon. 1. p. 562. Stems simple, or divided a little at apex, brownish-purple, downy, or glabrous. Leaves opaque above. Racemes 1J foot long, simple, or furnished with 1 or 2 short branches at the base ; fascicles many-flowered : lower ones remote : upper ones crowded. Corolla yellow. Filaments clothed with purple wool. Anthers all reniform ; pollen vermillion. Down branched, or stellate.

Far. 13; racemes subpanicled. %. H. Native of France. V. Parisiense, Thuill. fl. par. p. 110.

Far. y, *gymnostemon* (Roem. et Schultes, syst. 4. p. 345.) stamens glabrous, or naked.

***Far. B9 albiflorum*; flowers white.**

Far. e ; flowers funnel-shaped, proliferous. %. H. Native of Siberia. Verbascum, Gmel. sib. 4. p. 91. t. 47.

Black-rooted Mullien. FL May, Aug. England. PL *si to* 4 feet.

52 V. BANA'TICUM (Schrad. verb. 2. p. 28.) lower leaves oval-oblong, petiolate, triply crenated, tomentose, pinnatifid at the base : cauline leaves oblong-ovate, doubly crenated, nearly sessile : superior ones broad-ovate, subcordate, smoothish, sessile ; racemes panicled ; pedicels longer than the calyx. *$* . H. Native of Banatu, near Alt-orsowa, and frequent about Topliz. V. sinuatum, Rochel, pi. ban. exsic. no. 136. V. sinuatum, /3, Banaticum, Rochel, in litt. and Schrad. Upper cauline leaves half stem-clasping, all glabrous above. Down stellate. Herb deep green. Disposition and structure of flowers that of *F. **sinuatum.***

Banatic Mullien. PL 2 to 4 feet ?

53 V. LANA^TUM (Schrad. verb. 2. p. 28. t. 2. f. 1.) leaves clothed with woolly tomentum beneath : lower and cauline leaves oblong, petiolate, somewhat triply crenated : upper ones oblong-ovate, sessile, acutely crenated; racemes simple; pedicels twice as long as the calyx. 1/. H. Native of Italy, Bassi; Carnea, Wulf; Carinthia, Bernhardi. Plant clothed with white woolly tomentum, except the upper surfaces of the leaves. Lower leaves 3-4 inches long. Racemes a span long, simple ; fascicles remote, 4-6-flowered : lower ones leafy. Flowers sweet-scented. Calyx and corolla as in *F. nigrum,* but the tube is sometimes spotted with purple. Stamens, structure, and colour of those of *V. nigrum.*

Woolly Mullien. Fl. July, Aug. Clt. 1825. PL 3 to 4 feet.

54 V. RUBIGINÒSUM (Waldst. et Kit. pi. hung. 2. p. 216. t. 197.) leaves crenated, pubescent beneath : lower ones oblong, obtuse, petiolate: cauline ones oblong-ovate, acutish, sessile: superior ones ovate, acute, sub-cordate, half stem-clasping; racemes panicled ; pedicels much longer than the calyx. $. H. Native of Hungary, about Pesth, Akazto, and elsewhere, Waldst. et Kit. ; south of Podolia, Besser; and of Caucasus, m high, grassy lands between Tyra and Borysthene; very rare at the river Terek, Bieb. Habit and flowers of *F.ferrugineum* ; and the leaves like those of *F. phceniceum.* Stem downy. -Leaves deep green: radical ones 3-4 inches long. Racemes [a] foot long, leafy at the base, generally simple; fascicles remote, 3-5-flowered, rarely 6-flowered : upper ones usually 2-flowered. Flowers scentless, size of those of *F. Blattària.* Corolla of a reddish rust colour outside, and of a yellowish rust colour Inside, spotted with red towards the tube. Filaments clothed with purple wool. Anthers equal; pollen copper-coloured.

[t0] ^sty-flowered Mullien. Fl. June, Aug. Clt. 1817. PI. 3 4 feet.

55 V. HYOSERIFÒLIUM (Schrad. verb. 2. p. 31. t. 3. f. 1.) Jeaves tomentose : lower ones linear-lanceolate, attenuated at [tn]e base : superior ones oblong, acutely-crenated, sessile : upper ones broad-ovate, auriculately cordate ; racemes panicled ; Pedicels twice as long as the calyx. $. ? H. Native of the Levant. Stem erect, simple, tomentose. Leaves greenish grey beneath : radical and lower cauline leaves a span long, sub-sinuated : upper cauline leaves half stem-clasping. Racemes a span to a foot long; fascicles 4-7-flowered : lower ones remote, yorolla middle-sized, yellow, a little larger than those of *V. Lychnitis.* Filaments all clothed with yellowish wool; anthers equal.

Hyoseris-leaved Mullien. PI. 3 to 4 feet.

[5 6] V. VIMINA'LE (GUSS. pi. rar. p. 101. t. 21.) stem simple ; weaves oblong-elliptic, crenulated, green, and beset with ad-pressed villi above, but clothed with white tomentum beneath; racemes rather crowded; lower fascicles remote; bracteas, [c]alyxes, and capsules densely clothed with mealy tomentum. £. H. Native of Japygia, on arid hills, as on Massafra, Cas-ellaneta, and Taranto. Stem tomentose, green, or purplish, 2-4 Leet high, tough, and serve for tying, hence the specific name. Radical leaves *5-6* inches long : cauline leaves sessile : upper ones half stem-clasping, drawn out at the base, and therefore somewhat decurrent. Racemes solitary, 1 to 1| foot long; lascicles 2-4-flowered, one of the flowers usually fertile. Corolla not seen.

Twiggy Mullien. PI. 3 to 6 feet.

* * * *Flowers twin and solitary.*

[57] V. ANGUSTIFÒLIUM (Tenore, prod, suppl. 2. p. 64. syn. p. •) leaves crenulated, tomentose : lower ones linear-lanceolate, [ta]pering into the petioles : upper ones oblong-ovate, sessile; ^ike simple; flowers solitary, sessile. $. H. Native of ^alabria, and Nicotera, in dry fields. V. Calàbricum, Richard, [111] Htt. Stem simple, clothed with canescent tomentum, dwarf, leaves calvescent above in the adult state. Radical and lower [c%]auline leaves length of stem : upper cauline ones half stem-[p.]asping. Corolla yellow, larger than those of *V. Lychnì'is.* Filaments beset with white hairs. Anthers reniform. The whole plant is densely clothed with canescent tomentum, which becomes loose, and falls off in part during summer.

Narrow-leaved Mullien. Fl. July, Aug. Clt. 1824. PI. 1 [to] 1| foot.

[5 8] V. SÌMPLEX (Labill. pi. syr. dec. 4. p. 10. t. 5.) leaves crenated, tomentose: lower ones obovate-spatulate, tapering into [le] P[eti]oles : upper ones ovate, sessile; racemes subspicate ; flowers twin and solitary. %. H. Native in sandy places near Damascus. Schrad. verb. 2. p. 32. Stems simple, many from the same root, which is woody, tomentose. Radical and lower cauline leaves 2^ inches long. Flowers nearly sessile : lower and upper ones solitary : the rest twin, but very rarely by threes. Corolla like that of *F. blattària,* but smaUer. Stamens all woolly : anthers all reniform. There is a variety of this having the superior flowers smaller and sessile.

Simple-stemmed Mullien. PI. 1 to 1| foot.

59 V. MAJA^LE (D. C. fl. fr. suppl. no. 2673. b. Schrad. verb. 2. p. 33.) leaves crenated, tomentose : lower ones ovate-oblong, and ovate, petiolate : upper ones oblong-ovate, sub-cordate, sessile ; racemes subspicate ; flowers twin and solitary; anthers equal. $. H. Native of the Pyrenees, Fliigge ; in sandy, sterile places near Nice, Rohde ; Montpelier at Cambrettes, and elsewhere, D. C. This is a very polymorphous plant, densely clothed with white floccose, caducous tomentum. Stem simple, purplish brown. Radical and lower cauline leaves 2 to 2§ inches long: upper ones half stem-clasping. Flowers on short pedicels. Corolla yellow, size of those of *V. Blattdria* and *F. phlomoides.* The 3 smaller filaments clothed with purple wool; the 2 longer ones pilose only in the middle.

Var. /3, longibracteàtum (Schrad. verb. 2. p. 34.) lower bracteas twice as long as the calyx; the plant is, however, less tomentose, and larger in all its parts than the species.

Hog Mullien. Fl. July, Aug. Clt. 1817. PI. 2 to 3 feet.

60 V. BUGUL;EF6LIUM (Lam. diet. 4. p. 226. Schrad. verb. 2. p. *35.* exclusive of the syn. of Lin.) lower leaves broad-ovate, crenated, glabrous, petiolate: superior cauline ones lance-olate, acuminated, deeply serrated, rather pilose ; racemes sub-spicate ; flowers solitary; anthers equal. *S* • H. Native about the Bosphorus. Blattària orientàlis, Bugulae folio, flore maximo virescente, lituris luteis in semicirculum striato, Tourn. cor. p. 8. itin. 2. p. 83. with a figure.—Buxb. cent. 5. p. 17. t. 32. Stem simple, rather villous. Radical leaves 1|; to *2* inches long, obtuse. Flowers on short pedicels. Corollas larger than those of *F. phlomoides,*pale green, verging to yellow, marked by 2 purple stripes. Filaments clothed with purple wool; the 2 larger ones only in the middle.

Bugloss-leaved Mullien. PI. 2 to 3 feet.

61 V. COMPA'CTUM (Bieb. fl. cauc. no. 399, exclusive of the syn.. of Till. pis. suppl. p. 151. Schrad. verb. 2. p. *35.)* leaves ovate, coarsely crenated, tomentose beneath : lower ones tapering into the petioles : cauline ones petiolate : upper ones sub-cordate, sessile ; spikes compact; flowers solitary; 2 of the anthers oblong. $. H. Native of Tauria and Caucasus; and Iberia, Bieb.; Lower Volga, Heming. Stem tomentose, simple, or divided a little at top. Leaves at length almost glabrous above. Tomentum of a greyish green colour. Lower leaves *2-3* inches long : upper cauline ones half stem-clasping. Spike | a foot to a span long, dense, interrupted a little at the base. Corolla yellow. Filaments copper-coloured, beset with orange-coloured wool, unequal; the 2 longer ones only pilose inside. Pollen vermillion. There is a variety having the radical leaves repandly crenated.

Compact-Rowered Mullien. Fl. July, Aug. Clt. 1820. PI. 2 to 3 feet.

62 V. OVALIFÒLIUM (Donn, hort. cant. ed. 4. p. 42. Sims, bot. mag. t. 1037.) stems simple; leaves oval, sessile, dentately crenated, tomentose beneath, and nearly glabrous above ; spike long, simple; flowers solitary? %. H. Native of Caucasus. Habit of *Cèlsia Crètica.* Each flower furnished with 3 bracteas : the middle one orbicular, acuminated : lateral ones small. Co-rolla large, orange-yellow. Filaments fulvous: the 3 smaller ones bearded, the other 2 naked. Capsule globose. Perhaps the same as *F. compdetum.* Leaves large.

Oval-leaved Mullien. Fl. July, Sept. Clt. 1804. PI. 2 to 3 feet.

63 V. FORMOSUM (Fisch. hort. gorenki, 1812. p. 25. Schrad. verb. 2. p. *36.)* leaves tomentose beneath : lower ones elliptic-ovate, somewhat triply crenated, and are, as well as the cauline ones,'petiolate : upper ones ovate, cordate, simply crenated; spikes elongated ; flowers solitary ; 2 of the anthers are oblong. £ . H. Native of Tauria, Caucasus, and Iberia. Steven and Ledebour. D. Don, in bot. reg. t. 558. Schrank, hort. mon. t. *22.* Stem simple, or branched at top. Spikes dense. Corolla large, yellow, with a dark purple centre. Filaments clothed with purple wool.

Handsome Mullien. Fl. July, Aug. Clt. 1818. PI. *2* to 4 feet.

64 V. BETONIC^FOLIUM (Desf. cor. de Tourn. p. 33. t. 23. and in ann. mus. 11. p. 54. with a figure. Schrad. verb. p. *37.)* leaves crenated, villous : lower and cauline ones oblong, cordate, petiolate : upper ones oblong-lanceolate, sessile ; raceme spicate ; flowers solitary; 2 of the anthers are oblong. %. H. Native of Armenia. Schrad. verb. 2. p. *37.* Stem simple, villous. Leaves deep green : lower and cauline ones 2-3 inches long. Racemes 2-3 inches long. Flowers crowded, on short pedicels. Corollas yellow, smaller than those of *V. Blattaria.* Three of the filaments are woolly, and the other two declinate and glabrous. Capsule roundish.

Betony-leaved Mullien. Fl. June, Aug. Clt. 1825. PI. 1J to 2| feet.

'65 V. PUNI'CEUM (Schrad. hort. gott. fasc. *2.* p. 20. t. 14. verb. *2.* p. *38.)* leaves doubly crenated, pubescent: radical and lower cauline ones ovate, cordate, petiolate : upper ones oblong-ovate, sessile; racemes elongated ; pedicels usually twin, twice as long as the bracteas. 1/. H. Native of the South of Europe. Stems many from the same root, branched at top, rarely simple, more or less downy. Leaves green : radical and lower cauline ones 4-6 inches long, obtuse; one of the lobes at the base longer than the other : upper ones half stem-clasping, acute, or acuminated. Racemes flexuous, drooping at top : terminal one 1 foot and more long; but the lateral ones are much shorter. Flowers twin, except the upper ones, remote. Corolla dirty red. Filaments clothed with purple wool. Anthers all reniform ; pollen copper-coloured. Down simple. There is a variety of this having the lower leaves subtriply crenate: the upper ones recurved at top, and the uppermost ones rounded at the base, not cordate.

Light-red-fiowered Mullien. Fl. June, Aug. Clt. 1820. PI. 2 to 4 feet.

66 V. SPECTA'BILE (Bieb. fl. cauc. suppl. p. 158) leaves oblong-ovate, cordate, doubly crenated, rather villous above, but villously tomentose beneath : lower and cauline leaves petiolate: superior ones sessile, half stem-clasping ; raceme terminal, elongated ; pedicels twin and solitary, about equal in length to the 'bracteas. %. H. Native of the South of Tauria, on mountains about Sobla ; at the fountains of the river Salgir; and on mountains above Utu-Usen, Bieb. Stem simple, and is, as well as the under sides of the leaves, tomentose. Leaves all cordate, green above, but paler beneath: radical and lower cauline ones *2* to *3* inches long. Raceme length of stem ; those of the branches, if present, shorter. Lower pedicels twin, beset with simple and glandular hairs. Corolla showy, yellow, spotted with purple in the bottom. Capsule downy, mucronate.

Eminent Mullien. Fl. June, July. Clt. 1820. PI. % to 4 feet.

67 V. TRI'STE (Smith, prod. fl. graec. 1. p. 151.) leaves pubescent: lower ones elliptic-ovate, cordate, subsinuated, unequally crenated, petiolate: superior cauline leaves sessile; racemes elongated; pedicels solitary, spreading, much longer than the bracteas. %. H. Native on Mount Athos. Schrad. verb. 2. p. 40. V. ferrugineum, Andr. bot. rep. t. 162. but not of others. Corollas rust-coloured, or yellowish-red.

,SW-flowered Mullien. Fl. July, Aug. Clt. 1788. PL « to 4 feet.

68 V. FERRUGI'NEUM (Mill. diet. no. 10. Ait, hort. kew. 1. p. 237.) leaves rather villous, wrinkled: cauline ones nearly sessile, equally crenated : radical ones oblong, cordate, doubly crenated ; racemes spicate ; pedicels twin and solitary: lower ones 3-4 together. 3/. H. Native of the South of Europe. Trew. ehret. p. 3. t. 16/ f. 1. Miller says the radical leaves are almost entire, dark green above and paler beneath, on long petioles : cauline leaves acute, sessile. Corolla rust-coloured.

/?wsty-flowered Mullien. Fl. May, Aug. Clt. 1683. PL 3 to 4 feet.

69 V. PHCENI'CEUM (Lin. spec, p, 254) leaves pubescent beneath : lower ones elliptic, or ovate-oblong, subcordate, crenated, petiolate : upper cauline leaves crenulated, sessile ; raceme terminal, elongated : pedicels solitary, much longer than the bracteas. %. H. Native of the South and East of Europe, on the margins of woods, and in stony grassy fields ; and of Caucasus and Siberia. Lam. ill. t. 117. Gsertn. fruct. \ p. 262. t. *55.* Jacq. fl. austr. 1. t. 125. Curt. bot. mag. t. 885. Ker. bot. reg. *637.*—Mor. hist. 2. sect. 5. t. 9. f. 1.—Bauh. hist. 3. p. *875.* with a figure.—Tab. kraut. 959. icone.—Lob. icon. 1. t. *565.* Stem downy, simple, or divided into a few floriferous branches. Leaves deep green, nearly glabrous above : radical ones 2-4 inches long : upper cauline ones half stem-clasping. Raceme length of stem. Flowers remote. Corolla deep purple, beset with small purple hairs at the base. Two of the filaments are clothed with purple hairs, and the other 3 with white hairs. Anthers all reniform; pollen copper-coloured. Down on the stem and lower leaves simple; of the other parts guttuliferous or glandular. Verb. Cisalpini, Bisol. is a var *of* this, ex Coll. in act. acad. taur. vol. 26. p. 507.

Purple-flowered Mullien. Fl. May, Aug. Clt. 1796. /PI- 2 to 4 feet.

70 V. CU'PREUM (Curt. bot. mag. t. 1226.) leaves cordate, wrinkled, crenated, woolly beneath; pedicels solitary, uniliracteate. %. H. Native country unknown. Corolla of a rust-colour. The 3 shorter filaments covered with long, glandular, purple hairs ; the 2 longer ones naked ; anthers of the long filaments moon-shaped and naked: of the shorter ones nearly cir-^ cular and hairy. Perhaps a hybrid between *V, ovalifblium* and ***V. phceniceum.***

***Copper-colour ed-fiowered* Mullien. Fl. May, Aug. Clt.** 1798. PI. 2 to 4 feet.

71 V. REPA'NDUM (Willd. enum. 1. p. 226. Schrad. verb. 2. p. 44.) leaves glabrous: lower ones obovate-oblong, attenuated at the base, somewhat sinuated : cauline leaves oblong, acute, crenated, sessile : superior ones broad-ovate, cordate, acuminated, acutely crenated, stem-clasping ; racemes elongated ; pedicels solitary : superior ones longer than the bracteas. $ •' H. Native country unknown. Celsia heterophylla, Pers. ench. 1. p. 161. This species differs from *V. Blaltaria,* in the superior leaves being always broader, and exactly cordate, stem-clasping, and acutely crenated ; in the bracteas being larger, broader, and serrulated. Racemes as in *V. blattarioides, 3 feet* long, and more. Flowers yellow, never white.

Bepand-le-dved Mullien. Fl. July, Aug. Clt. 1813. PL[4] to 6 feet.

72 V. BLATTVRIA (Lin. spec. p. 254.) leaves glabrous : lower ones obovate-oblong, attenuated at the base, somewhat sinuated: cauline ones oblong, acute, crenated, sessile: superior leaves subcordate, acuminated, half stem-clasping; raceme terminal,

elongated ; pedicels solitary, twice as long as the bracteas. # . *f • Native of Middle and South Europe, in gravelly places; J-auria, and Caucasus, Bieb. ; Palestine, Sieber; North Ame-"ca, Michx. ; plentiful in some parts of Britain. Jaume St. H»- pi. fr. t, 469. Smith, engl. bot. t. 393.—Sab. hort. 2. t. ?6—Mor. hist. 2. sect. 5. t. 10. f. 6. Bauh. hist. 3. p. 874. icone. Lob. icon. 1. t. 564. Lob. hist. p. 304. icone. Plant glabrous. Stem simple, or divided into floriferous branches at top. Leaves deep green. Calyx, peduncles, pedicels, bracteas, and ovarium, beset with very short guttuliferous hairs. Corollas yellow, larger than those of *V. phceniceum.* Filaments clothed with purple villi: the 2 longer ones only in the Middle, on the inner side. Anthers all reniform.

Var. ft, albiflorum; flowers white. £ . H. Native along with the species. V. glabrum, Mill. fig. t. 67. diet. no. 8.—parrel, icon. t. 1249.—Bauh. hist. 3. p. 874.—Lob. icon. 1. p.

Moth Mullien. Fl. July, Aug. Britain. PL 4 to 6 feet.

73 V. BLATTARIOI'DES (Lam. diet. 4. p. *225.* Schrad. verb. • p. 45.) leaves downy : lower ones elliptic-oblong, tapering »to the petioles, coarsely crenated: cauline leaves oblong, acute, sessile : superior leaves oblong-ovate, subcordate, acuminated, acutely crenated, half stem-clasping; raceme terminal, very long 5 pedicels usually twin, shorter than the bracteas, and are, as well as the calyxes, clothed with viscid hairs. *$* . H. Native of France, by way sides, and in waste fields, on gravelly soil. V. crystallostemon, Cat. sem. hort. dorp. 1818. V. glandulosum, Thore. V. viscidulum, Pers. ench. 1. p. 215. V. pbrum, WilM. enum. 1. p. *225.* Stem pubescent, like the eaves ; hairs simple, mixed with guttuliferous pili. Leaves glabrous on the upper surface in the adult state: radical and cauhne ones 4-6 inches long. Raceme twiggy, simple, or a mtle branched at base. Bracteas 3 to each flower. Corolla yellow; the smaller segments furnished with a few hairs at the base, as in *V. Blattdria.* Hairs of the longer filaments purple ; the rest purple on one side, and white on the other. Anthers as in *V. BlaMria.*

tar. ft, Lusitdnicum (Schrad. verb. *2.* p. 45.) larger in all its parts ; lower leaves a foot long: the stem ones acuter, and doubly and acutely crenated ; bracteas narrower. *$* . H. Native of Portugal. V. blattarioides, Brot. fl. lus. 1. p. *272.* "offm. et Link. fl. port. 1. p. 219.

Ulattaria-like Moth Mullien. Fl. July, Aug. Clt. 1805. Pl —^ to 6 feet.

55ot i"V" VIRGAXTUM (With, arrang. p. 250. Smith, engl. bot. t. •"0 leaves oblong-lanceolate, pubescent, toothed, sessile : radial ones sublyrate ; stem branched ; flowers in fascicles, nearly sessile. *$* . H. Native of Britain, in corn-fields and by way ^aes. V. blattarioides, *ft,* virgatum, Schrad. verb. 2. p. 45. t^attaria magno flore, Bauh. hist. 3. p. 859. Lob. icon. 1. t. ^64. Stem branched from the base. Leaves dentately cremated, pinnatifidly cut at the base, shining above : superior ones cordate, sessile. Flowers disposed in nearly sessile fascicles, yellow, large, with a purplish mouth. Perhaps only a variety °f*K blattarioides,* as considered by Schrader.

Twiggy Moth Mullien. Fl. July, Aug. Britain. PI. 5 to 6 feet.

75 V. GRANDIFLORUM (Schrad. hort. gött. fasc. 2. p. 19. t. lo. verb. *2.* p. 47.) leaves coarsely crenated, pubescent beneath: ower ones elliptic-oblong, attenuated into the petioles : cauline °nes oblong, acute, sessile : superior ones broad-ovate, cordate, acuminated, stem-clasping; racemes spicate, elongated; pedicels outary, shorter than the bracteas, and are, as well as the calyxes, ny. £ : H. Native country unknown, but probably of Syria. branches stems many from the same root, divided into floriferous vol. IV. leaves deep green, and glabrous above. Bracteas 3 to each flower. Racemes 1-2 feet long. Flowers crowded, but at length more remote. Corolla yellow. The 3 smaller filaments woolly: the 2 larger ones pilose on the inner side. Anthers of the longer filaments oblong.

Great-flowered Moth Mullien. Fl. July, Aug. Clt. 1820. PI. 4 to 6 feet.

76 V. PYRAMIDA^TUM (Bieb. fl. cauc. 1. p. 161. suppl. p. 155.) leaves downy beneath : lower ones oval-oblong, doubly crenated, petiolate: cauline ones oblong-ovate, cordate, acute, nearly sessile : superior ones broad-ovate, acuminated, sessile ; racemes panicled ; pedicels usually solitary, shorter than the bracteas. 1/. H. Native of Caucasus and Iberia; and of Hungary, in woods, hedges, and among bushes. Schrad. verb. 2. p. 48. Sweet, fl. gard. t. 31. V. Caucasicum, Hort. Stem downy, branched at top. Leaves at length canescent, smoothish above, a span to 1 foot long, wrinkled. Racemes subspicate, disposed in a panicle, like those of *V. Lychnitis* and *V.floccosum.* Flowers remote, sweet-scented : the lower ones sometimes twin. Pedicels a little shorter than the calyxes. Bracteas solitary. Corollas yellow, size of those of *V. Thdpsus.* * Filaments clothed with purple villi. Anthers equal ; pollen vermilion. Capsule downy.

Pyramidal-Rowered Mullien. Fl. July, Aug. Clt. 1804. PI. 5 to 8 feet.

77 V. SPINOSUM (Lin. amoen. acad. 4. p. 307.) stem frutescent, spiny. J? . F. Native of Candia, on the higher mountains, but never below the altitude of 300 hexapods ; but in sterile places about Alexandria. Lam. diet. 4. p. 222. Sibth. et Smith, fl. graec. t. 229. Verbascum Creticum, spinosum frutescens, Tourn. cor. p. 8.—Mor. hist. 2. sect. 5. t. 10. f. 8.—Alp. exot. p. *37.* t. *36.*—Clus. hist. p. 299. with a figure. Habit distinct from other species. Stem much branched ; bark scabrous. Branches tomentose, but naked in summer ; branchlets naked, flexuous, leafless, spinescent. Leaves linear-lanceolate, an inch long, obtuse, more or less sinuated, becoming gradually smaller and more entire as they ascend; with fascicles of smaller entire leaves in the axillae of the upper ones. Peduncles at the extremity of the branches, scattered, spinescent, propped each by a small bractea. Corollas small, yellow, tomentose outside. Filaments clothed with white wool. Anthers all reniform : pollen orange-coloured.

Spiny Mullien. Fl. May, June. Clt. 1824. Shrub 1 to lj foot.

f *Doubtful species.*

78 V. BOERHAA'VII (Lin. mant. 45.) leaves sublyrate ; flowers sessile. ©. H. Native of the South of Europe. Willd. spec. 1. p. 1002. V. luteum, Mill. fig. 273. V. blattariae foliis nigrum amplioribus, floribus luteis, apicibus purpurascentibus, Boerh. ludgb. 1. p. 228. Till. pis. t. 50.? Leaves sessile, a little decurrent, spatulate, narrowed at the base, sinuated, naked above, and tomentose beneath. Spike like that of *V. Thdpsus,* but not so crowded, and with numerous bracteas to each flower. Corolla yellow. Genitals purple, ex Lin. Perhaps a hybrid between *V.phlomoldes* and some allied species.

Boerhaaves Mullien. Fl. July. Aug. Clt. 1731. PI. 2 to 3 feet.

79 V. H^MORRHOIDA^LE (Ait. hort. kew. ed. 1. p. *236.)* leaves ovate-oblong, attenuated at the base, tomentose, obsoletely crenulated ; racemes spike-formed, elongated ; fascicles of flowers bractless. *$* . H. Native of Madeira. It is doubtful whether this is a true species of the genus, from the want of bracteas, and it is not enumerated in the second edition of Hort. kew.

Hcemorrhoidal Mullien. Fl. June, Aug. Clt. 1777. PI. 2 to 4 feet.

80 V. CORDVTUM (Desf. fl. atl. 1. p. 186.) leaves tomentose : radical ones cordate, petiolate, crenulated, obtuse : cauline ones stem-clasping, quite entire. $. ? H. Native of Mount Atlas, near Tlemsen. Stem simple, or a little branched, tomentose, erect, thickness of a finger. Flowers unknown.

Cordate-leaved Mullien. PL erect.

81 V. CLAYTONII (Michx. fl. bor. amer. 1. p. 148.) glabrous; stem very simple; cauline leaves nearly lanceolate-oblong, deeply crenated: the crense again crenated ; spikes like those of *V. Blattaria.* $. H. Native of Carolina. This is probably only a variety of *V. Blattaria.*

Clayton's Mullien. PL 4 to 6 *feet.*

82 V. STRICTUM (Clark, trav. ed. 2d. pt. *2.* sect. 1. p. *262.)* stem shrubby, erect; lower leaves spatulate-ovate, petiolate: superior leaves ovate-lanceolate, obsoletely toothed or quite entire, sessile; all canescent from stellate hairs ; racemes elongated ; pedicels divaricate, longer than the calyx. J?. F. Native of the Island of Rhodes. Plant tomentose. Leaves 1\ to *2* inches long and more. Racemes panicled. Flowers large, an inch in diameter, yellow.

Strict Mullien. Shrub 5 to 6 feet.

83 V. LAXIFLORUM (Presl. del. prag. 1. p. *76.)* leaves crenulated, densely clothed with stellate tomentum on both surfaces : radical ones oblong-ovate, mucronate : cauline ones sessile: upper ones ovate, acuminated; flowers panicled; fascicles many-flowered, loose. £. H. Native in the region of Mount ***JEtna.***

Loose-flowered Mullien. **PL** ?

84 V. BRACTEATUM (Presl. del. prag. 1. p. 214.) leaves ovate-oblong, toothed, green on both surfaces, rather tomentose beneath : radical ones acute : lower cauline ones acuminated, petiolate: upper ones lanceolate-linear, exceeding the aggregate fascicles of flowers. $. H. Native of Bohemia. Very nearly allied to *V. lychnitis,* and is probably only a variety of it.

Bracteate-Rowered Mullien. PL 3 to 4 feet.

85 V- GLABRUM (Delarb. in journ. de sant6 et d'hist. nat. bourd. 2. p. 166. and in journ. soc. pharm. par. 1. p. 154.) stem angular, branched ; leaves glabrous, obscure green: radical ones petiolate, elliptic, crenated: cauline ones subdecurrent, cordate, auricled ; fruit spicate, sessile, bracteate. $. H. .Native of France. If the cauline leaves of this species are truly subdecurrent, it is distinct from all others.

Glabrous Mullien. PL

86 V. ANNUUM (Mill. diet. no. 11.) radical leaves oblong, quite entire, deep green *on* both surfaces : cauline leaves acute, sessile ; flowers aggregate, pedicellate. #. ?©. ? H. Native of Sicily. Blattaria annua, flore majore luteo, capsula item majore, Mor. hist. *2.* p. 498. Lower leaves 10 inches long, rounded at apex. Raceme long, loose, terminal. Flowers fascicled, deep yellow. Capsule large, brownish. Perhaps V. glabrum, Willd.; the V. blattarioldes, Lam.

Annual Mullien. FL July, Aug. Clt. ? PL 4 to 9 feet.

Cult. The species of *Verbascum* are generally tall, robust - -nlants, they therefore should be grown at the back *of* flower pearance. or in shrubberies, where they will make a showy apfncreased by" They thrive in any common soil, and are all readily sions *of the* i\ seeds ; and some of the perennial kinds by divisport into hybnhoot. As there is hardly any genus more liable to it *is* difficult *to* sa)?s than *Verbascum* by promiscuous impregnation, gardens. These hyb.what is a hybrid, or what is a species in the abortive generally abounds we have found, however, to become that nature has its limits. * the third generation, plainly showing botanist, and traveller in the Pyrenees ; author of " Voyages au Mont Perdu/' 1 vol. *8vo.* Paris, 1801.) Richard in Pers. ench. 1. p. 216. Lam. et D. C. fl. fr. syn. 1. p. *236.* Mycdnia, Lapeyr. Chaixia, Lapeyr. Verbascum species, Lin.

LIN. SYST. *Pentdndria, Monogynia.* Calyx campanulate, 5-parted. Corolla rotate, 5-Iobed, or 5-parted, rarely 4-parted, rather unequal, hairy at the base of the sinuses of the lobes. Stamens approximate. Anthers perforated at the apex. Stigma roundish. Capsule 1-celled, 2-valved : valves bent in at the margins, forming dissepiments; placentas 2, parietal, many-seeded.—A stemless plant, with radical, rosulate, wrinkled, hairy leaves, and 1, or few-flowered scapes, and large purple corollas.

1 R. PYRENAICA (Rich, in Pers. ench. 1. p. 216.) %• H* Native of the Pyrenees and Piedmont, in groves. R. scapigera, Jaume St. Hil. fam. nat. 1. p. *280.* Verbascum Myconi, Lin. spec. p. *255.* Mill. icon. t. 277. Curt. bot. mag. *236.* Mycdnia borraginea, Lapeyr. abr. p. 115. Chaixia Myconi, Lapeyr. abr. suppl. p. *37.* Cortusa foliis ovatis sessilibus, Lin. hort. cliff, p. 50. Trew. ehret. p. 26. t. *57.* Auricula Ursi Myconi, Dalech. hist. p. 837. Leaves radical, ovate, tapering into the petioles, disposed in a rosulate manner, broadly and deeply crenated, clothed with long, rufous, silky hairs on the under side and along the margins, and white hairs above. Scapes naked, pubescent, 2-4 inches long, usually 1-flowered, rarely 2-5-flowered.

Pyrenean Ramondia. FL May. Clt. 1731. PL \ foot.

Cult. This is a pretty little alpine plant. It grows well in common garden earth, and is well fitted for the front of flower borders, or *to* be grown among other alpine plants. It is readily propagated by division.

II. **RAMO'NDIA (named in honour of L. Ramond, a French**

III. CE'LSIA (named by Linneus, in honour of Olaus Celsius, D.D. professor of the Greek language, and afterwards of theology, in the University of Upsal.) Lin. gen. no. 757. Schreb. gen. no. 1015. Juss. gen. p. 121, ed. Usteri. p. 139. Gaertn. fruct. 1. p. 262. t. *55.* Nees in Lin. trans. 17- p. *80.* Verbascum species, Tourn.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted Corolla rotate, 5-lobed. Perfect stamens 4, didynamous, that is 2 long and 2 short, all bearded. Anthers woolly.—Herbs. Leaves simple, or pinnate. Flowers disposed in loose, terminal*racemes, rising each from the axil of a bractea, or small leaf.

SECT. I. ARCTURUS (from *apxrog, arctos,* a bear ; and *ovoa, oura,* a tail; in reference to the long raceme of flowers, which has been compared to a bear's tail.) Benth. scroph. ind. p. 5. Herbs. Filaments all bearded ; anthers of all fixed by *the* middle, 2-celled, and, with the cells, confluent.

1 C. ORIENTALS (Lin. spec. 866. hort. ups. 179. t, 2.) lower leaves jagged: cauline ones bipinnate. ©. H. Native of Cappadocia and Armenia. Lam. ill. 1. t. 532. Sibth. et Smith, fl. graec. t. 605. Verbascum orientale Sophise folio, Tourn. cor, 8.—Buxb. cent. 1. p. 14. t. 20. and 5. p. 17. t. *33.* Plant glabrous or downy. Segments of leaves narrow. Calyx clothed with glandular down. Flowers shorter than the bracteas, of a rusty yellow colour outside, and yellow inside.

Eastern Celsia. FL June, July. Clt. 1713. PI. 2 feet.

2 C. PERSICA (Meyer, verz. pflanz. p. 111.) perennial, pubescent ; radical leaves bipinnatifid : cauline ones cut; pedicels much longer than the sublinear bracteas; calycine segments sublinear, one half shorter than the capsule, which is pear-shaped. %. H. Native of Caucasus, in dry stony places on the Talusch mountains.

Persian Celsia. PL 2 feet. ?

3 C. ARCTU'RUS (Lin. syst. 561. Vahl, symb. 3. p. 79.) radical leaves lyrate : superior ones oblong ; pedicels longer than the bracteas; calycine segments linear, quite entire. £ . H. Native of Candia. Curt. bot. mag. t. 1962. Verbáscum Arcturus, Lin. spec. 254. Jacq. hort. vind. 2. t. 117.—Column, ecphr. 2. p. 81. t. 82.—Alp. exot. p. 123. t. 122. Floral leaves sessile, cordate, serrately toothed. Corollas large, yellow. Filaments bearded with purple hairs.

Bear's Celsia. Fl. July, Sept. Clt. 1780. PL 4 to 6 feet.

4 C. COROMANDELIA'NA (Vahl, symb. 3. p. 79. Nees in Lin. trans. 17. p. 80.) clothed with hoary villi; lower leaves lyrate: floral ones cordate, half stem-clasping ; peduncles 3 times as long as the calyx ; calycine segments ovate, somewhat serrated. ©. H. Native of the East Indies. Flowers yellow, size of those of C. *Arcturus.*

Var. /3, hetcrophylla (Nees, 1. c. p. 81.) lower leaves pinnate: terminal leaflet large, ovate-lanceolate: upper leaves sessile, subcordate; stem much branched ; branches twiggy, racemose. O.? H. Native of the East Indies.? C. heterophylla, Pers. «ch. 1. p. 161. Flowers small, yellow.

Coromandel Celsia. Fl. July, Aug. Clt. 1783. PI. 4 to 6 feet.

5 C. VISCOSA (Roth, catalect. fasc. 2. p. 69. fasc. 3. p. 50. Nees, in Lin. trans. 17. p. 81.) clothed with clammy pubescence : lower cauline leaves lyrate : floral ones cordate, half stem-gasping; peduncles equal in length to the flowers; calycine segments oblong-lanceolate, quite entire. ©. H. Native of the East Indies, at Tanjore. Link. enum. 2. p. 146. C. Corottandeliana, Vahl, symb. 3. p. 79. diagnosis, but not the description. Willd. spec. 3. p. 280. Corolla yellow, like those of the preceding.

Clammy Celsia. Fl. July, Aug. Clt. 1816. PI. 3 to 4 feet.

SECT. II. PSEUDOTHA'PSUS (from ^*EVSTIQ, pseudes,* false ; and *tnapsus,* the name of the shepherd's club.) Benth. scroph. ind. P- 5. Herbs. The 2 longer stamens glabrous, with oblong adnate anthers : the 2 shorter stamens bearded, having the angers fixed by the middle, with the cells confluent.

6 C. CRE'TICA (Lin. syst. 469. Vahl, symb. 3. p. 80.) Radical leaves lyrate : upper ones oblong ; flowers nearly sessile, length of bracteas ; calycine segments ovate, serrated. £ . H. ^ative of the North of Africa and Candia. Curt. bot. mag. 64. Upper leaves or bracteas cordate, serrated, stem-clasping. The 2 lower filaments smooth. Corolla yellow, large, marked by 2 rust-coloured spots at the bottom on the upper side. Plant hoary.

Cretan Celsia. Fl. July, Sept. Clt. 1752. PL 5 to 6 feet.

7 C. BETONIC^FOLIA (Desf. fl. atl. p. *58.* Willd. spec. 3. p. ~°1.) hairy; leaves ovate-oblong, wrinkled, crenated: floral °nes lanceolate, half stem-clasping, shorter than the pedicels ; Calycine segments ovate, acute, with serrated or entire edges. £ . F. Native of Algiers, in waste fields. Blattària Hispánica Maximo flore, Dodart. icon. Shaw. afr. no. *78.* Stem simple, Or branched. Leaves glabrous, or scarcely hairy, often pinnate at the base. Corolla yellow, the 2 superior segments marked each by a purple spot. Lower filaments glabrous.

Betony-leaved Celsia. Fl. July, Aug. Clt. ? PI. 2 to 3 feet.

SECT. III. NEFFLE'A (meaning unknown to us.) Benth. 1. c. kmall shrubs. Filaments all bearded. Anthers all terminal, 1 -celled, dehiscing by 2 ovate-acute valves.

8 C. LANCEOLA'TA (Vent. hort. eels. t. 27.) rather tomentose; leaves lanceolate, serrated, attenuated at the base ; pedicels rather shorter than the floral leaves; calycine segments entire, Bequ16,, ^ * ^' Native at the mouth of the Euphrates. Corolla yell<>w, marked with purple spots at the base.

Lanceolate-leaved Celsia. Fl. July, Sept. Clt. 1816. Shrub 3 to 4 feet.

9 C. SUBLANA'TA (Jacq. fragm. 79. no. 247. t. 126. Ker. bot. reg. 438.) shrubby, clothed with woolly tomentum ; leaves oval-oblong, obtuse, crenated, wrinkled, soft. ^ • Gl. Native country unknown. Leaves doubly crenated, alternate, petiolate, or furnished with 1 or 2 pairs of sessile leaflets at the base. Bracteas sessile, acute, small, subserrated. Flowers sweet-scented.

FIG. 45.



Woolly Celsia. Fl. July, Sept. Clt. 1818. Shrub 1 to 2 feet.

10 C. PARVIFLORA ; radical leaves pinnatifidly runcinate, tomentose on both surfaces ; stem branched, nearly naked; flowers small. J? . H. Native country unknown. Verbáscum parviflórum, Lam. diet. 4. p. 222. Pers. ench. 1. p. 216. Radical leaves size of those of *Leontodon Taraxacum.* Segments ovate, or ovate-oblong, acutish, entire, or a little toothed. Flowers in fascicles. Ovarium tomentose. Flowers size of those of *Scopdria dúlcis.* Capsule size of *Coriander* seed.

Small-flowered Celsia. Shrub 1 to \\ foot.

f *Doubtful species.*

11 C. BERNADE'SII ; stem nearly naked; leaves lanceolate, dentately sinuated, glabrous; peduncles solitary. *$.* ? H. Native of Spain, on hills towards the town called Ortalezza. Verbáscum Bernadésii, Vahl, symb. 2. p. 39. Stem glabrous, simple. Radical leaves numerous, petiolate, hardly 3 inches long, somewhat pinnatifid, acute, with lanceolate toothed segments ; floral leaves small, cordate, cuspidate. Calycine segments unequal both in size and shape, all a little denticulated. Corolla yellow, Vahl. Peduncles an inch long.

Bernades's Celsia. PI. 1 to 2 feet.

12 C. LYRA'TA ; hairy; radical leaves lyrately-pinnatifid at the base, having the margins angularly-toothed: cauline leaves unequally toothed, nearly sessile ; calycine segments serrated. *$* . ? H. Native of Spain ?. Verbáscum lyrátum, Lam. diet. 4. p. 222. Stem weak, flexuous, leafy. Leaves glabrous above, or almost so, 3-4 inches long. Cauline leaves cordate, acute : upper ones stem-clasping. Flowers large, yellow, on short pedicels, solitary, disposed in a long raceme. Calycine segments unequal. Corolla 3 inches in diameter. The two lower filaments naked. Perhaps the same as C. *Crética.*

Lyrate-lesived Celsia. Fl. July, Aug. Clt. 1819. PL 2 to 4 feet.

Cult. The species of *Célsia* have much the habit of the species of *Verbascum,* and like them bear showy yellow flowers. The seeds of them should be reared on a gentle hot-bed ; and when the plants are of sufficient size they should be set separately in pots, as they require protection of a greenhouse or frame the first winter. In May of the second year they may be planted out into the open border in any warm, sheltered situation, where they will flower and ripen their seed. *C sublanata* and *C. parviflóra,* being shrubby, will require the same treatment as a geranium, or other common greenhouse shrub.

IV. ISANTHERA (from *HTOQ, isos,* equal; and a^pct, *anther a,* an anther ; in reference to the stamens being 5, and equal.) Nees, in Lin. trans. 17. p. 82.

LIN. SYST. *Polygdmia, Dicecia.* Flowers polygamous. Calyx 5-cleft. Corolla rotate. Stamens *5,* equal, straight, glabrous. Anthers reniform, 1-celled, opening by a vertical, longitudinal chink, clasping a semicircular connective. Stigma truncate. Capsule 2-celled, many-seeded. Seeds small, inserted in 4 lamelliform placentas. Female flowers without any corolla. Pistil as in the hermaphrodite flowers. Rudiments of stamens tubercle-formed.

1 I. PERMOLLIS (Nees, 1. c.)—Native of the East Indies, but in what particular part is unknown. Plant clothed with soft rusty wool. Leaves obovate-cuneiform, acute, tapering into the petioles, green above, white beneath, and rusty on the nerves and rib beneath. Flowers fasciculately glomerate in the axils of the leaves, nutant. Calyx woolly. Corolla glabrous, shorter than the calyx. Stem erect, filled with white medulla. Down simple.

Soft Isanthera. PL ?

Cult. For culture and propagation see *Celsia,* p. 499.

ORDER CLXIX. SCROPHULARINEiE (this order contains plants agreeing with the genus *Scrophularia* in particular characters.) R. Br. prod. p. 433. D. Don, in edinb. phil. p. 108. Benth. scroph. ind. p. 15.—Scrophulariae and Pediculares, part. Juss. gen. p. 99. & 117. Personatae part. Lin. nat. ord.

Calyx 4-5-parted, permanent. Corolla monopetalous, hypogynous, deciduous, irregular, bilabiate, personate, or ringent, imbricate in aestivation. Stamens usually 4, didynamous, sometimes only *2,* and sometimes with the rudiment of a fifth. Ovarium 2-celled. Style one ; stigma 2-lobed, or undivided. Fruit capsular, rarely baccate, 2-celled, 2-4-valved. Seeds small. Albumen copious. Embryo terete, erect, inclosed, straight. Radicle inferior looking to the umbilicus.—Herbs or shrubs, various in habit, usually with opposite leaves. Inflorescence various.

From the great diversity of form found in this order, and from its partaking, both in habit and structure, of those orders to which it is more immediately allied ; for example, the group *Scrophulariece* closely approximates them to *Verbdscince* and *Solandcece;* the *Gratiolece* connects them with *Lentibularece;* the *Aniirrhinece* and *Gerardiece* with *Chelbnece* and *Bignonidcece;* the *Calceoldrece* with *Gesneridcece;* the *Euphrasiece* with *Rhinanthdcece;* and their affinity to *Verbendcece* is clearly established through the *Buddleiece.* The *Verbdscince* approach so closejy to the first group as to be only distinguished by their symmetrical flowers.

The greater part of Linnaeus's *Didyndmia Angiospermia* are found in this orde-jr. Capstilar fruit and didynamous stamens being amongst the jnost obvious characteristics of the order. The species are natives of all parts of the world. Some of the plants of this order are highly ornamental, as *Digitalis, Calceolaria, Veronica, Russelia, Alonsba, Lindria, Maurdndya, Antirrhinum, Gerdrdia, Mimulus, Collinsia,* &c.; others are mere weeds. Most of them have a weak, unpleasant smell, a bitterish taste, and acrid and suspicious properties; the taste is refreshing in *Mimulus luteus,* which is a culinary plant in Peru, and the ordinary acrid properties become emollient in some *Antirrhinums.* The leaves and roots of *Scrophularia aqudtica, Gratiola officindlis,* and *Peruvidna* and *Calceolaria* act as purgatives, or, in strong doses, produce vomiting ; these properties exist in a high degree in *Digitdlis purpurea.* The leaves of this plant reduced to powder excite vomiting and vertigo, excite urine and saliva, and lower the pulse; in too strong doses they cause death ; in moderate doses they are useful in scrophula, dropsy, asthma, &c.

Synopsis of the genera.

TRIBE I.

SCROPHULARIE\E. Calyx deeply 5-parted ; segments dilated, with scarious edges, imbricate in aestivation. Corolla tubular, or campanulate, ventricose ; limb bilabiate, 5-lobed. Stamens 4, fertile, didynamous; cells of anthers confluent at apex, inserted in a fleshy connective. Stigma capitate, or 2-lobed. Capsule crustaceous ; dissepiment double, fixed to the inflexed margins of the valves, placentiferous on both sides. Testa of seeds thick, spongy, corrugated. Albumen fleshy. Embryo almost the length of the albumen.—Shrubs and herbs. Leaves opposite and alternate. Flowers terminal, racemose, yellow, purple or scarlet.

1 DIGITA'LIS. Corolla tubular, declinate; lower lip the longest.

2 ISOPLE'XIS. Corolla tubular, incurved ; upper lip the longest.

3 SCROPHULA'RIA. Corolla with a subglobose tube, and a very unequal limb.

4 ALONSOA. Corolla subrotate, resupinate from the twisting of the pedicels.

5 RUSSE'LIA. Corolla tubular, straight. Valves of capsule bipartible.

TRIBE II.

ANTIRRHI'NEJE. Calyx deeply 5-parted, imbricate in aestivation. Corolla personate, ventricose ; limb 5-lobed, bilabiate. Stamens 4, fertile, didynamous, sometimes with the rudiment of a fifth. Cells of anthers distinct at top. Stigma 2-lobed. Capsule crustaceous ; dissepiment undivided ; placentas spongy, adnate. Seeds with a thick, spongy, corrugated, or cellular testa. Albumen fleshy. Embryo almost the length of the seeds.—Herbs or sub-shrubs. Leaves opposite, or alternate. Flowers terminal, spicately racemose, or axillary solitary.

6 ANTIRRHI NUM. Corolla personate, saccate, or gibbous at the base. Capsule opening by *3* valvate pores under the apex, rarely by *2* irregular holes.

7 LINA'RIA. Corolla personate, spurred at the base. Capsule opening by *2* lids at top, or by 4-10-tooth-formed, or valve-formed parts.

8 ANARRHI^NUM. Corolla bilabiate, spurred, or spurless at the base ; throat open and naked. Capsule opening by *2* valve-formed lids at top.

9 GALVE'SIA. Corolla bilabiate ; throat naked ; tube elongated, gibbous at the base. Capsule bursting irregularly under the apex.

10 MAURA'NDYA. Corolla personate, gibbous at the base. Capsule dehiscing by 10 teeth at apex.

11 LOPHOSPE'RMUM. Corolla bilabiate ; tube wide, gibbous at the base. Capsule dehiscing irregularly under the apex.

12 NEME'SIA. Corolla personate, spurred at the base. Capsule compressed, truncate at apex.

13 LEUCOPHY'LLUM. Corolla tubularly campanulate, bilabiate, without any spur at the base ; palate convex. ?

TRIBE III.

GRATIOLE^:. Calyx usually tubular, 5-cleft. Corolla tubular, ventricose, sometimes personate ; limb 5-cleft, bilabiate. Stamens 4, didynamous, all, or only *2* of them, fertile ; cells of anthers diverging, distinct at apex. Stigma usually bilamellate. Capsule often membranous, 2-celled, 2-4-valved, rarely almost 1-celled; dissepiment membranous, fixed to the inflexed margins °f the valves ; placentas spongy, at length free. Testa of seeds somewhat crustaceous. Albumen fleshy. Embryo length of seeds.—Herbs rarely sub-shrubs. Leaves opposite, or verticillate. Flowers axillary or terminal, usually yellow or purple.

§ 1. *Stamens* 2, *or* 4, *when* 4, *2 of them are sterile.*

14 GRATI'OLA. Corolla tubular. Two upper stamens fertile. Capsule 4-valved.

15 BEYRI'CHIA. Corolla tubular. Two lower stamens fertile. Valves of capsule hardly cleft.

16 ACHETA'RIA. Corolla tubular. Two lower stamens fertile. Valves of capsule bipartible.

1? MONTI'RA. Corolla funnel-shaped; limb 5-cleft, almost equal. Capsule didymous, 4-valved.

18 DOPA'TRIUM. Corolla much longer than the calyx, with a wide throat. Two upper stamens fertile. Capsule 4-valved.

19 MICROCARP^XA. Corolla minute, hardly exceeding the Catyx. Stamens *2*9 none sterile. Capsule 2-valved.

20 PEPLI'DIUM. Corolla equal in length to the calyx. Stains 2, none sterile. Capsule dehiscing irregularly.

21 BONNA'YA. Stamens 4, *2* lower ones sterile. Capsule dehiscing valvately. Valves entire.

22 HYDROTRICHE. Corolla nearly regular. Stamens 2, Without any rudiments of sterile ones.

23 HEMIA'NTHUS. Calyx 4-toothed, cleft. Upper lip of coroll$_a$ obsolete : lower one tripartite. Stamens 2; lateral clefts antheriferous.

24 PTEROSTI'GMA. TWO upper stamens fertile ; upper segment of calyx the largest. Capsule with a loculicidal dehiscence ; valves bifid.

§ 2. *Stamens* 4, *all fertile, sometimes with the rudiment of a fifth.*

25 LINDENBE'RGIA. Cells of anthers separate. Calyx half 5-cleft.

26 STEMODIA. Cells of anthers separate. Calyx 5-parted.

27 DODA'RTIA. Calyx tubular; teeth straight. Lower lip °f corolla papillosely bigibbous at the base.

28 MA'SUS. Calyx campanulate ; teeth spreading. Lower *P of corolla papillosely bigibbous at the base.

29 LIMNOPHILA. Calyx tubularly campanulate. Lower lip of corolla glabrous, with flat segments.

30 MORGA'NIA. Calyx 5-parted, equal. Lower lip of corolla with obcordate, equal segments.

31 HERPE'STIS. Segments of calyx very unequal. Corolla bilabiate, with flat segments. Valves of capsule bipartite, with nat margins.

32 MECARDONIA* Segments of calyx unequal. Corolla tubular, sub-bilabiate. Stigma oblique, sub-capitate; valves of capsule entire, parallel.

33 BRA'MIA. Segments of the calyx unequal. Corolla campanulate, somewhat regularly 5-cleft. Ovarium girded by a toothed disk. Valves of capsule bipartite.

34 SPH^EROTHE'CA. Segments of the calyx nearly equal. Valves of capsule bipartite, with flat margins.

35 DI'CEROS. Segments of calyx equal. Corolla funnel-shaped : limb bilabiate. Anthers bicornute. Capsule globose ; valves entire.

36 LOXOPHY'LLUM. Calyx 5-parted, bilabiate. Corolla bilabiate ; upper lip emarginate, erect. Stamens exserted. Capsule globose; valves bipartite.

37 MATOU'REA. Calycine segments rather unequal. Valves of capsule nearly entire.

38 CACONA'PEA. Calycine segments unequal : upper one the largest. Stamens inclosed. Valves of capsule bipartite.

39 RANA'RIA. Calycine segments equal in length : the *3* outer ones the broadest. Limb of corolla 4-cleft, nearly equal. Valves of capsule bipartite.

40 VANDE'LLIA. Calyx nearly equal, 5-toothed, or 5-parted. Two lower filaments appendiculate, or gibbous at the base. Valves of capsules entire.

41 E'LLOBUM. Calyx equal. Corolla funnel-shaped : limb bilabiate; upper lip retuse. Stamens exserted; anthers connected, mutic. Capsule silique-formed, subulate.

42 ARTANE'MA. Calyx nearly equal. Tube of corolla furnished with 4 scales inside. Two lower filaments appendiculate, or gibbous at the base.

43 TORE'NIA. Calyx plicate, obliquely 5-toothed. Two lower filaments appendiculate, or gibbous at the base.

44 HETERA'NTHA. Anthers of the upper filaments large, and clasping the style. Calyx 5-cleft.

45 LINDE'RNIA. Anthers equal. Lower filaments bifid. Calyx 5-parted. Valves of capsule entire.

46 LIMOSE'LLA. Anthers equal. Calyx 5-toothed, or 5-cleft. Valves of capsule entire.

47 HYDRANTHE'LIUM. Calyx deeply 4-parted. Corolla funnel-shaped ; limb 3-lobed: the hind lobe large and emarginate. Anthers equal.

48 CONOBEA. Calyx 5-cleft. Capsule 1-celled, 4-valved. Anthers sagittate.

49 MIMULUS. Calyx 5-toothed.[fr] Corolla personate. Capsule 2-valved, with flattish margins.

50 LEUCOCA'RPUS. Calyx 5-toothed. Corolla personate. Fruit baccate.

51 UVEDA'LIA. Calyx 5-toothed. Corolla ringent. Capsule 4-valved, with flattish edges.

52 HEMIPHRA'GMA. Corolla tubular, sub-bilabiate. Capsule baccate, 2-valved ; valves bipartite.

53 COLLI'NSIA. Corolla gibbous above the base: limb very irregular. Capsule 2-valved ; valves bipartite.

TRIBE IV.

GERARDIE^JE. Calyx tubular, 5-toothed. Corolla campanu-

lately ventricose; limb 5-lobed, bilabiate. Stamens 4, didynamous, usually exserted; anthers 2-eelled, often bearded ; cells diverging, distinct at apex, usually spurred at the base. Stigma clavate, undivided. Capsule bipartible ; dissepiment composed of two combined lamina; placentas narrow, spongy. Seeds angular ; testa loose, thick, favosely cellular. Albumen fleshy. Embryo sub-foliaceous, nearly the length of the seeds ; radicle short, obtuse.—Herbs or subshrubs. Leaves opposite, scabrous. Flowers axillary, solitary, or terminal, and spicately racemose, yellow or purple.

§ 1. *Calyx tubularly campanulate, 5-toothed, or 5-cleft.*

54 GERA'RDIA. Calyx 5-toothed, or semi-5-cleft. Corolla campanulate, or tubularly campanulate ; tube longer than the calyx. Stamens inclosed. Cells of anthers equal.

55 SOPU'BIA. Calyx 5-toothed. Corolla campanulate ; tube shorter than the calyx. Stamens exserted, equal. Cells of anthers unequal.

56 SEYME^RIA. Calyx deeply 5-cleft. Corolla with a short tube, and a subrotate spreading limb. Stamens a little longer than the corolla ; cells of anthers nearly equal.

57 MACRANTHE'RA. Calyx 5-cleft, foliaceous; segments denticulate. Corolla cylindrically tubular, nearly equal, with a 5-toothed apex. Stamens exserted.

58 ESTERHAZIA. Calyx 5-toothed. Corolla tubularly funnel-shaped. Stamens much exserted.

59 GLOSSOSTYLIS. Calyx 4-5-toothed. Corolla oblique, campanulate. Stamens exserted.

60 PHTHEIROSPE'RMUM. Calyx 5-cleft. Corolla campanulate. Stamens inclosed. ? Stigma 2-lobed.

61 ESCOBE'DIA. Calyx tubular, pentagonal, 5-toothed. Corolla funnel-shaped. Stamens inclosed.

§ 2. *Calyx inflated, 5-toothed or 5-cleft.*

62 PHYSOCA'LYX. Calyx inflated, 5-toothed. Corolla funnel-shaped.

63 MELA'SMA, Calyx inflated, 5-cleft. Corolla campanulate.

64 GASTROME'RIA. Calyx inflated, 5-toothed. Corolla campanulate.

§ 3. Calyx compressed, cleft on one side, at length somewhat 4-lobed.

65 CENTRANTHE'RA, Character the same as that of the section,

TRIBE V.

VERONI'CE*:. Calyx 4-5 parted, imbricate in aestivation. Corolla rotate, 4-lobed, or tubular and sub-bilabiate. Stamens 2 or 4, exserted, distant; anthers incumbent; cells parallel, distinct. Stigma capitate. Capsule membranous ; dissepiment narrow, composed of two separable lamina; placentas very short, in the middle of the dissepiment. Seeds compressed, with a membranous testa. Albumen cartilaginous. Embryo minute, terete, located in the base of the albumen.—Herbs or subshrubs. Leaves usually opposite. Flowers axillary or terminal, solitary or racemose, blue, red or white.

$ 1. *Stamens 2.*

66 VERO'NICA. Calyx 4-5-parted. Corolla rotate, unequal.

67 DIPLOPHY'LLUM. Calyx of *2* sepals. Corolla rotate, unequal. Capsule 4-seeded.

68 LEPTA'NDRA. Corolla tubular, sub-ringent: lower segment the smallest.

69 P^EDEROTA. Corolla tubular, straight, bilabiate: upper lip entire, or emarginate.

70 CALORHA'BDOS. Corolla tubular, incurved, with an oblique, 2-3-cleft mouth.

71 WULFE^NIA. Corolla tubular, declinate ; limb 4-5-cleft. sub-

72 GYMNA'NDRA. Corolla tubular, straight, with a b bilabiate limb.

§ 2. *Stamens* 4, *didynamous.*

73 PICRORHI'ZA. Corolla campanulate, shorter than the calyx.

74 GEOCHORDA. Corolla funnel-shaped.

TRIBE VI.

BUCHNE'RE*:. Calyx tubular, striated, 5-cleft. Corolla salver-shaped ; limb nearly equal. Stamens 4, didynamous, inclosed. Anthers for the most part 1-lobed, from the cells being contiguous, seated on a thick, elevated connective. Stigma, undivided. Capsule with a simple dissepiment; placentas narrow, columnar, adnate longitudinally, or at length free. Seeds minute, smooth, scrobiculate, with a membranous testa. Albumen fleshy. Embryo much shorter than the seed.—Herbs or subshrubs. Leaves opposite or alternate. Flowers terminal, spicately racemose, white or red.

§ 1. *Valves of capsule entire.*

75 STRIGA. Tube of corolla abruptly incurved; limb bilabiate.

76 BUCHNE'RA. Calyx short, tubular, 5-toothed. Corolla salver-shaped. Capsule straight.

77 RHAMPHICA'RPA. Calyx campanulate, 5-cleft. Corolla salver-shaped. Capsule obliquely beaked.

78 CY'CNIUM. Calyx long, tubular, foliaceous. Corolla salver-shaped. Capsule straight, fleshy.

§ *Valves of capsule bifid.*

79 NYCTERI'NIA. Calyx bilabiate. Stamens *2,* inclosed ; with oblong-linear anthers ; the other 2 a little exserted, with short or abortive anthers.

80 POLYCARE'NA. Calyx bilabiate. Anthers all exserted, and similar.

81 PHYLLOPODIUM. Calyx 5-cleft. Anthers all exserted, and similar. Bracteas adnate to the pedicels.

82 SPHENA'NDRA. Calyx 5-cleft. Anthers similar, exserted. Corolla rotate.

83 CH^NOSTOMA. Calyx 5-cleft. Anthers similar, exserted. Bracteas free from the pedicels. Corolla campanulate or funnel-shaped.

84 LYPE^RIA. Calyx 5-cleft. Anthers all inclosed. Tube of corolla gibbous or incurved; limb bilabiate. Peduncles axillary, or disposed in leafy racemes or spikes.

85 MANX/LEA. Calyx 5-cleft. Anthers all inclosed. Corolla tubular ; limb nearly equal.

86 ERINUS. Calyx 5 parted. Corolla tubular, with a 5-

parted, nearly equal limb ; lobes obcordate. Stamens nearly equal, inclosed. Capsule ovate.

TRIBE VII.

BUDDLEIE**:. Calyx campanulate, 5-toothed. Corolla tubular ; limb 4-cleft, equal, spreading. Stamens 4, nearly equal, inclosed. Anthers composed of 2 parallel distinct cells. Stigma clavate, 2-lobed. Capsule crustaceous ; dissepiment constituted from the bent-in margins of the valves, inserted in the thick spongy placenta. Seeds angular, scobiform, with a loose, membranous testa. Albumen fleshy. Embryo almost the length of the seeds. Cotyledons oblong-compressed. Radicle very short—Shrubs with quadrangular branches, opposite, reticulately veined leaves; and terminal, capitate, spicate, or panicled nowers. Corollas generally orange-coloured.

87 BUDDLE'A. Character the same as that of the tribe.

TRIBE VIII.

CALCEOLARIE\E. Calyx 4, rarely 5-parted, valvate in aestivation. Corolla irregular, bilabiate. Stamens 2-4, inserted in the throat of the corolla. Cells of anthers diverging at the base, but confluent at the apex. Stigma undivided, capitate. Capsule membranous. Dissepiment constituted from the bent-in margins of the valves; placentas 2, stipitate, or adnate to the dissepiment. Seeds minute, with a mucrone-formed umbilicus ; testa membranous. Albumen fleshy. Embryo terete, half the le»gth of the albumen.—Herbs or subshrubs, usually clothed with glandular pubescence. Leaves opposite, usually undivided. Flowers terminal, for the most part corymbosely panicled, or racemose, yellow, rarely purple.

88 CALCEOLA'RIA. Lower lip of corolla incurved, calceolate : upper lip small. Stamens 2.

89 JOVELLA'NA. Both lips or lobes of corolla concave, nearly equal, spreading. Stamens *2.*

90 *B'JÈA.* Corolla spreading; lower lip 2-parted : upper 3-lobed. Capsule long, corniculate. Stamens 2.

91 HEMĪMERIS. Lower lip of corolla concave, blunt; upper lip cloven, with a kind of bag at the base. Stamens *2,* or didynamous.

92 THYLACA'NTHA. Lower lip of corolla large, saccate at the °ase, trifid : upper lip short, bifid. Stamens 4, didynamous. Capsule round, valveless.

93 ANGELLÒNIA. Lower lip of corolla saccate at the base, trifid: upper one smaller, bifid. Stamens 4, didynamous. Capsule 2-valved.

TRIBE IX.

EUPHRASIE\E. Calyx tubular, 5-toothed. Corolla bilabiate. Stamens 4, didynamous. Cells of anthers parallel, usually spurred at the base. Stigma undivided. Capsule crustaceous; dissepiment placentiferous on both sides. Seeds with a membranous testa. Albumen fleshy. Embryo terete, slender, straight, almost the length of the albumen.—Herbs with opposite leaves, and terminal, subspicate, bracteate flowers.

§ 1. *Cells of anthers spurred at the base.*

94 EUPHRAW. Calyx campanulate, 4-cleft. Superior lip °f corolla galeate, emarginate; lower lip large, spreading, with emarginate segments.

95 ODONTI'TES. Calyx campanulate, 4-cleft. Upper lip of corolla emarginate, galeate : segments of the lower lip equal, linear. Anthers oblong, a little exserted.

96 BA'RTSIA. Calyx campanulate or tubular, 4-cleft. Upper lip of corolla galeate, compressed, entire; segments of the lower lip quite entire, reflexed.

97 BU'NGEA. Calyx tubular, 4-cleft. Upper lip of corolla tridentate : lower one trifid.

98 SIPHONOSTE'GIA. Calyx funnel-shaped; tube elongated; limb 4-5-parted. Upper lip of corolla incurved ; lower one short, with entire segments.

99 LAMOUROU'XIA. Corolla tubular, compressedly ventricose ; upper lip galeate, entire : lower one with obtuse lobes.

§ 2. Cells of anthers mutic at the base.

100 CASTILLE'JA. Calyx compressed, bifid or quadrifid, cleft on one side. Upper lip of corolla linear, channelled, entire. Cells of anthers unequal.

101 ORTHOCA'RPUS. Calyx tubular or campanulate, 4-cleft. Upper lip of corolla small, compressed. Cells of anthers unr equal.

102 SCHWA'LBEA. Calyx compressed, obliquely 5-cleft. Upper lip of corolla arched. Cells of anthers equal.

103 LAFUE'NTEA. Calyx tubular, 5-parted. Cells of anthers equal.

TRIBE X.

TEEDIE^JE. Calyx 5-parted. Limb of corolla nearly equal. Fruit baccate.

104 TEE'DIA. Calyx 5-parted. Corolla salver-shaped.

105 FREYLI'NIA. Calyx 5-parted. Corolla funnel-shaped.

TRIBE XI.

HALLERIE\K. Calyx small, 3-lobed, unequal, permanent. Corolla large, funnel-shaped; throat ventricose; limb erect, oblique, 4-cleft, unequal; upper segment the largest, and emarginate. Stamens 4, didynamous. Fruit baccate, roundish, terminated by the style, 2-celled, many-seeded.—A shrub with opposite leaves, with the habit of *Vitex.*

106 HALLE'RIA. Character the same as that of the tribe.

•j- *Genera not sufficiently known.*

107 PI'KRIA. Calyx deciduous, 4-leaved, longer than the corolla. Corolla ringent, bilabiate. Stamens 4, didynamous; the *2* longer stamens bearing 1-celled anthers, and the 2 shorter stamens bearing 2-celled anthers. Berry ovate, 2-celled, many-seeded.

108 DIPLANTHE^RA. Calyx 3-cleft; hind segment entire: lateral ones bifid. Corolla bilabiate ; upper lip obcordate. Stamens 4, exserted, nearly equal. Cells of anthers diverging. Ovarium 2-celled; placentas 2, adnate in each cell. Stigma bilamellate.

109 GOMVRIA. Calyx 4-cleft. Corolla irregular; tube curved. Nectary cup-shaped. Stamens 4, didynamous. Capsule 2-celled.

110 RHYNCOGLŌSSUM. Calyx 5-cleft, bilabiate. Stamens 4, 2 sterile. Capsule 1-celled, 2-valved.

Tribe I.

SCROPHULARIE^E (this tribe contains plants agreeing with Serophularia in the characters indicated below.) D. Don, in edinb. phil. journ. 19. p. 110. July, Oct. 1835. Calyx deeply 5-parted ; segments usually dilated, with scarious margins, imbricate in aestivation. Corolla tubular or campanulate, ventricose ; limb 5-lobed, bilabiate. Stamens 4, didynamous, often with the rudiment of a fifth. Cells of anthers confluent at apex, inserted into a fleshy connective. Stigma capitate or 2-lobed. Capsule crustaceous ; dissepiment double, formed from the bent-in margins of the valves, placentiferous on both sides. Testa of seed thick, spongy, corrugated. Albumen fleshy, nearly the length of the albumen.—Herbs or shrubs, mostly natives of Europe. Leaves opposite and alternate. Flowers terminal, racemose, yellow or purple. This tribe comes near to *Ferbascinece* in habit more than in character.

I. DIGITA'LIS (so named from the resemblance of the flower to the finger of a glove, *digitate,* or from the adjective *digitalis,* of or belonging to a finger. Parkinson says, some thinking Foxglove to be a foolish name, do call them finger flowers', because they are like unto the fingers of a glove, the ends cut off.) Fuschs. hist. p. *892.* Tourn. inst. p. 165. t. *73.* Lin. gen. no.' 758. Schreb. gen. no. 1017. Juss. gen. p. 120. ed. Usteri. p. 135. Gaertn. fruct. 1. p. 247. t. *53.* Lindl. dig. mon.-Campanula, Trag. kreut. 2. cap. p. 125.—Virga regia Csesalp. pi. 348.—Gesneria spec. Lin. hort. cliff, p. 318.

LIN. SYST. *Didynamia, Angiospermia.* Calyx unequal. Corolla tubular at the base, funnel-shaped : limb obliquely 4-lobed : upper segment much shorter than the lower one or lip, and is, as well as it imbricate in aestivation. The rudiment of the fifth ; stamen hardly conspicuous. Stigma simple, or bilamellate. Capsule ovate, acuminated.—Herbs with alternate leaves, and terminal racemes of secund, bracteate, drooping flowers.

§ 1. *Corolla oblong-ventricose; upper segment transverse.*

Stamens shorter than the tube.

1 D. PURPU^REA (Fuschs. hist. 892. t. 893. Lin. spec. 866.) leaves oblong, rugose, crenated; calycine segments ovate-oblong; segments of corolla transverse, acute ; peduncles straight, about equal in length to the calyxes. 1/. H. Native of Europe, as of Denmark, Germany, Switzerland ; Britain, in sandy gravelly soils near London ; it grows plentifully about Charlton wood, Norwood, &c. Gaertn. fruct. 1. p. 247. t. *53.* Curt. fl. lond. fasc. 1. t. 48. Woodv. med. bot. 71. t. 24. Oed. fl. dan. t. 74. Hoffm. et Link, fl. port. p. 222. Lindl. dig. t. 2. Stev. et Church, med. bot. 1. t. 18.—Blackw. t. 16.—Riv. mon. t. 104.—Lob. icon. 1. p. *572.* f. 1, 2 —Mor. hist. sect. 5. t. S. f. 1. Plant pubescent. Corollas large, purple, marked inside with dark purple spots, which are edged with white. The colour, however, varies from dark purple *to* cream-colour and white.

Foxglove has been analysed by Destouches. Four ounces of the dried leaves yielded successively 9 drachms of watery and *78* grains of alcoholic extract. The first was brown, smooth, and *of* a consistence fit for making pills. The second had a very deep green colour, a virose and disagreeable smell, the consistence of tallow, but more tenacious, did not furnish ammonia by distillation, and was not acted upon by acids. The ashes contained salts of lime and potass. The effects of *Foxglove* when taken into the stomach are to diminish the frequency of the pulse, and the irritability of the system ; and to increase the action of the absorbents, and the discharge by urine. In excessive doses it produces vomiting, dimness of sight, vertigo, delirium, hiccough, convulsions, collapse, and death. For these symptoms the best remedies are cordials and stimulants. Internally *Digitalis* has been recommended. 1. In inflammatory diseases, from its very remarkable power of diminishing the velocity of the circulation. *2.* In active haemorrhages, and phthisis. *3.* In some spasmodic affections, as in spasmodic asthma, palpitation, &c. 4. In mania from effusion on the brain. 5. In anasarcous and dropsical effusions. 6. In scrophulous tumours. 7. In aneurism of the aorta, and hypertrophy *of* the heart. Externally it has been applied to scrophulous tumours. It may be exhibited—1. In substance, either by itself, or conjoined with some aromatic, or made into pills, with soap or gum ammoniac. Withering directs the leaves to be gathered before the plant comes into flower; he rejects the petioles and midrib, and dries the remaining part either in the sunshine or before the fire. In this state they are easily reduced to fine green powder, which is given in doses of one grain twice a day, and the dose is gradually increased until it acts upon the kidneys, stomach, pulse, or bowels, when its use must be laid aside, or suspended. 2. In infusion : the same author directs a drachm of dried leaves to be infused for 4 hours in eight ounces of boiling water, and an ounce of any spirituous water to be added to the strained liquor for its preservation. Half an ounce, or an ounce of this infusion may be given twice a day. 3. In decoction. Darwin directs that four ounces of the fresh leaves be boiled in two pounds of water, until they are reduced to one, and that half an ounce of the strained decoction be taken every two hours, for four or more doses. 4. In tincture, put one ounce of the dried leaves, coarsely powdered, into four ounces of diluted alcohol: let the mixture stand by the fire-side 24 hours, frequently shaking the bottle, and the saturated tincture, as Darwin calls it, must then be separated from the residuum by standing, or decantation. Twenty drops of the tincture were directed to be taken twice or thrice a day, but the dose is dangerous. The Edinburgh college use eight ounces *of* diluted alcohol to one of the powder, but let it digest seven days. 5. The expressed juice and extracts are not proper forms of exhibiting this very active remedy.—Woodville and Duncan.

Far. albijlhra; flowers white. %. H. Native along with the species.—Gerard, emac. 790. f. 2.

Pwr^/e-flowered, or Common Foxglove. Fl. Clt. PI. 3 to 5 feet.

2 D. THA'PSI (Lin. spec. 867.) leaves oblong, rugose, crenated, undulated, decurrent; calycine segments ovate; segments of corolla ovate-roundish ; peduncles slender, arched, much longer than the calyx. %. H. Native of Spain, Portugal, Savoy, &c. Smith, exot. bot. p. *83.* t. 43. Hoffm. et Link, fl. port, p. 223. t. 30. Lindl. dig. p. 10. t. 3. D. verbascifdlia, Bocc. mus. t. *85.* D. Hispanica purpurea minor, Tourn. inst. p. 165. —Barrel, icon. 1183. Plant tomentose, in habit much like *D-purpurea.* Corollas purple ; throat pale, marked with blood red dots.

Far. /3, intermedia (Lindl. dig. p. 11. t. 4.) stems simple, taller; segments of corolla obsolete. %. H. Native of Portugal about Cintra and Grandola. D. purpurea, Tab. icon. t. *568.* D. tomentosa, Hoffm. et Link, fl. port. p. 220. t, *20.* Sims, bot. mag. 2194.—Besl. hort. eyst. ord. 1. fol. 2. f. 2.

Mullien-Wke Foxglove. Fl. June, Sept. Clt. 1752. B. 1818. PI. 2 to 4 feet.

3 D. MI^NOR (Lin. mant. p. *567.* syst. ed. 13. p. 470.) radical leaves recurved to the ground, lanceolate, flat, denticulated; racemes few-flowered ; segments of corolla ovate-roundish, dilated, quite glabrous : superior one bifid ; peduncles 3-times longer than the calyxes. %. H. Native of Spain. Sims, bot. mag. 2160. Lindl. dig. p. 12. t. 5, 6. D. Hispanica purpurea, minor, Tourn. inst. p. 165. Stem glabrous, or downy. Leaves glabrous above, downy beneath : upper ones quite entire. Corolla purplish, large for the size of the plant, marked by many spots inside.

Smaller Foxglove. Fl. June, July. Clt. 1789. *VI* \ to f foot.

4 D. AMBI'GUA (Murr. comm. goett. p. 6. Lin. syst. p. *562.*)

leaves ovate-lanceolate, toothed, sessile, nerved ; lower bracteas about equal in length to the flowers ; corolla reticulated : with ovate, transverse, obtuse segments. %. H. Native of Austria, Switzerland, Germany, East of Siberia and Persia, in shady places. Schkuhr, handb. t. 174. Lindl. dig. p. 13. t. 7. R. Br. hort. kew. 4. p. 28. D. lutea, Guildst. reis. 1. p. 425. Poll. pal. no. 599. D. grandiflora, All. ped. 1. p. 70. Mill, diet. no. 4. Lam. fl. fr. 2. p. 332. D. media, Roth, catalect. 2- P. 60. D. intermedia, Pers. ench. 2. p. 162. Plant hairy, leaves downy beneath. Corollas large, yellowish, reticulated with brown. Genitals glabrous.

Ambiguous Foxglove. Fl. July, Aug. Clt. 1596. PL 2 to 3 feet.

5 D. OCHROLEU'CA (Jacq. austr. 1. p. 36. t. *57.)* leaves ovate-lanceolate, acuminated, toothed, and are, as well as the stem, villous ; bracteas lanceolate : lower ones twice as long as the flowers ; corolla villous, reticulated : segments ovate, acute : lip bearded. i£. H. Native of Austria, Germany, Croatia, wrpathian mountains. Lindl. dig. p. 14. t. 8. D. ambigua, kchrank, mon. 3, with a figure. D. lutea, Tabern. icon. t. *567.* Roth. fl. germ.]. p. *267.*—Besl. eyst. ord. 1. fol. 1. f. 3.—*nip. centf 6j witll a figUre> Corolla yellow, reticulated with brown.

Var. /j, *fuscescens* (Lindl. dig. p. 14.) flowers smaller, brown. H. Native of Croatia. D. fuscescens, Waldst. et Kit. 3. P- 304. t. 274.

Cream-coloured-flowered Foxglove. Fl. July, Aug. Clt. ? PI- 2 to 3 feet.

6 D. FU'LVA (Lindl. dig. p. 15. t. 9.) leaves lanceolate, ciliated ; bracteas all not half so long as the flowers ; corolla downy, reticulated : segments ovate, acute : lip bearded ; stamens about equal in length to the tube. %. H. Native county unknown. D. obscuro-ferruginea, Kcelr. in act. petrop. 2. p. 261—Park. par. 381. f. 5. ? Plant glabrous. Leaves ciliated and pilose on the veins beneath, smooth, bullate, and tainted with purple above. Calyx downy. Corolla fulvous, reticulated with rust-colour. Stamens glabrous. Perhaps a **hybrid between *D. obscura* and *D.ferruginea.***

Tawmj-ftowered Foxglove. Fl. July, Aug. Clt. ? PI. 2 to 3 feet.

§ 2. *Corolla roundisk-ventricose. Lip length of tube. Stamens equal in length to the tube.*

7 D. L^VIGA^TA (Waldst. et Kit. pi. hung. 2. p. 171. t. 158.) glabrous, branched ; leaves linear-lanceolate; flowers scattered, glabrous, i;. H. Native of Croatia, on calcareous rocks, ^ndl. dig. p. 16. t. 10. Radical leaves obovate-lanceolate, obscurely-toothed; upper ones recurved, 5-nerved. Corolla fulvous, reticulated ; lip ciliated, white ; segments obtuse.

Smooth Foxglove. Fl. July, Aug. Clt. 1816. PI. 2 to 3 feet.

8 D. SIBI'RICA (Mill. diet. no. 9. Lindl. dig. p. 16. t. 11.) villous, branched ; leaves ovate, distantly-toothed; flowers scattered, pilose. If. H. Native of Siberia, Tartary. Upper leaves quite entire. Calyxes villous. Corolla hairy ; segments ovate, transverse, acute ; lip drawn out. Corolla rust-coloured, reticulated.

Siberian Foxglove. Fl. June, July. Clt. ? PL 2 to 3 feet.

9 D. FERRUGINEA (Tab. icon. t. *573.* Lin. spec. 867.) raceme dense, pyramidal; calycine segments margined; lip of corolla ovate, entire, bearded. 1/. H. Native of Piedmont, kpain, Hungary, Caucasus, Iberia, and Persia. Bieb. cauc. 2. P- S;^ Lindl. dig. p. 17. t. 12. Sims, bot. mag. 1828. D. latifolia flore ferrugineo, Tourn. inst. p. 166.—Mor. hist. 1. p. 4 ™. sect. 5. t. 8. f. 2, 3.—Riv. mon. irr. t. 105.—Sabb. hort. rotm. 2. t. 86.—Ger. emac. 790. f. 4.—Park. par. 380. no. 1. f. 6. Stem glabrous, densely leafy. Leaves glabrous, or ciliated. Racemes long. Corolla rusty, reticulated inside, downy outside.

Var. /3, *parvijldra* (Lindl/dig. p. 17.) flowers about half the size of those of the species. %. H. Native of Persia and Caucasus.

/row-coloured-flowered Foxglove. Fl. July, Aug. Clt. 1597. PI. 4 to 6 feet.

10 D. AU'REA (Lindl. dig. p. 18. t. 13.) racemes many-flowered ; calycine segments marginate ; corolla arched : lip ovate, tridentate. 1/. H. Native of Mounts Parnassus and Olympus. D. ferruginea, Smith, prod. fl. graec. 1. p. 439. fl. graec. t. 606.—Mor. hist. 1. p. 478. sect. 5. t. 8.—Park par. 381. f. 6. Stem downy. Leaves distant, distantly-toothed, nearly glabrous : superior ones linear-lanceolate. Corolla fuscescent, brownish purple outside, yellow, and reticulated inside.

Golden-flowered Foxglove. Fl. July, Aug. Clt. 1816. PI. 2 to 3 feet.

11 D. LEUCOPH^A (Sibth. et Smith, prod. fl. graec. 1. p. 439. fl. graec. t. 607.) raceme dense, cylindrical, many-flowered; lip of corolla unguiculate, lunate ; bracteas linear, longer than the flowers. %. H. Native of Greece, on Mount Athos. Lindl. dig. p. 18. t. 14. Corolla rust-coloured; lip white.

GV^-flowered Foxglove. Fl. July, Oct. Clt. 1788. PI. 2 to 3/feet.

-42 D. LANA^TA (Ehrh. beitr. 7. p. 153. Waldst. et Kit. 1. p. 76. t. 74.) leaves oblong ; rachis woolly ; lip of corolla ovate. 1/. H. Native of Hungary, in vineyards. Sims, bot. mag. 1159. Lindl. dig. p. 19. t. 15. D. Winterli, Roth, catal. 1. p. 71. D. ferruginea, /3, Lam. diet. 2. p. 280. R. Br. hort. kew. 4. p. 29. D. orientalis, Elm. mon. 45. t. 1. D. eriostachya, Fisch. ex Loud. hort. brit. p. 251.? Leaves deep green, ciliated with wool. Racemes dense, many-flowered. Bracteas shorter than the flowers. Calycine segments villous, acute. Corolla downy, grey, reticulated ; lip white, naked, sometimes purplish.

#oo%-spiked Foxglove. Fl. July, Aug. Clt. 1789. PI. 2 to 3 feet.

13 D. ORIENTA'us (Lam. diet. 2. p. 280. but not of Mill.) quite glabrous ; leaves linear ; flowers scattered ; lip of corolla oblong. %. H. Native of the Levant. Lindl. dig. p. 19. t. 16. Ker. bot. reg. 554. Sims, bot. mag. 2253. D. orientalis, tragapogi folio, flore albido, Tourn. inst. p. 166. Stern glabrous. Leaves linear-lanceolate, recurved, 3-nerved. Rachis naked. Calycine segments obtuse, ciliated. Corolla campanulate, grey, pale outside, reticulated with purple inside, pilose : lateral and superior segments minute ; lip white, obtuse.

Eastern Foxglove. Fl. June, July. Clt. 1820. PL 2 to 3 feet.

§ 3. *Corolla funnel-shaped, a little ventricose; upper segment bifid. Stamens equal in length to the tube.*

14 D. PARVIFLORA (Jacq. vind. 6. t. 17. Ker. bot. reg. t. 257.) leaves oblong-lanceolate, undulated, deflexed, ciliated with wool, entire; racemes dense, cylindrical ; segments of corolla, as well as those of the calyx, roundish. 2/. H. Native country unknown. Lindl. dig. p. 20. t. 17. R. Br. in hort. kew. ed. 2d. vol. 4. p. 29. D. ferruginea, var. y, Lam. diet. 2. p. 280. Leaves margined with wool: radical ones obovate. Corollas small, brownish purple, pilose.

Small-flowered Foxglove. Fl. June, Aug. Clt. 1798. PI. 1J to 3 feet.

15 D. VIRIDIFLORA (Lindl. dig. p. 21. t. 18.) clothed with glandular hairs; leaves oblong, toothed ; segments of corolla ovate ; sepals subulate. %. H. Native of Greece, on Mount Athos. Racemes long, not dense. Corolla small, green ; segments ovate, veiny.

***Green-flowered* Foxglove.** Fl. June, July. Clt. ? PL 2 to 3 feet.

16 D. RI'GIDA (Lindl. dig. p. 21. t. 19.) plant clothed with glandular hairs; leaves, oblong-lanceolate, wrinkled, undulated, toothed ; racemes secund, many-flowered ; corolla downy, with ovate, obtuse, glandular segments. %. H. Native country unknown. Corolla small, yellow, purplish above.

Stiff Foxglove.'' Fl. June, Aug. Clt. ? PL 1| to 2 feet.

17 D. PURPURA'SCENS (Roth, catal. 2. p. 62. D. C. fl. fr. 5. p. 411. exclusive of the var. Lindl. dig. p. 22. t. 20.) leaves linear-lanceolate, serrated, glabrous ; racemes secund ; corolla glabrous, with roundish segments. *71.* H. Native of Germany and Italy, in stony places on mountains. D. erubéscens, Dryand. mss. R. Br. in hort. kew. 4. p. 29. Habit of *D. lùtea.* Radical leaves obovate, pilose on the nerves beneath. Corolla reddish, spotted inside; segments ciliated : upper one entire.

Pwr^/i^-flowered Foxglove. FL June, Aug. Clt. 1776. PL 2 to 3 feet.

18 D. LUTE'SCENS (Lindl. dig. p. 22. t. 21.) leaves cordate-oblong, flat, crenated, glabrous; racemes secund ; corolla glabrous, with very blunt segments ; bracteas all shorter than the flowers. %. H. Native country unknown. Stem slender, nearly naked. Bracteas, calyxes, and ovaria beset with a few hairs. Corolla long, tubular, glabrous ; segments ciliated; upper lip bifid. Anthers yellow, spotted with blood colour. Corolla pale yellow.

Yello?vish-flowered Foxglove. FL July, Aug. Clt. ? PL *2* to 3 feet.

19 D. TUBIFLÒRA (Lindl. dig. p. *22.* t. 22.) segments of corolla ovate, obtuse; flowers declinate. %. H. Native country unknown. Nearly allied to *D. lùtea.* Corolla pale yellow, long, narrow.

Tube-flowered Foxglove. FL June, Aug. Clt. ? PL 2 to 3 feet.

20 D. LU'TEA (Lin. spec. *867.)* leaves lanceolate, toothed, glabrous ; racemes secund ; corolla glabrous, with ovate, bearded segments ; lower bracteas longer than the flowers. %. H. Native of the temperate parts of Europe, as of France, Switzerland, Silesia, Carniola, Piedmont, Italy, &c. Bull. herb, t. *373.* Jacq. vind. 2. p. 47. t. 105. Ker. bot. reg. t. 251. R. Br. hort. kew. 4. p. 29. Lindl. dig. p. 23. t. 23. D. parviflora, All. pedem. 1. p. 70. D. C. fl. fr. 3. p. 597.-Riv. mon. t. 105. D. minor luteo parvo flore, Tourn. inst. p. 165.—Lob. icon. t. 573.—Mor. hist. 1. p. 479. sect. 5. t. 8.—Sabb. hort. rom. 2. t. *98.* Stem simple, smooth, angular, glabrous, or downy. Superior leaves subcordate at the base. Racemes dense. Peduncles glabrous, or downy. Corolla pale yellow, downy towards the top. Anthers pilose.

*Var. /*3, *micrdntha* (Lindl. dig. p. *23.)* calycine segments about equal in length to the corolla. %. H. Native of Europe. D. micrántha, Elm. mon. 46. t. 2.

Var. y, *hybrida* (Lindl. dig. p. *23.* t. 24.) flowers large, pale ; stem more erect. 2/. H. Native of Auvergne, and the Pyrenees. D. hybrida, Salv. nov. bull. 3. p. *337.* t. 6. Journ. phys. 1782. p. *285.* t. 1. f. 1, 2. D. intermedia, Lapeyr. abr. D. purpurascens, var. /3 and *B,* D. C. fl. fr. 5. p. 411. Elm. mon. p. 45.

Var. B, fucata (Lindl. dig. p. *23.* t. *25.)* flowers larger, brownish purple ; stem more erect. %. H. Native of Europe. D. fucàta, Ehrh. beitr. 7. p. 151. Pers. ench. 2. p. 162. *D.* purpurascens, D. C. fl. fr. 5. p. 411.

Yellow-fiowered Foxglove. Fl. July, Aug. Clt. lb~y. *ri.* 1| to 3 feet.

21 D. LACINIA'TA (Lindl. bot. reg. 1201.) leaves lanceolate, acuminated,* jagged, glabrous ; raceme subsecund ; corolla downy, with ovate, bearded segments : lower lobe or lip ovate, acute ; bracteas all much shorter than the pedicels. *11.* H. Native *of* Spain, on the mountains about Malaga, P. B. Webb. Corolla yellow. It differs principally from *D. lùtea* in the cut leaves.

JaggedAeaved Foxglove. Fl. June, July. Clt. 1827. PL l£ to 2 feet.

22 D. OBSCU'RA (Lin. spec. 867.) suffruticose; leaves linear-lanceolate, quite entire, glabrous; corolla ventricose. %• *G.* Native of Spain. Jacq. hort. vind. 1. p. 40. t. 91. Sims, bot. mag. t. 2157. Lindl. dig. p. 24. t. *25.* R. Br. hort. kew. 4. p. 30. D. Hispánica angustifdlia, flore nigricante, Tourn. mst. p. 166.—Bocc. mus. p. 136. t. *98.* Stem simple, glabrous. Leaves deep green. Racemes loose, few-flowered. Calyx downy. Corolla arched, downy, rufous outside, golden yellow inside, veined with dark brown lines ; upper lip emargmate, villous inside at the base. Anthers ciliated with glands.

Obscure Foxglove. FL July, Aug. Clt. 1778. Shrub 1 *to 2* feet.

t *Species hardly known.*

23 D. *1* COCHINCHINE'NSIS (Lour. coch. 378.) leaves lanceolate, rough ; flowers sessile, solitary, axillary ; calyxes acute; corollas obtuse, emarginate at top. 1/. G. Native of Cochinchina. Leaves quite entire, opposite. Calyx 5-cleft. Corolla pale violet, bell-shaped, ventricose at bottom ; segments obtuse : the upper one emarginate. Capsule ovate, acute, 2-celled. Certainly not a species *of Digitàlis.*

Cochinchina Foxglove. PL \\ foot.

24 D. ? SINE'NSIS (Lour. coch. p. *378.)* leaves ovate, hairy ; flowers solitary, axillary ; segments of calyx awl-shaped ; segments of corolla obtuse, all entire. *%.?* G. Native of China. Stems tufted, smooth. Leaves opposite, serrated. Upper segment of the calyx larger, and sometimes bifid. Corolla dusky purple, bell-shaped, ventricose, 4-cleft : its upper segment the largest. Stigma screw-shaped. Capsule ovate-conical, 2-grooved, 2-celled. Certainly not a species *of Digitalis.*

China Foxglove. PL 1 foot.

25 D. MILLE'RI ; leaves ovate-lanceolate, nerved; calyxes acute. 1/. H. Native of Tartary. D. orientalis, Mill. diet, no. 7, but not of Lam. Leaves smooth: cauline ones half stem-clasping. Corolla yellow, size of those of *D. ambigua.*

Miller's Foxglove. FL May, July. Clt. 1759. PL 1 foot.

Cult. Most of the species of Foxglove are showy, and well fitted for decorating flower borders. They all grow freely in common garden earth, and are readily increased by seed. Some of the more tender species require protection in winter.

II. ISOPLE'XIS (from tcoe, *isos,* equal; and TIXCKW, *pleco,* to plait; the upper segment of corolla is equal in length to the lip.) Lindl. dig. p. *25.* Digitalis species, Lin.

LIN. SYST. *Didynamia, Angiospermia.* Calyx unequal. Corolla tubular at the base, campanulate ; limb obliquely 4-lobed ; upper segment equal in length to the lip, and, like it, incumbent in aestivation. Stigma bilamellate. ? Capsule ovate, acuminated.—Stems shrubby. Racemes pedunculate.

1 I. CANARIE'NSIS (Lindl. dig. p. 25. t. 27.) segments of the corolla acute. ^ . G. Native of the Canary Islands. Digitalis Canariénsis, Lin. spec. p. 868. Mill. fig. 1.t. 120. Ker. bot. reg. t. 48. R. Br. hort. kew. ed. 2d. vol. 4. p. 30.—Plukn. mant. t. 325. f. *2.*—Comm. hort. 2. p. 105. t. *53.* Stem simple, downy. Leaves permanent, lanceolate, serrated, pilose on the edges. Calycine segments subulate : upper one the largest. Flowers dense, golden yellow: superior lip obovate, emarginate; ,!:-eral segments subulate.

Canary-Island Isoplexis. FL June, July. Clt. 1698. Shrub 4 to 6 feet.

2 I. SCE'PTRUM (Lindl. dig. p. 26. t. 28.) segments of corolla obtuse ; racemes comose. F? . G. Native of Madeira, in shady woods. Digitalis sceptrum, Lin. suppl. 282. Lher. angl. p. 21. *• 24. Smith, exot. bot. 2. p. 27. t. *73.* R. Br. in hort. kew. 4. P» 31. Trunk di-trichotomous, Young branches fleshy, pilose. -Leaves obovate-lanceolate, denticulated, pilose beneath, crowded at the tops of the branches. Racemes thyrsoid. Flowers dense, pendulous, of a yellowish brown colour. Calycine segments pilose, spatulate, the 3 upper the shortest. Corolla pilose, reticulated; segments oblong-roundish: superior one flat, bipartite : lateral ones spreading a little smaller : lower one concave.

Sceptre Isoplexis. Fl. July, Aug. Clt. 1777. Shrub 3 to 4 feet.

Cult. Both species of *Isoplexis* are very showy when in blossom. A light rich soil answers them well; and they may be either increased by cuttings under a hand-glass, or by seed, which ripen plentifully.

III. SCROPHULA'RIA (so named from its supposed use in the cure of scrofula.) Tourn. inst. p. 166. t. 74. Lin. gen. no. *756.* Schreb. gen. no. 1014. Juss. gen. p. 119. ed. Usteri. P- 133. Gaertn. fruct. 1. p. 249. t. *53.* Neck. elem. 1. p. 343. ^am. diet. 7. p. 27. ill. t. *533.* Scrofularia, Spreng. anleit. ed. 2d = 1. p. 394. Wydler. mon. scrof.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, or usually 5-cleft, nearly equal. Corolla with a ventricose subglobose tube, and a short 5-lobed limb : segments short, roundish : the 2 upper ones combined with the upper lip. Stamens 4, fertile, didynamous, declinate, the rudiment of a fifth often present; anthers 1-celled. Style simple, thickened at the apex. ktigrna emarginate. Capsule almost globose, or ovoid, often acuminated ; valves entire, but often also shortly bifid at apex. The fifth filament, when present, is adnate, bearing a sessile, ^rnellifbrm, or emarginately spatulate anther or tip.—Herbs or under-shrubs with a fetid smell. Leaves opposite; or the superior ones are sometimes alternate, entire, or deeply pinnatifid, sometimes full of pellucid dots. Inflorescence thyrsoid; peduncles °Pposite, or alternate, cymosely many-flowered, rarely 1-flowered.

SECT. I. VENI'LIA (in myth, the wife of Neptune.) Rudiment °* a fifth stamen none.

§ 1. *Thyrse leafy.*

1 S. VERNA'LIS (Lin. spec. p. 864.) hairy ; leaves roundish-cordate, coarsely and multiplicately serrated; acute ; peduncles °Pposite ; lobes of calyx without a membrane, lanceolate ; lobes of corolla short, connivent; genitals exserted. ©. H. Native °* Europe, in shady, humid places ; particularly on the Caucasian Alps. It is to be found in woods and hedges in some parts °f England, but is hardly indigenous. Schkuhr, handb. 2. t. 173. Smith, engl. bot. t. *567.* Hook. fl. lond. t. 70. Oed. fl- dan. t. 411. S. cordata, Waldst. et Kit. hung. 1. p. *75.* t. 73.—Barrel, icon. t. 273.—Mor. hist. p. 482. sect. 5. t. 8. f. 2. —Riv. mon. irr. t. 107. f. 2. Upper leaves alternate and smaller. Size and form of bracteas variable. Lobes of calyx obtuse, or acute, full of pellucid dots. Corolla yellow. Ovarium clothed with stipitate glands. Capsule oblong, pear-formed.

Vernal Figwort. Fl. March, May. Britain. PI. 2 feet.

§ 2. *Thyrse leafless.*

2 S. PAUCIFLORA (Benth. scroph. ind. p. 17.) glabrous ; stem nardly angular ; leaves roundish-ovate, coarsely, acutely, and doubly serrated; thyrse elongated, *few-flowered, with short, remote cymes ; calycine segments lanceolate, acute, without membranes, shorter than the capsule; genitals inclosed. %. H. Native of Gosaingsthan, Wall. Corolla yellowish, with nearly equal segments. Capsule ovate, obtuse.

Few-flowered Figwort. PI. 2 to 3 feet ?

3 S. ORIENTALS (Lin. spec. 864.) glabrous ; lower leaves pinnatifidly cut: superior ones lanceolate, all regularly and sharply serrated ; peduncles subverticillate ; lobes of calyx membranous, ovate ; genitals exserted. 1/ . H. Native of the Levant, Siberia, and Caucasus. Schkuhr, handb. 2. p. 196. t. 175. Wydler. scrof. p. 26. S. ebulifolia, Bieb. fl. cauc. 2. p. *77.* and 3. p. 415.? but not of Link. S. orientalis foliis cannabinis, Tourn. cor. p. 9. Lower leaves 3-4 in a whorl, pinnatifid, or appendiculate at the base; segments petiolate, all acuminated. Corolla greenish yellow outside, striped lengthwise with purple inside : lobes of the upper lip shorter than the others. Stigma pilose. Capsule oblong-conical, acuminated.

Eastern Figwort. Fl. July, Aug. Clt. 1710. PI. 3 to 4 feet.

SECT. II. SCORODONIA (from *fficopoSov, scorodon,* the Greek name of garlic; in reference to the fetid smell of the species.) Sterile stamen present, adnate at the base, but free at the apex, dilated and spatulate, or emarginate and reniform. Calycine lobes roundish, or ovate, usually with membranous edges. Corollas purplish-green, greenish, purplish white, rarely yellowish. Genitals inclosed, or exserted. Fertile anthers yellow. Roots fibrous, rarely tubercular and woody. Stem usually herbaceous, but in a few species shrubby. Thyrse loose.

§ 1. *Thyrse leafy.*

4 S. GRANDIFLORA (D. C. cat. hort. monsp. p. 143. Wydler, scroph. p. 26.) leaves clothed with soft villi : lower ones interruptedly and lyrately pinnatifid: lobes alternate, ovate, acute, toothed: terminal one large, broad, lanceolate; upper leaves ovate-lanceolate; calyx membranous; genitals inclosed. %. H. Native of South America. ? Leaves sometimes doubly toothed ; teeth ciliated, mucronate ; petioles villous. Peduncles 5-flowered, much shorter than the leaves. Pedicels and calyxes villous. Corolla large, deep red. Anther or top of sterile filament reniform. Capsule almost globose.

Great-flowered Figwort. Fl. June, Aug. Clt. 1820. PL 2 to 3 feet.

5 S. SAMBUCIFOLIA (Alp. exot. 203. t. 202. Lin. spec. p. *865.)* glabrous ; lower leaves deeply pinnate : upper ones ternate, or undivided ; leaflets ovate, acute, deeply toothed: terminal one large; calyxes membranous; genitals inclosed. %. H. Native of Spain, Portugal, Corsica, North of Africa, Levant, &c. Hill. veg. syst. 19. t. 48. Mirb. elem. bot. (1815.) t. 30. f. 7. S. mellifera, Vahl, symb. 2. p. *68.* Desf. fl. atl. 2. p. *53.* t. 143. S. viridiflora, Poir. voy. barb. 2. p. 194. S. Hispanica sambuci folio, glabro, Tourn. inst. p. 166. —Mor. hist. 2. p. 483. sect. 5. t. 8. f. 6.—Munt. phyt. 45. f. 238. Mill. fig. 2. t. 231. Leaflets sometimes petiolate. Anther or top of sterile stamen reniform. Capsule acuminated. Corolla purple ; lower lip greenish.

Far. /3, *hirsilta* (Wydler, scroph. p. 27.) plant hairy in every part, canescent. *If.* H. Native of Portugal. S. sambucifolia, Willd. enum. 645. Link, fl. port. p. 272. S. grandiflora, Rchb. icon. cent. 1. t. 98. but not of D. C. S. maxima Lusitanica, sambucifolio lanuginoso, Tourn. inst. p. 166. S. Lusitanica, maximo flore, foliis dissectis, Ray, hist, suppl. *396.* This is very like the species, but differs in all its parts being hairy.

Far. y, *thyrso aphyllo* (Wydler, 1. c.) thyrse leafless.

Elder-leaved Figwort. Fl. May, July. Clt. 1640. PI. 2 to 3 feet.

6 S. PEREGRI'NA (Math. comm. in Diosc. Cam. hort. p. 157. t. 43. Lin. spec. p. 866.) glabrous ; leaves cordate, shining,

glabrous; peduncles alternate, 2-5-flowered; lobes of calyx not membranous, glabrous, acute; genitals inclosed. ©. H. Native of Greece, Italy, Crete, Balearic Islands, and Provence, along way-sides, in hedges, and shady places. D. C. fl. fr. 3. p. 580. in add. p. 729. S. geminifldra, Lam. fl. fr. 2. p. *336.* S. sexangulàris, Moench. meth. p. 445. S. minor, Sav. fl. pis. 2. p. 8lT S. argùta, Ait. hort. kew. ed. 1st. vol. 2. p. 342.—Mor. hist. *2.* p. 481. sect. 5. t. 8. f. 1. — Chabr. sciagr. 470. icone *Va\io\piQ,* Diosc. Stem acute-angled at the base, but obtuse angled at apex, dark purple. Leaves full of pellucid dots. Corollas small, purple, veiny ; lobes all denticulated. Anther or tip of sterile stamen reniform. Capsule almost globose.

Foreign Figwort. Fl. July, Aug. Clt. 1640. PI. 1 to *2* feet.

7 S. SCORODÒNIA (Lin. spec. p. 864.) pilose ; leaves cordately triangular, doubly toothed, acute, wrinkled, all opposite ; edges of the lobes of calyx white and membranous, clothed with glandular hairs outside; genitals inclosed. %. H. Native of the Island of Jersey, Siberia, Galicia, Portugal, Tunis, in humid places and hedges. Hill. veg. syst. 19. t. 45. Lam. ill. t. *533.* Smith, engl, bot. 2209. S. scordiifolia, Grisl. vir. lus. p. *75.* S. melisssefolia, Tourn. inst. p. 166. Petiv. brit. 2. p. *35.* f. 11. S. scorodoniaefblia, Mor. hist. 2. p. 482. sect. 5. t. *35.* f. 6. Plukn. phyt. t. *59.* f. 5. S. foliis cordatis, duplicato-serratis ; racemo composito, Gmel. sib. *3.* p. 195. Corolla small, brownish purple. Anther or tip of sterile stamen reniform. Capsule roundish. The plant of Desfontaines, under this name, differs from that of Linnaeus in the thyrse being leafless, and the size of the corolla.

Far. p. Leaves jagged at the base.

Balm-leaved Figwort. Fl. July, Aug. Britain. PL 2 to 3 feet.

8 S. CASTAGNEA'NA (Wydler, scroph. p. 29.) angles of stem rather downy ; leaves oblong-cordate, doubly and deeply toothed, acute, rather downy : lower ones opposite : upper ones alternate ; edges of the lobes of the calyx red, membranous, glabrous outside ; genitals inclosed. %. H. Native of Turkey, about Constantinople, Castagne. Stem simple, striated. Leaves full of pellucid dots ; teeth finely ciliated. Peduncles bifid ; pedicels equal. Lobes of calyx ovate. Corollas larger than those of *S. nodosa,* purple. Anther or tip of the fifth stamen roundish, emarginate.

Castagne's Figwort. PL \\ to 2 feet.

9 S. URTICIEFOLiA (Wall. cat. no. 3922. Benth. scroph. ind. p. 18.) downy, but at length nearly glabrous; leaves roundish-ovate, coarsely and doubly toothed, cordate at the base; peduncles opposite, 3-7-flowered ; segments of the calyx broad ovate, obtuse, with membranous edges ; genitals inclosed. %. H. Native of Nipaul and Gosaingsthan, Wall. Corolla greenish : upper lip longer than the lower segments. Anther or tip of sterile filament dilated, spatulate, and emarginate.

Nettle-leaved Figwort. PI. 1 to 2 feet ?

10 S. HIMALAYE'NSIS (Royle, mss. ex Benth. scroph. ind. p. 18.) downy, tall; stem obtuse-angled ; leaves ovate-lanceolate, somewhat doubly-toothed, subcordate at the base ; thyrse ample, panicled, leafy at the base; segments of the calyx ovate, roundish, hardly membranous ; genitals exserted. *If..* H. Native of the Himalaya, common. Corolla greenish. Anther or tip *of* sterile stamen dilated, spatulate, and emarginate.

Himalaya Figwort. PI. *3* to 4 feet ?

§ 2. *Thyrse leafless.*

11 S. POLYA'NTHA (Royle, mss. ex Benth. scroph. ind. p. 18.) downy, tall; stem rather angular; leaves ovate-lanceolate, somewhat doubly toothed, narrowed unequally at the base, or furnished with a few lanceolate segments; thyrse elongated, large, panicled ; segments of calyx ovate-roundish, with membranous edges; genitals exserted. %. H. Native of Mussooree, Royle. Corolla greenish.

Many-flowered Figwort. PI. 2 to 4 feet?

12 S. ELA'TIOR (Wall. cat. no. 3921. Benth. scroph. ind. p. 18.) glabrous, tall; stem angular, or winged; lower leaves ovate, cordate at the base : superior ones ovate-lanceolate, all doubly-toothed ; thyrse large, panicle-formed, almost leafless ; segments of calyx deep, lanceolate, acute, not membranous ; genitals exserted. %. H. Native of Gosaingsthan, Wall. Anther or tip of sterile stamen dilated, spatulate, and emarginate.

Tall Figwort. PL 3 to 4 feet?

13 S. LANCEOLÀTA (Pursh. fl. amer. sept. 2. p. 419. Nutt. gen. amer. 2. p. 44. ? Wydler, scroph. p. 29.) glabrous ; lower leaves ovate-lanceolate : superior ones lanceolate, all acute, serrated; peduncles bifid, 2-5-flowered; calycine segments with membranous edges ; capsule roundish. 1/. H. Native of Carolina, Pennsylvania, &c. S. Marylàndica, herb. D. C. et Desf. Stem very simple. Leaves not cordate at the base. Petioles shorter than the leaves. Corolla greenish yellow. Genitals inclosed.

Lanceolate-leaved Figwort. Fl. July, Aug. Clt. 1820. PI- *2* to 3 feet.

14 S. NODÒSA (Lin. spec. p. 863.) root tubercular ; stem acute-angled, glabrous ; leaves glabrous, cordately triangular, doubly serrated : teeth drawn out at the base ; segments of calyx not membranous; genitals inclosed. %. H. Native of shady, humid places, and edges of ditches, throughout Europe ; plentiful in some parts of Britain, particularly in the north. Schkuhr, handb. 2. p. 194. Smith, engl. bot. 1544. Oed. fl. dan. 1167. Gunn. fl. norv. 2. p. *87.* no. *732.* t. 4. f. 1—3. Hayne, arz. 5. t. 35.—Petiv. 193. f. 194.—Mor. hist. p. 482. sect. 5. t. 8. f. 3.—Riv. mon. irr. t. 107. f. 1.—Blackw. herb, t. 87.—Lob. icon. *533.* Roots knobbed. Leaves full of small pellucid dots, sometimes not cordate at the base. Corollas greenish ; lip purplish. Anther or tip of sterile stamen reniform. Capsule nearly globose. This species has the name Figwort and formerly Kernelwort from its knobbed roots, and Brownwort from the brown tinge of the leaves. In medicine the plant is hardly known in modern practice, but the rank smell, like elder, and bitter taste of the leaves, seem to indicate some active properties. Swine that have the scab are cured by washing them with a decoction of the leaves. Wasps resort greatly to the flowers. Goats eat the plant; but cows, horses, sheep, and swine refuse it.

Far. /3 ; leaves 3 in a whorl.

Far. y ; flowers green.

Knotty-rooted Figwort. Fl. May, July. Britain. PI. 2 to *3 feet.*

[5 S. MARYLA'NDICA (Lin. spec. p. *863.)* stem obtuse-angled ; leaves cordate, serrated, acute, rounded at the base. %• H. Native of North America and Siberia. S. nodòsa, /3, Americàna, Michx. fl. bor. amer. 2. p. 21. S. Marylàndica, longo profunde seri&to urticae folio, Ray, hist, suppl. p. *396.* This species hardly differs from *S. nodbsa,* unless in the stem being taller, in the teeth of the leaves being deeper ; but the calyx, corolla, and capsule are the same as those of *S. nodòsa.*

Maryland Figwort. Fl. May, July. Clt. 1759. PL S ^{t0} * feet.

16 S. SCOPÒLII (Hoppe. cent, exsic. D. C. fl. fr. suppl. 406. Wydler, scroph. p. 31.) downy ; leaves ovate-cordate, regularly and doubly crenated, or serrated, acute, wrinkled ; lobes *of* calyx broad, ovate, with whitish, membranous edges ; genitals inclosed. %. H. Native of the Alps of Hungary, Carniola, Pyrenees; in hedges, orchards, gardens, and waste places; north of Caucasus, in groves ; and south of Tauria. Bertol.

amoen. ital. p. 382. S. auriculàta, Scop. earn. ed. 2d. vol. 1. p. 446. t. 32. S. rugòsa, Willd. enum. suppl. p. 42. ? S. nepetefftlia, Smith, in Rees' cycl. 32. no. 7.—Barrel, icon. 274. S. màjor hirsùta, Tourn. inst. 166. Lower leaves very large, all full of pellucid dots, without any auricles. Anther or tip of sterile stamen reniform. Capsule nearly globose.

Var. ft ; pedicels elongated, filiform. Wydler, scroph. p. 31.

Scopoli's Figwort. Fl. May, Sept. Clt. 1816. PI. 2 feet.

17 S. GRANDIDENTA^NTA (Tenore, fl. nap. suppl. 2. p. 69. Guss. pi. rar. p. 255.) stems and petioles villous ; leaves cordate-oblong, downy beneath, deeply bidentate ; teeth diverging; thyrse panicled ; peduncles trichotomous. 1/. H. Native of Naples, Calabria, and Hungary, on the mountains. S. glandulòsa, Waldst. et Kit. hung. *3.* p. 238. t, 214. S. Scopòlii, /3, glandulòsa, Wydler, scroph. p. 31. Leaves 3-nerved, downy. Peduncles and bracteas clothed with glandular hairs.

Large-toothed-leaved Figwort. Fl. May, Sept. Clt. 1806. PI. 2 to 3 feet.

18 S. CALIFORNIA (Cham, et Schlecht, in Linnaea, 2. p. 585. Hook, et Arn. in Beech, voy. pt. bot. p. 153.) stem acute-angled, glabrous, the floriferous part clothed with glandular down; leaves oblong-triangular, acute, cordate at the base, doubly serrated, glabrous above, but sparingly beset with glandular down beneath ; thyrse leafless ; calycine segments ovate, acute, mucronate, the margins furnished with a narrow membrane ; capsule ovate, conical. %. H. Native of California. Said to **be nearly allied to *S. nodosa* and *S. Maryldndica.***

Callfornian Figwort. PL 2 feet.

19 S. BETONKLEFÒLIA (Tourn. inst. 166. Lin. mant. p. *87.* Wydler, scroph. p. 31.) rather pilose; leaves cordate-oblong, acute, unequally toothed, wrinkled ; lobes of calyx roundish, with rusty, membranous edges; genitals inclosed. %. H. Native of Portugal, Canary Islands ; in Madeira, at the altitude of from 2500 to 4000 feet. Hill. veg. syst. 19. tr. 46. Spreng. syst. 2. p. 785, exclusive of the syn. of Horn.—Barrel, icon. 274.? S. rugòsa, hort. lugd. ex herb. Balb. Stem purplish. Petioles ciliated. Leaves unequally and doubly toothed, or rarely crenated ; the teeth ciliated with glandular hairs. Thyrse usually leafless, but sometimes leafy. Corolla greenish purple, or of a rusty green, size of those of *S. nodòsa.* Anther or tip of sterile stamen green, marked with purple, reniform. Capsule globose. *S. betoniccefolia,* of Brotero and Link, a native of Portugal, is quite distinct from this.

Var. /3, glàbra (Wydler, scroph. p. 31.) plant glabrous,

Var. y, thyrsofolibso (Wydler, 1. c.) thyrse leafy.

Bctony-leaved Figwort. FL June, Aug. Clt. 1752. PL 2 to 3 feet,

20 S. HERMI^NNI (Link, et HofFm.fi. port. 1. p. 266.) stem hairy ; leaves cordate and subcordate, oval, and somewhat <Wbly crenate-toothed, not wrinkled, downy ; capsule conical, long. i£. H. Native of Portugal, on Serra Estrella. Leaves on long petioles. Lobes of calyx small, margined a little. Upper lip of corolla pale brown, lower one green. Stamens and Anthers yellow.

Hermiris Figwort. PL 2 to 3 feet.

21 S. ALTA^YICA (Murr. in comm. goett. 1781. p. *35.* t. 2.) P^nt clothed with glandular villi.; leaves cordate, doubly toothed, downy beneath, acute; lobes of calyx broad-lanceolate, acute, not membranous ; capsule roundish. %. H. Native of Altaia. Leaves sinuately toothed; teeth acute: lower teeth reverse. Thyrse beset with glandular villi. Lobes of calyx lanceolate, acuminated, ciliated. Anther or tip of sterile stamen reniform. Genitals sub-exserted. Corolla whitish yellow.

Altaian Figwort. FL May, June. Clt. 1786. PL 1 foot.

22 S. SMI'THII (Horn. hort. hafn. suppl. *68.* Link, enum. 2. P- 139. Wydler, scroph. p. 33.) hairy; leaves ovate-cordate, multiplicately and deeply crenated, acute ; lobes of calyx roundish, with red or yellowish membranous edges; capsule somewhat ovate. %. G. Native of the Canary Islands. Stem quadrangular, dark purple, branched. Corolla yellow. Genitals inclosed. Anther or tip of sterile stamen reniform.

Smith's Figwort. FL April, Aug. Clt. 1815. PL 2 to 3 feet.

23 S. GLABRA^XTA (Ait. hort. kew. 2. p. 341. and ed. 2d. vol. 4. p. 22.) glabrous; stem suffruticose ; leaves cordate-lanceolate, acute, doubly and triplicately toothed,- lobes of calyx with white membranous edges; genitals exserted ; capsule ovate-globose. <£. G. Native of TenerifTe, among rocks on the Pic de Teyde, at the altitude of 7000 or 8000 feet, where it is called *Yerba de Cumbre.* Jacq. hort. schcenbr. 2. p. 44. t. 209. Willd. spec. 3. p. 272. exclusive of the syn. of Vahl. Wydler, scroph. p. *33.* Leaves full of pellucid dots. Lobes of calyx roundish ovate. Corolla purple, veined, size of that of AS. *canna.* Anthers margined with red.

Far. /3, ? pubescens (Wydler, scroph. p. *33.)* stem and leaves downy. 2/. H. S. betonicaefòlia, D. C. in herb. Balb. This differs from *S. betoniccefolia,* Lin. in the lobes of the calyx not being margined with rust colour.

Smooth Figwort. Fl. April, May. Clt. 1779. PL 2 to *3* feet.

24 S. BISERRA'TA (Willd. enum. p. 6ii. Wydler, scroph. p. *33.)* leaves oblong-lanceolate, deeply cordate, sharply and doubly serrated, glabrous. %. H. Native country unknown. Very like the preceding, and probably only a variety of it.

Doubly-sawed-lesLved Figwort. FL June, Aug. Clt. 181(j. PL 2 to 3 feet.

25 S. FOSTIDA (Wydler, scroph. p. 31.) glabrous; leaves ovate-oblong, deeply and multiplicately crenated. %. H. Native country unknown. Plant fetid. Stem simple, or a little branched, striated. Leaves full of pellucid dots. Peduncles alternate, bifid. Lobes of calyx broad-ovate, sometimes glandular outside, with membranous, chestnut-coloured edges. Corolla size of those of *S. nodosa9* yellow, ex. D. C.

Fetid Figwort. PL 2 to 3 feet.

26 S. TRIFOLIA'TA (Lin. spec. p. 865.) glabrous; stem almost simple; leaves ovate, or roundish, cordate, deeply-toothed, or lobately crenated, often appendiculate at the base, according to several authors, or deeply cut; lobes of calyx roundish, with reddish white membranous margins; capsule ovate-conical. $. H. Native of Corsica, in mountainous places ; and of Portugal, and the north of Africa. D. C. fl. fr. 3. p. 581. Wydler, scroph. p. 34. S. laevigàta, VahJ,' symb. 2. p. *67.* S. appendiculàta, Jacq. schcenbr. 3. p. 19. t. 286.—Plukn. aim. 338. t. 313. f. 6. ? but the thyrse is leafy.—Bocc. mus. t. 60. ? Stem tetragonal. Corolla globose : lower lip whitish, the other reddish. Filaments white. There is probably two species confounded; the one having the leaves never appendiculate, or ternate, and downy beneath.

Trifoliate Figwort. FL May, Sept. Clt. 1731. P. 2 feet.

27 S. III'SPIDA (Desf. fl. atl. 2. p. *55.* Wydler, scroph. p. 35.) hispid ; leaves pinnate at the base, doubly crenated : terminal lobe large, cordate; cymes dense flowered ; lobes of calyx margined with white. %. H. Native of Mount Atlas, in the fissures of rocks near Tlemsen. Genitals inclosed.

Hispid Figwort. Fl. June, Aug. Clt. 1824. PL 2 feet.

28 S. AURICULA^YTA (Lin. spec. p. 864. exclusive *o£* the synonymes. Wydler, scroph. p. *35.)* leaves cordate-oblong, appendiculate at the base, tomentose beneath. %. H. Native of Nice and Algiers, on the sides of ditches. D. C. fl. fr. 3. p. 580. Desf. fl. atl. 2. p. *56.* exclusive of the syn. of Lob. Stem tetragonal, rather pilose ; angles membranous. Leaves rather pilose, crenated ; crense broad, mucronulate. Segments of calyx roundish, with red membranous edges, glandular outside.

Corolla, stamens, and sterile anther and capsule as in *S. aqudtica.* Smith considers this to be a variety of *S. Scorodbnia,* but Wydler considers it a variety of *S. aqudtica.*

Aurickd-leaved Figwort. Fl. June, Aug. Clt. 1772. Pl. 2 to 3 feet.

29 S. ASUA'TICA (Lin. spec. p. 864.) glabrous; angles of stem acute, membranous; leaves ovate, or elliptic, subcordate at the base, crenate-toothed: lower leaves usually appendiculate; lobes of calyx margined with red; genitals inclosed. •*U.* H. Native throughout Europe, and in Caucasus, in moist places by the sides of ditches, &c.; plentiful in BriST Blackw. herb. t. 86. Schkuhr, handb. 2. p. 195. t. 173*. smith, engl. bot. t. 854. Oed. fl. dan. 507. Havne arz. *It.* 367. Chaumet. fl. med., 321. S. Balbisii, HorZLrt. hafn. ill. J" [illegible] aUr> 1813> P- 69, ^elusive of the syn. I T 292? T [illegible] Balb herb. S. HricnUta, LS." *US* wL, V°- ^ V [illegible] Schkuhr> handl>- «• p. 195. t. 173. Water F.gwort, Petiv. brit. 2. t. *S3* f. 10—Mor. h,st pract p. 147. t. 68. f. l._Mor. hist. 2. p. 482 It. *5. t.* 78. f. 4—Loes. pruss. p. 248. t. 75.—Lob. icon. t. 533. Leaves sometimes without auricles, but always fuHof pellucid dots. Cymes usually dense-flowered. Corolla blondU TT i- is called *Water Betony, B r o J ^ ^ S S ^ ^ ^* [illegible] e hoirn7e/eTmended raedicina% «» the same purposelas those *of S.nodosa;* in taste and smell they are similar, but weaker. M. Marchant has reported, in tbJ memo's of the Trench Academy, that this plant is identical with the Equetaia of the Brazilians, celebrated as a corrector of the ill flavour of senna: the Edinburgh college, in their common infusion of that drug directed two thirds of its weight of water Figwort leaves to bejo.ned; but as they have since discarded this hWet lent, we may presume that it was not found to be of much use. The disagreeable smell which attends this plant when brusSed makes it rejected by cattle in general. Bees collect much honey from the flowers.

Var. /3; stem simple; leaves lanceolate-elliptic; flowers less Uense. %. H. Native of ditches about Geneva. Wydler, scropb. p. 37.

Var. y; thyrse leafy, *if.*. H. Wydler, scroph. p. *37.*

P[illegible]*ater*^'8wort, or Water fietony. Fl. May, Sept. Britain. JrJ. *o* to 5 feet.

SO S. LYRA^TA (Willd. enum. p. 545. hort. berol. t. *55*.) Jeaves hairy on both surfaces: lower ones lyrately and interruptedly pinnate: superior ones ternate: upper ones simple auncled; terminal lobe large, oblong-ovate, subcordate, bluntly and doubly toothed. %. H. Native country unknown. Braeteas beset with glandular hairs. Corolla brownish purple. Genitals inclosed.

Lyrate-leaved Figwort. Fl. June, Aug. Clt. 1816. Pl. *2* to 4 feet.

31 S. EBULIFOLIA (Hoffm. et Link, fl. port. 1. p. *270.* Wydler, scroph. p. 37. but not of Bieb.) glabrous; lower leaves lyrate: segments somewhat duplicately, acutely, and deeply crenated: superior leaves deeply pinnatifld: segments dentately crenated. %.H. Native of Portugal, °on the seashore near Setuval. Nearly allied to *S. lyrala*

Var. ft- leaves shining, if. H. Native of Portugal, on Serra de Gerrez.

Danervort-leaved Figwort. Pl. *2* to 3 feet. ?

32 S. TANACETIFOLIA (Willd. hort. berol. *t. 56.* Link, enum. *2.* p. 140.) glabrous; leaves interruptedly pinnate; 'leaflets petiolate, oblong-ovate, deeply toothed, the terminal lobe the largest; genitals exserted. %. H. Native of North America. Anther or tip *of* sterile stamen nearly orbicular. Fertile anthers dark purple. Segments *of* calyx with white membranous edges, usually shining. Root and stem often woody. Leaves more or less fleshy, rarely undivided, but usually pinnatifid, or pinnate. Corolla brownish purple.

Tansy-leaved Figwort. Fl. July, Sept. Clt. 1804. Pl. *2* to 4 feet.

33 S. VERBEN^FOLIA (Desf. cat. hort. par. p. *77.* Poir. suppl. 5. p. 117. Wydler, scroph. p. 38.) stem simple, glabrous, herbaceous; leaves cordate-oblong, laciniately pinnatifid, unequally crenated and serrated, lower segments the deepest, often auricled; genitals exserted. %. H. Native of Croatia, on calcareous rocks. S. laciniata, Waldst. et Kit. hung. *2.* p. 185. t. 170. Segments of calyx margined with white. Corolla size of that of *S. nodosa,* greenish; upper lip purple.

Vervain-leaved Figwort. FJ. June, July. Clt. 1806. Pl. 1| to *2* feet.

34 S. PATRINIA'NA (Wydler, scroph. p. 39.) stem simple, glabrous, herbaceous; leaves ovate, acute, deeply and acutely toothed: lower ones pinnatifid at the base: lobes acute. %. H. Native of Dauria. Stem striated. Leaves glabrous, on short petioles. Peduncles 2-3-flowered. Lobes of calyx broad, ovate. Corolla as in *S. canina.* Sterile anther roundish, white.

Patrin's Figwort. Pl. *2 to 3* feet.

35 S. INCI'SA (Weinm. ind. pi. hort. dorp. 1810. p. 136. Ledeb. fl. ross. alt. ill. t. 156. fl. alt. *2.* p. 442.) leaves oblong, attenuated at both ends, petiolate, deeply serrated, thickish, glabrous; panicle elongated, clothed with glandular villi: lower branches 3-5-flowered: superior ones *2-3-* flowered. If. H. Native of Altaia, on rocks among the mountains of Arkaul and Tschingistau; and on the borders of the river Tschuja, &c. Said to be nearly allied to *S. laciniata,* but the leaves are never cordate at the base. Stem and branches bluntly quadrangular. Corolla and anthers dark purple. Genitals exserted. Margins of calyxes white, and membranous.

Cut-leaved Figwort. FJ. May, June. Pl. *2* feet.

36 S. DIVARICVTA (Led. ind. sem. hort. dorp. *1822.* p. 17. Led. fl. ross. alt. ill. t. 121. fl. alt. *2.* p. 440.) leaves cordate, acuminated, doubly serrated, downy on both surfaces; racemes axillary, dichotomous; calycine segments acutish, adpressed; genitals inclosed. 1£. H. Native of Iberia, near Tiflis. Stem and branches bluntly tetragonal, beset with glandular hairs, and longer simple ones. Margins of the segments of the calyx membranous. Corolla yellowish-green. Capsule nearly globose, acuminated. The thyrse of this species being leafy, it ought to have been placed in the preceding section: the leaves of the thyrse are deeply jagged.

Divaricate Figwort. FJ. May, Oct. Pl. 4 to 6 feet.

37 S. OLIVIERIA'NA (Wydler, scroph. p. *39.)* stem glabrous; leaves ovate, deeply and dentately crenated, more or less pinnate at the base; segments or leaflets petiolate, roundish. *If.*. H. Native of the Levant. Stem nearly simple, woody at the base, striated, dark purple. Upper leaves roundish, subcordate. Lobes of calyx roundish. Corolla form, size, and colour of *S. canina.* Sterile anther white. This is very nearly allied to *S. Urvilleana,* but differs in the lobes *of* the calyx being broader, and in the petioles being dilated.

Olivier's Figwort. Pl. 1 to *2* feet.

38 S. MICRA'NTHA (D'Urv. enum. arch. p. 75.) stem branched at the base, glabrous, ascending; branches weak; leaves petiolate, oblong, obtuse, auricled at the base, coarsely toothed; flowers small. %. H. Native of the Island of Ferasia, near Thera. Wydler, scroph. p. 39.

Small-flowered Figwort. Pl. 1 to *2* feet.

39 S. URVILLEA'NA (Wydler, scroph. p. 40. t. 11.) stem simple, glabrous; leaves roundish-cordate, lobed, rarely crenated. %. H. Native of the Island of Melos, and at Thera, on walls and on rocks, d'Urville. Stems numerous, dark purple. Lower bracteas like the leaves. Peduncles alternate; cymes *3-6-* flowered. Segments of calyx margined with white. Corolla small, purple. Capsule roundish. This species hardly differs from the preceding, and might with propriety be joined to it.

Var. /3, *lyrata*; lower leaves ovate: superior ones cordate-ovate, all lyrately pinnate; leaflets cuneate, ovate, sometimes petiolate: terminal one large, all deeply crenated. %. H. Native along with the species. Wydler, scroph. p. 40. t. 3.

D'Urville's Figwort. PL 1 to 1| foot.

40 S. VARIEGA'TA (Bieb. casp. 177. app. no. 48. fl. cauc. 3. p. 416.) stem suffFruticose; leaves ovate, lobately toothed: lower ones pinnatifid at the base, and rather downy. 7/. H. Native of Caucasus, in stony places. Rchb. icon. cent. 3. t. 257. Corolla purple; lower lip white, as well as one of the segments of the upper lip. Genitals exserted.

yariegaled-fiowered Figwort. Fl. June, Aug. Clt. 1816. •!• 2 feet.

41 S. RUPE'STRIS (Bieb. fl. cauc. 2. p. 79. and 3. p. 417.) stems nearly terete, clothed with hoary down; leaves oblong-ojate, attenuated at both ends, toothed, glabrous. 3/. H. Native of the South of Tauria, among rocks. Willd. spec. 3. P- 274. Rchb. icon. cent. 3. t. 258. S. orientals, Habl. jaur. p. 164. ex Bieb. There is a variety of this having the lower leaves cut at the base, and downy on the nerves beneath, which is probably a variety of *S. variegdta.* Genitals exserted.

Rock Figwort. Fl. July, Aug. Clt. 1818. PI. 2 feet.

42 S. U'VIDA (Smith, prod. fl. grsec. 1. p. 437. fl. graec. t. 01.) leaves pinnate: leaflets pinnatifid; thyrse twiggy; genius inclosed. ©. H. Native of Asia Minor, Sibthorp! Calyx edged with white. Corolla greenish yellow; upper lip purple.

Livid Figwort. PI. 1 to 2 feet.

43 S. BI'COLOR (Sibth. et Smith, fl. graec. t. 602.) leaves bi-Pinnate; racemes panicled; peduncles many-flowered; capsule globose, mutic; stamens exserted. 1/. H. Native of Sicily, Only x edged with white. Corolla blood-coloured, with a white base ; lateral segments short, white; the rest blood-coloured, ed ged with white.

***Tno-coloured-fiowered* Figwort. PI. 3 feet.**

44 S. MULTI'FIDA (Willd. enum. p. 646. hort. berol. t. 58.) stem simple ? glabrous, herbaceous; lower leaves bipinnate; Segments or leaflets lanceolate, deeply toothed, acute: superior on.es pinnate, or pinnatifidly cut: uppermost ones tripartite, the ^^dle segment long and toothed. 1/. H. Native of Sicily and Asia Minor. S. silaifolia, Clark, voy. ex Spreng. syst. Corolla brownish-purple.

Multifid Figwort. Fl. June, Aug. Clt. 1816. PL 2 to 3 feet, sh K " LU,CIDA (Lin. spec. p. *865,)* stem simple, glabrous, r rubby; leaves thickish, shining, pinnate; leaflets pinnatifid, oundish or acute, toothed; thyrse short, dense. *%.H.* Native ** Italy, Greece, Levant, Iberia, and the North of Africa. D. C. •• t*. S. p. 582. Willd. hort. berol. t. *57.* S. glauco folio in ttiplas lacinias diviso, Tourn. cor. 9. voy. 1. t. 85. (ed. 1717.) 1. t. 221.—Bocc. mus. t. 117.—Mor. hist. 2. p. 483. sect. 5. t; 9. f. 7. *Zicrjpirig rpirrt,* Diosc. This species is readily distinguished from the rest in the peduncles and pedicels being thick; the calyx larger, and the membranes broader. Stems always leafy at the base. Corolla pale, with a red upper lip; but acceding to Miller dark brown. Genitals inclosed.

Vatr C3; leaves narrower. %. H. Wydl. scroph. p. 42.

Shin?g Figwort. Fl. June, Sept. Clt. 1596. PI. 1 to 2 feet.

46 g FILICIFOLIA (Mill. diet. ed. 8th. no. 10. Sibth. et **Smith,** j: rod. fl. grsec. 1. p. 436. Rees' cycl. vol. 32. no. 26.) **radical** leaves interruptedly pinnate; leaflets pinnatifid, lanceo-late; lobes acutely toothed: teeth mucronate; flowers distant. Native of Greece. S. Crética, Riv. mon. irreg. t. 94. Trev- in Linnaea, 2. p. *53.* Radical leaves a foot long. Thyrse footlong, not short as in *S. lucida;* and the peduncles are Just thickened as in *S. lucida.* Segments of calyx margined Wltli whjite. Corollas small, purple, edged with white, ex **Mill.** Genitals exserted.

Fern-leaved Figwort. Fl. July, Aug. Clt. 1700. PI. 2 to 3 feet.

47 S. DECOMPOSITA (Royle, mss. ex Benth. scroph. ind. p. 18.) glabrous, shining; leaves opposite, thickish, pinnate; leaflets deeply pinnatifid, lanceolate: lower ones petiolate; thyrse strict; lower peduncles opposite: superior ones alternate, short, stiff, 3-5-flowered; segments of calyx with white margins, and rufous membranes; genitals exserted. %. H. Native of Kinnour, Royle. Perhaps only a variety of *S. lucida.* Sterile stamen with an orbicular tip.

Decompound-leaved Figwort. PI. 2 to 3 feet.

SECT. III. CANIXNA (SO called on account of the species agreeing in character and habit with *S. canina.)* The fifth or sterile stamen deficient of an anther; that is to say, the free part or tip is acute. The rest as in the last section.

§ 1. *Thyrse compound; cymes many-flowered.*

48 S. DESE'RTI (Delile. fl. d'egypt. p. 96. t. *33.* f. 1.) stem suffFruticose at the base, and branched; leaves cut, glabrous, with cartilaginous edges: lower ones sublyrate: superior ones pinnatifid; segments narrow-obovate, toothed. 1£.F. Native of the deserts of Egypt. Margins of calyx cartilaginous.

Desert Figwort. PI. 1 to 2 feet.

49 S. FRUTE'SCENS (Lin. spec. p. *866.)* stem shrubby; leaves usually alternate, cuneate-ovate, or lanceolate, running into the short petioles, toothed. T? . F. Native of Portugal, in the sand by the sea side; Greece, and the North of Africa. Hill, veg. syst. 19. t. 46. Herm. lugdb. 545. t. 547. S. Lusitanica verbenacae folio, Tourn. inst. 167. Stem quadrangular. Corollas small, dark purple, with the lateral segments white.

Far. /3; leaves cut or jagged. J? . F. Wydler, scroph. 43.

Shrubby Figwort. Fl. June, Aug. Clt. 1768. Shrub *2 feet.*

50 S. PINNATI'FIDA (Brot. fl. lus. 1. p. 202. HofTm. et Link, fl. port. 1. p. 269,) stem suffruticose; leaves sessile, lanceolate, deeply crenate-toothed, or cut and pinnatifid at the base. J? . F. Native of Portugal, in sandy places.—An intermediate plant between *S. frutescens* and *S. canlna,* and probably only a variety of the first. Stem erect, much branched, glabrous. Leaves usually alternate, sometimes opposite, narrowed at the base.

Pinnat'ifid-leaLved Figwort. Fl. July, Aug. CJt. 1819. Shrub 2 feet.

51 S. HETEROPHY'LLA (Willd. spec. 3. p. 274. d'Urv. enum. arch. 75.) stem shrubby; leaves on long petioles, rather fleshy: lower ones pinnate: superior ones 3-lobed and elliptic, all remotely and deeply toothed; thyrse very long. J? . F. Native of Candia, and the Island of Melos; and of Ferasia, near Thera. Sibth. et Smith, fl. graec. t. 603. S. frutescens, var. /3, Smith, prod. 1. p. 437. S. Sibthorpiana, Spreng. syst. 2. p. 786. S. crética frutescens folio vario et carnoso, Tourn. cor. p. 9. Very nearly allied to *S. frutescens;* but the leaves are all on long petioles. Branches bluntly tetragonal. Corolla scarlet. Genitals exserted.

Various-leaved Figwort. Shrub 2 to 3 feet.

52 S. CANI'NA (Lin. spec. 865.) root woody; stems herbaceous; lower leaves pinnate: superior ones pinnatifid or bipinnatifid; segments roundish or lanceolate, toothed. V. H. Native of the South of Europe, in dry, sandy, or gravelly places; Greece, and the Balearic Islands; North of Africa, on the Mediterranean sea. Hill. veg. syst. 19. t. 48. D. C. fl. fr. 3. p. 582. S. multifida, Lam. fl. fr. 2. p. *337.* S. chrysanthemifolia, Balb, herb.—Mor. hist. 483. sect. 5. t. 9. f. 8. Sicfyptne crepa, Diosc. Thyrse sometimes leafy, strict, long; branches of cyme kneed. Corollas purple, with a mixture of green. Genitals exserted.

*Var, 0, **chrysa^themifoUi*** (Wydler .scroph. p. 44.) flowers small, purple, margined with white. *%.U.* Native of lau- i s! chrysantbemifoli*, Bieb. fl. cauc. 2. p. 78. and 3. p. 4li>. "WillX *halt,* berol- t. 59. S. canina, 0, Willd. spec. 8, 277. exclusive of the syn. of Tourn. S. pinnata, Mill, diet, iio 155.? S- orientalis, chrysanthemifolia, flore minimo varic- u>, Tourn. COT. 9.

Var, y, nana (D. C, (1. fr. S. p. 589.) stem more humble ; leaves very narrow; racemes short; flowers dense. If. H. Native of Mount Jura, in many places. S. praUinsis, Schleich. cent, exsic. no. 67,

far. t), *pubescens;* stems downy. If. H. Native of the valley of Boden, near Win disch-B lei berg, Hoppe. S. canina, Hoppe, cent. 4. S. canina, var. y, D, C. fl. fr. 3. p. 582.

Var, e, albi flora (Wydler, scroph. p. 45.) flowers white ; leaves broader, with rounJed segments. % . H.

Dog's Figwort. Fl. June, Aug. Clt. 1683. PI. 2 to 3 feet.

* S3 S. rVRAMiBAYis {Wydler, scropli, p. 45.) stems very long; leaves alternate : lower ones lanceolate, denticulated : upper ones pinnatifid ; thyrse very long, *11.* H. Native about the Black Sea, near Donnums Bercy. Perhaps only a variety of *S.. canina ;* the peduncles are longer, and the capsule ovate-roundish, acuminated, small.

Pyramidal-flowered Figwort. PL 2 to 3 feet.

^•54 S. CALYCINA (Benth. scroph. ind. p, 18.) glabrous or do'.vny; stem angular; leaves broad-ovate, toothed; lower ones cordate at the base: rameal ones roundish ; thyrse short, Hense, almost leafless ; calyx 5-parted, with lanceolate, acuminated, downy segments, which are longer than the capsule ; genitals inclosed; anther or tip of sterile filament ovate-acute. 1/. H. Native of Kamaon. Veronica thyrsiflora, Wall. cat. no. 6393. Leaves wrinkled. Calyxes not membranous. Segments of the corolla short, nearly equal. Capsule large, acuminated.

Large-calyxcd Figwort. PL 1 foot.

§ 2. *Thyrse simple; cymes few-flowered from the abortion of the pedicels,*

55 S. RAMOSISSIMA (Lois. fl. gall. 2, p. 381. D, C. fl. fr. suppl. 406. exclusive of the synonymes) stems rather woody, much branched; leaves opposite, subpetiolate, ovate-oblong, deeply toothed or pinnatifid; peduncles 1-2-flowered. %, H. Native of Corsica, by the sea side ; also of Provence, by the sea side, &c. S. firut&scens, D. C. fl. fr. 3. p. 721). but not of Lin.

Muck-branched Figwort. Fl. June, Aug. Clt. 1821. PL 2 to *3* feet.

56 S. CE'SIA (Sibth. et Smith, fl.grsec.t. (504. prod. 1. p. 438.) stems humble, numerous, tufted ; leaves opposite, glaucescent, lyrately pinnatifid, cut; peduncles simply dichotomous, 2-3-floweretl. *%. H.* Native on rocks about Atliens, &c. S. orientalis minor melissse folio, Tourn. cor. p. 9.—Buxb. cent. 5. 10. t. 17. f. 2. ex Smith, Stems a span high, glabrous. Perhaps distinct from the preceding. Corolla greenish ; upper lip dark purple. Genitals exserted.

Grey Figwort, PI. *§* to 1 foot.

57 S. DEKTATA (Royle, mss. ex Benth. scroph. ind. p. 19.) humble, tufted, downy ; leaves alternate, thick, oblong, narrowed at the base, deeply toothed at the apex; thyrse simple, few-rlowered; peduncles 1-3-flowered; genitals exserted ; tip of sterile stamen oblong, acute, %• H. Native of Kinnour. Margins of the calyxes mpbranous. Very nearly allied to *S. cretacea,* but distinct.

Tootitd-Uand Figwort. PL | to 1 foot.

58 S. CRETA'CEA (**Fiseh.** in Spreng. syst. 2. p. 788. Wydler, scroph. p. 46. t. 4.) leaves alternate, on short petioles, lanceolate, serrated, attenuated at both ends ; peduncles I-2-flowered. %, H. Native of Siberia, on cretaceous mountains, at the river Don. Stem simple, clothed with white, glandular, powdery down. Leaves i inch long, generally running into the petioles, glabrous. CorollafsmalJ, dark purple. Capsule brown, size of a pea.

Cretaceous Figwort. Fl. July, Aug. Clt. 1827. PL 1 to 2 feet.

59 S. JIYPERICIFOLIA (Wydler. scroph. p. 46. t. 5.) stem woody; leaves opposite, ovate, quite entire, running into the short petiole; peduncles I-2-fiowered. %. H. Native of Arabia, in deserts. Branches with whitish bark, sometimes spinescent.? Leaves small, glabrous, full of pellucid dots. Abortive pedicels spinescent. Segments of calyx roundish, with white margins. Corolla small, purple. Genitals exserted. Capsule roundish, large in respect to the size of the flower.

St. Johris-wort-leaved Figwort. Shrub.

§ 3. *Flowers capitate,*

60 S. MI'NIMA (Ilieb. fl. cauc. 2. p. 79.) humble; stems quite simple; leaves petiolate, ovate, sublobate, toothed ; heads of flowers terminal, dense, nearly globose. %. H. Native of Iberia. S. orientals minima, folio subrotundo, Tourn. cor. p. 9, ex Bieb. Flowers size of those of *S. vernalis,* rose-coloured ; the Jip paler. Tip of sterile stamen unknown.

Least Figwort. PL i foot ?

f Species not sufficiently known.

61 S. MICRA'NTHA (Herb. Desv. ex Hamilt. prod. fl. ind, oce. p. 47. but not of d'Urv.) stem nearly simple; leaves ovate, acute, deeply toothed, quite glabrous ; flowers in loose almost terminal spikes. *If..* ? H. Native of HispanioSa.

Small-flowered Figwort. PL ?

62 S, SUBVERTICILLATA (Moris, stirp. sard. fasc. *3.* p.:S stem tetragonal, full of glandular dots; leaves oblong-lanl; late, doubly toothed : lower ones pinnate ; racemes termn. almost leafless; peduncles opposite, distant, short, dcnselyar mose. *"if..* H. Native of Sardinia, near Tivulets about Ohe and Bono, &e. Corolla deep purple. Leaves pilose benealy

Whorled Figwort, Ft. May, July. PI. 2 to 3 feet. it

63 S. BIVULA'RIS {Moris, 1. c. p. 7.) stem tetragonally vies ed ; lower Jeaves ovate : upper ones oblong-lanceolate, cr toothed, glabrous, running into the petioles ; racemes terr nearly naked; peduncles branched. %, H. Native of Ss ; nia, on mountains, nefir rivulets. Corolla obscure purple n- green, Habit of *S. aqtidtica,* but the stems and petioleif. more conspicuously winged ; the leaves are bluntish, and he bluntly toothed. c.

Rivulet Figwort. Fl. May, June. PL 8 to 4 feet, of *S.*\

64 S. OBLONG] yon A (Lois. not. in mem. soc. Lin. p^o *S,* 6.) glabrous; stem tetragonal; leaves oblong-lanceolatdeif rated, tapering into the petioles ; racemes terminal, naket duncles branched. If. H. Native of Corsica.

Oblong-leaved Figwort. PL 2 to 3 feet. nclied

65 S. NUflicAr'ns (Wydler. scroph. p. 48.) stem alnpet;o- ple, leafy at the base, but almost leafless above ; **leavtths** ; tifid, strigose ; racemes simple. If. H. Native of Asi, a Jfej on Mount Elivend. Root woody. Stem clothed with *sti* glands. Lower leaves deeply pinnatifid, beset with ad/r hairs, rather glaucous; segments alternate, acute, toothe*rss»* ciliated. Cauline leaves small, pectinately pinnatifid^ fin^y glandular; segments ov,ate-lanceolate, acuminated, n* branous. Corolla and capsule not seen. Perhaps beloj a distinct genus.

Naked-stewmed Figwort. PL ? *vU'"

66 S. SCKE'LLII (Spreng. syst. 2. p. 783.) stem lar, smooth ; leaves lanceolate, acute, glabrous, equa

on short dilated petioles ; panicle terminal, with trichotomous branches, *y.*. H. Native country unknown.

SckelVs Figwort. PI. 2 to 3 feet ?

67 S. NEPET^FOLIA (Presl. del. prag. 1. p. *73.)* stem shrubby; branches quadrangular; leave* cordate, obtuse, doubly toothed, glabrous on both surfaces; peduncles dichoto-»nous, 3-flowered. F? . F. Native of the South of Spain. S. glabrata, Spreng. syst. 2. p. 784. ? Leaves almost like those of *Nepeta cataria.* Flowers of a livid yellow, like those of *S. aquahca,* but not half the size. Capsule ovate.

Cat-mint-leaved Figwort. Fl. May, July. PI. 2 to 3 feet ?

68 S. MELISS^FOLIA (D'Urv. enum. pi. arch. p. *75.)* stem erect, quadrangular, quite glabrous ; cauline leaves petiolate, ovate-lanceolate, sharply serrated; bracteas lanceolate, erectish ; peduncles downy, many-flowered; panicle elongated. 1/. H. Native about Trebizond, on hills. Flowers small, purple. Peduncles 3-4 times forked. Nearly allied to *S. Scoroddnia.*

Balm-leaved Figwort. Fl. July, Aug. Clt. 1823. PI. *2* to 3 feet.

69 S. HASTA'TA (Rafin. fl. ludov. p. 44.) leaves opposite, on long petioles, oblong, hastate, serrated, canescent, hoary beneath ; flowers loose, panicled. %. H. Native of Louisiana.

Hastate-tewed Figwort. PI. 2 feet ?

70 S. ADSCE'NDENS (Willd. enum. p. 644.) leaves lanceolate, attenuated at both ends, deeply, unequally, and doubly toothed, glabrous ; racemes terminal. *U.* H. Native country unknown.

Ascending Figwort. Fl. June, July. Clt. 1816. PI. *2* feet.

71 S. CHINE'NSIS (Lin. mant. 250. Smith, in Rees' cycl. 32.) leaves ovate-oblong, serrated, downy. 2/. H. Native of China. Perhaps belonging to a distinct genus.

Vnna Figwort. PI. 2 feet.

72 S. HIRSU'TA (Schott, ex Steud. nom.) %. H. Nothing Ot ^e plant is known but the name.

{fairy Figwort. Fl. June, Aug. Clt. 1816. PI. 2 feet.

/8 S. INCI^SA (Weim. ex Steud. nom.) 1/. H. Nothing of this plant is known but the name.

^Meaved Figwort. PI. 2 to 3 feet?

iswt. The species of Figwort are plants of the most easy culture and propagation, will grow in any soil, but prefer a moist situation. All are readily increased by seeds. The shrubby species require protection in winter, by being kept in a frame. Some of the species are handsome border flowers, as

***nellifera, canina, grandiflbra, sambucifblia,* &c.**

IV. ALONSO^A (named by Ruiz, et Pavon, after Zanoni Alonso, formerly Spanish secretary for Santa Fe de Bogota.) Gt PaV* fl, per, *SySU* P, *l52,* Hemimeris **species of**

L'N . SYST. *Didynamia, Angiospermia.* Calyx 5-parted. Corolla subrotate, resupinate ; the superior segment the largest, stamens *4,* didynamous, glabrous, declinate ; anthers cordate; cells confluent at top. Stigma capitate. Capsule 2-celled, one of the cells more gibbous than the other. Seeds angular. Small shrubs and herbs, with opposite or verticillate leaves : floral ones alternate. Flowers racemose, scarlet or vermillion-coloured.

§ 1. *Shrubby, Stems and branches quadrangular.*

1 A. LINEA'RIS (Ruiz, et Pav. syst. fl. per. p. 154. fl. per. t. 503. * b') glabrous ; leaves opposite, or 3 in a whorl, linear, entire, or remotely denticulated. T?. G. Native of Peru. Swt} fl- gard. n. s. 240. Hemimeris coccinea, Willd. spec. 3. 210 -3.tr Clsia linearis, Jacq. icon. 3. t. 497. Curt. bot. mag.

• Hemitomus fruticosus, Lher. ? Hemimeris linariaefolia. H. B. et Kunth, nov. gen. 2. p. *377.* Young leaves fascicled in the axils of the old ones. Corolla scarlet, with a dark bottom, like most of the species. There is a variety of this with opposite leaves and peduncles. There is also a hybrid between this and *A, incisifolia* figured in Lodd. bot. cab. 1456, called *A. intermedia.*

Linear-tewed Alonsoa. Fl. May, Oct. Clt. 1790. Shrub 1 to 2 feet.

2 A. QUADRIFOLIA ; leaves 4 in a whorl, ovate ; flowers verticillate, racemose. T? . G. Native of Vera Cruz. Scrophularia coccinea, Lin. spec. 866. Smith, in Rees' cycl. 32. no. 10.

Four-leaved Alonsoa. Shrub 1 to 2 feet.

3 A. INCISIFOLIA (Ruiz, et Pav. syst. fl. per. p. 154.) glabrous ; leaves opposite, ovate, acute, deeply toothed, or serrated. T? . S. Native of Chili, about Conception. Hemimeris urticifolia, Willd. spec. 3. p. 282. Celsia urticifolia, Curt, bot. mag. 417. Peduncles long, alternate, disposed in terminal racemes like the others, (f. 46.)

FIG. 46.



Cut-leaved Alonsoa. Fl. May, Oct. Clt. 1795. Shrub 1 to 2 feet.

4 A. PROCU'MBENS (Ruiz, et Pav. I.e.) stems procumbent; leaves opposite, ovate, serrated. J?. G. Native of Peru, in waste places, where it is called Ricaco. Hemimeris procumbens. Pers. ench. 2. p. 162. Corollas scarlet.

Procumbent Alonsoa. Shrub procumbent.

5 A. ACUTIFOLIA (Ruiz, et Pav. 1. c. p. 153.) leaves opposite, ? ovate-lanceolate, deeply serrated, *fy* • S. Native of Peru, on hills. Hemimeris acutifolia, Pers. ench. 2. p. 162.

Acute-leaved Alonsoa. Fl. May, Oct. Clt. 1790. Shrub 1 to 2 feet.

§ 2. *Herbaceous. Stems and branches quadrangular; angles winged.*

6 A. CAULIALA'TA (Ruiz, et Pav. 1. c. p. 152.) leaves ovate, acute, serrated ; stems and branches winged. 1/. G. Native of Peru. Hemimeris caulialata, Pers. ench. 2. p. 162.

Wing-stemmed Alonsoa. Fl. year. Clt. 1823. PI. 1 foot?

7 A. PARVIFLORA (H. B. et Kuqth, nov. gen. amer. 3. p. *376.* under Hemimeris) stem herbaceous, 4-winged ; leaves opposite, ovate, acute, serrated ; flowers axillary, racemose. %. G. Native of Caraccas, in temperate places on Mount Bonavista, near Los Teques, at the altitude of 830 hexapods. Stem branched, panicled at top. Leaves glabrous, nearly an inch long. Middle segment of the lower lip of the corolla larger, and obcordate.

Small-flowered Alonsoa. PI. 2 to 4 feet.

8 A. MUTI'SII ; stem herbaceous, somewhat 4-winged; leaves opposite, oblong, acute at both ends, serrated ; flowers racemose. %. G. Native near Santa Fe de Bogota. Hemimeris Mutisii, H. B. et Kuntb. 1. c. p. 376. Schrophularia Meridionahs, Mutis and Lin. Stem panicled. Leaves glabrous, an inch long, and 5 lines broad. Corolla and stamens unknown.

Mutis's Alonsoa. PI. 1 to 2 feet ?

Cult. The species are all very showy when in blossom, and on that account are general favourites. They grow freely in any rich light soil, and are readily increased by cuttings and seeds.

V. RUSSE^LIA (so named by Jacquin, in honour of Alex.

ander Russel, M.D. F.R.S., author of a Natural History of Aleppo. London, 1756. He died in 1768. There is a second edition revised by his brother, Patrick Russel, M.D. F.R.S. 1794. Patrick Russel published a fine work upon serpents collected on the coast of Coromandel.) Jacq. amer. p. 178. t. 113. Schreb. gen. no. 1041. Juss. gen. p. 118. ed, Usteri, p. 132. H. B. et Kunth, nov. gen. amer. 2. p. 358.

LIN. SYST. *Didynamia, Angiospermia.* Calyx deeply 5-parted ; segments acuminately subulate. Corolla tubular, swollen, and widened at top; limb bilabiate ; upper lip emarginately 2-lobed : lower lip tripartite, segments nearly equal; palate convex, bearded. Stamens 4, didynamous, inclosed; cells *of* anthers spreading. Stigma undivided. Capsule inclosed in the calyx, nearly globose, attenuately beaked, 2-celled, 2-valved; valves bipartible ; placentas central, at length free. Seeds numerous, small.—Shrubs or herbs with angular branches, and opposite, or verticillate leaves. Corymbs and racemes axillary. Flowers scarlet.

§ 1. *Leaves opposite. Stems and branches quadrangular.*

1 R. SARMENTOSA (Jacq* amer. 178. t. 113. H. B. et Kunth, nov. gen. amer. 2. p. *358.)* stem and branches quadrangular, glabrous ; leaves opposite, ovate, rounded at the base, rather pilose above ; corymbs axillary, pedunculate, 3-5-flowered. ^ • S. Native of Cuba, near Guanavacoa, in shady places, and about the Havannah. Leaves nearly sessile, crenately serrated, 8 lines long, and 5 lines broad. Corolla flesh-coloured, or fine red, about half an inch long.

' *Sarmentose* Russelia. Shrub 4 to 6 feet.

2 R. MULTIFLORA (Sims, bot. mag. t. 1528.) stem quadrangular, glabrous ; leaves opposite, ovate, acuminated, serrately crenated; peduncles cymose, many-flowered, verticillate. *2 • S. Native of the mountainous tract between Vera Cruz and Mexico. Racemes terminal, verticillate. Leaves glabrous. Corollas scarlet.

Many-flowered Russelia. Fl. June, Aug. Clt. 1812. Shrub 4 to *G* feet.

3 R. KOTUNDIFOLIA (Cav. icon. 5. p. 9. t. 415. Pers. ench. 2. p. 164.) downy or tomentose ; stem and branches erect, tetragonal ; leaves opposite, sessile, cordate-roundish ; peduncles racemose, subsecund, many-flowered. J? . S. Native of Mexico, near Acapulco. Corollas scarlet. Leaves crenately serrated.

Hound-leaved Russelia. Shrub 4 to 6 feet.

4 R. SYRINGJEFOLIA (Cham, et Schlecht. in Linnaea, 6.p. 376.) scandent, glabrous ; branches tetragonal: angles acute ; leaves opposite, on short petioles, cordate-ovate, acuminated, acute, mucronulate ; cymes terminal and axillary, many-flowered. Tj. ب. S. Native of Mexico at Papantla. Leaves %\ to 3 inches long. Branches and pedicels of .cyme downy. . Calyx glabrous, with ovate, acuminated, acute, short segments. Corolla 8 lines long, scarlet; throat bearded. Capsule ovate, acute.

Syringa-leaved Russelia. Shrub climbing.

5 R. FLORIBU'NDA (H. B. et Kunth, nov. gen. 2. p. 359.) stem and branches quadrangular, glabrous; leaves opposite, ovate, cordate, smoothish ; corymbs axillary, sessile, many-flowered. T? . ? "V. ? S. Native of Mexico, between the river Papagallo and Venta de Tierra Colorado, at the altitude of 120 hexapods, Humb. et Bonpl. ; near Hacienda de la Laguna, Schiede and Deppe. Leaves on short petioles, serrately crenated, downy on the midrib beneath, 9-10 lines long, and 8-9 lines broad. Corymbs about the length of the leaves, downy, sessile, ex Kunth, 1. c.; pedunculate, ex Cham, et Schlecht, in Linnsea, 5. p. 106. Corolla scarlet. Seeds min,ute, oblong, angular, brown, a little wrinkled.

Bundle-flowered Russelia. Fl. ? Clt. 1824. Shrub 4 to 6 feet.

6 R. ALATA (Cham, et Schlecht, in Linnsea, 3. p. 3.) stem quadrangular, winged, pilose ; leaves opposite, acuminated, running into the short, winged, ciliated petioles; peduncles axillary, solitary. %. S. Native of tropical Brazil, Sello. Old stems decumbent, rooting at the joints, from which rise erect branches about 1 or 1^ foot high. Wings of stem ciliated. Leaves bluntly serrated, pilose beneath, 2| inches long, and If broad. Limb of corolla ciliated.

Winged-stemmed Russelia. PI. 1 to 2 feet.

§ 2. *Leaves verticillate. Stem and branches many-angled.*

7 R. TERNIFOLIA (H. B. et Kunth, nov. gen. amer. 2. p. 359.) stem and branches 6-angled, hairy, or downy ; leaves 3 in a whorl, obovate, or ovate, cuneated at the base, hairy above, and pubescent beneath ; corymbs pedunculate, many-flowered. Tj . ? %. ? S. Native of Mexico, on the declivities of the burning mount Jorulla, at the altitude of 450 hexapods. Leaves on short petioles, coarsely serrate-toothed, 2 or *2*\ inches long, and 16-24 lines broad. Corolla scarlet.

Tern-leaved Russelia. Fl. ? Clt. 1818. Shrub 4 to 6 feet.

8 R. VERTICILLATA (H. B. et Kunth, 1. c. p. 360.) branches somewhat 10-angled, glabrous ; leaves and corymbs verticillate. *2 . S. Native of New Spain, in temperate places near Puente de la Madre de Dios, at the altitude of 880 hexapods. Branches verticillate. Floral leaves roundish-ovate, obtuse, cuneated at the base, serrately crenated, hairy. Corollas scarlet.

Whorled-lestyed Russelia. Shrub 4 to 6 feet.

9 R. EQUISETIFORMIS (Cham, et Schlecht. in Linnaea, 6. p. 377.) suffruticose; branches twiggy, almost leafless, angular, verticillate, or opposite; flowers pedicellate at the tops of the branches ; leaves elliptic, acute, coarsely serrated. \ . S. Native of Mexico, at Papantla. Stem 12-8-angled. Leaves 4 lines long, and one broad. Calycine segments triangular, acute. Throat of corolla beardless. Corolla scarlet, 6 lines long. Genitals equal in length to the corolla. Capsule globose.

Horsetail-formed Russelia. Shrub 3 to 4 feet.

Cult. All the species are showy when in blossom. Any light rich soil answers them ; and they are readily propagated by cuttings, which strike root freely in heat under a hand-glass.

Tribe II.

ANTIRRHI'NE^E (this section agrees with the genus *Antirrhinum* in the characters given below.) Chav. antjrrh. D. Don, in edinb, phil. journ. 19. p. 110. Calyx deeply 5-parted, imbricate in aestivation. Corolla tubular ; limb 5-lobed, personate or ringent, bilabiate. Stamens 4, didynamous, sometimes with the rudiment of a fifth. Cells of anthers distinct at apex. Stigma 2-lobed. Capsule crustaceous; dissepiment undivided; P*a" centas spongy, adnate. Seeds with a thick, spongy, corrugated, or cellular testa. Albumen fleshy. Embryo almost the length of the seed.—Herbs or shrubs inhabiting the temperate regions of the globe. Leaves opposite, or alternate. Flowers disposed in terminal, spicate racemes, or axillary and solitary.

VI. ANTIRRHPNUM (av&ppii/ov, of Theophrastus and Dioscorides; from avn, *like;* and *piv,* rhin, a snout; in allusion to the form of the flowers; hence also it is called in English Snap-Dragon, and Calves' Snout.) Juss. gen. 120. ed. Usteri. p. 184. Vent. tab\. 2. p. 3G2. D. C. fl. fr. p. 592. t. 3. Gsertn. fruct. 1. p. 249. t. 53. Chav. mon. p. 79.__Antirrhinum species, Lin. gen. no. 750. Schreb. gen. no. 1007. Lam. ill. t. 531. f, 1—2. Antirrhinum and Asarina, Tourn. inst. p. 167. and 171. t. 75 et 76. Orontium, Pers. ench. 2. p. 1^8- Ten. fl. neap. 2. p. *53,* but not of Lin.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, oblique. Corolla personate; tube ample, a little compressed, saccate at the base, and furnished with Z parallel and interrupted lines of hairs inside beneath the palate; lobes of the upper lip erect, and often adpressed to the back by turns: lower lip spreading, having the middle lobes smaller than the lateral ones, with an ample bearded palate, which closes the throat. Stamens compressed, rather hairy at the base, having the sterile or fifth one very short or wanting. Stigma 2-lobed. Capsule 2-celled, woody, ovate, or pear-formed, incurved at top, opening by 3 holes, or an irregular foramen, under the top. Seeds oblong, truncate, minute; testa black, more or less engraven, or wrinkled.—Perennial or annual, rarely suffruticose plants. Stems or branches erect or procumbent. Leaves feather-nerved and entire, rarely palmate-nerved and lobed, sessile or petiolate: lower leaves opposite, but sometimes 3 in a whorl: superior ones usually alternate. Flowers showy, in terminal racemes, or solitary and axillary.

SECT. I. ASARI'NA (meaning unknown to us.) Tourn. inst. 171« t. 76. Chav. anthill, p. 80. t. 3. f. 12. Leaves palmate-nerved, lobed, opposite. Capsule membranous, sub-globose; each cell opening by a broad, irregular foramen under the apex.

* A. ASARI'NA (Lin. spec. 860.) plant clammy and villous; branches procumbent; leaves opposite, on long petioles, 5-nerved, 5-lobed, cordate, and crenated; flowers axillary, solitary; calycine segments linear-lanceolate, acute, hairy. %. H. Native of the South of France, Eastern and Central Pyrenees; near Montpelier, Cevennes, &c. Sims, bot. mag. 902. Orontium Asarina, Pers. ench. 2. p. 159. Asarina cordifolia, Mcench, meth. suppl. p. 172. Antirrh. asarinum, Lam. fl. fr. 2. p. 348. Asarina procumbens, Mill. diet. edit. 8. no. 1. Asarina, Lob. jcon. t. 601. f. 2.—Mor. hist. 3. p. 432. sect. 11. t. 21. f. 1. Sabb. hort. rom. *3.* t. 3. Asarina Lobelii, Dalech. hist. p. 915. Xa Maiiao-<roc, Diosc. 4. p. 126. Plant canescent. Corolla 1^ inch long, white, sometimes tinged with red; palate yellow; tube glabrous, compressed on the back, marked by purple spots on the ventre, and bearded by yellow hairs inside.

Asarina or Heart-leaved Snap Dragon. Fl. June, July. Clt. 1699. PI. trailing.

SECT. II. ANTIRRHINA'STRUM (from Antirrhinum and astrum, an affixed signification, like.) Chav. antirrh. p. 81. Antirrhinum, Tourn. inst. p. 167. t. 75. Leaves pinnate-nerved, quite entire: lowef ones opposite, rarely 3 in a whorl: superior ones for the most part alternate. Capsule woody, or chartaceous, nearly pear-shaped, very oblique at the base, incurved at top, and opening by 3 holes.

§ 1. *Lobes of calyx much shorter than the corolla,*

2 A. MOLLE (Lin. spec. p. 860.) villous; branches procumbent, slender, clothed with woolly villi; leaves opposite, petiolate; flowers few, at the tops of the branchlets; calycine lobes lanceolate, erect. %. F. Native of the Pyrenees, on the confines of Spain; on rocks in the valley de La Segre, between Bellwor and La Seo d'Urgel; in the valley of Andorrea; and on the mountains of Granada. Lam. diet. 4. p. 366. exclusive of the syn. of Tourn. Chav. antirrh. p. 81. Leaves clothed with glandular and clammy hairs, *5-6* lines long, and 4-5 broad. Corolla an inch long, whitish, with a yellow palate; the upper lip striped with purple. Capsule ovate-globose, pilose.

^o/Meaved Snap Dragon. Fl. July, Oct. Clt. 1752. PI. Procumbent.

3 A. SEMPERVI'RENS (Lapeyr. fl. pyr. 1. p. 7. t. 4. abr. p. 354. Chav. antirrh. p. 82.) stem short, sufFruticose, ascending, branched; leaves petiolate, opposite, elliptic, or oblong-ovate, evergreen, rather downy; flowers few, in loose racemes; calycine lobes lanceolate, acute, reflexed at top. f?. F. Native of the South of France; of the Pyrenees, in calcareous places near Gerdres; in the valleys of Oo, and Venas, &c.; and in Portugal, near Oporto. A. molle, St. Am. bouq. pyr. no. 151. but not of Lin. A. meonanthum, Hoffm. et Link, fl. port. 1. p. 261. t. 51. Branches nodose. Leaves decussate: floral ones usually alternate, all obtuse, and rather fleshy. Corolla smaller than that of *A. molle,* white, having the upper lip and tube marked with purple, and the palate yellowish; tube beset with short hairs. The plant is usually rather downy in every part, but sometimes entirely glabrous.

Evergreen Snap Dragon. Fl. June, Sept. Clt. 1817. Shrub 1 to 3 feet.

4 A. HISPA'NICUM (Chav. antirrh. p. 83.) villous; branches erect, rather woody, and branched again; leaves oblong-lanceolate, contracted at the base, bluntish: lower ones opposite: superior ones alternate, narrower; bracteas linear-lanceolate, much longer than the pedicels; flowers in loose spikes; calycine segments oblong, acutish. 1/0 F. Native of Spain. Antirrhinum Hispanicum villosum origani folio, Tourn. inst. p. 168. Plant clothed with glandular hairs. Calycine segments reflexed a little at apex. Corolla hardly an inch long, purple, with a golden yellow palate; tube villous. Capsule small, ovate-oblong, elongated, downy.

Spanish Snap Dragon. PI. 1 to 1^ foot.

5 A. LATIFOLIUM (D. C. cat. hort. monsp. 7. fl. fr. 5. p. 411. Chav. antirrh. p. 84. t. 3. f. 28.) caudex thick, twisted; branches ascending, or erect, villous; leaves ovate, or ovate-lanceolate, petiolate, broadly mucronate at apex, downy; flowers racemose; rachis villous; lobes of calyx elliptic, pilose, ciliated. %. H. Native of the South of France; in the Eastern Pyrenees, near Villa Franca, and Saint Martin du Canigon; Nice; near Arti, in Piedmont. Nocc. and Balb. fl. ticin. 1. p. 28. t. 42. A. diffusum, Bernh. A majus, /3, latifolium, Duby, bot. gall. 1. p. 343. A. majus, var. a, Lin. spec. p. 858. Vill. dauph. 2. p. 441. Willd. spec. 3. p. 256. D. C. fl. fr. 3. p. 593. Bertol. amcen. p. 382. Poll. fl. ver. 2. p. 336.—Lob. icon. 405.—Bocc. mus. p. 49. t. 41.—Barrel, icon. t. *655.* A. luteo flore, Bauh. pin. 211. Branches fistular, beset with capitate pili. Leaves 1-2 inches long, and 6-10 lines broad, obsoletely spotted with purple. Bracteas and pedicels pilose. Corolla 1 to 1 \ inch long, usually yellow, with a. deeper coloured palate; tube villous, elongated, very gibbous at the base. Capsule pilose, elongated. Seeds ovate, truncate at apex; testa foveolate.

Var. /3, *hybridum* (Chav. antirrh. p. 84.) leaves longer; flowers purplish, or marked by purple lines; lobes of calyx ovate-elliptic. 2/. H. Native of the Pyrenees, betwixt Rousse and Rodome, &c.; and of Portugal, near Lisbon. A. hybridum, Benth. pi. pyr. p. 60. A. latifolium, /3, striatum, D. C. fl. fr. 5. p. 411. A. latifolium, Mill. diet. ed. 8. no. 4. *Hg.* 1. t. 28. Hoffm. et Link, fl. port. 1. p. 260. t. 50. exclusive of the syn. of Tourn. This appears to be a hybrid between *A, latifolium* and *A. majus.*

Broad-leaved Snap Dragon. Fl. July, Oct. Clt. PI. 1 to 3 feet.

6 A. MAJUS (Lin. spec. p. 859. var. /3. Gsertn. fruct. 1. p. 249. Chav. antirrh. p. 86. t. 3. f. 26.) caudex thick, twisted; branches erect, usually branched again; leaves oblong-lanceolate, attenuated at both ends, glabrous; flowers racemose, approximate; rachis pubescent; lobes of calyx broad-ovate, obtuse, clothed with glandular pili. %- H. Native of South and middle Europe, indigenous every where, generally upon old

walls ; also of Barbary, about Algiers, and near Mustapha-Pacha frequent ; and in Persia. In Britain on old walls, as about London, and other places, but probably an escape from gardens. Smith, engl. bot. t. 129. Schkuhr, handb. 2. p. 193. t. 172. A. grandiflorum, Stok. bot. mat. med. 3. p. 384. A. murale, Sal. prod. p. 100. Orontium majus, Pers. ench. 2. p. 158.—Bauh. hist. 3. p. 162. with a figure.—Riv. mon. irr. t. 82. f. 1. —Lob. icon. t. 404. f. 2.—Besl. hort. eyst. 1. t. 9,10. Branches glabrous, rarely downy. Leaves 1-3 inches long : upper ones narrower. Rachis leafless, beset with glandular hairs, as well as the calyxes. Corolla 1-2 inches long, purple, red, scarlet, or white, or variegated with these colours ; palate yellow at top, very prominent; tube downy outside. Capsule downy, oblique at the base, incurved at apex. Seeds oblong, ovate. This is a very polymorphous plant, varying considerably in habit, and much in the colour of the flowers. .There is also a variety with double flowers. The leaves in some varieties are variegated.

Far. /3, *angustifblium* (Chav. antirrh. p. *86.)* leaves very narrow, often revolute, sometimes approximate by threes; corolla large, purple. %. H. Native upon walls about Constantinople. A majus, Oliv. et Brug. herb. mus. par.

Far. y, Montevidense; leaves long, all opposite, dark green ; flowers usually white, or yellow, and not so much crowded. %. H. Native of Monte Video. A. montevidense, Hort. berol. This does not appear to be more than a slight variety of the species.

Greater, or Common Snap Dragon. Fl. June, Oct. Britain. PI. 1 to 2 feet.

7 A. TORTUOSUM (Bosc, mss. Lam. diet. 4. p. *365.* Chav. antirrh. p. *87*)* plant altogether glabrous ; branches erect or ascending, flexuous, twisted at the base; leaves linear, acute, opposite, or 3 in a whorl; flowers racemosely spicate, approximating by threes and fours, the raceme is therefore interrupted ; lobes of calyx oblong-ovate, obtuse. 1/. H. Native of Italy, on rocks, and in waste places by the sea side, as near Rome ; also in the South of France, near Frejus ; and of Sicily. Guss. fl. sic. 2. p. 1G9. exclusive of many synonymes. Ten. syll. p. 304. Orontium Siculum, /3. tortuosum, Pers. ench. 2. p. 158. A. capitatum, Presl. del. prag. p. 74.—Sabb. hort. rom. 3. t. 2. —Barrel, icon. 638. Leaves 1-nerved, 2 inches long, attenuated at both ends: upper ones very narrow. Corolla the largest of the genus, purple; tube short; upper lip large. Capsule smaller than that of the preceding, and glabrous. This species is often confounded with *A. Siculum,* but appears to be more nearly allied to *A. majus.*

Twisted-branched. Snap Dragon. Fl. June, Oct. Clt. ? PI. 1 to ljfoot.

8 A. SICULUM (Ucria pi. and Lin. op. addenda, no. 17. Chav. antirrh. p. *8S. t.* 3. f. 24.) branches erect, flexuous, downy at top, and branched; branchlets diffuse ; leaves linear-lanceolate or linear, opposite, alternate, or 3 in a whorl, narrowed into the petioles at the base; flowers in loose racemes ; lobes of calyx lanceolate, acute, downy. %. H. Native of Sicily, on walls, and in waste places about Palermo and Ragaza ; of Calabria, on walls about Reggio and Trucoli, &c. Mill. diet, no. 6. Pers. ench. 2. p. 158. exclusive of var. *j3.* Guss. pi. rar. p. *253.* fl. sic. 2. p. 170. Tenor, syll. p. 304. A. angustifolium, Poir. suppl. 4. p. 27. Branches woody. Leaves 1 to 1J inches long. Flowers solitary, twin, or 3 in a whorl. Corolla hardly an inch long, white or yellowish, rarely purple; tube rather pilose ; lobes of the upper lip, and the middle lobe of the lower lip emarginate. Capsule downy. Seeds oblong, subquadrangular.

Far. 0, *glandulbsum* (Chav. antirrh. p. *88.*\ leaves broader; branches and calyxes beset with glandular hairs ; corollas yellowish. 7/. H. Native of Sicily, Gussone. A. Siculum, var. *y.* Guss. fl. sic. t. 309. f. 2.

Far. y, eldtum (Chav. antirrh. p. 88.) plant taller and firmer; corolla purplish-yellow. %. H. Native of Spain and the Archipelago. A. angustifolium, D'Urv. enum. pi. arch. no. 549. exclusive of the syn. of Lam. et Bocc. A. satureiaefdlio, Vaill. herb. A. Hispanicum, altissimum, angustissimo folio, Tourn. inst. p. 168.

Sicilian Snap Dragon. Fl. July, Aug. Clt. 1804. PL 1 to 2 feet.

§ 2. *Segments of the calyx exceeding the corolla, or about equal in length to it.*

9 A. ORONTIUM (Lin. spec. 860. Chav. antirrh. p. 89. t. 3. f. 18. and 19.) stem glabrous, erect or ascending, branched; leaves oblong-lanceolate or linear, acutish, attenuated at both ends, glabrous ; flowers distant; calycine segments linear-lanceolate, large, and as if they were digitately pilose. ©. H. Native almost throughout Europe, along way sides and in waste fields and vineyards; of Barbary, abundant about Algiers ; islands of Madeira, and Scio ; Virginia, ex Pursh, but probably introduced from Europe ; in Britain it is to be found in corn-fields, on a light soil ; but hardly indigenous. Curt. fl. lond. fasc. 4. t. 45. Gaertn. fruct. 1. p. 249. t. *53.* Lam. ill. t. 531. f. 2. Smith, engl. bot. 17. t. 1155. Schkuhr, handb. 2. p. 193. t. 173. A. humile, Salisb. prod. p. 9S. Orontium arvense, Pers. ench. 2. p. 158.—Barrel, icon. t. 651. and *652.L*-Rivin. mon. irr. t. 83. f. 2.—Mor. hist. sect. 5. t. 14. f. 5.1—Besl. hort. eyst. 1. p. 9. f. 3.—Lob. icon t. 405. f. 2. *Avnpivov,* Theoph. hist. pi. 9. p. *23.* Stem glabrous or pilose. Leaves 1-3-nerved, 2 inches long. Flowers axillary, distant. Corolla rose-coloured or white, striped with purple; tube furnished with a few glandular hairs ; palate veined with purple. Capsule pilose. Seeds irregularly ovate, cuneiform, keeled on the back, and concave in front.

Far. /3, *l'ndicum* (Chav. antirrh. p. 90.) leaves narrower ; flowers reddish, smaller ; bracteas and floral leaves very long, spreading a little. ©. H. Native of India, in the province of Delhi. A. l'ndicum, Royle, mss.

Var. y, *grandiflorum* (Chav. 1. c. t. 4.) flowers larger, paler, and more approximate ; leaves broader ; plant firmer and more glabrous; corolla almost the length of the calyx, whitish, marked with purple or rose-coloured veins. ©. H. Native *of* Portugal, in fields. A. calycinum, Lam. diet. 4. p. *365.* Brot. fl. lus. 1. p. 100. Hoffm. etLink, fl. port. p. *262.* t. *52.* A. Orontium, /3, album, Roth, fl. germ. ed. 1st. vol. 2d. p. *65.* Orontium calycinum, Pers. ench. 2. p. 158. A. Jamaicense, Fisch. et Hort. A. elegans, Tenore, viag. in abbruz. 1830. p. *35.* syll. p. 304.—Barrel, icon. *656.* A. arvense majus, flore albo, Tourn, inst. p. 168.—Sabh. hort. rom, 3. t. 1.

Orontium Snap-Dragon, or Calves'-Snout. Fl. June, Sept. Britain; /3. 1810. PI. \ to 1 foot.

10 A. RYTIDOCARPUM (Fisch. et Meyer, in ind. sem. hort. petrop. 1836. p. 27.) annual, rather pilose; leaves oblong or linear ; flowers distant, nearly sessile ; calycine segments linear, longer than the corolla; seeds prismatic, wrinkled on all sides. ©. H. Native *of* Caucasus, on the Talusch Mountains, in corn-fields. Corollas small, bluish. Capsule nearly globose. Seeds black, subtetragonally prismatic. This comes nearer to *Ant. Orontium* than any other, but is very distinct.

Wrinkled-fruited Snap-Dragon. Clt. 1836. PI. \ to 1 foot.

f *Species doubtful, or not sufficiently known.*

11 A. CORDATUM (De Buch. besch. der. can. ins. ex Chav. antirrh. p. 181.) Native of-the Canary Islands. We know nothing of this plant but the name.

Cordate-leaved Snap-Dragon. PI.

12 A. ITA'LICUM (Mill. diet. ed. 7th. no. 5.) Of. H. Native of Italy. This is nothing but a variety of *A. majus.*

Italian Snap-Dragon. PI. 1 to 2 feet.

ISA. OSY'RIS (Raeusch. Fisch. ex Steud. nom. ex Chav. antirrh. p. 181.) ©. H. This is probably a variety of *A. Orontium.*

Osyris Snap-Dragon. PL 1 foot.

14 A. VARIA'BILE (Link, ex Steud. nom. ex Chav. antirrh. p. 18 L) A. multibracteatum, Brot. ex Steud. This is probably a variety of *A. Orontium.*

Variable Snap-Dragon. PL 1 foot.

N.B. A. porcinum, Lour. coch. 2. p. 467. A. aquaticum, Bar. 1. c, and A. papilionaceum, Burm. fl. ind. p. 131. t. 39. f. 2. certainly do not belong to this genus, and it is difficult to say what they really are.

Cult. All the species of Snap-Dragon are showy, and worth cultivating for ornamenting flower-borders and rock-work. The species are readily increased, either by cuttings of the young Ranches or by seeds. The 4 first species will require protection in winter, by placing them in a frame or greenhouse. *A. Orontium,* being an annual plant, the seeds only require to be sown in the open ground in spring.

VII. LINA'RIA (from \ivov, *linon,* flax ; similarity in the leaves.) Vent. tabl. 2. p. 360. Juss. gen. p. 120. edit. Usteri, p. 134. £>. C. fl. fr. 3. p. 582. Chav. antirrh. p. 91. Linaria and Elatine, Mcench. meth. p. *522.* and 524. Antirrhinum, Lin. gen., Lam. ill. t. 531. f. 3—4. and other authors. Ratine, Dill. nov. gen. p. 116. t. 6. but not of Lin. Linaria species, Tourn. inst. p. 168.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted. Corolla personate, almost like that of *Antirrhinum,* but furnished with a spur at the base; tube short, inflated ; palate more or less bearded, usually prominent at the throat, but sometimes depressed, and not closing the throat; lobes of upper lip plicate at the base, often reflexed ; lobes of the lower lip spreading, or a little deflexed: the middle lobe of the lower lip generally the smallest. The rudiment of the fifth stamen very small or wanting. Capsule ovate -or spherical, a little compressed, 2-celled ; each cell more or less drawn out into *3-5* valves, or dehiscing by a single operculum or one valve. Seeds egg-shaped, or somewhat prismatic, or compressed and discoid, girded by a membranous margin.—Annual or perennial plants, very rarely small shrubs. Roots of the perennial kinds rhizomatose. Leaves alternate, verticillate, or opposite, quite entire, or lobed. Flowers beautiful, racemose, or spicately racemose at the tops of the Ranches, or solitary and axillary.

SECT. I. CHJENORRHINUM (from *xaLyu), chaino,* to gape ; and *9iv i rhin,* a snout; the palate of the flower is depressed, therefore the throat appears wider than in those of other sections.) *\C. fl. fr. 5. p. 410. Duby. bot. gall. 1. p. *34,3.* Chav. antirrh. p. 92. Corolla having the palate more or less depressed ; the upper lip drawn out in front, not erect; spur shorter than the corolla. Seeds oblong-ovoid, truncate ; testa furrowed lengthwise, or foveolate or echinated.—Herbs usually clothed with pili. Leaves opposite and alternate, quite entire. Flowers axillary, or loosely racemose.

§ I. *Capsule chartaceous ; superior cell usually much larger than the other, dehiscing by one valve at apex; the lower cell dehiscing slowly by a transverse chink towards the base, or altogether indehiscent.* Chav. antirrh. t. 5. f. 8.

1 L. TENE'LLA (D. C. fl. fr. 5. p. 410. Chav. antirrh. p. 92.) viscous ; branches procumbent, slender; leaves cordate-ovate, opposite, acute : floral ones alternate ; calycine segments linear, acutish. ©. H. Native of Spain, in the province of Valentia, near the top of Mount Ayora, in shady humid places, where it is generally hidden by other plants. Leaves distant, 3-4 lines long. Flowers axillary ; pedicels capillary, much longer than the leaves. Corolla white, with a short, blunt, bent spur, and rounded, quite entire lobes. Seeds oblong; testa furrowed.

Slender Toad-Flax. PL procumbent.

2 L. VILLOSA (D. C. fl. fr. 5. p. 410. Chav. antirrh. p. 93.) villous; leaves ovate or orbicular, obtuse, on short petioles, all opposite ; flowers opposite, on long pedicels ; calycine segments linear-oblong, somewhat spatulate. %. F. Native of Spain, about Gibraltar ; and near Vejez de la Frontera, not far from Gibraltar. Ait. hort. kew. ed. 2. vol. 4. p. 15. L. muralis, Saltzm. in herb. D. C. Ant. oppositiflorum, Poir. suppl. 4. p. 23. Ant. serpyllifolium, Poujr. in herb. Desf. Ant. villosum, Lin. spec. p. 852. Linaria Hispanica nummulariae folio villoso, Tourn. inst. p. 169.—Barrel, icon. t. 597. Branches diffuse, clothed with simple, spreading hairs, woody at the base, 5-10 inches high. Leaves villous. Pedicels hairy, 2 or 3 times longer than the leaves. Corolla white or pale blue, marked by more intense lines; lobes emarginate at top; spur straight, widened above the base. Capsule downy, ovate. Seeds oblong, truncate at top ; testa furrowed lengthwise.

Villous Toad-Flax. Fl. July, Aug. Clt. 1786. PL diffuse.

3 L. ORIGANIFOLIA (D. C. fl. fr. 3. p. 591. exclusive of the syn. of Magn. Chav. antirrh. p. 94. t. 6.) pubescent or glabrous ; leaves oblong or obovate, on short petioles : lower ones opposite : upper ones alternate ; flowers alternate, distant; calycine segments linear, or linear-spatulate, villous. %. F. Native of the South of France, on walls and rocks ; in the Pyrenees ; about Narbonne; on old walls near Bagneres-de-Luchon ; in Sicily; in Portugal, on La Serra d'Arrabida, and on Monte Junto, among high rocks and in calcareous places. Ait. hort. kew. ed. 2d. vol. 4. p. 15. Benth. cat. pi. pyr. p. 96. exclusive of var. rubrifolia. Ant, origanifdlium, Lin. spec. 852. Linaria saxatilis serpyllifolia, Tourn. inst. p. 169. This is a very polymorphous plant. Branches branched, ascending or procumbent. Flowers in the axils of the superior leaves, distant, forming a loose raceme. Calyx beset with glandular hairs. Corolla like the preceding, but smaller, bluish-violet, rarely white; throat yellow; lobes emarginate, striped with red. Seeds oblong, ovate, truncate at top ; testa furrowed lengthwise.

Var, (3, grandijlora (Benth, cat. pi. pyr. p. 96. Chav. antirrh. p. 94.) plant more villous and larger; flowers larger. 2£.F. Native of the higher Pyrenees, at Font de Comps, Crabere, &c. Ant. villosum, Lapeyr. fl. pyr. p. *853.* but not of Lin.

Var. y, crassifolia (Chav. antirrh. p. 94.) leaves ovate, acutish, quite glabrous, thickish ; flowers large. %. F. Native of Spain, on the mountains. L. crassifolia, D. C. fl. fr. 5. p. 410. Anarrhinum crassifdlium, Willd. spec. 3. p. 261. Pers. ench. 2. p. 159. Ant. crassifolium, Cav. icon. 2. p. 11. t. 114.—Barrel, icon. t. 1313.

Marjoram-leaved Toad-Flax. Fl. June, Sept. Clt. 1785. PL ascending.

4 L. FLEXUOSA (Desf. fl. atl. 2. p. 47. t. 139. Chav. antirrh. p. 95.) quite glabrous; branches filiform, flexuous, interwoven, procumbent; leaves petiolate, spatulately-elliptic or oblong: lower ones usually opposite : upper ones alternate ; flowers distant ; pedicels twice or thrice as long as the leaves ; calycine segments linear, bluntish. ' %. F. Native of Barbary, in fissures of rocks on Mount Hamamelif, near Tunis. Ant. flexuosum, Willd. spec. 3. p. 250. Plant prostrate, diffuse. Corolla like that of *L. minor,* but longer, small, bluish ; tube a little elongated ; spur obtuse, recurved ; lobes entire. Cells of cap-

sule nearly equal. Seeds ovate, truncate, at botli ends; testa Hack, full of small pits,

Fiexuous Toad-flax. Pl. prostrate.

5 L. nuBRiruLi* (Boba, et Cast, diss, ined, ex D. C. fl, fr. *o.* p. 410. Chav. yntirrh. p. 9G.) stem erect, branched from tin; base, flexnous, downy : luwer leaves ovate, opposite, approximate, deep red beneath, glabrous ; upper leaves oblong, alternate; calycine segments linear-spandate, obtuse, villous. ©. H. Native of the South of France, near Dragui<-nan, Duby; Marseilles, KobiU ; about 1 elon ; Pyrenees; and Sardima. L. origamfdia, var. rubrifSIia, Bent!), cat. pi. ryr. p. <G. Ant. fill forme, Pojr. suppl. 4. p. 27. Ant. origan i folium, touan, hort. monsp. 301. but not of Lin.—Magn. bot. 25. icon, t. 24. Stems beset with capitate pili; branches villous. Flowers loose ; pedicels pilose, about equal in length to the flowers, but lengthening at last. Floral leaves ciliated. Corolla small, purplish blue, marked with 2 yellow spots at the mouth, downy ; lobes entire ; spur slender, acute, diverging.

Far, (i, h&milu (Chav. antirrli. p. 96.) leaves oblong, nearly sessile; calyx about equal in length to the corolla; corolla small, with a straight spur. 0. H. Native of Sicily, on arid rocks of Montallegro, Mineo, S:c.

Kild-Uaved Toad-flax. Fl, June, Aug. Clt, 1830. PL J to ↑ foot.

§ 2. *Capsule membranous; cells equal in size; each cell dehiscing by* 3 *teeth at apex.*

6 L. MI'NOR (Desf. fl. at]. 2. p. *46.* Chav. antirrh. p. 97.) stem erect, much branched, downy ; leaves oblong-linear, obtuse, downy : lower ones opposite ; pedicels twice or thrice as long as the calyx ; flowers small, distant; calycine segments linear-spatulute, clothed with glandular hairs. G- H. Native of Europe, in sandy corn-fields frequent; as of France, Switzerland, England, Germany, Barbary, and Caucasus, &c. D. C. fl. fr. 3. p. 591. L. Antirrhinum, Chevall, fi. gen. des env. de Par. t. 2. L. viscida, Moencb. meth. p. 524. Ant. minus, Lin, spec. n. §52, 0*4. tt. thn. t. SOS. Ga>rtn, fruct. 1. p. 249. t. 53. f. 1. Smith, engl. bot. 28. *t.* SOU—Hall. hist. p. 335. Linaria pumila vulgatior arvensis, Tourn. inst. p. 109.—Riv. mon. irr. 1. t, §5. f.

beset with daWTOJ glandular hairs. Flowers in the axils of the superior leaves. Corolla small, whitish, having the tube and upper lip pale violet; the palate beset with yellow hairs; lower lip white; spur very short, obtuse. Seeds truncate at apex; testa marked by longitudinal furrows.

Swaller Toad-Flax. Fl. June, Nov. England. Pl. ½ to ¾

foo7L i.TMiiALrs (Willd. enum. p. 641. Chav. antirrh. p. 88.) downy; stem erect, branched; leaves usually alternate, oblong, obtuse; pedicels shorter than the calyx; flowers in loose racemes ; calycine segments linear, actitish. 0. H. native of Austria, on the banks of rivers ; and in the South ot Istria. Ant. pubescent, Pera. *each.* 2. p. 156. but not of Tenore. L. pubescens, Desf. herb, but not of Presl. Ant. Ijnorale, Bernh. ex D. C. fl. fr. 5. p. 410. Corolla bluish, with i straight spur. This is very nearly allied to *L. minor,* but the i-mf is lar«er, loss branched, and the pedicels shorter.

A » 4 b n Toad-Flax. Fl. June, Nov. Clt. 1820. Plugus- .dves It 120 j. ^ose of i. *Cymbalarm,* **bluwh-f** 1 foot.

SECT. II. CYMBALA'RIA (from κυμβη, *kymb-*, rarely crately pr forencc to the shape ot the leaves.) Cha- and the long, tine species, Moench. t. ymbalaria sp downy, the Gray. Leaves palmate-nerved, usually lob Flow- *eta* axillary, supported by too? ' or- **"having** the throat closed by the palate; spur obtuse, much shorter than the corolla. Capsule dehiscing by 6 valves at the apex. Seeds oblong; testa much wrinkled (Chav. antirrh. t. 5. f, 16.)—Hypcicaipogeous perennial plants, usually growing in the fissures "of rocks and walls.

8 L, CYMB^LA'RIA (Mil), diet. ed. 8th, no. 17, Chav. antirrh. p. 98.) quite glabrous ; leaves for the most part altering cordately renifono, 5-7-lobed: lobes rounded or cuneiform) mucronulate ; floriferous pedicels longer than the leaves ; calycine segments linear-lanceolate, acute, smaller than the capsule. %. H. Native of Europe, on old walls frequent; especially in Italy and Sicily, where it is alone indigenous ; it is also found in France, Germany, Switzerland, Britain, apparently wild, but has probably been introduced. D. C. fi. fr. 3. p. 583. Tenore syl!. p. 302. Cymbalaria hederacea, Gray, brit. pi. 2. p. 322* Ant. hederaccum, Lam- fl. fr. 2. p. 338. Cymbalaria muralis, Baumg. trans. 2. p. 206. Elatine Cymbalaria, Mcench. meth. p. *525.* Ant. quinquelobum, Stok. bot. mat, med, 3. p. 385. Ant. Cynibalaria, Lin. spec, p, 851, Bull. herb. t. 395. Smith, engl. bot. 7. t. 502.—Hall, hist. no. 339. Linaria lieclraceo folio glabro seu Cymbalaria vnlgiin's, Tourn. inst. 1, p. 169.—Lob, icon. t. 615.—Riv. raon. irr, t. *SG.* f. 2. Roots rhizomalose, emitting fibres. Branches prostrate, creeping and rooting, purplish-green. Corolla bluish-purple, with a yellow palate; spur a little curved. Capsule globose, ventricose, glabrous. There is a variety of this with white flowers, and pale green branches and leaves, and another variety with variegated leaves. Parkinson calls the plant Italian Bastard Navel-wort.

Var. j3, acutangula (Chav. antirrh, p. 99.) leaves smaller, cordate, 5-9-lobed: superior leaves hastately 5-lobed; lobes cuneiform, acute; floriferous pedicels jpuch longer than the leaves; calycine segments linear, bluntish ; corolla a little smaller. T/.H, Native of Italy, in the fissures of rocks, about Naples, Abruzzo, St. Angelo, &c. L. acut4nguia, Tenore, syll. p. 302. Ant. acutaugulinn, Tenore, cat. 1819. p. 52. fl. nean. 2. p. *4,7.* t. otf,

Var. y, hederafblia (Chav. an tirrh. p. 99.) leaves usually 3-. Joked, thick : lobes broader; calycine segments linear, obtuse - | flowers a little larger than the species. %. H. Native o

&34Sv"WJKfe.^SB-^ft Cv&i^ih'VSwWiHSvi:ei. A w A s K & t v s & S w i ' m ^ <j\t

suppl. 4. p- 18- but not of Saltzm. under *Linaria.*

***Tar.** l,Sieben* (Chav. 1. c.) leaves smaller: some of the \o\r*flUsl,* i ones entire, and some cor date roundish : : lobes k&^fsjtjjfi in the flowers smaller; spur twice as long, and thick species. ¼. H. Native of Candia, near Ant. Cymbalaria, Sieb. herb. cret.

Cymbalaria, or Ivy-leaved Toad-F May, Nov. Britain. PI. creeping and trailing. • Sar^ Sjf^ p, J.J4. Chav. an-

D L. iiEPATic.*i-0LiA (P'^^1 4. $X;osjt'e, usually renifoTm, 8- irrh. p. 100.) gla^ous.^fiSjfprfdr,c^uUte. intermediate lobe 5-lobed: lobes ***mudjfagpf tg**thm* **u« leaves; cjyaae #%-** larire; floriferous r'^.n S- ,'* ,i „ ^nKnle *11. U-* >ativt **mefu linear.** - V ^ g L ^ ^ £ 1 ^ ^ Ajaccio, Thorn.; rtLOmnntains. haltzm. , !"-" J , rum-

! '-: ft?? "W. Lo!S_fl'F ?\"nur»Usl>, much shorter than ***%p£AjBU. A.* p.** 19. Brandy g^ e Pn, usually **3- obed,** 0 ***%iUt** Cymhalana.* I * " ^ * 1 twice the Corollas almost sometimes quite entire.

Capsule globose, glabrous.

Liverwort-leaved Toad-Flax. Fl. June, Nov. Pi. **trailing'**

10 L. PA'LLIDA (Tenore, fl. nap. 1. p. 32. et add. fl. na 159. f. 2, syll. p. 302. Chav. antirrh. p. 101.) pabest4T leaves opposite, cordately reniform, 3-5-lobed : lobes rourow hardly mucronate ; floriferous pedicels shorter than the leavi-.

1

calycine segments linear-lanceolate, acutish. 1/ . H. Native of Abruzzo, in gravelly places, and among rocks on the mountains ; and on the mountains of Magella. Ant. pubéscens, Tenore, fl. neap. prod. p. *36.* Branches slender, diffuse. Leaves sometimes quite entire, rarely crenated, dark green. Corolla pale blue, sweet-scented ; spur straight. Capsule globose, smoothish.

Pafe-flowered Toad-Flax. Fl. July, Sept. Clt. 1820. PI. 4 to 6 inches.

11 L. PILÒSA (D. C. fl. fr. 3. p. 584. Tenor, syll. p. 302. Chav. antirrh. p. 101.) leaves opposite and alternate, cordately rounded or reniform, villous, 5-11-lobed: lobes rounded, mucronulate ; floriferous pedicels about equal in length to the leaves; calycine segments narrow-lanceolate, acute, shorter than the capsule. %. H. Native of Sicily, on the mountains, or in the fissures of shaded humid rocks, particularly near Palermo ; and about Naples, &c. L. pubéscens, Presl. del. prag. p. 74. Guss. prod. fl. sic. 2. p. 158. Ant. pilòsum, Lin. rnant. p. 749. Jacq. obs. 2. p. 29. t. 48.—Cup. pamph. sic. t. 214.—Mich. pi. ital. ed. germ. no. 108. Linaria hederaceo folio villoso seu Cymbalaria alpina, Tourn. inst. 1. p. 169. Branches prostrate, radicant, clothed with white hairs. Leaves soft, villous, purplish beneath. Calyx pilose. Corolla purplish blue, with a yellow palate, and rather incurved spur. Capsule downy, globosely ventricose.

Var. /3, pùmila (Chav. antirrh. p. 101.) leaves smaller, thick ; plant hardly 4 inches long.

Pilose Toad-Flax. Fl. June, Sept. Clt. 1800. PL creeping.

12 L. JEQUITRI'LOBA (Duby, bot. gall. 1. p. 304. Chav. antirrh. p. 102.) plant rather pilose, very slender; leaves opposite, small, cordately reniform, 3-lobed: lobes rounded, shortly mucronulate ; floriferous pedicels longer than the leaves ; segments of calyx linear-lanceolate, shorter than the capsule, if.. H. Native of Corsica, on Monte della Trinita, among rocks ; about Saint Antoine, in high, shady, rocky places; and near Speluncato. Ant. aequitrilobum, Viv. fl. cors. p. 10. fragm. fl. lyb. p. 68. Hook. bot. mag. t. 2941. Branches slender, creeping or pilose. Leaves very numerous, shining, green, often smoothish : lower ones on long villous petioles. Corolla purplish-blue, with a short straight spur. Capsule small, globose. This species is very nearly allied to the preceding, but is readily distinguished by the smaller membranous leaves; by the filiform branches ; and by the slender flexuous pedicels.

Equal4obed-\ea\ed Toad-Flax. Fl. June, Sept. Clt. 1829. PI. creeping.

SECT. III. ELATINOI'DES (this section contains species agreeing with *L. EMtine* in the characters indicated below.) Chav. antirrh. p. 103. Elatine species, Moench. and Gray. Cymbalaria species, Baumg. Leaves feather-nerved, usually on short petioles, alternate (the lower ones sometimes opposite, rarely wanting), toothed or lobed, sometimes entire. Flowers axillary, distant. Corolla with a prominent palate at the throat; and an acute spur, which is about equal in length to the corolla, but never longer. Capsule nearly spherical, dehiscing at the sides by 2 lids, or operculi; or ovate, and dehiscing by 2 valves at the apex. Seeds ovate, truncate or roundish ; testa full of irregular little pits, or granular from tubercles. (Chav. antirrh. t. 4. f. 19—21.) Annual or suffrutescent plants, commonly procumbent.

^§ 1. *Capsule nearly spherical, dehiscing by 2 circular lids or at operculi at the sides.* Chav. antirrh. t. 5. f. 9—10.

13 L. SCARIÒSA (Desf. fl. atL *2,* p. 38. t, 131. Chav. antirrh. p. 103.) villous; leaves oblong, or ovate-oblong, petiolate : lower ones opposite, angularly toothed above the base: superior leaves alternate, quite entire; pedicels much shorter than the corolla; calycine segments ovate-oblong, scarious. ©. H. Native of Tunis, on arid hills ; and in corn-fields near Kervan ; and probably of Spain. Ant. dentàtum, Vahl, symb. 2. p. *66.* t. *37.* Willd. spec. 3. p. 234. but not of Poir. Ant. scaridsum, Lam. diet. 4. p. 349. Pers. ench. 2. p. 156. Branches prostrate, densely clothed with simple spreading pili, like the rest of the plant. Leaves 1-3 inches long. Flowers numerous, approximate. Corolla large, yellow, downy; spur arched ; filaments rather hispid. Seed oblong-ovate; testa pitted.

Scarious Toad-flax. PI. prostrate.

14 L. ELATINOI'DES (Desf. fl. atl. 2. p. 39. t. 132. Chav. antirrh. p. 104.) downy; leaves alternate, ovate and elliptic, obtuse : lower ones dentately angular, on short petioles : superior ones sessile, quite entire ; pedicels shorter than the corolla; calycine segments oblong, acute, with membranous edges. ©. H. Native of Habra, in cultivated fields near Mascar. Ant. elatinoides, Willd. spec. 3. p. 235. Pers. ench. 2. p. 155. but not of Tenore. Branches 1-2 feet long, procumbent and prostrate ; branchlets spreading, slender. Leaves glabrous or downy: lower ones 1-2 inches long. Flowers in the axils of the superior leaves. Corollas size of those ofZ. *vulgàris,* yellow; spur a little arched, sometimes straight. Capsule glabrous. Seeds a little curved ; testa brown, foveolate.

Elatine-Uke Toad-Flax. Fl. July, Sept. Clt. 1821. PL prostrate.

15 L. DEALBA'TA (Hoffm. et Link, fl. port. p. 231. t. 34. Chav. antirrh. p. 104.) hairy ; leaves ovate, or ovate-lanceolate, sessile, acute : lower ones toothed: superior ones entire ; pedicels very short; calycine segments lanceolate, acute. ©. H. Native of Portugal, near Thomar ; and in the Algarves and Alentejo, Brot. Ant. lanigerum, Brot. fl. lus. 1. p. 189. but not of Willd. Branches slender, 2-3 feet long ; branchlets stiff, spreading. Lower leaves an inch long. Flowers small, in the axils of the superior leaves. Corolla small, referrible in shape to those of *L. spùrium;* upper lip violaceous: lower ones white; palate pale, and marked with blue dots. Seeds ovate; testa finely foveolate.

Whitened Toad-Flax. Fl. July, Sept. Clt. 1820. PL trailing.

16 L. LANI'GERA (Desf. fl. atl. 2. p. 38. t. 130. Chav. antirrh. p. 105.) clothed with woolly villi ; leaves alternate, cordate, or cordately rounded, mucronulate, woolly : lower leaves on short petioles, and sometimes vaguely toothed: superior ones nearly sessile, quite entire ; pedicels longer than the leaves; calycine segments linear-lanceolate, acute. ©. H. Native about ancient Carthage, in cultivated fields. Ant. lanigerum, Willd. spec. 3. p. 235. but not of Brot. Plant 1-3 feet long ; branches prostrate, slender. Lower leaves *5-6* lines long. Corolla villous, small, yellowish, a little incurved. Capsule glabrous. Seeds egg-shaped ; testa pitted.

Wool-bearing Toad-Flax. Fl. June, Sept. Clt. 1818. PL prostrate.

17 L. SPU'RIA (Mill. diet. ed. 8. no. 15. D. C. fl. *ft.* 3. p. 584. Chav. antirrh. p. 105.) plant pilose; leaves cordate-ovate or ovate, mucronate at apex: lower ones sometimes opposite, on short petioles, and obsoletely toothed: superior ones quite entire, nearly sessile ; pedicels longer than the leaves ; calycine segments ovate-lanceolate, cordate at the base, acute. ©. H. Native throughout Europe, in corn-fields. Ait. hort. *kew. ed. 2d. vol. 4. p. 11. L. lanigera, Hoffm. et Link, fl. port. 1. p. 231. t. 34. exclusive of the syn. of Desf. Elatine ovàta, Gray, brit. pi. 2. p. 321. Ant. spùrium, Lin. spec. p. 851. Brot. fl. lus. 1. p. 188. Smith, engl. bot. 10. t. 691.

Oed. fl. dan. t. 913. Labr. et Heg. icon. helv. 5. t. 1. Cymbalaria spuria, Baumg. trans. 2. p. 209.—Hall. helv. no. 341. Linaria segetum nummulariae folio villoso, Tourn. inst. 1. p. 169.—Bauh. hist. 3. p. 372. f. 1__fabern. 2. t. 413. f. 1.—Mor. hist. sect. 5. t. 14. f. 27. Plant a foot or more long, clothed with spreading articulated hairs. Branches usually procumbent. Leaves 1-3 inches long. Corolla yellow ; upper lip dark purple ; spur incurved. Capsule downy. Seeds ovoid, compressed ; testa foveolate.

Far. /3, *dentata* (Chav. antirrh. p. 106.) lower leaves, and sometimes also the upper ones toothed; flowers larger; plant firmer, erectish. ©. H. Native of France and Switzerland, rather frequent.

Far. y, *microphylla* (Chav. 1. c. t. 8.) leaves much smaller, roundish, woolly. ©. H. Native about Montpelier. Peldria comm. goett. 1. p. 351. t. 15. f. 4. Stoehel, in act. helv. 2. p. 25. t. 4.

Spurious Toad-Flax. Fl. June, Sept. England. PL pros.

18 L. ELA'TINE (Mill. diet. ed. 8. no. 16. Chav. antirrh. p. 107.) pilose ; leaves usually ovate-hastate, mucronulate at top, alternate : lower ones sometimes opposite, and often denticulated ; pedicels longer than the leaves ; calycine segments lanceolate, very acute. ©. H. Native of Europe, North of Africa, frequent in corn-fields; and *of* the Island *of* Madeira. It is also to be found in North America, but has, most probably, been introduced from Europe. D. C. fl. fr, 3. p. 584. Tenore, syll. p. 302. L. commutata, Bernh. in Reichb. pi. cnt. 19. t. 815. f. 1101. Ant. elatinoides, Tenore, fl. nap. 2. p. 48. Ant. auriculàtum, Lam. fl. fr. 2. p. 339. Cymbalana Elatine. Baumg. trans. 2. p. 208. Elatine hastata, Mcench, meth. p. 524. Gray. brit. pi. 2. p. 321. Ant. Elatine, Lin. spec. p. 851. Oed. fl. dan. t. 426. Bull. herb. t. 245. Smith, engl. bot. 10. t. *692.* Gaud. fl. helv. 3. p. 147. but not *of* Sibth, herb.__Hall. hist. no. 340. Linaria segetum nummulariae folio aurito et villoso, flore luteo, Tourn. inst. 1. p. 169.—Mor. hist. 2. sect. 5. t. 14. f. 28.—Lob. icon. 470.—Blackw. herb. t. 170. EXcmvrj, Diosc. 4. p. 40. This species comes very near the preceding, but it is readily distinguished by its slender habit, and the usually smaller hastate leaves, with acute auricles : and in the segments of the calyx being less cordate at the base. The flowers are the same, but sometimes bluish.

Var. ft, ccerulea (Chav. antirrh. p. 107.) flowers blue, larger ; leaves broader, usually toothed. ©. H. Native of Egypt and Mauritania. Linaria segetum nummulariae folio aurito et villoso, flore caeruleo, Tourn. inst. p. 169. Elatine folio acuminato, flore caeruleo, Bauh. pin. *253.* Magn. bot. p. *89.*

Far. y, *Siebèri* (Chav. 1. c.) very villous ; leaves smaller, usually cordate-ovate, not hastate : calycine segments narrower. ©. H. Native of Candia. ? L. Elatine, Sieb. in herb. Gay. L. Siebèri, Rchb. fl. germ. sect. 2. p. 374.

Far. Bf hamosa (Chav. 1. c. p. 108.) flowers pale blue, larger; spur hooked ; calycine segments almost linear. 0. Fl. Native of the Island Ischia, on rocks; and of Calabria and Camaria. Ant. hamòsum, Passy, in herb. D. C. et Merat.

Far. e, peloria (Chav. 1. c) flowers shape of those of *L. vulgaris,* var. *peloria.* ©. H. Hegets, in descript. *mL. spuria,* in icon. helv. 5. no. 1.

Elatine, or Halbert-leaved Toad-Flax. Fl. June, Nov. Britain. PL trailing.

19 L. GR^VCA (Chav. antirrh. p. 108.) villous ; lower leaves ovate-oblong, or ovate, opposite: superior ones ovate-lanceolate, hastate, alternate, on short petioles ; pedicels capillary, much longer than the leaves; segments of calyx linear, very* acute, hardly exceeding the capsule. ©. H. Native of the Grecian Islands, and the neighbouring continent; Corsica and Sardinia. Ant. Grae'cum, Bory, et Chaub. fl. pelop. no. 796. t. 21. L. Elatine, D. Urv. enum. p. 74. Sibth. et Smith, fl« graec. icone. but not of Mill. Branches slender at first, erectish, but at length prostrate, nearly simple. Pedicels stiff, bent, or twisted at apex, quite glabrous. Corolla downy, citron coloured ; spur arched, at length straight, rather longer than the corolla. Capsule glabrous. Testa of seeds brown, granularly tubercled.

Grecian Toad-Flax. FL July, Oct. PL prostrate.

20 L. CIRRHO^SA (Willd. enum. p. 689. D. C. fl. fr. 5. p. 407. Chav. antirrh. p. 109.) pilose, very slender ; leaves lanceolate, or linear-lanceolate, hastate, alternate, petiolate ; pedicels longer than the leaves, here and there twisted like tendrils; calycine segments linear-lanceolate, acute, shorter than the capsule. 0. H. Native of the South of France, in corn fields ; in Camaria; Stoechades; Corsica, near Ajaccio; and on the mountains about Bola; Island of Ischia, in hedges; Candia ; and Egypt. Ten. syll. p. 302. Elatine tènuis, Mcench, meth. suppl. 171. Ant. cirrhosum, Lin. mant. 249. Jacq. hort. vind. t. 82. Tenore, fl. neap. 2. p. 49. Linaria supina villosa, folio sagittato, Till. pis. t. 32. f. 2. Habit of plant slender, prostrate. Corolla small, bluish ; palate white, marked with purple dots; spur almost straight, shorter than the corolla. Capsule downy. Seeds ovate-truncate ; testa black, tubercular.

Tendrilled Toad-Flax. FL June, Sept. Clt. 1771. PL prostrate.

21 L. ALSIN;EFO'LIA (Spreng. syst. 2. p. 729. Chav. antirrh, p. 110.) leaves quite entire, downy: lower ones ovate, opposite, on long petioles : superior ones ovate-cordate, mucronate, petiolate ; pedicels shorter than the petioles; calycine segments linear-lanceolate, very acute, with membranous edges. Q. H. Native *of* the small Islands between Corsica and Sardinia ; and on the north-west shore of Sardinia; and in the desert near the Red Sea. Ant. alsinifolium, Viv. fl. cors. p. 10. The whole herb is clothed with short white glandular hairs. Branches erectish. Lower leaves 1 inch long. Calyx villous, ciliated. Corolla small, yellow, with a straight, short, acute spur. Capsule smoothish. Seeds roundish ; testa brown, granularly tubercled.

Chickweed-leaved Toad-flax. PL 1 foot.

22 L. *MGYVTIÀCA* (Dum. Cours. bot. cult. ed. 1st. t. 11. p. 92. Chav. antirrh. p. 110.) sufFruticose, downy ; leaves alternate, ovate, usually tricuspidate, petiolate ; pedicels bent at top, at length ending each in a spine ; calycine segments linear-lanceolate, acute. ^2. F. Native of Egypt, in arid places near Cairo ; and on the mountains of Cyrenaica. Ait. hort. kew. ed. 2d. vol. 4. p. 11. Del. fl. aegypt. p. 95. t. 92. Ant. spinescens, Viv. fl. libyc. p. *22. t.* 27. f. 2. L. spinescens, Spreng. syst. 2. p. 789. Ant. iEgyptiacum, Lin. syst. p. 464. Lam. diet. 4. p. *350.* Forsk. aegypt. p. 112. EXi-tj/r/, Diosc. ex Sibth. The branches rise from the neck of the plant the first year, but afterwards the neck becomes the form of a caudex, and twisted ; branches 1-3 feet long. Leaves glaucous, 2-3 lines long. Corolla small, yellowish ; spur blue, hooked. Capsule downy. Seeds small; testa granulately tubercled. The *L. spinescens of Viv.* is only the old state of *L. Mgyptiaca.*

Egyptian Toad-Flax. Fl. June, Aug. Clt. 1771. fchrub trailing.

23 L. rituTictfsA (Desf. fl. ad. 2. P- *»• *t. 133.* Char, antirrh. p. 111.) stem suffruticose, villous, branched ; leaves alternate, petiolate, ovate-oblong, acutish, downy, rarely furnished with one or two teeth at the base : superior ones entire ; pedicels shorter than the leaves, erect; calycine segments narrow, acute, *h* . F. Native of Barbary, on calcareous mountains near Cafsa. Ant. fruticòsum, Willd. spec. 3. p. 237. Pers. ench. 2, p. 155. Stem woody, thick, twisted; branches erect, villous. Leaves acutish, or obtuse, 3-4 lines long. Pedi-

eels glabrous. Calyx downy. Corolla yellow; spur straight, or arched ; upper lip emarginate, somewhat 2-lobed ; lobes reflexed. Capsule downy. Seeds small; testa tubercled.

Shrubby Toad-Flax. Shrub 1 foot.

§ 2. *Capsule ovate, dehiscing by two oblong, valve-formed lids at apex.*

24 L. RAMOSI'SSIMA {Vail, pi. asiat. rar. *2.* p. 43. t. 153.) smoothish; caudex thick; branches elongated, woody ; leaves alternate, petiolate, quite glabrous, all triangularly hastate, or the lower ones are somewhat palmate nerved, and 5-7-lobed ; pedicels stiff, longer than the petioles ; segments of the calyx linear-lanceolate, very acute, with membranous margins, *fy* • F. Native of India, in Hindostan and Burmah, in waste and stony places, Wall. ; in the province of Delhi, Royle; Coromandel, Heyne; and at Patna, Hamilton. L. hastâta, Royle, mss. L. Rôylei, Chav. antirrh. p. 112. Caudex twisted ; branches erect, or ascending, downy. Pedicels glabrous, bent at top, and like the petioles becoming at length stiff and spine-like. Calyx glabrous. Corolla downy, yellow; upper lip short; spur short, arched. Capsule glabrous. Seeds nearly orbicular; testa black, finely tubercled.

Much-branched Toad-Flax. Shrub 1 to 1| foot.

25 L. INCA'NA (Wall. cat. no. 3910. Benth. scroph. ind. p. *20.)* clothed with hoary villi; stems prostrate, woody at the base; leaves ovate, villous, rather cordate at the base, quite entire, or sub-hastate; pedicels longer than the petioles ; segments of calyx linear, acute. J?. F. Native of Nipaul, in fields, and among rubbish in the valleys. Corolla pale brown, spotted with purple inside.

Hoary Toad-Flax. Shrub prostrate.

26 L. HETEROPHY'LLA (Spreng. syst. 2. p. 790. Chav. antirrh. p. 112. but not of Desf.) suffruticose ; branches slender, glabrous; leaves petiolate : lower ones oblong-hastate : superior ones linear-lanceolate, and linear, sometimes hastate, or sagittate, sometimes quite entire ; pedicels longer than the leaves; calycine segments nearly lanceolate, acute. F? . F. Native near Mogodor ; and of the Canary Islands. Webb, et Bertholet, fl. can. icon. hied. Ant. heterophyllum, Willd. spec. 3. p. 234. Ant. sagittâtum, Poir. suppl. 4. p. 20. Caudex woody; branches 1-2 feet, striated. Lower leaves 8-14 lines long, glabrous above, but rather downy on the back. Corolla large, yellow, with a woolly palate, and straight spur. Testa of seed granularly tubercled.

Variable-leaved Toad-Flax. Shrub procumbent.

27 L. CIRCINA'TA (D. Don, in Sweet, fl. gard. n. s. t. 235.) suffruticose, glabrous ; leaves sagittate, circinately recurved, acute behind; calycine segments lanceolate, acuminated; spur subulate, straight, length of corolla; palate with 2 prominences, densely bearded. ty. G. Native of the Canary Islands. Corollas of a sulphur colour, larger than those of *L. vulgâris,* clothed with glandular pubescence; palate deeper coloured, clothed with dark red hairs. Leaves alternate. Peduncles filiform, axillary, solitary, thickened at top.

Circinate-leaved Toad-Flax. Fl. June, Aug. Clt. 1824. Pi- procumbent.

28 L. SPARTIOI'DES (Brouss. ex Buch. besch. der. can. p. 163. Webb, et Berth. 1. c. Chav. antirrh. p. 113.) suffruticose, glabrous; branches leafless at the base, twiggy; leaves linear-lanceolate, or linear, quite entire, alternate : lower ones petiolate ; superior ones nearly sessile ; pedicels longer than the segments nearly lanceolate, very acute. *J?* . F. Native of Teneriffe, and Grand Canary, on rocks by the sea-side; and of Cape Verd, upon a hill called in French Les Mamelles, and by the English the Paps. L. scopâria, Brouss. in herb. D. C. Spreng. syst. 2. p. 789. Root emitting many procumbent branches. Leaves 6-12 lines long. Pedicels bent at top. Corollas size of those of *L. Grceca,* downy, yellow ; spur ascending. Seeds ovoid ; testa brown, tubercled.

Broom-like Toad-Flax, Fl. June, July. Clt. 1816. Shrub procumbent.

SECT. III. LINARIA'STRUM (from *Linâria* and *astrum,* an affixed signification like; the name is given to the section of the genus from its containing the only legitimate species of the genus.) Chav. antirrh. p. 114. Linariastrum, the greater part Duby, bot. gall. 1. p. 344. Leaves sessile, alternate, or verticillate, rarely opposite, feather-nerved, quite entire, usually glaucous. Flowers terminal, racemose, spicately racemose, and sometimes somewhat capitate. Palate at the throat of the corolla, prominent. Capsule dehiscing by 4-10 small valves or teeth at the apex. Seeds angular; or discoid, girded by a membranous border or margin, emarginate at the hilum.

§ 1. *Leaves dilated, ovate, lanceolate, or oblong, verticillate or alternate. Flowers racemose, or spicately racemose. Corolla always beyond 3 lines long, with the spur.*

* *Leaves usually* 4 *in a whorl. Flowers usually verticillate.*

29 L. TRIORNITHÔPHORA (Willd. enum. p. 639. Chav. antirrh. p. 114.) branches erect, decumbent at top; leaves lanceolate, acute, quite glabrous ; flowers usually 3-4 in a whorl. 2£. G. Native of Portugal, especially in the province of Minho, in gravelly, mountainous, humid places. Hoffm. et Link, fl. port. p. 244. L. Lusitânica, Mill. diet. ed. 8. no. 3. but not of Brot. Ant. triornithophorum, Lin. spec. p. 852. Vent. malm. p. 11. t. II. Brot. fl. lus. 1. p. 198. Curt. bot. mag. 525. Linâria latissimo folio Lusitânica, Tourn. inst. 1. p. 169.—Riv. mon. irr. 1. t. 84.—Herm. lugdb. 376. t. *377.* Plant glaucous, glabrous. Leaves usually 4 in a whorl, rarely *3-5,* 2-3 inches long, glaucous beneath, with purplish edges. Calyxes exceeding the capsule. Corolla an inch long, pale violet, or purple; spur straight, equal to the corolla in length ; palate yellow ; tube inflated, and striated. Capsule dehiscing by 8 teeth at apex. Seeds discoid.

Three-birds-bearing Toad-Flax. Fl. June, Sept. Clt. 1710. PI. 2 to 4 feet.

* * *Leaves all 3 in a whorl, or only the lower ones, or opposite ; the rest alternate.*

30 L. LATIFÔLIA (Desf. fl. atl. 2. p. 40. t. 134. Chav. antirrh. p. 115.) glabrous ; branches erect, almost simple, twiggy; leaves broad-lanceolate : lower ones 3 in a whorl : superior ones alternate ; flowers disposed in long spicate racemes ; calycine segments linear-lanceolate, exceeding the capsule. ©. H. Native of Barbary, in corn fields near Mascar and Tlemsen. Ant. latifdlium, Willd. spec. *3.* p. 238. Pers. ench. *2.* p. 155. Leaves somewhat stem-clasping, U to 3 inches long, rather glaucous. Corollas size of those of *L. vulgâris,* yellow ; spur straight, or a little arched, length of corolla. Capsule dehiscing by 6 small valves at apex. Seeds discoid.

Broad-leaved Toad-Flax. FL June, July. Clt. 1800. PI. 1 to 2 feet.

31 L. HI'RTA (Mcench, meth. suppl. p. 170. Chav. antirrh. p. 116.) villous, erect; leaves ovate-elliptic, acutish: the lower ones 3 in a whorl, or opposite, the rest alternate; flowers crowded; segments of the calyx ovate-oblong, obtuse; upper one the largest. ©. H. Native of Spain, near Madrid ; and about Malaga; of Portugal, in cultivated fields between Serpa and La Guadiana. L. villôsa, Mill. diet. ed. 8. no. 10. but not of D. C. L. semiglâbra, Salzm. exsic. in herb. D. C. Ant,

viscdsum, Curt. bot. mag. t. 368. Ant. hirtum, Lin. syst. p. 446. spec. p. 857. Jacq. icon. rar. 1. p. 12. t. 117. Hoffm. et Link, fl. port. p. 246. Plant clothed with clammy, glandular hairs. Leaves half stem-clasping, 1-2 inches long. Corolla yellow, showy, marked by green stripes, 9-14 lines long, with the spur, which is straight, and equal in length to the corolla; palate fulvous. Capsule opening by 6 small valves at apex. Seeds compressed, sub-discoid, obscurely triquetrous; testa grey, scrobiculate.

Hairy Toad-Flax. Fl. June, Sept. Cit. 1759. PL \ to \\ foot.

32 L. CAVANILLE'SII (Chav. antirrh. p. 117.) villous, erect ; leaves ovate, subpetiolate, usually 3 in a whorl; flowers crowded ; calycine segments oblong, contracted at the base : superior one the longest. ©. H. Native of Spain, on the shady mountains of la Cova Alta, near Albayda and Palomera. Ant. triphyllum, Cav. icon. 2. p. 61. t. 179, exclusive of all the synonymes. Linaria Hispanica trifolia latifolia villosa, Tourn. inst. p. 169. Branches branched at top, clothed with capitate or glandular hairs, like the rest of the plant. Leaves \ inch long and more, 3-nerved, bluntish. Flowers crowded into a spike-formed raceme. Corolla almost like that of the preceding, pale yellow; spur a little incurved ; superior lip whitish, marked with brown lines. Capsule downy, opening by 6 teeth at apex. Seed almost similar to those of the last.

Cavanilles's Toad-Flax. Fl. April, July. PL 1 foot.

33 L. TRIPHY'LLA (Mill. diet. ed. 8. no". 2. Desf. fl. atl. 2. p. 40. Chav. ant. p. 118.) quite glabrous, glaucous, erect, or ascending ; leaves ovate and elliptic, usually 3 in a whorl; flowers disposed in dense, spicate racemes; calycine segments oblong, or ovate-lanceolate, obtuse, shorter than the capsule. Q. H. Native o€ Italy, Ca\abt\a, Spam, Portugal, Sicily, Corsica, France, &c. Tenore, syll. p. 303. L. glabrata, H. B. et Kunth, nov. gen. amer. 2. p. 362. L. neglecta, Clarke and Guss. pi. sic. rar. p. 249. fl. sic. t. 305. f. 1. Tenore, syll. p. 303. Ant. tricolor, Hort. Ant. triphyllum, Lin. spec. 2. p. *85.* Lam. fl. fr. 2. p. 344. Gsertn. fruct. 1. p. 249. t. *53.* Curt. bot. mag. 324. Viv. fl. libyc. *33.* Tenore, fl. neap. 2. p. 49.—Sabb. hort. rom. 3. t. 4.—Plukn. t. 96. f. 4.—Barrel, pi. rar. p. 44. t. 22.—Mor. hist. sect. 5. t. 12. f. 2.—Cup. pamph. 2. t. *57.*—Clus. hist. 1. p. 320. icone.—Lob. icon. 408.—Clus. hisp. 351. icon. Linaria triphylla minor lutea, Bauh. pin. 212. Tourn. inst. p. 169. Lower leaves an inch long, obtuse, or acutish : upper ones smaller, 3 in a whorl, opposite, or alternate, attenuated at both ends. Upper segment of calyx rather the largest. Corolla variegated with three colours, blue, white, and yellow; spur arched, almost the length of the corolla : upper lip pale purplish blue, lower one smaller and whitish ; the palate yellow ; the spur blue, or violaceous, acute. Capsule furrowed, opening by 6 valves at apex. Seeds prismatic, subtriquetrous, angular ; testa brown, reticulately excavated.

Var. fi, cceriilea (Chav. antirrh. p. 118.) corollas nearly all blue; leaves narrower; plant more slender. 0. H. Linaria triphyllos caemlea, Bauh. pin. p. 212. Tourn. inst. p. 169. Mor. hist. sect. 5. t. 12. f. 23. Linaria nedecta, var. /3, Guss. icon. fl. sic. t. 305. f. 2.

Far. y, *Peldria* (Rcem. arch. bot. 1. p. 125.) corollas shaped like those of Peloria, var. of *L. vulgaris.*

Three-leaved Toad-Flax. FL June, Sept. Clt. 1596. PI. 1 to 2 feet.

34 L. VIRG^TA (Desf. fl. atl. 2. p. 41. t. 135. Chav. antirrh. p. 119.) glabrous, glaucescent; branches erect, simple, twiggy; lower leaves ovate, 3 in a whorl: superior ones ovate-lanceolate, generally alternate ; flowers disposed in spicate racemes ; calycine segments linear, very acute, exceeding the capsule. ©. H. Native of Numidia, Poir.; in corn-fields of Algiers, Desf. ; in fields near Tripoli ; and in the Great Syrtus, Viv. Ant. virgatum, Poir. itin. 2. p. 192. Lam. ill. t. 531. f. 4. Viv. n. libyc. p. *33.* Branches erect, or decumbent. Leaves rnucr0" nulate, 5-9 lines long. Bracteas and calyxes hairy. Corona blue ; spur subulate, twice as long as the corolla : upper; nj? elongated. Capsule opening by 6 teeth at apex. Seeds suDtnquetrous, angular ; testa brown, scrobiculate.

Twiggy Toad-Flax. Fl. June, July. Clt. 1817. PL 1/5 to 1 %°5

L. REFLE'XA (Desf. fl. atl. 2. p. 42. D. C. fl. fr. 3. p. 585. Chav. antirrh. p. 119.) glabrous, procumbent; leaves ovate, acute, glaucous : lower ones *3* in a whorl: superior ones alternate; flowers in loose racemes; pedicels longer than the leaves, reflexed after flowering ; calycine segments sub-lanceolate acute ©. H. Native of Corsica, Sicily, Sardinia, Italy, Tunis "n corn-fields. Guss. prod. fl. sic p. 162. Tenore, syll p. 303. L. rhegina, Spreng. syst. 2. p. 792. Ant. prostratum, Cyr. in herb. Moricand. Ant. reflexum, Lin. syst. p. *557* spec p. *857.* All. misc. taur. 2. p. 205. t. 1. Sibth. et Smith, fl. grsec. t. 593. Corolla pale blue, rarely white ; palate yellow; spur straight, twice or thrice as long as the corolla, subulate, acute ; upper lip erect, elongated. Capsule dehiscing bv 6 valves at apex. Seeds subreniform ; testa brown, pitted.

lteflexed-vedice\\e& Toad-Flax. FL May, Aug. Clt. 1810. PL procumbent.

36 L. PEDUNCULA^TA (Spreng. syst. 2. p. 797. Chav. antirrh. p. 120.) quite glabrous, ascending; lower leaves ovate-lanceolate, obtuse, 3 in a whorl, and opposite: middle and upper ones oblong, alternate ; flowers on long pedicels; pedicels a' length firm, not reflexed ; calycine segments linear-oblong, obtuse, shorter than the capsule. ©. H. Native of Spain, as about La Torre Gorda, Malaga. Gibraltar, &c. L. transtagkna, Spreng. syst. 2. p. 792, exclusive of the syn. *o*\ Link. Ant. spartium, Saltzm. exsic. in herb. D. C, et Gay, but not of Lin. Ant. pedunculatum, Lin. spec. 2. p. 857. Lam. diet. 4. p. *363.* Branches woody at the base, and often without leaves ; young branches leafy, and decumbent. Leaves 3-4 lines long, like those of *Polygonum aviculare.* Corolla blue, marked with deeper veins, size of those of *L. origanifolia;* palate yellow ; spur straight, subulate, shorter than the corolla! Capsule opening by 6 small valves at apex. Seeds reniforrn; testa black, muricated. Flowers loose.

Pedunculate-flowered Toad-Flax. Fl. June, July. Clt. 1810. PL \ to 1 foot.

37 L. FLA^VA (Desf. fl. atl. 2. p. 42. t. 136. D. C. fl. fr. *s.* p. 729. Chav. antirrh. p. 121.) glabrous, erect; lower leaves ovate, or ovate-oblong, 3 in a whorl: superior ones oblong-linear, alternate : flowers terminal, few, on short pedicels • calycine segments broadly linear, obtuse, shorter than the capl sule. ©. H. Native of Barbary, in corn-fields near La Calle ; Numidia; Sardinia; Corsica, in sand by the sea near Ajaccio; and of Spain. Ant. flavum, Poir. itin. 2. p. 19\. Lam. diet. 4. p. 358. Lower leaves 4-6 lines long: superior ones smaller, all obtuse and glaucous. Corolla small, deep yellow ; spur acute, about equal in length to the corolla. Capsule opening by 6 small valves. Seeds subreniform ; testa black pitted.

Yellow-flowered Toad-Flax. FL July, Aug. Clt. 1820. PL i to 1 foot.

38 L. CRETVCEA (Fisch. exsic. in herb. D. C. Sprenosyst. 2. p. 791. Chav. antirrh. p. 122.) glabrous ; leaves ovate acutish, glaucescent: lower ones 3 in a whorl: superior on ' opposite and alternate ; flowers spicately racemose, f[illegible] cine segments linear-lanceolate, acute, very short. rk *£' Native in cretaceous places at the river Don. Branchp* K [illegible] at top. Leaves crowded, 4-6 lines long: u p p e r f ^

Racemes short. Flowers on short pedicels. Corolla yellow, with a short, sub-incurved spur ; palate deep yellow. Capsule unknown.

Cretaceous Toad-Flax. Fl. June, Sept. Clt. 1827. PI. *h* to f foot.

39 L. THYMIFO'LIA (D. C. fl. fr. 3. p. 587. Lois. fl. gall. ed. 2d. vol. 2. p. 792. t. 10. Chav. antirrh. p. 122.) glaucous, glabrous, procumbent, or ascending ; lower leaves ovate, obtuse, 3 in a whorl: superior ones oblong, usually opposite ; flowers few at the tops of the branches; calycine segments oblong-ovate, obtuse, shorter than the capsule. ©. H. Native of the south-west of France, on the sea-shore about Burdigala, and near Bayonne. Ant. thymifolium, Vahl, symb. 2. p. 67. VVilld. spec. 3. p. 243. Ant. glaucum, Thore, clor. land. 265. but not of Lin. nor Lapeyr. Branches usually decumbent. Leaves *3-5* lines long : upper ones smaller. Flowers on short pedicels. Corolla like those of Z. *supmum,* yellow ; spur a little arched, about the length of the corolla ; palate orange-coloured. Capsule dehiscing by 6 deep valves at apex. Seeds discoid.

Thyme-leaved Toad-Flax. Fl. June, July. Clt. 1818. PI. procumbent.

* * * *Leaves all alternate,*

40 L. LUSITA'NICA (Hoffm. et Link, fl. port. p. 247. t. 43. Chav. antirrh. p. 123. but not of Mill.) branches procumbent, glabrous ; leaves crowded, obovate, or oblong : upper ones the larger ; flowers disposed in dense racemes ; calycine segments oblong, obtuse, pubescent. %. H. Native of Portugal, in sand by the sea side near Comporto, and at the mouth of the river Mondego. Ant. Lusitanicum, Lam. diet. 4. p. 361. Brot. fl. lus. 1. p. 193. Linaria Lusitanica maritima polygalae folio, Tourn. inst'. p. 169. Root fibrous, yellowish. Leaves glabrous, glaucescent: lower ones *3-5* lines long. Corolla large, yellow; tube and spur marked with red lines ; spur about equal in length to the corolla, straightish, acute. Capsule opening by 6 small valves. Seeds discoid.

Portugal Toad-Flax. Fl. June, July. Clt. 1819. PI. proc.

41 L. MICHAU'XII (Chav. antirrh. p. 124. t. 7. f. B.) glaucous ; branches ascending, branched; leaves broad-obovate, rnucronate ; flowers disposed in spicate racemes ; calycine segments oblong, ovate, acutish. %. H. Native of Persia, near Ispahan. Plant quite glabrous. Branches furnished with a few sterile, filiform branchlets, which are sometimes reduced to spines. Leaves as if they were truncate at top, 5-7 lines long. Corolla large, purple ; the spur hardly longer than it, and incurved at top ; palate bearded. Capsule unknown.

Mkhaux's Toad-Flax. PL \ to \ foot.

42 L. FASTIGIA'TA (Chav. antirrh. p. 125. t. 7. f. A.) glaucous, glabrous, erect; branches fastigiate ; leaves ovate-lanceolate, or oblong, adpressed to the stem at the base, mucronulate at apex ; flowers disposed in dense spicate racemes, which taper to the top ; calycine segments oblong-lanceolate, acute. 1/ . H. Native of the Levant, Armenia, in cultivated fields near Bagdad and Kermancha, Oliv. Linaria orientalis latissimo folio, floribus linarise vulgaris, Tourn. cor. inst. p. 9.? Leaves lj to 2 inches long, 5-nerved, somewhat stem-clasping at the base. Corolla yellow ; spur shorter than the corolla, a little arched.

Fastigiate-hranched Toad-Flax. PL 1 to 2 feet.

43 L. PYRAMIDA[X]TA (Spreng. syst. 2. p. 796. Chav. antirrh. P- 125, exclusive of the syn. of Lin.) erect; leaves oblong-janceolate, attenuated at both ends, quite glabrous; flowers in spicate, pyramidal racemes ; calycine segments ovate-oblong, obtuse, downy, much shorter than the tube of the corolla. If.. H. Native of the Levant. Ant. pyramidale, Lam. diet. 4. p. 360. Linaria orientalis lilii persici foliis, florum spica densissima [et] pyramidata, Tourn. corol. inst. p. 9. Leaves *3-5* inches long, usually 5-nerved, a little stem-clasping at the base, mucronulate at apex. Corolla large, yellow ; spur straight, acute, about equal in length to the corolla ; palate densely bearded.

Pyramidal-spiked Toad-Flax. PI. 2 to 3 feet.

44 L. GRANDIFLORA (Desf. cor. inst. Tourn. p. 30. t. 21. Chav. antirrh. p. 126.) erect, glaucescent, glabrous; leaves ovate-lanceolate, acute, half stem-clasping; bracteas deflexed, longer than the pedicels; flowers approximate ; calycine segments oblong-lanceolate, acute, quite glabrous. ©. H. Native of Armenia, in uncultivated fields very frequent. L. Dalmatica, Rchb. pi. crit. 5. t. 438. f. 629. Ant. Dalmaticum, Lam. diet. 4. p. 360. exclusive of the syn. of Lin. and others.—Buxb. cent. 1. p. 15. t. 24. Linaria orientalis flore luteo maximo, Tourn. cor. inst. p. 9. Leaves approximate, 5-nerved, attenuated at both ends. Corolla large, yellow ; spur a little shorter than the corolla, straight; palate deep yellow, villous. Capsule not seen.

Great-flowered Toad-Flax. PL 2 to 3 feet.

45 L. DALMA'TICA (Mill. diet. ed. 8. no. 13. Chav. antirrh. p. 127.) glaucous, glabrous, branched; leaves oblong-lanceolate, acute, approximate ; flowers few, and loose at the summits of the branches ; segments of calyx oblong-lanceolate, or linear-lanceolate, acute, glabrous. 1£. H. Native of Candia, Armenia, and Dalmatia. Baumg. trans. 2. p. 205. Ant. Dalmaticum, Lin. spec. p. 857. exclusive of the syn. of J. Bauh. Pall.'itin. p. 590. Linaria latifolia, Dalmatica magno flore, C. Bauh. pin. p. 212. Tourn. inst. p. 169. Branches erect, or decumbent, densely clothed with leaves. Leaves 1-3 inches long, 3-5-nerved : upper ones 3-nerved. Flowers disposed in loose few-flowered racemes. Corolla yellow ; spur straight, much shorter than the corolla; palate large, villous.

Dalmatian Toad-Flax. PL 3 to 4 feet.

46 L. GENIST/EFO[Y]LIA (Mill. diet. ed. 8. no. 14. Chav. antirrh. p. 128.) glaucous, glabrous, erect; leaves lanceolate, acute, 3-5-nerved ; flowers paniculately racemose ; rachis flexuous, twiggy; segments of the calyx oblong-lanceolate, acute. "2/. H. Native of Austria, Hungary, Tauria, Caucasus, and Altaia ; and about Constantinople, in sandy, dry places. Rchb. pi. crit. 5. t. 435. Ledeb. fl. alt. 2. p. 443. Meyer, verz. p. 109. Ant. genistaefolium, Lin. spec. p. 858. Jacq. austr. 3. t. 244. Bieb. fl. cauc. 2. p. 74. exclusive of the syn. of Hall. Sibth. et Smith, fl. graec. t. 596. Pers. ench. 2. p. 158. but not of Sut. nor Lapeyr. Linaria constantinopolitana lini sativi folio, flore luteo, Tourn. cor. p. 9. Buxb. cent. 1. p. 16. t. 25. Linaria flore pallido rictu aureo, Tourn. inst. p. 170. Linaria Pannonica, Clus. hist. 1. p. 321. pann. p. 308. Root white, rhizomatose. Stem branched ; branches panicled. Leaves somewhat stem-clasping, an inch and more long. Flowers in loose racemes. Corolla a little smaller than those of *L. vulgaris,* pale yellow ; palate yellow ; spur -straightish, equal in length to the corolla. Capsule opening by 6 teeth at apex. Seeds prismatic, subtriquetroos ; testa brown, corrugately excavated -

Var. /3, *prdcera* (Chav. antirrh. p. 128.) leaves broader 5-nerved ; plant larger and firmer. 7/ . H. Native of Tauria on cretaceous rocks about Karassubassa. L. chlorsefolia, Rchb! pi. crit. *o*. t 436. L. genistaefolia, var. y, p_r6_{cera}, Hook. bot. mag. t. 2183. Ant. genisteefolia, var. y, Bieb. fl. cauc. 2. p. 74. Linaria flore pallido rictu aureo, elatior, Tourn. inst. p. 17ü.

Far. y, *silemfblia* (Chav. antirrh. p. 128.) branchlets less flexuous; leaves more elongated; flowers a little larger; spur shorter than the corolla. %. H. Native not far from Constantinople. L. silenifolia, Fisch. hort. gorenk. p. 25. Rchb. pi crit. 5. t. 437.

Broom-leaved Toad-Flax. FL June, Aug. Clt. 1704. B 1819. PL 2 to 4 feet.

§ 2. *Leaves narrow, linear, linear-lanceolate, or linear-oblong, all alternate. Flowers racemose, or spicaiely racemose, ratiwr large.*

* *Seeds angular.*

47 L. LINIFOUA (Rc\A). p\. cnt. 5. t. 422. f. 609. fl. germ, sect. 2. p. 374. exclusive of the syn. of Rochel. Chav. antirrh. p. 129.) erect, glabrous, a little branched ; leaves linear-lanceolate, acute, somewhat 3-nerved ; racemes strict, rather loose ; bracteas longer than the pedicels; calycine segments rather ovate at the base, acuminated, short. %. H. Native of the Levant, and Italy, by the sea-side. Ant. linifòlium, Lin. spec. p. 858. exclusive of the syn. of Tourn. et Buxb. Lam. diet. 4. p. 362, exclusive of the syn. Linària orientàlis, vulgari similis folio longissimo, Tourn. inst. p. 9. Leaves 1 to lj inch long. Corollas like those of *L. genistcefblia,* but rather smaller, yellow, with a deeper coloured villous palate ; spur straight, equaling the corolla in length. Capsule opening by 6 small teeth. Seeds subtriquetrous, scrobiculate.

Flax-leaved Toad-Flax. PL 1 to 1¼ foot.

* * *Seeds discoid, marginate.*

48 L. ITA'LICA (Trev. in nov. act. bonn. 13. p. 188. Chav. antirrh. p. 150.) branched; leaves linear-lanceolate or linear, 3-nerved ; flowers crowded ; segments of calyx linear, acute, often ciliated; capsule nearly ovate. %. H. Native of Switzerland, Italy, Piedmont, Tyrol, Hungary, on the alps. Rchb. pi. crit. 5. p. 13. t. 421. f. 608. L. genistaefòlia, D. C. fl. fr. 3. p. 591. exclusive of the synonymes. L. angustifdlia, Rchb. fl. germ. sect. *2.* p. *375.* exclusive of the syn. of Lang. L. paniculàta, Peyer et Vest, ex Rchb. 1. c. L. linifdlia, Roch. pi. ban. rar. p. 60. t. *22.* f. 47. and of many other authors. Ant. Bauhini, Gaud. fl. helv. 3. p. 154. Ant. polygalaefblium, Poir. diet, suppl. 4. p. 21. but not of Link, under Linària. Ant. genistif61ium, Vill. dauph. *2.* p. 440. exclusive *of* the syn. of *Lin.* and Clus. All. pedem. no. 243. exclusive of many synonymes. Sut. fl. helv. 2. p. 34. exclusive of the syn. of Jacq. Chenal, act. helv. 8. p. 242. but not of Lin. nor Lapeyr. Ant. Linària, var. Lin. spec. p. 859.—Hall. hist. no. *337.* Plant glaucescent. Leaves an inch and more long. Corollas like those of *L. vulgàris,* but not above half the size, deep yellow ; palate bearded with white hairs; spur hardly exceeding the corolla, a little arched. Capsule opening by 6 small valves at apex. Seeds muricated in the centre, and girded by a broad margin.

Far. ft, angustifdlia (Chav. antirrh. p. 131.) leaves exactly linear, very acute; capsule ovate-globose. "2/. H. Native of Piedmont, on the banks of the river La Stura, and near Superga.

Italian Toad-Flax. PL 1 to 2 feet.

49 L. VULGA'RIS (Mill. diet. ed. 8. no. 1.) simple or branched ; leaves linear, or linear-lanceolate, usually 1-nerved ; flowers disposed in dense spicate racemes ; calycine segments almost lanceolate, acute; capsule almost cylindrical. If. H. Native throughout Europe, in sandy fields and in hedges ; also of Podolia and Siberia ; in America, but probably introduced from Europe. It is very plentiful in many parts of Britain. Mcench. meth. p. 524. D. C. fl. fr. 3. p. 592. Chav. antirrh. p. 131. Ant. genistifòlium, Lapeyr, abi\ p. 354. ? Benth. cat. pyr. p. *69.* with the leaves broader and erect, and the flowers smaller. L. Geblèri, Besser, in herb. D. C. L. ciliàta, Lang, in herb. Guy, with ciliated corollas. Ant. simulans, Lam. fl. fr. 2. p. 340. Ant. Linària, Lin. spec. p. 858. Bull. herb. t. 201. Gaertn. fruct. 1. p. 248. t. 58. f. 7. Lam. ill. t. 851. f. 3. oturm, n. gerru. i. *iaa^.* *^» * *~ — Smith, engl. bot. 10. t. 69. 982.—Hall. helv. no. 336.—Blackvv. herb. t. 115.—Mor. hist. 2. p. 499. sect. 5. t. 12. f. 10.—Besl. hort. evst. 1 t, 14. f. 3. Riv. mon. ii Os^is, Pliny, na, h i s t ^ Osyris Linària, Trag. *357' O*vp«%* Diosc. 4. p. *138.* Rhizoma creeping tubercled Plant glaucous. Leaves about an inch long. Corolla pale yellow or citron-coloured; palate copper-coloured; spur curved, about equal in length to the corolla. Capsule dehiscing by 6-8 teeth. Seed with tubercled centre and winged margin.]n Worcestershire the plant is called Butter-and-Eggs. Gerard names it *Wild-Flax, Toad-Flax,* and *Flax-weed.* It abounds in an acrid oil, that is almost empyreumatic. Given inwardly it excites nausea. It is recommended in dropsical cases ; but Haller and others do not much approve of it. The juice, mixed with milk, is a poison to flies.

Far. /3, glandulbsa (Chav. antirrh. p. 132.) downy, usually procumbent; calyxes glandular. %. H. Native in woods about Malmedy. Ant. glanduldsum, Lejeune, fl. spa. p. *320.* Ant. Linària, var. glandulòsum, Lejeune, revue, p. 124. L. prostràta, Bcenn. in Rchb. 1. c. but not of Cyrill. under *Antirrhinum.*

Far. y, specibsa (Chav. 1. c.) leaves linear-lanceolate, rather coriaceous, obsoletely 3-nerved, glaucescent beneath ; flowers larger ; capsule elliptic-oblong. %. H. Native of Naples, in corn-fields on the mountains. L. speciòsa, Ten. fl. neap. 4. t. 159. f. 1. syll. p. 304.

Far. <), acutiloba (Chav. 1. c.) leaves narrow-oblong, or oblong-lanceolate, usually 3-nerved ; calycine segments often acuminated ; corolla pale yellow ; palate deep orange-coloured ; lobes sometimes acutish, sometimes obtuse; capsule subcylindrical. %. H. Native *of* Dahuria; and *in* shady dry places in the region of Altaia. L. acutiloba, Fisch. mss. Rchb. pi. crit. 5. p. 14. t. 424. f. 611.

Far. e, Pelòria (Lin. amoan. 1. p. *280.* Smith, engl. bot. 4. t. 260. nov. diet. sc. nat. veg. t. 31.) corolla almost regular, ending in 5 horns at the base.

Common Toad-Flax. FL June, Sept. Britain. PL 1 *to 2* feet.

50 L. BIEBERSTE'INII (Besser, enum. pi. pod. p. 25. Rchb. pi. crit. 5. t. 434. f. 624. and *625.)* branched ; leaves broad-linear, or linear-lanceolate, 3-nerved, mucronate ; flowers disposed in a short crowded raceme ; segments of the calyx oblong-linear, acutish, downy ; capsule globose. 1/. H. Native of the South of Podolia; on the shores of the Black Sea, about Odessa ; in Syria, about Damascus. Chav. antirrh. p. 134. Ant. Linària, Bieb. fl. cauc. 2. p. *75.* exclusive of many synonymes. Stem furnished with fastigiate branches. Leaves *1-2* inches long. Corollas form of those of //. *vulgdris,* but a little smaller, pale yellow, with a deeper coloured, bearded palate. Capsule nearly globose, dehiscing by 6-8 valves at apex. Seeds margined, black.

Bkberstein's Toad-Flax. Fl. June, Aug. Clt. 1820. PL 1 to 3 *feet.*

51 L. HEPA'TICA (Bunge, in Led. fl. alt. *2.* p. 445. fl. ross. alt. ill. t. 91. Chav. antirrh. p. 134.) branches spreading, elongated, strict; leaves oblong-linear, acute, glabrous, crowded ; flowers racemose; calycine segments glabrous, obtuse, about equal in length to the pedicels ; spur slender, straight, about equal in length to the corolla. %• H. Native of the Kirghisean steppe, on the mountains at the river Kurtschum, and on the mountains of Arkaul and Dolenkara. Plant glabrous, glaucous, rather procumbent at the base. Leaves somewhat 3-nerved. Flowers distant on the raceme. Calycine segments glabrous, rarely glandularly ciliated. Corollas rather large, liver-coloured, or dirty purple, almost like those of *Lotus Jacobceus;* palate villous. Seeds black, discoid.

Zi^r-coloured-flowered Toad-Flax. PL 1 to /\ foot.

52 L. PR^COX (Bunge, in Led. fl. alt. 2. p. 446. fl. ross. alt.

ill- t. 431. Chav. antirrh. p. 135. but not of Link, fl. port.) stem erect, strict, simple; leaves scattered: lower ones short, broader: superior ones linear, elongated, fleshy, glaucous; segments of the glandular calyx oblong, obtuse ; spur straight, exceeding the corolla, which is also glandular; racemes subspicate. V« H. Native of Altaia, at the river Irtysch, and between Tscheremschanskoi and Krasnojarski, on dry mountains. Plant glabrous, glaucous. Leaves 1-2 inches long. Racemes 12-15-flowered, at length elongated. Calycine segments somewhat 3-nerved. Corolla violaceous, marked with deeper stripes ; throat villous, white, furnished with 2 yellow confluent spots ; the spur deeper violet. Seeds discoid.

Early Toad-Flax. Fl. April. PI. 1 to 2 feet.

53 L. ODORA (Fisch. cat. hort. gorenski, 1812. p. 25. Chav. antirrh. p. 136.) branched, erect or ascending; leaves linear-subulate, semiterete, channelled; flowers in loose racemes ; calycine segments short, ovate or elliptic, obtuse; capsule globose. 2/. H. Native of Tauria, in the sand of the Ukraine ; in the colony of Sarepta, Rchb. ; Siberia, at the Oby, Demidow ; on sandy hills between Schulbinsk and Oserski, at the river Irtysch,' Ledeb. ; in Calabria and Sicily rather frequent, Schouw. ? L. Itálica, Fisch. mss. ex Ledeb. L. Loeselii, Schweigg. Keen, arch. 1. p. 228. Led. fl. alt. 2. p. 447. Spreng. syst. 2. p. *797.* L. juncea, Rchb. pi. crit. 5. t. 425. f. G12—613. but not of D. C. nor Desf. L. maritima, Rchb. fl. germ. sect. 2. P» 375. but not of D. C. Ant. subulatum, Cyrill. in herb. Ant. odoratissimum, Giild. itin. 1. p. 111. Ant. odorum, Bieb. fl« cauc. 2. p. 76. suppl. 414. Ant. junceum, Pall. itin. 2. p. 332. et 3. p. 541. and 682. but not of Lin. nor Lam.—Lois, bor. p. 298. t. 39.—Buxb. cent. 4. p. 23. t. *37.* Plant very polymorphous, with a slender habit, glaucescent. Leaves 1 to 1| inch long. Racemes few-flowered, loose, clothed with white glandular hairs, and also the calyx. Corolla pale yellow, painted by 2 orange stripes beneath; palate orange-coloured ; spur straight, or a little incurved, sometimes equal in length to the corolla, and sometimes shorter. Capsule large. Seeds discoid, subrehiform. Ledebour gives three varieties of this species.

Sweet-scented Toad-Flax. Fl. July, Aug. Clt. 1823. PI. 1 to 1| foot.

54 L. MACROURA (Rchb. pi. crit. 5. p. 20. t. 432. f. 621, 622. Chav. antirrh. p. 137.) erect, branched or simple; leaves linear, flat, glaucous, quite glabrous; those of the surculi crowded ; raceme dense ; segments of the calyx ovate-oblong, obtuse, clothed with glandular down, or smoothish. 1£. H. Native of Tauria and Caucasus, in dry places. Led. fl. alt. 2. p. 446. Ant. macrourum, Bieb. fl. cauc. 2. p. 75. Ant. linifolium, Pall, md. taur. Habl. taur. p. 161. but not of Lin. Leaves 1-2 inches long. Flowers disposed in long, straight, dense racemes, ^alyx beset with glandular hairs. Corollas large, glabrous or downy, yellow, with a more intense coloured, villous palate; spur straight, length of corolla, or a little longer. Capsule opening by 6 valves at apex.

Var. (D, Besseriana (Chav. antirrh. p. 137.) simple; raceme few-flowered ; flowers larger; calycine segments broader and a little longer, rather downy, or sometimes quite glabrous ; spur about equal in length to the corolla. %. H. Native of Bessarabia, in fields between Elisabetgrad and Nicolaef; and in fields about the Don, and beyond the Volga; South of Tauria. L. Besseriana, Rchb. pi. crit. 5. t. 433. f. (>23. L. macroura, Bieb. pi. rar. ross. 1. t. *27.* Ant. macrourum, /3, Bieb. fl. cauc. suppl. p. 413. Corollas deeper yellow, and sometimes even Purplish.

Var. y, rarnbsa (Chav. antirrh. p. 137.) branches again branched, thicker; flowers smaller, loose; calycine segments narrower ; corolla golden yellow ; spur long. %. H. Native °* Altaia. L. macroura, /3, Ledeb. fl. alt. 2. p. 446. .Flowers disposed in a loose, elongated raceme.

Long-tailed-racemed Toad-Flax. Fl. June, Sept. Clt. 182 > PL 1 to lj foot.

§ 3. *Leaves narrow, alternate or verticillate ; those of the surculi broader, lanceolate or linear, verticillate. Flowers disposed in racemes, or spicate racemes. Corolla beyond 3 lines long with the spur.— Usually erect herbs, furnished with sterile leafy surculi.*

Style forked at top; stigma 2-lobed (Chav. antirrh. t. 5. f. 10. b.) *Seeds transverse, corrugated* (Chav. 1. c. f. 28.)

55 L. APARINOIDES (Chav. antirrh. p. 138.) strict; leaves linear-subulate, usually alternate ; those of the surculi flat, and 4-5 in a whorl ; raceme villous ; pedicels longer than the braeteas; segments of the calyx linear, acute. ©. H. Native of Sicily, on arid sandy hills and fields; and the Island of Cyprus. L. reticulata, Rchb. pi. crit. 5. p. 19. t. 431. f. 620. but not of Desf. L. stricta, Guss. pi. rar. sic. p. 250. exclusive of the syn. of Spreng. prod. fl. sic. p. 166. Tenore, syll. p. 304. but not of Horn, nor Rchb. Ant. multicaule, Tenore, fl. nap. prod, p. *36.* but not of Lin. L. heterophylla, Desf. fl. atl. 2. p. 48. t. 140. cat. par. 3. p. 108. exclusive of the syn. *Ant. pinifolium,* but not of Willd. under Antirrhinum. Ant. strictum, Sibth. et Smith, fl. graec. t. 594. Ant. aparinoides, Willd. spec. 3. p. 247. Poir. suppl. 4. p. 25. Pers. ench. 2. p. 157. Linaria Sicula multicaulis molluginis folio, Bocc. sic. t. 19. f. 1. Tourn. inst. p. 171. Branches villous. Leaves 1-2 inches long, usually scattered: lower ones sometimes in whorls ; those on the younger branches crowded, as if in fascicles. Racemes clothed with white glandular hairs. Corollas size of those of *L. vulgaris,* sulphur-coloured; palate copper-coloured, marked with brown lines ; spur usually straight. Anthers ciliated. Capsule dehiscing by 6 teeth at the apex.

Var. /3, humilis (Chav. 1. c.) plant ascending, hardly half a foot high ; sterile surculi villous. ©. H. L. stricta, var. *ft,* Guss. icon. fl. sic. t. 308.

Cleaver s-like* Toad-Flax. Fl. June, Aug. Clt. 1825. PI. 1 to 3 feet.

56 L. RETICULATA (Desf. fl. atl. 2. p. 48. Chav. antirrh. p. 140.) erect, glaucous; leaves linear, channelled : lower and surculine ones verticillate: superior»ones scattered; raceme short, downy, tapering upwards ; bracteas longer than the pedicels; segments of the calyx broadly linear. ©.? H. Native of the North of Africa, on the sea shore ; in Portugal, on the Douro, near Oporto, and especially about Faustua. Hort. et Link, fl. port. p. 251. exclusive of the synonyme of Brot. Willd. enum. 2. p. 796. Ait. hort. kew. ed. 2d. vol. 4. p. 15. but not of Rchb. Ant. reticulatum, Smith, icon. rar. t. 2. Willd. spec.-3. p. 247. Pers. ench. 2. p. 157. exclusive of the syn. of Brot. Ant. pinifolium, Poir. itin. 2. p. 193. Lam. diet. 4. p. 362. Plant glabrous, except the floriferous part. Leaves obtuse, an inch and more long ; those of the surculi shorter and broader, 4-6 in a whorl. Flowers crowded. Corolla reticulately veined, deep purple; palate copper-coloured or yellow, marked with dark purple lines ; spur shsrter than the corolla. Capsule and seeds as in the preceding.

Reticulated-fiovfered Toad-Flax. Fl. May, July. Clt. 1788. PI. 2 to 4 feet.

57 L. VERSICOLOR (Mcench. meth. p. 523. D. C. fl. fr. 3. p. 586. Chav. antirrh. p. 141.) downy at top; leaves flat, broad-linear or linear-lanceolate, obtuse : lower ones usually 3 in a whorl: superior ones alternate : those *of* the surculi opposite, or 3 in a whorl ; flowers racemose ; segments of the calyx linear-oblong, bluntish. ©. H. Native of the South of France. Ant. bipunctatum, Hort. but not of Lin. nor Cav. Ant. versicolor, Lin. syst. p. 466. Jacq. misc. 2. p. 336. icon. rar. 1. p. 12. t. 116. Racemes clothed with short glandular hairs. Leaves

1 to \\ inch long. Corolla size of those of *L. vulgaris,* pale yellow, with a copper-coloured palate, which is often marked with 2 brown spots ; spur violaceous or yellow, longer than the corolla. Capsule dehiscing by 6 teeth at apex. Seed a little curved, truncate at the base.

Party-colottrcd-l\owvrcd Toad-Flax. Fl. July, Sept. Clt. 1777. PL 1 to l£ foot.

58 L. VISCOSA (l)um.Cours. bot. cult. ed. 1st. p. 93. Spreng. syst. 2. p. 794. Chav. antirrh. p. 141.) downy; leaves linear, usually alternate, distant; those of the surculi linear-lanceolate or linear-oblong, 4 in a whorl ; raceme short, crow'ded; segments of the calyx linear or linear-lanceolate, acute, vaguely ciliated. ©. H. Native of Spain, near Gades. Ant. viscosum, Lin. amcen. 4. p. 319. spec. p. 855. Ait. hort. kew. ed. 2d. vol. 4. p. 14. exclusive of the syn. of Bot. mag. Hoot yellowish, with twisted, somewhat horizontal branches. Stem naked under the raceme. Leaves J to 1 inch, bluntish, quite glabrous : lower ones fascicled, or somewhat verticillate. Corolla yellowish-brown ; upper lip large ; spur straight, hardly exceeding the corolla. Capsule dehiscing by G teeth at apex. Seed black, a little curved.

Clammy Toad-Flax. Fl. July. Clt. 178G. PL 1 to lj foot.

59 L. ALGARVIA'NA (Chav. antirrh. p. 142.) glabrous ; branches almost leafless ; leaves of the surculi verj numerous, lanceolate or linear-lanceolate, 3-4 in a whorl ; flowers on long pedicels, drooping ; segments of the calyx nearly linear, acute. ©•?!;.? II. Native of the Algarves. Koot fusiform, fibrous, brown. Branches decumbent or erect. Leaves of the branches small. Flowers 2-4 together, at the ends of the branches. Corollas size of those of A. *alptna,* pale yellowish brown, or purplish, furnished with a long spur. Capsule dehiscing by G teeth «t apex. Seeds irregular ; testa variously twisted.

Algarves Toad-Flax. PL \ to J foot.

00 L. SI'A'RTEA (Ilofttn. et Link, fl. port., p. 233. t. 30. Rchb. pi. crit. 9. t. 814. f. 1100. Chav. antirrh. p. 143.) plant strict, branched ; leaves linear-lanceolate, erect, quite glabrous : lowct ones often 3 in n whorl : superior ones alternate ; those of the nurculi flat, 3-4 in a whorl ; flowers on long pedicels ; calycine segment* linear or linear-lanceolate, acute, glaliroiu or downy. 0. #x Ait. *S* • ex Willd. H. Native of Spain, near Madrid and Arnnjuez; Portugal, in sandy places about Lisbon ; South of France; Canary Islands; Morocco; Tripoli, *on* the sea shore. L.jiincea, Desf. fl. atl. 2. p. 43*. I). (\ fl. fr. 3. p. 729. Duby, bot. gall. 1. p. 345. exclusive of *L.junceuvi,* Lin. Rchb. pi. crit. 9. t. 813. f. 1099. L. proc%-cox, Iloflin. et. Link, fl. poru p. *233.* t. 37. exclusive of the syn. of Lin., but not of Ledeb. Ant. junceum, Lam. diet. 4. p. 352. Pers. ench. 2. p. 156. but not of Lin. Aflt. sparteum, Lin. spec. p. 854. Cav. icon. 1. p. 19. t. 32. Viv. fl. libyc. p. 33. Curt. bot. mag. t. 200. Linaria annua angustifolia, flore niajorc luteo, Mor. hist. part. 2. p. 199. Tourn. inst. 1. p. 171. Leaves 6-10 lines long. Racemes few-flowered, glabrous, or clothed with short cfammy down. Corolla very variable, yellow; palate deep orange; spur straight Capsule €lcl;;S^ii1^.^?C;;?!'!:'.F^lV€?i;. -^T*11* ¿*»:!?"«. truficutd-Mack. • '

Hroom-Uke load-Hax. FL June, Oct. Clt. 1772. PI, 1 to 2 *feet.*

(>i L. JUNCEA (Ait. hort. kew. cd. 2d. vol. 4. p. 17. Chav. antirrh. p. 144. but not of Desf. nor Rchb.) glabrous, much branched, slender; leaves linear-subulate, semiterete, usually alternate ; those of the surculi linear-lanceolate, opposite or 3 in a whorl; flowers few, on long pedicels; calycine segments linear-lanceolate, short, acute. ©. H. Native *of* Spain and Portugal, near Coimbra. L. meonantha, Hoflm. et Link, fl. port. 1. p. 236. Ant. virgulatum, Brot. fl. lu*. 1. p. 193. Ant. junceum, Lin. amoen. 4. p. 277. but not of Lam. Leaves sometimes 3-4 in a whorl, at the base of the branches. CoroUa* much smaller than those of *L. sj>6rtca,* yellow ; palate orange coloured ; spur straight, hardly longer than the corolla. Capsule dehiscing by 6 valves. Seeds truncate, a little curved black.

Rushy Toad-Flax. FL June, Sept. Clt. 1780. PL 1 to 1. foot.

62 L. BIPARTI%TA (Willd. enum. 2. p. 640. Chav. antirrh. p. 145.) glabrous; leaves linear or linear-lanceolate, flat, alternate or verticillate : those *of* the surculi broader, and 3 in a whorl; flowers disposed in loose racemes; segments of the calyx almost lanceolate, acute, with membranous edges. © H. Native of Morocco, about Mogodor ; Tangiers and Mauritania. Sweet, fl. gard. t. 30. L. sj>eciosa, Jacq. fil. eclog. 1. p. 140. t. 95. but not of Tenore. Ant. speciosum, Donn. hort. cant. 1804. p. 178. L. cxTulea, Hort. Ant. orchidiflorum, Hort. Ant. bipartitum, Vent. hort. eels. t. 82. Poir. suppl. 4. p. 21. Root yellowish, branched. Leaves 1-3 inches long. Corollas showy, of a violet-purple colour ; upper lip deeply bipartite; palate orange-coloured, whitish at the base ; spur arched, hardly exceeding the corolla. Capsule opening by 6 teeth at apex. Seeds oblong, black, curved a little.

Bipartite-hyped Toad-Flax. FL June, Sept. Clt. 1815. PL 1 foot.

63 L. LINOGRI'SEA (Hoflm. et Link, fl. port. p. 240. t. 41 exclusive of the syn. of Tourn. Chav. antirrh. p. 146.) downy at top; leaves linear, flat, glabrous, alternate or *3* in a whorl those' *of* the surculi lanceolate, short, 3-4 in a whorl; flowers loose, on long pedicels ; calycine segments linear, very acute downy. ©. H. Native of Portugal, in sandy places about Coimbra. L. incarnata, Spreng. syst. 2. p. 643. Ant. sapphirinum, /3, incarnatum, Per*, ench. 2. p. 158. Ant. incarnatum Lam. diet. 4. p. 364. Very nearly allied to /,. *bipartita,* and perhaps only a variety of it. Leaves smaller, and more distant. Calyxes and bracteas much narrower ; pedicels longer. Corolla blue ; upper lip reddish ; palate orange-coloured ; spur arched length of corolla.

Oretj'tmum Toad-Flax. FL June, July. Clt. 1819. PL 1 foot.

64 L. SAPPHIRI'NA (HofFm. et Link, fl. port. 1. p. 241. t. 42. Chav. antirrh. p. 14G.) leaves linear, flat, alternate; those of the surculi sublanceolate, 3 in a whorl; racemes very elongated ; rachis downy; segments of the calyx linear, acute, downy. ©. II. Native of Portugal, near Coimbra, on Serra d'Arabida. Ant. sapphirinum, IJrot. fl. lus. 1. p. 197. Linaria piimila Lusitanica, floribus palato carentibus, Tourn. inst. p. 170. Leaves glabrous. Racemes loose. Corolla smaller than that of the preceding, deep blue ; tube nearly cylindrical ; lower lip spreadingly deflexed; palate orange-coloured, dotted : slender, long, arched. Capsule globose, dehiscing bjj $ teeth at apex. Seeds like those of the preceding.

Sapphire Toad-Flax. PL J to 1 foot.

* * *Style thickened at the apex; stigma emarginatc* (Chs/,. anthirrh> t# 5t f, 10# a#) *Seeds angular, somewhat prhmai\c*

G5 L. ARMENIA (Chav. antirrh. p. 147.) quite glabrous, firm, much branched above the base; leaves alternate, linear, obtuse, thick ; flowers in loose racemes ; segments of the caly* linear, acute. 1£.? II. Native of Armenia, Tourn. Root yellowish. Stem firm ; lower part naked and woody. Leaves an inch long. Flowers distant. Corollas form of those of *L% Chalcpttisis,* bkie, with a long arched spur. Capsule a \^e compressed, emarginated, and dehiscing by 6 teeth at ape*- Seeds large, subtriquetrous, a little curved, black, scrobiculate.

Armenian Toad-Flax. PL 1 foot.

66 L. CHALEPE'NSIS (Mill. diet. ed. 8th. no. 12. D. C ^*

?en**tfth<u.a| Txfm*«. !„ l——1 » A ii vr
'' of IV n T*Z "T, lC T° n G- H \ ''
t>c. t. 592. Ant. osyns, Cyr. not of Fisch. Linaria annua angustifolia, flosculis albis longius caudatis, Triumph. obs. . t. 87. f. 2. T
{K bist. 2. n. 502. sect. «. t. 35. f. 9.—Riv. mon. irr. t. 80.
Leaves 1-2 inches long. Flowers ..
or a small, white
longer ttia" the cornllf palate >'d!oiv)sh' sometimes .narked by a few
--- Capsule de sc ! i b b e d h S d subtriq
truncate at a pex, narrowed at the base, scrobiculate.

Aleppo Toad-Flax. Fl. June, July. Clt. 1680. Pl. 1 to 1½ foot.

67 L. CANADE'NSIS (Dum. Cours. bot. cult. ed. 1st. vol. 2. p. 96. Chav. antirrh. p. 149. Hook. bot. mag. t. 3474.) leaves linear, remote, glabrous, usually a those of the surculi broader, opposite, or 3 in a whori loose, slender, attenuated upwards; pedicels bracteas; calycine segments acute, downy. ..ative of North America, from Canada to
fld<f,jjj"T TO1,II)ri<Ia; 311(1 S «» America, in Brazil, Peru, fi 4S- Ant ' -2> Call(lt^nse, Lin, spec. p. 861. Vest eels. ?*•*«.—*c'r ""•'lflwnim- Poepp. in herb. D. C. with whitish "..', rtfl - **» p. 94. Plant with a slender habit. C !"ch' acute. Flowers distant, nutant. Pedicels downy. corolla Ipres 1 PaleV,0iet; ,owelH P llytltix*!d ! P sI»t(- ^ite, ">)la. v .If ; S|mr "olwlate, arched, acute, length of co«a« nearly globose, dehiscing by 6-8 teeth. Seeds rather d I, fiirrowed, truncate at both ends, brown, Canadian Toad-Flax. Fl. June, Aug. Clt. 1S1£. PI. 1 to 1½ foot.

68 L. PURPU'REA f Mni- dict. ed. 8th. no. 5. **Moench. meth.** p. 522. Chav. antirrh. p. 150.) quite "htbrous, branched, erect; leaves linear, or linear-lanceolate; lower and surculine ones 4-9 in a whorl; superior ones 3 in a whorl, opposite or alternate; raceme elongated; calycine segments linear, acute, spreading a little. f ff V. H. Native of the South of! Europe, at the bottom o or It«lv «• cily; Greece; Naples, in vineyards and on hills; South pro cce; Tunis, in fields; Switzerland, but gardens. L. purpiiriiscens, JJernh. mss. Horn. hort. 3. GZJTT' %> P' 57S- Ant. Phys reum, Lin. spec. p. 853. ^artn. fruct, i. p. 219, t. 53. Curt bot. mag. t. 99. Sibth. 5™«H. fl. giwc t. 5W.-Uiv. mon. irr. S2--Mor. hist. ;,,re;i **a*£i** , i"]2* f,]6 —**Barret,** icon. t. **1041. Linaria** pur "a Puml k °Joratfl» Tourn. inst. p. 170. Hoot fibrous. hT n *KhuZ* grecn' "Miaity spotted with purple above. , TS***^ about inch loiifj. Flowers in loose upper lip short; spur arched, length of corolla; palate bearded with white hairs along the edges; tube striped with purple. Capsul compressed, emarginate « toP' corrugated, black.

Purple-flowered Toad-Flax. Fl. July, Sept, Cit. 1694. Pl. 2 to 4 feet.

69 L. & 1 . '^lH\ A (D, C„ fl, fr, 3. p. 580. and 5. p. 40?. Chav. °fU ; leave- <1Ult<„ wI;11)rous, or{inclles oreet or ascending, tj^ * '^cnli 4J5 . uslm".V linear, verticil late or alternate; tl * &Dear,U- m a w'"^fl; flowers racemose; calveine ses- anceoJate or i» linear acute> -» H V.vtjve of France, in waste fields; P Switzer Dalmatia, &c. L

S I iwl s Kedatoni, - ilrfcta, Horn, hart hatb. 2. p. 675. .x Rchb, pi, crit* 5„ t* 610. but not of Gor**, with a yellowish jd o«s
^f*' Ant* ***"• *Um' *' ff 2" P- 3 p' <lict- *• P-p
Ant. re pens, Lin. spec. p. E gL hot. 1253. Ant. purpureum, Rchb, but not of Lin, L. decira- i A™ n ——Ordmium stipinum, Villem. phyt. i. p. 4Ch KooFrlimtfmatOM, creeping, branched, tuber.:L-d, fibrous, yellowish, Leaves 1-: ,mes long. ,mes loose. Corolla whitish-grey, rarely yellowish, striated with violet; palate yellow, bearded; spur bluntish, much shorter than the corolla. Capsule dehiscing by 6 valves at apex. Race Vftl r generally bifid. Seeds oblong, truncate, a little curved, keeled, tubercled, blackish.

Var. ^ *Mon* ^ « ^ « (Chav. andrrh. p. J52.)-leaves narro^, for the most part alternate, crowded, L e t 1/ IT Na- ?%f Fe abo!lt *h«rfiS MontpX; £ £ ; places. daQg, Mill. diet. no. 6. c l , , Co.. « ed. 1st. vol. cult. Monspessulanum, Pers. ench. 2. p. 166. exclusive of the of Lam.—Dill. elth. p. 198. t. 163. f. 1 nària capillaceo folio odora, Tourn. inst. 170. Corollas oloured than the species, and the plant much taller, and more erect.

Var. '. S; ^(Chav. antiHi - P- 152.) leaves stiff, tri uetrous, a and channelled in front of corolla yellow; and both lips dirty white, and lin violet. ,. Native of Mauritania, near Termignon and Ltt&a-le-Bourg.

Var. 3, *gtitioidci* (Chav. antirrh. p. 152.) leaves 4-6 in a wjiorl; whorls sometimes distant and sometimes approxin %. H. Native of the Pyrenees, in low places, *&c.* Ant. jralioides, Lam. diet. 4. p. 351. Plant simple, or branched at top

&W«/(rfhWrcd Toad-Flax. R July, **Oct. a. Eottknd fl** and **y. ? PI, I** to **3 feet.**

^ 70 *L. ooKubxA* (Desf. cor. inst, **Toara,** p. ^2. t. Cliav, **aotirrb.** 151.) quite **glabrous; leaves li|w-subulate] alternate;** those of the surculi **subverticiUate5** flowers racellios<1» °i> short pedicels; calycinc segments- linear, actue It **g- N«i«** of **Aa» Minor. Liniria orientalis** cofi folio (loTe f«««Pl»«<». J«"«. cor. inst. p. 9. Root fibrous, elongated. whitish-violet; lobes of the upper lip narrow; spur straight, short, acute, slender. Capsule unknown.

Coris-kaued Toad-Flax. PL 1 t o l j foot.

• * * *Style thickened at top; stigma somewhat cmarginate. Seeds discoid, with ciliated edges,* (Clmv. antirrh. I f. .30.)

71 L. PsuSMRl^KA (D. C. fl. (r, 3. p. 581T. Chav. untirrh. p. 151-) glabrous, nearly itrople; leaves linear, usually alternate; those of the surculi ovate-lanceolate, 3-5 m a u-horl; ^oivers subeapitate, crowded; Calycioe segments linear, very acute. ©. H. Native of the South, and middle of Frai ce; an d Sardinia; Candia • Greece- Peloponnesus. Ait. hort. kew. fl. sic. 1. p. 16* Ant. Pdi^erianum, Lin. **sp^c 8M. S S S S** Smith'" fl «riKC_E_^K~Cup. pamph. 1. t. 229. Hafin. t. 101. f. 1. ex Guss.-13arrel. icon. MC2,—Buxb. cent. 1. p. 85. *t* Leaves beyond half an inch long. Corolla purplish-violet: palate white, with violet veins; spur etrawht, 10115, acute. Capsute emargi&ate at top, dehiscisg by *0* teeth,

^'«'•• Pi *gracilU* (Chav. antirrh. p. 155.) plant simple, very slender; flowers smaller, and [i:ile blue. G- H. . . Native about Montpeiier mid the Southern provinces of France, not far from

Hieres. L. Pelisseriana, *ft,* D. C. et.Guss. 1. c. Ant. gracile, Pers. ench. 2. p. 156. Ant. Pelisserianum, Mont. Font, ex Pers.

Pelisser's Toad-Flax. Fl. June, Sept. Clt. 1640. PL 1 foot.

4. *Leaves quite glabrous, linear, linear-oblong, or nearly lanceolate : lower ones verticillate : upper ones alternate. Flowers small, usually subcapitate at the tops of the branches. Corolla hardly more than 3 lines long, with the spur.—Erect herbs.*

* *Calyx glabrous. Seeds ovate or oblong.*

72 L. MINUTIFLORA (Meyer, verz. pflanz. p. 109.) quite glabrous, glaucous; leaves oblong, acutish, verticillate or alternate ; flowers subspicate ; calycine segments linear-oblong, acutish ; corolla yellowish, small, hardly longer than the calycine segments ; spur very short, conical, straight; seeds obldng, full of impressed dots. ©. H. Native of Caucasus, near Baku.

Minute-flowered Toad-Flax. PI. 1 foot ?

73 L. AL'BIFRONS (Spreng. syst. 2. p. 793. Chav. antirrh. p. 156.) glaucous ; leaves nearly lanceolate : lower ones 3-4 in a whorl: superior ones alternate ; flowers subcapitate ; calycine segments linear-oblong, obtuse. ©. H. Native of Greece, in the Island of Rhodes. Ant. albifrons, Sibth. et Smith, fl. graec. t. 588. Leaves an inch long. Corolla white ? a little loiiger than the calyx ; spur very short, curved. Capsule opening by 6 small valves. Seeds obliquely ovoid; testa alveolate, blackish.

White-faced Toad-Flax. PI. ± to 1 foot.

* * *Calyx downy. Seeds discoid, marginate; disc smooth.*

74 L. MICRA'NTHA (Spreng. syst. 2. p. 794. Chav. ant. p. 156.) glaucous; lower leaves oblong-lanceolate, 3-4 in a whorl : superior ones alternate; flowers spicately racemose ; calycine segments linear-subspatulate, ciliated. ©. H. Native of Spain, in cultivated fields of Real Retiro; Sardinia, and Corsica ; Algiers; Island of Rhodes ; Levant; Caucasus, near Baku, and between Ba&u and Sallian. Ant. micranthum, Cav. icon. 1. p. *pi.* t. 69. f. 3. Willd. spec. 3. p. 246. Sibth. et Smith, fl. grsec. t. 587. L. parviflora, Desf. fl. atl. 2. p. 44. t. 137. Spreng. syst. 2. p. 793. Ant. parviflorum, Willd. spec. 3. p. 245. Pers. ench. 2. p. 156, but not of Jacq. Plant sometimes furnished with surculi. Leaves somewhat 3-nerved, acute, an inch long. Flowers small. Calyx clothed with glandular down. Corolla pale blue ; palate white ; spur incurved. Capsule opening by 6 valves. Seeds somewhat kidney-shaped, surrounded by a broad margin.

Small-flowered Toad-Flax. Fl. May, July. Clt. 1820. PI. to I foot.

75 L. ARVE'NSIS (Desf. fl. atl. 2. p. 45. D. C. fl. fr. 3. p. 588. Chav. antirrh. p. 157.) erect, branched or simple, downy at top ; leaves linear, bluntish, glaucous: lower ones 4 in a whorl: upper ones usually alternate ; flowers disposed in capitate racemes ; bracteas deflexed ; calycine segments linear-oblong, acutish, clothed with clammy down, as well as the pedicels.^ ©. H. Native of Europe, in sandy fields, particularly in the* south; southern provinces of France, Sicily, Italy, Greece, Peloponnesus, Levant, Barbary. L. carnosa, Mcench. meth. p. 523. Ant. arvense, Lin. spec. p. 855. ? Schkuhr, handb. f. 172.—Linaria arvensis, caerulea erecta, Bauh. pin. p. 213. Tourn. inst. 170. Dill. elth. 199. t. 163. f. 198. Herb glaucescent, downy at top, and often furnished with surculi at the base. Leaves glabrous, 6-12 lines long, reflexed, and revolute : lower ones 4-6 in a whorl. Corolla small, blue; spur curved, slender ; palate smoothish.

Var. ft, simplex (Chav. antirrh. p. 157.) flowers subcapitate; corolla yellow, sometimes elegantly striped with purple, a little larger than the species ; spur usually straight. ©. H. Native of the South of France, frequent; Lucania, Calabria, Spain, Sardinia; near Smyrna, and about Constantinople; Caucasus, about Baku; Barbary. L. simplex, D. C. fl. fr. 3. p. *588.* L. arvensis, var. Desf. fl. atl. *2.* p. 45. Ant. simplex, Willd. spec 3. p. 243. Tenore, fl. neap. *2.* p. 50. but not *of* Link. Ant. parviflorum, Jacq. icon. rar. 3. t. 499. but not of Desf. unjler Linaria. Ant. arvense, Lin. spec. p. *855.* var. *ftK* et y, Sibth. et Smith, fl. graec. t. 590. var. *ft.*—Cupan. pamph. 2. t. 159. Raf. t. 92. f. 2.—Column, ecphr. p. 299 and 300. icone.—Clus. hist. p. 321. icon.

Com Toad-Flax. Fl. July, Aug. Clt.? /3.1816. PI. 1 to 2 feet.

§ 5. *Leaves narrow, linear, linear-lanceolate, or nearly lanceolate, small: lower ones usually* 4 *in a whorl: superior ones alternate. Flowers usually capitately racemose at the tops of the branches, few; bracteas usually deflexed.—Commonly procumbent and diffuse herbs, furnished with numerous stem-formed branches.*

* *Seeds discoid, girded by broad, membranous margins ; disk smooth,*

76 L. MARGINA'TA (Desf. in act. soc. par. 1. p. *36.* t. 7. fl. atl. 2. p. 43. Chav. antirrh. p. 159.) glabrous; leaves linear-lanceolate, or linear, glaucous : lower ones verticillate, the rest alternate ; bracteas deflexed ; segments of the calyx linear-oblong, acutish, quite glabrous. 3/. H. Native on Mount Atlas, in the fissures of rocks near Tlemsen. Ant. marginatum, Lam. diet. 4. p. *355.* Willd. spec. 3. p. 248. Branches decumbent. Lower leaves 4-6 in a whorl, 1 to \\ inch long. Flowers on short pedicels. Corolla of a yellowish rust colour, striated, size of those of *L.vulgdris;* palate marked by 2 dark purple spots, bearded with white hairs on the lower margin ; spur longer than the corolla, straight, acute. Seeds convex on one side, and concave on the other.

Margined-seeded Toad-Flax. PI. decumbent.

77 L. TRISTIS (Mill. diet. ed. 8th. no. 8. fig. *2.* t. 166. Chav. antirrh. p. 160.) glaucous, downy at top; leaves linear, or linear-oblong : lower ones S-4 in a whorl: upper ones opposite, or alternate ; flowers approximate, sometimes nearly opposite J bracteas deflexed ; calycine segments linear-subspatulate, obtuse, downy. %. F. Native near Gibraltar. Ant. triste, Lin. syst. 465. Lam. diet. 4. p. 354. Curt. bot. mag. t. 74. Mart. hist. pi. rar. dec. *35.* f. 2.—Dill. elth. 201. t. *264.* f. I[9.9'] Leaves glabrous, obtuse. Corolla size of those of *L. vulgarly* nearly the colour of those of *Lotus jacobatus,* and all the shades from that to yellow; spur thick, striated, arched at the base, about equal m length to the corolla ; palate brown at the base, or yellow ; citron coloured at apex, bearded.

Var. ft. tenuifblia (Chav. antirrh. p. 160.) leaves very narrow ; flowers crowded, a little smaller; corolla sometimes purplish. 2/. H. Native along with the species. Ant. serugineum, Gouan. ill. p. *38.* Linaria tenuifolia seruginei colons, Bauh. pin. P- 2l§ *0 Tour ... P# 17o, Linkria His Panica II., Clus. hist. P- -

>SW-flowered Toad-Flax. Fl. July, Aug. Clt. 1722. Pi- decumbent.

78 L. SUPINA (Desf. fl. atl. 2. p. 44. D. C. fl. fr. 3. p. 5**; Chav. antirrh. p. 160.) diffuse, procumbent, or ascending* leaves linear, obtuse : lower ones 4-5 in a whorl : superior ones alternate; calycine segments linear, or linear subspatulate, pubescent, it. F. Native of the south and middle of France, in sandy places ; Piedmont; Italy and Spain; Barbary. **K ... Schrad. journ. 1799. vol. 2. p. 300. but not o Willd. Ant. bipunctatum, Thuill. fl. par. ed. 2. p. 311, but no ot Lin. nor Cav. L. filiformis, Mcench. meth. p. *523,* but n of Poir. under Ant. L. Thuilleri, Merat, fl. par. ed. 3d.

FIG. 47.



Native about Cairo, in deserts; and near Alexandria. Ant. Haelava, Forsk. fl. segypt. p. 111. Vahl, symb. 2. p. *66.* Root yellowish. Plant glabrous. Flowers 2-4 together at the tops of the branches. Bracteas often ciliated. Pedicels more or less hairy. Corolla sulphur coloured, or bluish violet; palate copper coloured, or orange; spur straight, acute, longer than the corolla, and paler. Capsule dehiscing by 6 teeth at apex. Seeds reniform, scrobiculate. The specific name is an alteration of the Arabic name of the plant *Haldoah.*

Hcelava Toad-Flax. Fl. July, Aug. Clt. 1803. PL proc.

81 L. LAXIFLORA (Desf. fl. atl. 2. p. 45. t. 138. Chav. antirrh. p. 165.) glabrous, decumbent, or ascending; leaves linear, glaucous: lower ones 4 in a whorl; the rest alternate; flowers on long pedicels; bracteas deflexed, much shorter than the pedicels; segments of the calyx ovate-lanceolate. ©. H. Native about Algiers, in corn-fields. Ant. laxiflorum, Willd. spec. 3. p. 242. Viv. fl. libyc. p. *33.* ? Branches decumbent at the base, and furnished with surculi. Leaves \ an inch long, obtuse. Corollas size of those of *L. alpina,* pale blue, or white; upper lip elongated; spur straight, nearly twice as long as the corolla; palate rather villous. Capsule dehiscing by 6 teeth at apex. Seeds angular, wrinkled.

Loose-flowered Toad-Flax. PL 5 to \ foot.

* * * *Seeds obliquely oval, attenuated at the base, convex on one side, and concave on the other, girded by a narrow margin; testa smooth, or tubercled.* (Chav. antirrh. t. 5. f. *35.)*

82 L. CANDOLLEI (Chav. antirrh. p. 165.) clothed with clammy down, procumbent, or ascending; leaves oblong-lanceolate, or ovate-lanceolate, acutish: lower ones 3-4 in a whorl; the rest alternate and opposite; flowers few, disposed in a subcapitate raceme; calycine segments ovate, acutish. ©. H. Native of the West *of* France, on rocks by the sea-side. L. saxatiiis, D. C. fl. fr. 3. p. 590, and 5. p. 409. icon. rar. gall. p. 5. t. 13, but not *of* Lin. under *Antirrhinum,* nor of Link, in *Flore Portugaise.* Branches glabrous at the base, and almost leafless, but downy and leafy at top. Leaves 2-3 lines long, rather downy. Corolla yellow, with a short spur; jfalate marked by 2 dots; lobes of upper lip obtuse.

De Candolle's Toad-Flax. Fl. June, Sept. Clt. 1819. PL procumbent.

83 L. ARENA'RIA (D. C. fl. fr. 5. p. 409. icon. rar. gall. 1. p. *5.* t. 14. Chav. antirrh. p. 166.) clothed with clammy down, much branched; lower leaves 4 in a whorl, oblong, obtuse: upper ones usually alternate, linear-lanceolate, acute; flowers *few,* disposed in racemose spikes, the raceme at length elongating; calycine segments lanceolate-linear, acute, exceeding the capsule. ©. H. Native *of* Britany, in sand by the sea-side, &c. Ant. arenarium, Poir. suppl. 4. p. *26.* Ant. pubescens, Pers. ench. *2.* p. 157, but not of Desf. cat. hort. par. Ant. saxatile, Bonam, pann. prod. p. *69,* but not of Lin. Ant. viscosum, Aubry, prog. morb. an. 9. p. 49, but not of Lin. Linaria maritima, minima, viscosa, foliis hirsutis; floribus luteis, Mor. hist. 1. p. 499. Tourn. inst. p. 171. Very like the preceding species, but is much more branched, the leaves narrower, the flowers smaller, the palate of the corolla without dots, and in the whole habit. The plant is generally erect. Corolla small, yellow; spur short; lobes of the upper lip acute, pale coloured.

Sand Toad-Flax. Fl. June, July. Clt. 1823. PL procumbent, or erect, \ foot.

84 L. SAXA'TILIS (Hoffm. et Link, fl. port. 1. p. *238.* t. 40. Chav. antirrh. p. 167.) clothed with clammy down, procumbent; lower leaves 4 in a whorl, almost lanceolate: upper ones alternate, linear-lanceolate, acute; flowers subcapitate; calycine segments narrow-lanceolate, hairy. If. H. Native of the

middle and west of Spain, in stony sandy places ; and of Portugal, in the province of Traz dos Montes, and near Setuval. L. glutindsa, Hoffm. et Link, fl. port. 1. p. 238. t. 39, exclusive of all the synonymes. Ant. lagopodioides, Lin. ill. suppl. p. £79.? Pers. ench. 2. p. 158.? Ant. Tournefortii, Poir. suppl. 4. p. 24. Ant. saxatile, Lin. mant. 416, exclusive of the syn. of Moris, amcen. 4. p. 277. spec p. 835. Pers. ench. 2. p. 157, but not of Bonam. Linaria Hispanica tenuifolia villosa et viscosa, Tourn. inst. p. 171. All parts of the plant clothed with glandular hairs. Leaves thickish, 6-8 in a whorl, *6-8* lines long. Corolla yellow ; palate marked with 2 fulvous spots, or lines, but sometimes without these spots or lines ; spur short, arched, acute. Capsule dehiscing by 4-6 valves. Seeds compressed, blackish, tubercled.

Far. /3, stricta (Chav. antirrh. p. 167.) branches erect, firm, simple ; leaves strict, adpressed to the branches at the base, and nearly all alternate; flowers smaller. ©. H. Native of the province of Segovia.

Stone Toad-Flax. PI. procumbent.

* * # * *Seeds discoid, orbicular, girded by a narrow margin; disk tubercled.* (Chav. antirrh. t. 5. f. 37.)

85 L. FONTANESIVNA (Chav. antirrh. p. 168.) plant ascending, or erect; leaves linear, obtuse, glabrous: lower ones 3-4 in a whorl, the rest alternate; flowers subcapitate ; bracteas deflexed ; calycine segments ovate-oblong, acute, pilose. ©. H. Native of Spain, in Valentia, in sandy places. L. gracilis, Desf. herb, but not of Spreng. Branches many from the same neck, pubescent at top; branchlets erect. Corollas size of those of *L. supina,* deep yellow ; spur pale coloured, length of corolla; palate glabrous. Capsule dehiscing by 6 valves at apex.

Desfontaines's Toad-Flax. PI. ascending, | to f foot.

86 L. POLYGONIFOLIA (Spreng. syst. 2. p. *795.* Chav. antirrh. p. 169.) procumbent; leaves ovate-lanceolate, or oblong, glabrous : lower ones 4 in a whorl: superior ones opposite and alternate ; flowers disposed in capitate racemes, on short pedicels ; calyx oblique, with lanceolate, or linear-lanceolate, acute, rather hispid segments. O. H. Native of Gibraltar. Ant. polygonifolium, Poir. suppl. 4. p. 26. Branches naked, and downy under the racemes. Flowers few, on downy pedicels. Corolla white, or pale sulphur coloured ; palate yellow; spur acute, straightish, about equal in length to the corolla. Capsule dehiscing by 4-6 valves at apex.

Polygonum-leaved Toad-Flax. PL procumbent.

87 L. BROUSSONE'TII (Poir. suppl. 4. p. 23. Chav. antirrh. p. 169.) procumbent or ascending; leaves linear or linear-lanceolate : lower ones 4 in a whorl: superior ones alternate and opposite; flowers 2-3, at the tops of the branches; bracteas pendulous, much longer than the pedicels; segments of the calyx linear-oblong, acute. ©. H. Native of Barbary; and Portugal about Lisbon. Branches clothed with short glandular down at top ; furnished with sterile surculi at the base. Leaves glabrous, 4-6 lines long : those on the floriferous branches the broadest. Calyx glabrous, or slightly downy., Corolla size of those of *L. alpina.* Capsule dehiscing by 6 valves

BroussonneVs Toad-Flax. PI. procumbent

88 L. PAUCIFLORA (Bonpl. jard. malm, et nav. 1 p 48 t 18. Chav. antirrh. p. 170.) quite glabrous, glaucous! leaves linear, acutish: lower ones 4 in a whorl: superior ones alternate ; flowers terminal, few ; pedicels longer than the bracteas, which are small; segments of the calyx oval, with ciliated margins. ©.? H. Native country unknown; but probably of Spain or Portugal. Corolla violaceous, size of those of *L. vulgaris;* lobes of the upper lip narrow; palate white, marked with dark violet spots ; spur arched, 3 times longer than the corolla. Bonpland says this species has some analogy with *L. laxiflora,* Desf., but differs in the larger flowers ; but according to Chavannes 1. c. it approaches nearest to *L. amethystea.*

Few-flowered Toad-Flax. PI.

89 L. AMETHY'STEA (Hoffm. et Link, fl. port.]* p. *253.* t. 47. Chav. antirrh. p. 170.) plant ascending, downy at top; leaves almost linear, glabrous : lower ones 4-5 in a whorl: superior ones alternate; calyx oblique, with oblong-ovate, acute segments; racemes few-flowered, rather loose. ©. H. Native of Portugal and Spain, in corn-fields. Ant. bipunctatum, Cav. icon. 1. p. 20. t. 33. f. 1. but not of Lin. nor hort. Ant. elegans, Hort. reg. par. Pers. ench. *2.* p. 156. Ant. subalpinum, Brot. fl. lus. 1. p. 196. Ant. amethysteum, Lam. diet. 4. p. 353.' Brot. fl. lus. 1. p. 196. Willd. spec. 3. p. 197. Branches clothed with short clammy hairs above. Leaves glaucescent, h an inch long. Corolla violaceous, and nearly white ; palate pale yellow, marked with blue dots ; spur purplish, straight, acute, longer than the corolla. Capsule dehiscing by 4-6 valves at apex.

Var.fi, flava (Chav. antirrh. p. 170.) corolla yellow ; palate marked with dark purple spots. ©. H. Native of Portugal, about Lisbon, near the valley of Alcantara. L. multipunctata, Hoffm. et Link, fl. port. 1. p. 254. t. 48. Ant. multipunctatum, Brot. fl. lus. 1. p. 195.

Amethyst-fiow&red Toad-Flax. Fl. June, July. Clt. 1816. PL | to 1 foot.

90 L. GLAUCA (Spreng. syst. *2.* p. 796. Rchb. fl. germ, sect. *2.* p. *375.* Chav. antirrh. p. 171.) plant glaucous, grey, branched ; leaves thickish, obtuse : lower ones linear-oblong, 4 in a whorl, the rest subulate, and for the most part alternate ; flowers few, capitellate ; calycine segments very short, linear-lanceolate, acute, downy. ©. H. Native of Spain, Portugal, and Italy, in fields. L. bipunet&ta, var. glauca, Hoffm. *et* Link, fl. port. 1. p. *255.* Ant. glaucum, Lin. amoen. 4. p. 277. spec, p, *856.* exclusive of the syn. of Buxb. Lam. diet. 4. p. 354. exclusive of the synonymes. Willd. spec. 3. p. *Z**-* elusive of the syn. but not of Lapeyr. nor Thore. Linaria carnosis cinereis, Bauh. pin. p. 213. Tourn. inst. p. 170. elegant, rather downy towards the top. Branches erect ascending. Leaves 4-6 lines long. Calyxes downy at the a little ciliated. Corolla yellow ; palate sometimes bipunc spur length of corolla, a little arched, pale, striped wi let. Capsule dehiscing by 6 valves.

Var.fi, bipunctata (Chav. antirrh. p. 172.) corolla the palate marked by 2 dark purple spots ; branches and lets downy. ©. H. Native of the Algarves, between nova and Lagoa; also of Spain, about Aranjuez. L. bipunctata, Dum. Cours. bot. cult. ed. 1. Ait. hort. kew. ed. 2d. vol. 4. p. 13. exclusive of tne Bauh. Ant. capitellatum, Lam. diet. 4. p. 358. Vhore, cum, Cav. icon. 1. p. 20. t. 33. f. 2. but not of Lin., nor Lapeyr. Ant. bipunctatum, Lin. spec. p. 853. exc the syn. of Bauh., but not of Cav. nor hort.

Var. 7, *multicaulis* (Chav. antirrh. p. 172.) flowers a little smaller; corolla pale yellow ; coloured ; spur purplish or violet. ©. H. Native the species ; near Mediola, Cambess. L. multicaulis, ed. 8th. no. 7. * Ait. hort. kew. ed. 2d. vol. 4. of the syn. of Bocc. Spreng. syst. exclusive *oi* Brot. et Poir. Ant. tricolor, Pourr. in herb. ticaule, Lin. spec. p. *856.* exclusive of the syn. of dict. 4. p. 357. Willd. spec. 3. p. 247. exclusive *oi* nymes.

GfaucoM* Toad-Flax. Fl. June, Aug. Clt. 1800 ; y. 1728. PL ½ to 1 foot.

91 L. DIFFU^SA (Hoffm. et Link, fl. port. 1. P-

Chav. antirr

lo »« ones^'/'178"-1 diffl.Se, down y; leaves linear, flattish : distant • -«o ln ^ wtlorl: superior ones scattered ; flowers l've of Pn5me n(& ofthe ca'y x lanceolate, acute. 0. H. Na- Leaves 6 li l between Abrantes and Punpete. Down clammy. ed ; spur "T1 ong> Corolla sma l'' blue ! Palate orange-colour- ZT i"curved> longer than the corolla.

Toad-Flax. Fl. June, Aug. Clt. 1826. PI. 1 foot.

† *16 a mii y of the two following species is uncertain, the capsules being unknown.*

Q L,

branched f ves ovate- blong, on short petioles: lower ones Pposite- ln erior oneS alternate 5 flowers distant, nearly ses- sile ? calycin e Se ments rge, oblong, obtuse, ciliated. ©. H. Native of Pe S ^13 Stem branched rom the base. Corollas ated with depper ines 5 palate dotted ; spur shor acute- Cap" ft base ... f.. on g ani f uUm f> but larger, bluish, and stri- Sule n ot seen.

^ Toad.Flax. Pi. j to *1* foot.

glaucou s, *Jev* (D C* mss, Chav- antirrh. p. 174.) plant S l tern «e : tho^L f S labrous; leaves linear, very narrow, T Ver s spicatPlf o • u6 SUrculi somewhat verticillate, crowded ; S H- Na tv / T | m0Se; cal y cine segments short, lanceolate. » lls about M?1 o l Pain> near Cerro Ne S r0 5 and on sterile *ers, ench. 2 Ant. caesium, Lag. exsic. in herb. D. C. Ur culi procf r P# 57, Root brown- Branches ascending. 8h ? rter, than ZK aveS 2„4 lines lon S> obtuse, Pedicels Palate much ihi 7|, Mvlcr« » Corolla size of those of *L. vulgHris;* *Grey* S f earded- Capsule not seen.

^oad^Flax. PI. J to 1 foot, ascending.

94 I t *Species hardly known.*

ate > 3 in a whi Preng, S ^st 2, P- 794,) leaves l»near-lanceo- lowers racemo • ^r scattered ; stem strict, glabrous at top ; Z. H. NaH Se throat of corolla gaping; spur very short, Lin. pec. p. gto - tne South of Europe. Ant. linarioides, variety of *L. vui^* racemos a, Steud. nom. Perhaps only a Gaping-flowered Toad-flax. Fl. June, July. Clt. 1818. Pl. 1 to 2 feet.

95 L. ocymifolia (Spreng. syst. 2. p. 793.) lower leaves 4 in a whorl, ovate, blon ? su perior ones linear-lanceolate; stem Humblp" &TMple> villous, few-flowered; spur very short. c. Native °t fepain. Ant. Ocymifdlium, Pourr. ex Spreng.

Mu-leaved Toad-Flax. Pl. ½ foot?

96 L. t ' ' ' ' (Sp reng. syst. 2. p. 795.) leaves *3* in a whorl, and Scatt ered linear, rather downy ; stem slender, simple, few- flow ered ; ca'v* hispid ; lower lip of corolla 2-lobed ; spur elongated, ... Native of the North of Africa, in the Great Syrtus. Ant. tica . Viv. fl. libyc. p. *33.*

Slender Toad-Flax. foot.

97 L. (CA ica (Mussin2> ex Spreng. syst. *2.* p. 790.) leaves scatter d ^ o n g mucronate- y toothed> P ilose 5 peduncles axil- lary, f e On gated, filiform, J ca lyx green, acute; stem procumbent, very P ^ . A lf Native of Caucasus. Perhaps a variety of L. spuria. Caucasian Toad-flax. Fl. June> Augi Clt/1818. PLpro. cumbens.

98 L. Pu ' ' ' (D. C* hort* mon sp. p. 121.) lower leaves vertic llate :°unnp A stem almost sim- ple, ! ^ e r s dVnsel ^^ Scattered> d glabrous ; **itif af Ve cou racemos e ; spur exceeding the calyx. . % ' hitry unknown. Probably a variety of Z.

99 T Toad-Flax. Fl. Jul y» Aug. Clt,? Pl. 3 to 4 feet. Fu ja (Lag. ex Spreng. syst. 2. -te and crowded,

spur straight, subulate, elongated. ©• H. Native of Spain, about Madrid.

Thread-leaved Toad-Flax. PL dwarf?

100 L. DIANTHIFOLIA (Henk. adumb. pi. hort. hal. ex Chav. antirrh. p. 181.) Nothing is known of this plant but the name.

Pink-leaved Toad-Flax. PI. ?

101 L. POLYGONIIFOLIA (Hoffm. et Link, fl. port. 1. p. 248. t. 44.) leaves subverticillate and opposite, sessile, ovate, glabrous as well as the prostrate stem; flowers subspicate; calyx hispid. 0. H. Native of Portugal.

Polygonum-leaved Toad- Flax. PI. prostrate.

102 L. RUPE'STRIS (Meyer, verz. pflanz. p. 110.) perennial, glabrous, glaucescent; stems slender, much branched, diffuse ; leaves scattered, nearly linear, acutish ; racemes few-flowered, loose ; calycine segments nearly linear, obtuse, smoothish, much shorter than the corolla; spur subulate, almost erect, rather shorter than the corolla ; seeds discoid, winged, very smooth. %. H. Native of Caucasus, on rocks at the falls of the Terek, near Darial, at the altitude of 600 to 650 hexapods. Gorolla yellow.

Rock Toad-Flax. PI. diffuse.

Cult. All the species of this genus are elegant, and therefore well fitted for decorating flower borders. They grow well in common garden earth, but prefer a dry sandy soil. The seeds of annual species require only to be sown in the open border, where they are intended to remain. The perennial kinds are readily propagated by division of the root, or by seeds. The *L. alpina, L. supina, L. tristis,* and some others, are well fitted for ornamenting rock-work, or to be grown on dry banks, or in pots, and placed among other alpine plants ; these in winter require to be sheltered from the frost, as well as all those marked frame or greenhouse. A great part of the species are readily increased by the surculi, which will strike root readily if planted in sand; and fill are to be increased by seed.

VIII. ANARRHTNUM (from *ava, ana,* without; and *fa$ rhin,* a snout; in reference to the corolla being without a spur, or furnished with a very short one.) Desf. fl. atl. 2. p. 51. D. C. fl. fr. 3. p. 594. Chav. antirrh. p. 175.—Dodartia species, Mill. diet. 1.—Antirrhinum species, Lin. gen. Linaria species, lourn. inst. p. 169.

LIN. SYST. *Didynamia, Angiospermia.* Calyx deeply 5-cleft, cup-shaped at the base, contracted above the middle, incomplete in aestivation ; lobes lying over each other at top. Corolla tubular, bilabiate ; tube curved ; spur very short or wanting ; throat open ; lobes of the upper lip erect, at length reflexed ; lobes of the lower lip spreading, all more or less emarginate, and nearly equal. Stamens 4, fertile, with a short rudiment of a fifth; filaments equal. Anthers reniform, 1-celled from the confluence of the cells, filled with white pollen. Ovarium globose. Style thickened, and capitate at apex ; stigma obtuse, conical, subemarginate, half immersed in the top of the style. Capsule chartaceous, compressedly spherical or globose ; cells equal; each cell dehiscing by an oblong univalvate pore under the apex; the upper cell usually indehiscent. Seeds oval, small; testa granularly tubercled or muricated.—Biennial or perennial plants, with a slender habit. Radical leaves usually rosulate, rarely wanting; cauline and rameal leaves palmate-parted, or toothed at the apex: superior ones quite entire. Flowers small, beautiful, drooping, disposed in long spike-formed, twiggy, and interrupted racemes.

§ 1. *Corolla spurred. Rameal leaves divided.*

1 A. BELLIDIFOLIUM (Desf. fl. atl. *2.* p. 51. Chav. antirrh. p. 176. t. 10.) glabrous ; radical leaves spatulate or obovate-lanceolate, deeply toothed, rosulate: rameal ones deeply 3-7-parted ; divisions linpur .' ro^mnc ,r— « I _ J - i

H. Native of France, among rubbish, and in humid places; Pyrenees; Piedmont; Portugal; Switzerland; Germany; Syria, near Damascus; and Arabia, on Mount Kurma. Hoffm. et Link, fl. port. 1. p. 226. t. 82. Linana bellidifdlia, Dum. Cours. bot. cult. *3,* p. 3, Antirrhinum, bellidifdlium, Lin. spec. 860. mant. no. *2.*— Dodon. pempt. 184. f. 1.—Dalech. hist. lugd. 115. f. *2.*—Bauh. prod. p. iftti. —Bauh. hist. p. 459. f. 2. —Chabr. sciagr. 481. f. 5. ...ot fusiform. Corolla white or pale blue, variegated with violet; spur slender, acute,^arched, very short. Testa of seed muricated. Bracteas linear *Daisy-leaved* Anarrhinum. Fl. June, Aug. Clt. 1629. PI. I to 1½ foot.

2 A. DORMA'NSIANUM (Brot. fl. lus. 1. p. 199. Chav. antirrh. 177.) villous; radical leaves subspatulate, deeply toothed: rameal ones tripartite; middle lobe large, lanceolate, more or less denticulated. *S.* H. Native of the North of Portugal, in humid places. *S^. pubescens,* Hort. ? A. hirsutum, bellidis foho o ~ V... Port# 1# P... *2U, u 33* Linaria Lusitanica creed sh, Lin. ... 6 Gt Villoso Tourn. inst. P. TM*. Branches Shn ... lanceolate, quite entire. Radical leaves pubescent. Bracteas hosJ, *nf* S; preceding, rather pilose, of a whitish sulphur colour, the spur incurved, about equal in length to the tube. Testa the Preceding. Wn> WrinkIed, Perha Ps only a downy variety of *Douro* Anarrhinum. Fl. June, Sept. Clt. 1818. PI. 1 to 1J foot.

3 A. PEDA^TUM (Desf. fl. atl. *2.* p. 51. t. 141. Chav. antirrh. p. 178.) glabrous at bottom, villous above; radical leaves oblong, deeply toothed, pilose, erectish; rameal leaves deeply and palmately 5-9-parted (pedate, Desf.) glabrous: divisions broad-linear, acute; racemes short, tapering upwards. *$.* ? H. Native of Algiers, on arid hills. Flowers on short pedicels, somewhat horizontal. Bracteas linear-lanceolate, villous, ciliated. Calyx hairy. Corolla hairy, white; spur short, slender, incurved. *Pedate-leaved* Anarrhinum. PI. I to lj foot.

§ *2. Corolla without a spur. Rameal leaves quite entire or toothed.*

4 A. FRUTICOSUM (Desf. fl. atl. p. *52.* t. 142. Chav. antirrh. p. 179.) glabrous; stem short, suffruticose, branched; branches elongated, twiggy; lower leaves cuneiform or spatulate, for the most part tridentate at apex: superior ones oblong or oblong-linear, quite entire; raceme elongated, interrupted. T? . F. Native of Mount Atlas, near Tlemsen, Mascar, and Cafsa. Stem sometimes reduced to a short caudex. Racemes twiggy. Flowers small. Bracteas linear, acute. Corolla white, glabrous. Seeds scabrous from elevated dots.

Shrubby Anarrhinum. Fl. July, Sept. Clt. 1826. Shrub *2* to *3* feet.

Cult. Plants of the most easy culture; except that, if the winter prove severe, they require protection from frost. They are all increased by seeds.

IX. GALVE'ZIA (named by Dombey, after D. Galvez, of Lima.) Domb. mss. Juss. gen. p. 119. but not of Ruiz, et Pav. —Dodartia species, Ruiz, et Pav. prod. fl. per. p. *56.* Agassizia, Chav. antirrh. p. 180. t. 11.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted; segments ovate-oblong, acute, with a quincuncial aestivation. Corolla tubular, bilabiate; tube elongated, subcylindrical, ventricose at the base; lobes of the upper lip erect, ovate; of the lower lip spreading, ovate-roundish, nearly equal. Stamens 4, fertile, didynamous, without any rudiment of a fifth; filaments terete; anthers 2-celled, replete with yellow pollen. Ovarium roundish; style terete, thickened at top; stigma emarginate, somewhat 2-lobed. Capsule globose, ventricose, a little depressed; each cell opening by an irregular hole towards the apex. Seed numerous, oblong, truncate, small, fixed to a round placenta; testa ribbed lengthwise, engraven by small pits. Plant suffruticose. Leaves feather-nerved, petiolate, alternate and opposite, quite entire. Flowers beautiful, axillary, on long pedicels.

1 G. LTME'NSIS (Domb. mss. ex Juss. gen. p. 119.) b. G. Native of Peru, near Lima. Agassizia Limensis, Chav. antirrh. p. 180. t. 11. Plant much branched. Branches V^ Unarmed clothed with glandular down. Leaves ovate-lanceolate, referrible in form to those of *Myrtus communis,* 1 to 1\ inch long, mucronate, downy: lower ones usually opposite: upper ones alternate, and more distant: those on the branches are nearly all opposite, more approximate, and much smaller. Pedicels bent above the middle. Corolla scarlet, *6-8* lines long, downy. Filaments furnished with glandular hairs, especially at base and apex. Anthers glabrous or downy.

Lima Galvezia. Shrub 1 to *3* feet.

Cult. This is a very curious and rather pretty shrub. It will grow well in light rich soil; and may be propagated by cuttings and seeds.

X. MAURA'NDYA (named in honour of Dr. Maurandy^ the botanical professor at Carthagena.) Ortega, nov. gen. hort. matr. dec. 11. p. 21. Jacq. schoenbr. *3.* p. 20. t. 288. H. B. et Kunth, nov. gen. amer. *2.* p. 291. Chav. antirrh. p. *77.*- Ustèria, Cav. icon. *2.* p. 15. but not of Willd.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, with a quincuncial sestivation. Corolla personate; tube obscurely tetragonal, saccate at the base, ventricose downwards; lobes roundish or ovate, emarginate or entire; those of the upper lip erect, and those of the lower lip spreading; palate closing the throat, or rilled up by *2* plicse, which are drawn out nearly to the base of the tube. Stamens 4, fertile, didynamous, with the short rudiment of a -fifth. Filaments of fertile stamens villous at the base, and dilated; anthers 2-celled; cells oblong. Ovarium ovoid; style subulate; stigma obtuse, emarginate. Capsule ovate-globose, oblique at the base, rather compressed, membranous; each cell dehiscing at top by 5 reflexed valves. Seeds nearly ovate, truncate at apex; testa black, furnished with tubercles.—Climbing, evergreen, suffruticose herbs; branches slender, elongated. Leaves alternate, on long petioles; petioles twining; limb cordate, 5-7-nerved; nerves palmate. Flowers large, showy, solitary from the axils of the leaves, on long twining pedicels.

§ 1. *Throat of corolla pervious.*

1 M. BARCLAYA'NA (Lindl. bot. reg. t. 1108. Sweet, fl. gard. icone. Chav. antirrh. p. *77.)* leaves cordate, acuminated: young ones somewhat hastate; calycine segments linear-lanceolate, very acute, clothed with glandular hairs. F? . ^*j.* G. Native of Mexico. Branches and leaves glabrous. Lower and middle leaves obscurely 5-lobed; lobes acuminated. Corolla lj to *2* inches long; tube downy, greenish, curved; lobes ovate, roundish, emarginate, of a violet purple colour. Filaments subclavate at top, furnished with short glandular hairs. Capsule hidden by the calyx, (fig. 48.)

FIG. 48.



Barclay's Maurandya. Fl. Year. Clt. 1825. Sh. climbing. leave7y TKENS (ort, nov# Sen- hort. madr. dec. 11. p. ments]. ?r le most Part cordate-hastate; calycine seg- Mexico, Teolate, Subulate, glabrous. \>. w. G. Native of mag. 460 *rut.* schcenbr. 3. p. 20. t. *288.* Curt. bot. P- 160 'n^ a ntirrh- P- 78. M. scandens, Pers. ench. 2. bot, rep. t *QT* p indens> Cav* icon- 2- P- 15. t. 116. Andr. Segment<? v\u tant quite glabrous. Margins of calycine or reddish [scarious- Corolla \\ inch long, pale violet limb violace ema rginate lobes; tube variously furrowed; place of the ^' or Pu rP bsn ~v*o et > - P ucae white, occupying the Su*e about P e* Fila«ients rather villous at the base. Cap- «23L eqU al ln*len S th t0 ^e calyx.

cl tabiD£/ g Mau randya. Fl. Year. Clt. 1796. Shrub

3 M Palate *Prominent in the throat of the corolla.*

an tirrh. p N 7o R^INIFLORA **(VV^ild.** hort. berol. 2. t. 83. Chav. cal yci ne seo^ GS for the most Part trian gularly hastate; ^ G- Nativ ent f *M** trian gular> acute> q uite glabrous. J? . *l^* & the vallp 6 r c exico> amon g bushes between Salamanca ims> bot m , Ja S°» at the altitude of 930 hexapods. 29].' jj,' "»g. 1643. H. B. et Kunth, nov. gen. amer. 2. p. •J 805 -nov. f rSonata> Sesse, mss. Lag. elench. hort. matr. J0 5- Plan? 611 - Ust^ria antirrhiniflora, Poir. suppl. 5. p. oles acute qUUe- & labrous- The side lobes of leaves or auri- [alla lmrdi v Some tlmeS unidentate towards the petioles. Co- es: palato an lnch l0ng> bl ish, glabrous, with quite entire marke d by b r straw col oured, furnished with short hairs, and — 5 onp^tio es* Capsule shorter than the calycine seg- Sn <>*Pdral Cdls often sraaller than the other. hrub *dltntr ored* Maurandva- Fl. Year. Clt. 1814. cli^ult% Th^'ri, ^^bina, e vdS llke the next genus, is composed of elegant, Pant s; ° for Jh- r6 n> ever ~ flowerin g herbaceous, or suffruticose ^^ens. A tbe rioh son suits them best, and they are rea" 2 llv increased b A^r young If cntt* ^ seecls, which generally ripen in abundance ; or the specip f Which strike root readil y under a hand-glass, wanted a?ain?t V r? well during summer, and flower freely n.> to whirl fu m the °P en air» or at the bottom of trellis- qUlre tb e pro/p -y Should be trained 5 but in wi»ter they *re- P'otect,on of a greenhouse.

XI. LOP

WPMa^e/.S? SPE'?MUM (from Xo^, *lophos,* a crest; and **D** h a **crest-like*** a ? ; in reference to the seed being furnished S,o n> in- Lin ! Wmgi which is emarginate at both ends.) D. \>% fli Jj- d. ra ns. 15. p. 349. Chav. antirrh. p. *75.* t. 1. r Cino n* S> t# 68, and 75.—Besleria species, Sesse et

adynamia, Angiospérmia. Calyx 5-parted ; .^ate-lanceolate, with a quincuncial aestiva- ed> contr* b^ate» tubular; tube campanulate, a little ward at the h ded abov e the base, elongated, gibbous for- j Ws of Dase» dilated at the throat, and furnished with rTv Ji P snr 7 o Ven y ellow ha irs ; upper lip almost erect; dul ent of a Iffl* Stamens 4» didynamous, with a short ba at ton o J Filaments of fertile stamens terete, glanc a S? ; cells of clot hed with glandular hairs and scales at the si,? tate> whlf ant hers elliptic. **Ovarium clothed with long,** thN lob o s e hairs, y g la brous ; stima bilamellate. Cap- >a K x, S^ red ^ tbe ca^x» bursting irregularly under *ty^ Xed to l S V6r^ nunierous> ovate-truncate, tubercled, in f gin w hich ^ G P^acentas> girded by a membranous reticulate to a Cre lS ertla rginate at both base and apex, referrible est.—Evergreen, perennial, herbaceous, or suffruticose climbing plants. Stems flexuous; branches alternate, Leaves usually alternate, petiolate, lobed. Flowers large, pendulous, axillary, solitary, showy, on long, twisted, terete pedicels.

1 L. SCA'NDENS (D. Don, in Lin. trans. 15. p. 349.) leaves cordate, acuminated, deeply serrated, hairy, 5-nerved; peduncles bractless; stem herbaceous. I? . vy. G. Native of Mexico. Besleria scandens, Sesse et Mocino, mss. Branches clothed with soft viscid hairs. Leaves 3-4 inches long, and 2-3 broad. Flowers pendulous. Peduncles and calyx hairy. Corolla large, showy, purplish-violet.

Climbing Lophospermum. Clt. 1834. Shrub climbing.

2 L. ERUBE'SCENS (D. Don, in Sweet, fl. gard. n. s. t. 08.) branches clothed with articulated, short, viscid hairs ; leaves cordate, more or less distinctly 5-lobed, downy ; middle lobe large: lobes mucronate, crenated or deeply serrated: pedicels villous, bractless. \. w. G. Native of Mexico, about Jalapa. L. scandens,.Hook. bot. mag. 3037. and 3038. Sweet, fl. gard. n. s. t. *68.* Lindl. bot. reg. 1381. Chav. antirrh. p. 75. t. 1. but not of D. Don. Leaves large, canescent. Calycine segments entire, and sometimes furnished with one or two teeth : the 2 outer ones the largest, Corolla large, showy, rose-coloured, beset with capitate hairs ; tube whitish beneath, marbled in various ways inside; lobes of limb generally subemarginate. Capsule downy.

Reddish-Cowered Lophospermum. Fl. June, Oct. Clt. 1830. Shrub climbing.

3 L. ATROSANGUI'NEUM (ZUCC. abhandl. acad. wiss. 1*829,* 1830. p. 305. t. 13.) leaves cordate, acuminated, coarsely and dentately serrated ; calyx semiquinquefid, spreading; corolla tubular ; filaments simple. F?. vy. G. Native *of* Mexico. L. rhodochiton, D. Don, in Sweet, fl. gard. n. s. t. 250. Rhodochiton volubile, Zucc. Lindl. bot. reg. t. 1755. Plant clothed with shining jointed hairs. Young branches purple. Leaves 5-nerved, slimy to the touch, purple beneath, about 3 inches long, and nearly the same in breadth ; petioles purple. Flowers pendulous. Peduncles frequently twisted, finally becoming glabrous and shining, as well as the calyx. Calyx spreading, pale purple, deciduous to the middle. Corolla funnel-shaped, of a dark purple colour, clothed with white glandular hairs; throat cylindrical, hardly ventricose; lobes of limb oval, connivent, obtuse : the lower one the longest. Capsule spherical.

Red-coated Lophospermum. Fl. May, Aug. Clt. 1832. Shrub climbing.

Cult. For culture and propagation see *Maurdndya,* above.

XII. NEME'SIA (a name applied by Dioscorides *to* a kind of Antirrhinum.) Vent. malm. p. 41. t. 41. Pers. ench.^ *2.* p. 159.—Antirrhinum, species *of* Lin. and Thunb.—Linaria species, Spreng.

LIN. SYST. *Didynamia, Angiospérmia.* Calyx 5-parted. Corolla personate, furnished with a spur at the base ; upper lip 4-cleft: lower one emarginate ; palate prominent. Stamens 4, didynamous. Capsule compressed, truncate, oblong, 2-celled, 2-valved ; valves keeled. Seeds numerous, linear, girded by a membrane. — Annual or perennial herbaceous plants ; with opposite or verticillate leaves, and terminal racemes of flowers. Corollas usually purple.

FIG. 49.



1 N. FJE'TENS (Vent. malm. 1. c.) leaves opposite, lanceo-

late, acute, denticulated : upper ones entire, glabrous ; flowers m terminal bracteate racemes. Tp. G. Native of the Cape of Good Hope. Antirrhinum fruticans, Thunb. fl. cap. 2. p. 483. Linaria fruticans, Spreng. syst. 2. p. 789. Corolla nearly white; palate yellow, (fig. 49.)

Stinking Nemesia. Fl. April, Sept. Clt. 1798. Shrub 1 to 2 feet.

2 N. LINEVRIS (Vent. 1. c. Pers. ench. 2. p. 159.) leaves opposite, linear, quite entire; flowers disposed in corymbose racemes. %. ? G. Native of the Cape of Good Hope. Corollas of a coppery red colour.

Linear-leaved Nemesia. PL 1 foot ?

3 N. CIIAMJEDRIFOLIA (Vent. 1. c.) glabrous ; leaves opposite, ovate, serrated, petiolate ; peduncles axillary, 1-flowered. 2/ . G. Native of the Cape of Good Hope. Antirrhinum macrocarpum, Ait. hort. kew. 2. p. *335.* Willd. spec. 3. p. 249. Ant. scabrum, Thunb. prod. p. 1051. fl. cap. 2. p. 483. Linaria sc^bra, Spreng. syst. 2. p. 792. Corollas purple ? Stem tetragonal. Leaves an inch long. Peduncles shorter than the leaves.

Germander-leaved Nemesia. PL 1 to 2 feet.

4 N. BICORNE (Pers. ench. 2. p. 159.) leaves opposite, ovate-oblong, serrated ; stem erect; flowers racemose; capsule 2-horned, subdivaricate. 0. G. Native of the Cape of Good Hope. Antirrhinum bicorne, Lin. amcen. acad. 6. afr. p. 17. syst. 14. p. *559.* Thunb. prod. p. 105.—Burm. afr. 211. t. *75.* f. 3. Leaves numerous. Stem orect.

Two-horned-capsuled Nemesia. Fl. July, Aug. Clt. 1774. PI. 1 to 2 feet.

5 N. BARBATUM ; leaves opposite, ovate, serrated; stem erect, herbaceous; peduncles axillary, 1-flowered; nectary didymous ; corolla bearded. ©.? G. Native of the Cape of Good Hope. Antirrhinum barbatum, Thunb. fl. cap. 2. p. 482. prod. p. 105.

Bearded Nemesia. PL

6 N. THUNBE'RGII ; leaves opposite, linear, glabrous; branches elongated; racemes terminal.—Native of the Cape of Good Hope. Antirrhinum Capense, Thunb. fl. cap. 2. p. 481. Linaria Capensis, Spreng. syst. 2. p. 796.

Thunberg's Nemesia. PL 1 to 2 feet.

7 N. PA'TENS ; leaves opposite, nearly sessile, lanceolate, acute, nearly entire, glabrous ; flowers terminal, solitary. 1/. G. ? Native of the Cape of Good Hope. Antirrhinum patens, Thunb. fl. cap. 2. p. 482. Linaria patens, Spreng. syst. 2. **p. *793.***

Spreading Nemesia. PI. ?

8 N. DENTA'TA ; leaves sessile, linear, toothed, alternate; flowers racemose, on long peduncles, terminal; spur obtuse; stem nearly simple. ©. G. Native *of* Monomotapo. Antirrhinum dentatum, Poir. suppl. 4. p. *22.* Flowers pale purple.

Toothed-leaved Nemesia. PL 1 to \\ foot.

Cult. For culture and propagation see *Dopatrium, p. 530.*

XIIP. LEUCOPHY'LLUM (from *XEVKOG, leukos,* white ; and *(j)v\\ov, phyllon,* a leaf; in reference to the whiteness of the leaves.) Humb. et Bonpl. pi. aequin. 2. p. *95.* t. 109. H. B. et Kunth, nov. gen. 2. p. 361.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, equal. Corolla tubularly campanulate, exceeding the calyx; limb bilabiate ; upper lip 2 lobed : lower one trifid ; the middle segment the broadest; palate convex ? spotted. Stamens 4, didynamous, inclosed; cells of anthers divaricate. Stigma undivided. Capsule 2-celled ; cells many-seeded.—A much branched shrub, densely clothed with white tomentum. Leaves alternate, quite entire, or almost so. Flowers axillary, solitary, violaceous.

1 L. AMBI'GUUM (Humb. et. Bonpl. 1. c.) T? . G. Native of Mexico, near Actopan, at the altitude of 1050 hexapods. Branches scattered, retroflexed. Leaves elliptic, obtuse, acutish at the base, 6-11 lines long. Corolla violaceous ; palate spotted with orange colour.

Ambiguous Leucophyllum. Shrub 5 to 8 feet.

Cult. For culture and propagation see *Galvezia,* p. *532.*

Tribe III.

GRATIO'LEJE (this tribe contains plants agreeing with the genus *Gratiola* in the characters given below.) D. Don, in edinb. phil. journ. vol. 19. July, 1835. Calyx usually tubular, 5-cleft. Corolla tubular, ventricosdj sometimes personate ; limb 5-lobed, bilabiate, or nearly equal. Stamens 4, didynamous, inclosed, sometimes 2 of which are sterile ; cells of anthers diverging, distinct at apex. Stigma usually bilamellate. Capsule often membranous, rarely subunilocular. Dissepiment membranous, formed by the inflexed margins of the valves ; placentas spongy, at length free. Seeds with a somewhat crustaceous testa. Albumen fleshy. Embryo almost the length of the seed. Herbs, rarely under-shrubs, natives of the temperate parts of the globe ; or in marshy places within the tropics. Leaves opposite or verticillate. Flowers axillary or terminal^ usually yellow or purple.

§ 1. *Stamens* 4, 2 *of which are sterile.*

XIV. GRATIVOLA (from *gratia,* grace; on account of the supposed medicinal good qualities.) R. Br. prod. p. 435. Lam. ill. 116. f. 1. Gratiola species of Lin. and other authors.

LIN. SYST. *Didndria, Monogynia.* Calyx 5-parted. Corolla tubular, bilabiate ; upper lip 2-lobed : lower one trifid, equal. Stamens 4, 2 of which bear anthers, and 2 or 3 are sterile. Stigma bilamellate. Capsule 4-valved ; dissepiment contrary, separable but slowly from the inflexed edges of the valves.—Glabrous herbs, with opposite leaves, and axillary, usually bibracteate flowers.

Species natives of Europe.

1 G. OFFICINA'LIS (Lin. spec. 24.) glabrous ; leaves lanceolate, serrated, somewhat 3-nerved ; flowers pedunculate. %. H. Native of France, Switzerland, Denmark, &c, in humid places. Oed. fl. dan. t. *363.* Hayne, term. bot. t. 1. f. 47. Bull. t. 130.—Plenck. off. t. 15__Sabb. hort. rom. 2. t. 87.—Mor. hist. 2. p. 479. sect. 5. t. 8. f. 7.—Riv. mon. t. 157.—Blackw. t. 411. Root creeping, articulated. Stem tetragonal above. Leaves decussate, 3-5-nerved, sometimes entire. Corollas whitish or pale yellow, striated with purple. Fertile filaments bearded. Calyx often 7-cleft. Capsule ovate, acuminated. The whole plant has a strong, bitter, nauseous taste, and is much recommended by several eminent medical writers in cases of dropsy. It is a powerful cathartic, but is said generally to occasion vomiting. On account of its bitterness cattle reject it? insomuch that Haller assures us that there are meadows about Yverdun entirely useless from the abundance of it.

Officinal Hedge-Hyssop. FL May, Aug. Clt. 1568. PI- foot.

2 G. LINIFOLIA (Vahl, enum. 1. p. *89.)* glabrous; lea^ lanceolate-linear, quite entire; flowers pedunculate. %• Native of Portugal. G. officinalis, Brot. fl. lus. 1- P- Hoffm. et Link, fl. port. p. *225. t.* 31. Stems ascena^ branched a little. Leaves stem-clasping, acute, 3-nerved. rolla purplish-white.

Flax-leaved Hedge Hyssop. PL \ foot.

* * *Species natives of America.*

3 G. ALATA (Bush, fl. amer. sept. 11. p. 112.) glabrous; leaves broad-lanceolate, sessile, obscurely toothed, 3-nerved, dotted above; peduncles terete, the length of the leaves. %. H. Native of New York, and Carolina, in marshy places. Torr. bot. Mex. fl. amer. 1. p. 16. Stem bisulcate, terete at the base. Leaves half stem-clasping. Calycine segments linear, as long as the capsule, which is globose, glandular at top, equal. Corolla golden yellow, small.

4 G. PURPUREA (Walt. fl. car. p. 89.) glabrous; leaves ovate-oblong, somewhat 5-nerved, serrated; flowers sessile. %. H. Native of Peru, Chili, and Mexico. Pentstemodia glabra, Spreng. syst. 2. p. 811. Leaves ovate-lanceolate, 5-nerved, serrated, sessile. Flowers purple, smaller, and white. Capsule size of a Pepper corn. Hyssop. Pl. ½ to 1½ foot.

5 G. LAEVIGATA (Nutt. in Journ. acad. sc. Phil. 7. p. 103.) glabrous; leaves lanceolate, obsoletely denticulated, with the segments shorter than the leaves; flowers rather large, whitish. Native of Florida. Leaves smaller than those of *G. Virginica,* which it closely resembles, but the flowers are smaller and pale yellow. The whole plant is smaller. Hyssop. Pl. ½ to 1 foot.

6 G. OVATA (Walt. fl. car. p. 89.) glabrous; leaves ovate, acuminated, serrated; peduncles very short. %. H. Native of Carolina, in fields. Leaves 1 to 2 inches long. Flowers purple, with a yellowish tube, and white throat. Capsule 3 times shorter than the calyx. Hedge Hyssop. Fl. May, Aug. PL procumbent.

7 G. PUBESCENS (Willd. enum. p. 89.) pubescent; leaves lanceolate, remotely few-toothed; peduncles as long as the leaves. %. H. Native of Carolina, in fields. Vahl enum. p. 89. Habit of the preceding, but smaller. Stems terete. Flowers purple, with a yellowish tube, and white throat. Capsule 3 times shorter than the calyx. Hedge Hyssop. Fl. May, Aug. PL procumbent.

8 G. ELLIPTICA (Nutt. in Journ. acad. sc. Phil. 7. p. 103.) glabrous; leaves elliptic-lanceolate, sessile, obsoletely denticulated, with the peduncles shorter than the leaves; flowers rather large, white. Native of Florida. Leaves ovate, obtuse, obsoletely crenated, and quite entire; flowers sessile. 1/. G. Native of New South Wales, about Port Jackson; and of Van Diemen's Land. Corollas white. ?

9 G. PUBERULA (Vahl enum. p. 89.) pubescent; leaves lanceolate, sessile, obsoletely denticulated; peduncles shorter than the leaves; flowers rather large, white. %. H. Native of Carolina, in fields. Vahl enum. p. 89. Conobea borealis, Pursh. fl. amer. sept. 1. p. 12. G. acuminata, Vahl enum. p. 92. exclusive of the synonymes. Pursh. new em. fl. N. York, p. 89, Conobea borealis, Pers. syn. 2. p. 205, Steni terete, rooting at the joints. Flowers longer than the calyx, yellowish white. Capsule acuminated, FL Aug. Clt. 1759. PL creeping.

10 G. PEDUNCULATA (Ehx. fl. bor. Pl. Sh. fl. p. 12.) pubescent; leaves linear-lanceolate, remotely few-toothed; peduncles as long as the leaves. %. H. Native of Carolina, in fields. Leaves 1 to 2 inches long. Flowers purple. Vahl enum. p. 94. G. Peruvian. Stem terete. Leaves half stem-clasping. Corolla white, tinged with purple, villous in the throat. Hyssop. Pl. 1 to 2 feet.

11 G. SPHAEROCARPA (Elliot, car. p. 14.) glabrous; stem procumbent, terete; leaves obovate, attenuated at the base, serrated; capsule globose. %. H. Native of South Carolina. Perhaps a species of *Nelsonia.* Flowers nearly sessile. Sterile filaments wanting.

Round-fruited Hedge Hyssop. PL procumbent.

* * * *Species natives of New Holland.*

12 G. LATIFOLIA (R. Br. prod. p. *435.)* leaves ovate, obtuse, obsoletely crenated, and quite entire; flowers sessile. 1/. G. Native of New South Wales, about Port Jackson; and of Van Diemen's Land. Corollas white. ?

Broad-leaved Hedge Hyssop. Fl. July, Aug. Clt. 1822. PL 1 foot.

13 G. PUBESCENS (R. Br. prod. p. 435.) clothed with glandular pubescence; leaves lanceolate, toothed; flowers nearly sessile. %. G. Native of New South Wales; south coast of New Holland and Van Diemen's Land.

Downy Hedge Hyssop. PJ.

14 G. PEDUNCULATA (R. Br. I. c.) clothed with powdery down; leaves lanceolate, toothed above, the middle hardly longer than the peduncles. %. G. Native of New South Wales, about Port Jackson.

Peduncled Hedge Hyssop. PI. 1 foot.

Cult. The species of *Gratiola* are free growing plants, but require a moist soil; and they are readily increased by dividing at the root. Those species, natives of New Holland and North America, require protection in winter, by placing them in a frame or green-house.

XV. BEYRFCHIA (named after Charles Beyrich, who brought many living plants from Brazil to the Continent of Europe.) Cham, et Schlecht, in Linnaea. *3.* p. 21.

LIN. SYST. *Didynamia, Angiospermia.* Calyx deeply *5*-parted; segments unequal, the hind one small; the *2* lateral ones larger than the one in front. Corolla tubular, bilabiate. Stamens 4, the *2* posterior ones fertile, the *2* anterior sterile. Style thickened at apex; stigma cup-shaped, terminal. Capsule 2-celled, 2-valved, with a septicidal dehiscence; placenta central, at length free. Seeds numerous, scrobiculate.—Herbs beset with articulated hairs, with almost opposite leaves; tetragonal stems. Flowers solitary, axillary, opposite, spicate; calyx tribracteate.

1 B. OCYMOIDES (Cham, et Schlecht, in Linnaea, 3. p. 21.) downy; leaves ovate, serrated from the middle to the top; rameal ones elliptic, smaller; spike dense, leafy; both lips nearly equal, entire; fertile filaments exserted. %. S. Native of Brazil, in the province of Rio Janeiro, in humid places.

Bazil-like Beyrichia. PI. lj foot.

2 B. AJUGOIDES (Benth. scroph. ind. p. 9.) flowers spicate; upper lip of corolla retuse: lower one tricrenate; genitals inclosed. %. ? S. Native of Brazil, in the province *of* Bahia.

Jjuga-lifce Beyrichia*. PI. 1 foot. ?

3 B. SCUTELLARIOIDES (Benth, 1. c.) downy; leaves small, petiolate; flowers axillary; upper lip of corolla bifid: lower one trifid. %. ? S. Native along with the preceding.

Skull-cap-like Beyrichia. PI. 1 foot. ?

4 B. VILLOSA (Benth, 1. c.) villous all over; leaves nearly sessile; flowers axillary; upper lip of corolla emarginate, lower one shortly trifid. 1/. ? S. Native along with the preceding.

Villous Beyrichia. PL 1 foot.

Cult. For culture and propagation see *Montira* below.

XVI. ACHETA^RIA (meaning unknown to us.) Cham, et Schlecht, in Linnaea, 2. p. *5(56.*—Herpestis species, Spreng.

LIN. SYST. *Didynamia, Angiospermia.* Calyx bibracteate, 5-cleft, the fifth segment large ; the rest linear and equal. Corolla tubular, ringent; upper lip entire, erect; lower one longer, and 3-lobed. Stamens 2, fertile in front, and inclosed, without any rudiments of sterile ones. Style inclosed ; stigma drooping, emarginate. Capsule girded by the permanent calyx, 2-celled, with a septicidal dehiscence; valves bipartite; placenta occupying the whole dissepiment, permanent, at length free. Seeds irregularly angular, scrobiculate.—Herb erect, hairy, glandular, with the habit of *Melissa Calamintha,* with opposite leaves. Stems obsoletely tetragonal. Flowers axillary, opposite at the tops of the stems. Corolla pilose and glandular.

1 A. SPRENGE'LII (Cham, et Schlecht, 1. c.) *%.1S.* Native of tropical Brazil, Sello. Herpestis erecta, Spreng. syst. *2.* p. 801.

SprengeVs* Achetaria. PI. *3 to* 4 *feet.

Cult. For culture and propagation see *Montira* below.

XVII. MONTTRA (named by Aublet after M. de Monti, of Cayenne.) Aubl. guian. *2.* p. *637. t. 257.* Juss. *gen.* p. *122.* ed. Usteri. p. 137.

LIN. SYST. *Didndria, Monogynia.* Calyx 5-parted, spreading. Corolla funnel-shaped; limb spreading, 5-cleft, equal. Stamens 4, didynamous, all fertile ; anthers oblong. Ovarium didymous. Stigma furrowed. Japsule didymous, 2-celled, 4-valved, many-seeded. Seeds fixed to the inner angle of the cells.—Herbs with tetragonal stems, opposite leaves, and terminal 1-3-flowered peduncles.

1 M. GUIANE'NSIS (Aubl. 1. c.) ©. S. Native of Guiana. Stem quadrangular, marginate. Leaves oval-oblong, acute, glaucous, sessile. Flowers 3 in the bifurcation of the branches, and between the terminal leaves : lower one sessile : the other pedicellate, and the third on a longer pedicel, all white.

Guiana Montira. PI. \ foot.

Cult. A plant of easy culture; grows best in light rich earth kept moist, and is readily increased by division.

XVIII. DOPATRIUM (meaning unknown *to* us.) Hamilt. mss. ex Benth. scroph. ind. p. 31.

LIN. SYST. *Didndria, Monogynia,* Calyx short, membranous, semiquinquefid. Corolla funnel-shaped ; tube exserted ; limb obliquely widened, 5-cleft, somewhat bilabiate; lower lip larger. Stamens very short, the *2* upper fertile ; anthers cohering, 2-celled; cells parallel; the *2* lower stamens small and sterile. Stigma bilamellate, dilated. Capsule hardly furrowed, 4-valved ; margins of valves flattish ; dissepiment at length free, with adnate placentas.—Slender glabrous herbs, natives of bogs. Leaves opposite ; radical and lower leaves few, obovate, quite entire; cauline ones minute, distant. Pedicels filiform, opposite, or alternate from abortion, 1-flowered. Corollas blue.

1 D. NUDICAU'LE (Benth. in scroph. ind. p. 31.) humble, much branched ; cauline leaves small* very acute; capsule oblong. ©. S. Native of the coast of Coromandel, in wet places. Gratiola nudicaulis, Willd. act. berol. 4. p. 192. Gratiola aphylla, Roth, nov. spec. p. 7. Gratiola cuneifblia, Roxb. fl. ind. 1. p. *U2.*

Naked-stemmed Dopatrium. PL *2* to 3 inches.

2 D. LOBELIOIDES (Benth, in scroph. ind. p. 31.) stem elongated, a little branched ; cauline leaves small, obtuse; capsule globose ; corollas about 4-5 times longer than the calyx. 0* S. Native of Coromandel, growing in wet places during the rainy season. Gratiola lobelioides, Retz. obs. 4. p. 7. Roxb. fl. ind. 1. p. 143. Habit of *Lobelia Dortmdnna.* Flowers on longish pedicels, racemose at the tops of branches. Leaves sessile.

Lobelia-like Dopatrium. PI. \ to \ foot.

3 D. JU'NCEUM (Hamilt. ex Benth. scroph. ind. p. 31.) stem elongated, a little branched ; cauline leaves small, obtuse ; capsule globose; corollas hardly 3 times longer than the calyx. ©. S. Native of Coromandel, delighting in wet situations, where it flowers during the rains. Gratiola juncea, Roxb. cor. *2.* p. 16. t. 129. Very like *D. lobelioides;* but the flowers are much smaller, and the pedicels shorter, the lower pedicels generally very short. Leaves stem-clasping : floral ones minute, triangular. Corollas small, rose-coloured.

Rushy Dopatrium. PI. J to 1 foot.

Cult. The seeds of the species *of Dopatrium* require *to* be reared on a hot-bed in spring; and the plants may be planted out in the open ground in the month of May in a warm, sheltered situation, where they will flower and ripen their seeds.

XIX. MICROCARPiE'A *(fwcpoc, micros;* and καρπος *karpos,* a fruit; in reference to the smallness of the capsules.) R. Br. prod. p. 435. Benth. in Lin. trans, p. 435. Hook, bot. misc. 2. p. 101.

LIN. SYST. *Didndria, Monogynia.* Calyx short, campanulate, 3-5-toothed. Corolla small: tube equal in length to the calyx; limb sub-bilabiate, 5-cleft; segments all flat, and nearly equal. Stamens 2, fertile; filaments straight, entire ; anthers approximate, 2-celled; cells parallel ; vestiges of sterile *ot* lower stamens wanting. Stigma bilamellate, dilated. Capsule 2-valved ; valves entire, septiferous in the middle; dissepiment at length free; placentas adnate.—Small, mossy, glabrous herbs, with the habit of *Limosella.* Leaves opposite. Flowers pedicellate, axillary, small, bractless.

1 M. MUSCOSA (R. Br. prod. p. 436.) creeping; leaves oblong, entire; calyx 5-toothed ; teeth hairy inside. ©.?G. Native of India and New Holland, within the tropic. Paederdta minima, Koen, in *Retz.* obs. fasc. 5. p. 10. M. alternifolia, Blum, bijdr. p. 744. Nearly allied to *Hedybtis maritima,* but that plant has a valveless capsule, ex R. Br. 1. c.

Mossy Microcarpaea. PI. small.

2 M. SPATULA'TA (Hook. bot. misc. 2. p. 101. suppl. t. 4.) creeping; leaves linear-spatulate; calyx 3-toothed. %. G. Native of the Peninsula of India. Peplidium Capense, Spreng. syst. 1. p. 43. Limosella diandra, Lin. mant. p. *252.*

SpatulateAestwed Microcarpaea. PL creeping.

Cult. For culture and propagation see *Montira* and *Dopa' trium* above.

XX. PEPLI'DIUM (from 7r£7r\oc, *peplos,* purslane; and *idea, idea,* form ; plants with the habit *of Purslane.)* Delile, * segypt. p. 4. t. 4. f. 2. Benth. scroph. ind. p. *M^.Zd* carpsea, spec. Smith.—Pederdta, spec. Keen. Oldenlandia ai Hedyotis, species Lin. 5-

LIN. SYST. *Didndria, Monogynia.* Calyx campanula^, toothed. Corolla small; tube equalling the calyx in leifc^ limb 5-cleft, hardly bilabiate ; segments all flat, nearly' *e^* Stamens 2, fertile ; filaments gibbous at the base, *sqm ^* appendiculate, incurved ; anthers approximate, 2-celie ^.^te(j, parallel. Vestiges of sterile stamens none. Stigma

simple. ?
<>sened • f^apsu!^e g^lobose, bursting irregularly ; valves hardly x p ; dfs sepiment parallel.

ind. p^HQfx^FUS,y^M(Deli^fl.egypt.p.4.t.4.f.2. Benth. scroph. Native of India, and North of Africa.

c 3. •a cochlearifolia, Smith, in Rees' cycl. Hook. bot. Rottl Wail suppl. t. 29. Psederota cochlearifolia, Kon. et 119« ' Old rcat. no. 3920. Hedyoi maritima, Lin. suppl. p • creepino. u*nlandla TMaritima, Roth, nov. spec. p. *97.* Herb °Wate, hl quite cnt^lin6 FloVVers axillai 7> opposite, solitary, on Ve h Very short pedicels.

Peplidium. PI. creeping.

For culture and propagation see *Montira,* p. *536.*

XXI. BONNA'YA

(named by Li"k after Bonnay, a German botanist,) Link, Scroph. ind. p 32 ^ ott0# abbiMtt- *2m* P, *25, tmUm* Benth* Lin" & ^- *Di*TM*ydri**a, Monog$nia.* Calyx 5-parted, nearly equal (with ^ 6Xserted tube> and a bi^biate, 5-parted T^b 5 upper I the shortest- Stamens 4, 2 superior ones fer- f> ^closed t>^e o Stenle ones inserted at the base of the lower T anther^ cohering, Stigma flattened> bilamellate. Capsule globose, oblnn ?erobranous u.\ ffg°fl USUally linear, 2„valved 5 valves entire, i^> at len'oTw margins ; dissepiment parallel, placentiender, or T— UsuaTly glabrous, rarely pilose, creeping, erect sh herbs- Leaves opposite, quite entire, or tootlied. pi^ower axillar^ °PPosite, or alternate from abortion, USllall^y Pedic n eiiate, the upper ones sometimes racemose.

y 1, Stigmas capsule.? *(from Sli^ua,* a long Pod5 from the long r^apsules linear> AlHed t0 the sil' quose species of *Fandtir.*

°f lhh ll(r^y sPreadi»g- *Flowers racemose. The species* *nith each an ore Very* varTM*Me, and are readily confounded* 1 g ner> ex Benth.

^(l) branSY (Link et Ott0, abbild_2- P-25-4- "•) erect. ^oSe; capsule ere i6S oblon?' sharP'y serrated ; flowers racers. • Nativp of tM6 Indian Peninsula and Bengal; Manilla, h, PpositifAii u^a *(errkta* <Rosb. fl. ind. 1. p. 140. Gramal Wi»d no ' £r b- Willd no- *87&- G^o\a* grandifldra, £'.?•• 59. Pl. Ru6llia antiP5da, Lin- Part.-Rheed. Lnkcoln f Sracemose at the t0Ps of the branches. red.

Bonnaya. Fl. Aug. Clt. 1823. Pl foot.

el- stem creepus, ^ves ro»ndish-oblong, narrowed into Pe tlol es, sharply serrated ! flowers racemose; capsule erectly Ni;ac!lnS> 2-3 ti S' Ben T.%i Ong as the calyx, ©'S- Native of

*Ya P. 140 A^6 Molucca s. &c Gratiola reptans, Roxb. lb hI-symb I. atiolar uellioides, Keen. Colsm. grat. p. *'• Gi-^^ i P' ^^' Bonnaya ruellioides, Spreng. syst. Vemj * *ci]* &*> Colsm. grat. p. 14. ? Bonnaya ciligr. %, f^^J- p. 41. Henckelia Roxburghiana, Link. f colour P Spec> L P- 572. Corolla large, of a pale ^"nes. ' ^aPsuJe longer than in *B. brachiata,* usually

Spring Bonnaya. Pl

W.P>330 ste lPoLIA (SPreng* syst' 1- P- 41. Benth. scroph. sUle Superior o** creeP ln g ; leaves oblong: lower ones petio- *I erectly s nej sen'ated, thickish; flowers racemose; capfi onn.\ NatJve of u"g, *2,3* times lonSer than the calyx, ©• £ fed* P ndosta n> Nipaul, Silhet, Birman Empire. Ben*. in Wnth in WalL cat no, *3859,* B, Procumiv. all. cat. no. 3860. Gratiola veronicsefolia, Retz. obs. 4. p. 8.? Roxb. cor. 2. p. 30. t. 154. Gratiola marginata, Colsm. grat. p. 11.? Bonnaya marginata, Spreng. syst. 1. p. 4. ? Gratiola grandiflora, Retz. obs. 41. p. 8. but not of Roxb. Gratiola racemosa, Roth, nov. spec. p. 9. Bonnaya Rdthii, Link, Schwsegr. et Dietr. spec. pi. 1. p. *556.* Corolla reddish. Capsule *6-7* lines long. Stem tetragonal.

Speedwell-leaved Bonnaya. FL June, Sept. Clt. 1798. PL *1* foot.

4 B. VERBENJSFOLIA (Spreng. syst. 1. p. 42. Benth. scroph. ind. p. *33.)* stems erect or ascending ; leaves lanceolate, quite entire or serrated ; flowers racemose ; capsules erectly spreading, 2-3 times longer than the calyx. ©. S. Native of Hindostan, Silhet, Birmann Empire; and of China, Nelson. Tittmannia Colsmanni, Benth. in Wall. cat. no. 3952. Gratiola verbensefdlia, Colsm. grat. p. 9. Gratiola racemosa, Roxb. fl. ind. 1. p. 139. but not of Roth. Gratiola ciliata, Commers. in Colms. grat. p. 14. ? Gratiola Roxburghiana, Rcem. et Schultes, syst. 1. p. 123. Bonnaya Roxburghiana, Link, Schwsegr. et Dietr. spec. 1. p. *559.* This species hardly differs from *Vandellia,* unless in the stamens.

Vervain-leaved Bonnaya. PL i foot.

5 B. PUSI'LLA (Benth. in Wall. cat. no. 3861. scroph. ind. p. *33.)* stem diffuse, much branched ; leaves ovate-oblong, sessile, thickish, serrated; flowers small, racemose; capsules erectish, linear, scarcely exceeding the calyx. ©. ? S. Native of Singapore.

Small Bonnaya. PL diffuse.

* * *Capsules erectly spreading. Flowers axillary.*

6 B. GRANDIFLORA (Spreng. syst. I. p. 41. Benth. scroph. ind. p. *33.)* stem diffuse, subrepent; leaves ovate or ovate-lanceolate, sessile, serrated ; flowers axillary, opposite ; capsules linear, erectly spreading, hardly twice as long as the calyx. ©. ? S. Native of the Indian Peninsula, in wet places. Bonnaya Wightii, Benth, in Wall. cat. no. 3864. Gratiola grandiflora, Roxb. cor. 2. p. 42. t. 179. fl. ind. ed. Car. 1. p. 137. but hardly of Retz. Henckelia grandiflora, Link, Schwaegr. et Dietr. spec, pi. 1. p. *573.* Ruellia antipoda, Lin. spec. part.—Rumph. amb. 5. ^p. 460. t. 170. f. 2. Flowers light blue, very like those of *Vandellia pedunculata.* The specific name is not very apt, other species having equally large flowers.

Great-flowered Bonnaya. PL creeping, \ foot.

7 B. PEDUNCULA'RIS (Benth. in Wall. cat. no. *3865.)* stems elongated, slender ; leaves remote, oblong-lanceolate, nearly quite entire ; flowers axillary, solitary, on long peduncles ; capsules linear, spreading, hardly twice as long as the calyx. ©. S. Native of Silhet, Wall. Nearly allied to *Gratiola pulegiifdlia,* Vahl. enum. 1. p. *98.* but the flowers are very rarely opposite.

Peduncular-flowered Bonnaya. PL creeping, \ to 1 foot.

8 B. PULEGIIFOLIA ; leaves oblong, serrated ; peduncles axillary, opposite, length of leaves ; capsule subulate. ©. S. Native of the East Indies. Gratiola pulegiifolia, Vahl, enum. 1. p. *98.* Stems filiform. Leaves sessile.

Pennyroyal-leaved Bonnaya. PL creeping.

* * * *Capsules reflexed.*

9 B. OPPOSITIFOLIA (Spreng. syst. 1. p. 41.) erect; leases oblong or lanceolate, a little serrated ; peduncles opposite the leaves ; capsules linear, reflexed. ©. S. Native of Coromandel. Gratiola oppositifolia, Roxb. cor. 2. p. *30.* t. 155. fl. ind. ed. Car. 1. p. *139.* and probably of Retz. obs. 4. p. 8. Henckelia oppositifolia, Link, Schwaegr. et Dietr. spec. pi. 1. p. *573.* Flowers small, blue. Capsule linear, twice the length of the calyx. Sterile filaments white.

Opposite-leaved Bonnaya. PL 5 to i foot.

10 B. TENUIFOLIA (Spreng. syst. 1. p. 42.) erect ? leaves linear, quite entire; peduncles opposite the leaves ; capsule linear, reflexed. ©. S, Native of Coromandel; Birmann Empire, at Tavoy; Ceylon and China, in wet places. Gratiola ***tenuifolia, Colsm. grat. p. 8. Corollas blue ?***

Thin-leaved Bonnaya. PJ. \ to | foot.

§ *2.* BiiAcinrcA'ar^E (from *ftfxtx^c, brachys,* short; and *Kctp-7TOC, karpos,* a *fruit.) Capsules ovate,* exceeding the caJyx a very little. Plants with the habit *of Lindernia.*

11 B. HYSSOPIOI^DES (Benth. in Wall. cat. no. 3866. scroph. ind. p. 34.; stem elongated, loose; leaves oblong or lanceolate, remote ; peduncles axillary, elongated, filiform; corolla 3 or 4 times longer than the calyx. ©. S. Native of Hindostan, Silhet, China, Tranquebar. Gratiola hyssopioides, Lin. mant. p. 174. Koen. in Retz. obs. 4. p. 8. Roxb. cor. 2. p. 16. t. 128. fl. ind. ed. Car.1. p. 142. Morganuxhyssopioides, Spreng. syst. 2. p. 803. Corollas pale blue. Sterile stamens bearded. Habit of a species of *Dopatrium**

Hyssop-leaved Bonnaya. PI. J to 1 foot.

12 B. PARVIFLORA (Benth. in Wall. cat. no, 3867.^ scroph. ind. p. 34.) humble, branched ; leaves oblong or lanceolate ; flowers axillary or subracemose ; corolla twice the length of the calyx. ©. S. Native of Hindostan, Siljiet, and the Birmann Empire. Gratiola parviflora, Roxb. corom. 3. p. 3. t. 203. Flowers small, usually blue, but sometimes white. Sterile filaments capitate at apex.

Small-flowered Bonnaya. PI. \ foot.

§ 3. SPHTEROCA'RPA (from (7<f>aipa, *sphaira,* a sphere ; and •cap7Toc, *karpos,* a fruit; in reference to the capsules being roundish) Benth. scroph. ind. p. 34. Capsules roundish, shorter than the calyx. Similar to the species of *Vandellia,* with roundish capsules.

13 B. ROTUNDIFOLIA (Benth. scroph. ind. p. 34.) diffuse ; leaves sessile, broad-ovate, subcordate; peduncles axillary ; capsules roundish, shorter than the calyx. ©. S. Native of the Indian Peninsula and Ceylon, in moist places. Gratiola rotundifolia, Lin. mant. p. 174. Roxb. fl. ind. ed. Car^1. p. 138. Gratiola debilis, Hayne, in Wall. cat. no. 3946. Morgania rotundifolia, Spreng. syst. *2.* p. 803.—Rheed. mal. 9. p. 111. t. *57.* Flowers white.

Round-leaved Bonnaya. PI. | foot.

14 B. *BRACHYCA'RPA* (Cham, et Schlecht. in Linnsea, *2.* p. *568.)* stem decumbent; leaves oblong, bluntish, generally tridentate on both sides, narrowed at the base ; peduncles shorter than the leaves ; capsule about equal in length to the calyx. O. S. Native of the East Indies. Glabrous. Habit of *B.* ***grandiflora.***

Short-fruited Bonnaya. PI. decumbent.

15 B. MI'NIMA ; stem filiform, erect, simple; leaves oblong, sessile, remote, serrulated, and are, as well asilie calycine segments, ciliated ; capsule oblong, rather longer than the pedicels. ©. S. Native of the East Indies. Gratiola minima, Roth, nov. spec. p. 8.

Least Bonnaya. PI. \ foot.

f Species doubtful or hardly known.

16 B. PUNCTA'TA ; leaves lanceolate, serrated, nerveless, dotted beneath; flowers sessile. ©. S. Native of Java. Gratiola punctata, Colsm. grat. Vahl, enum. 1. p. 90. Stem erect, creeping at the base, quite simple. Leaves sessile, half an inch long. Flowers solitary, opposite. Capsule roundish, a little compressed, length of calyx.

Dotted Bonnaya. PI. | to \ foot.

17 B. VA'HLII; leaves oval, sessile, serrated, with cartilaginous edges, glabrous ; stem hispid ; peduncles axillary, opposite. 0. S. Native of the East Indies, in springs. Orat* pusilla, Willd. spec. 1. p. 105. Vahl, enum. 1. p. 105. *>™ simple or branched. Peduncles twice as long as the lea ***Segments of the calyx linear, acute. Flowers small, w*** *Capsule* globose.

VcihVs Bonnaya. PL creeping.

18 B. ***msFi'nvLA ; leaves oval, sesstie,*** **crenated, and are, a*** *well* as the *stem, pilose;* peduncles axillary, *opposite.* 0. • ^# Native of Java. Gratiola hispidula, Commers. in Vahl. enutn. 1. p. 94. Stem filiform, bifid at apex. Leaves a nail in length, acute, £-nerved beneath. Peduncles glabrous, longer than the leaves. Calycine segments linear-lanceolate. Capsule globose, almost the size of a coriander seed.

Hispid Bonnaya. PI. filiform.

19 B. ocYMiroLiA; leaves oblong, quite entire: lower ones petio\ate ; ftowers racemose. ©. S. Native of the East Indies. Gratiola ocymifolia, Vahl, enum. J. p. 96. Stem branched at bottom. Lower leaves petiolate : upper ones remote, sessile. Capsule globose.

Ocymum'leaved Bonnaya. PI. J to J foot.

Cult. The seeds of all the species should be reared on a hotbed ; and when the plants are of sufficient size, they should be planted in separate pots, which should be either kept in a hotbed, or placed in the stove, in deep pans filled with water.

XXII. HYDRO'TRICHE (from ^Swp ^pog, *hydor hydros,* water; and 6pi£ rpi)(OG> *tltrix* tricJios, a hair ; in reference to the hair-like, submersed leaves, and habitation of the plant.) Zucc. abhandl. acad. wiss. 1829, 1830. vol. I. p. 308.

LIN. SYST. *Didndria, Monogynia.* Calyx 5-parted, nearly equal. Corolla regular, funnel-shaped ; limb 5-cleft. Stamens 2 ; anthers connected by hairs. Ovarium 2-celled ; placentas one in each cell, adnate to the dissepiment, many-ovulate. Stigma bilabiate, or bilamellate. Capsule unknown.—An aquatic herb. Lower or submersed leaves verticillate, capillaceously multifid, setosely serrated : superior ones opposite, lanceolate* obtuse. Flowers disposed in few-flowered racemes. This genus is distinguished from *Limnophila* in the absence of the 2 sterile stamens, or even the rudiments of them.

1 H. HOTTONIIFLORA (Zucc. 1. c.) %. S. Native of Madagascar, in stagnant water.

Hottonia-flotpered Hydrotriche. PL aquatic, 1 to *2* feet.

Cult. See *Limnophila,* p. 543. for culture and propagation.

XXIII. HEMIA'NTHUS (from i/xi, *hemi,* half; and *CLVQOQ. anthos,* a flower ; in reference* to the upper lip of corolla being obsolete.) Nutt. gen. amer. *2.* p. *42.* journ. acad. nat. sc. pbil. 1.p. 119. t. 6. f. *2.*

LIN. SYST. *Didynamia> A?igiospermia.* Calyx tubular, 4-toothed, cleft on the under side. Upper lip of corolla obsolete: lower one 3-parted; middle segment ligulate and truncate, much longer, closely incurved. Stamens 2 ; filaments bifid; lateral clefts antheriferous. Style bifid. Capsule 2-valved, many-seeded. Seeds ovate, even, and shining.—A small creeping plant, growing in marshes. Leaves entire, opposite and verticillate. Flowers solitary, alternate, pedicellate, minute.

1 H. MICRANTHEMOI^DES (Nutt. 1. c.) %. H. Native on the borders of the Delaware.

Micranihemum-Uke Hemianthus. PI. creeping.

Cult. For culture and propagation see *Herpestis,* p. 544.

XXIV. PTEROSTFGMA (from *irrepov, pteron,* a wing ; and *anyfia, stigma;* in reference to the stigma being generally girded by a wing.) Benth. scroph. ind. p. *20.*

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, or deeply 5-cleft : upper segment the largest. Corolla bilabiate;

upper lip em. 'h
s«perior o.es /gl Mate: lower one S_lobed_ Stame»s *> the 2
*e anthpr.3 i' and the 2 lower ones sterile, or, if fertile,
celled • . cpii ^ only Ilalf 5 anthers of the fertile filaments 2-
thickened, S e Pparate, stipitate. Style simple; stigma a little
sides, ca Gn e> usually S irded by a membranous wing on all
dehiscence? Sl le r0Strate> bl sulcate, 2-valved, with a loculicidal
^ro-ins of fi es b ^ d >" d issepiment formed *by* the inflexed
nat e° to *the i•* VeSj du Plf cate, at length free. Placentas ad-
nak ed, strit C lSse lment» or at length free. Seeds small,
dried.' Le —Ha rd villous herbs, usually blackish when
tate» I'acem Opposite» wrinkled, crenulated. Flowers capi-
as short o Se> Scattered, or the lower only are axillary; pe-
s Pcies is 7^f U a y bibracte ate at apex. The odour of the
1 P *Gl Labiatae,* even in the dried state.

0Va*e ; cornll TDIFL oRUM (Benth- scroph. ind. p. 21.) leaves
the calvx « amply tubular> more than twice the length of
Vacheli; ' owers race mose. ©. S. Native at Macao,

2 %at fowc fed Pterostigma. PI. 2 to *3* feet.

0Vat e-lancenl o! UM (Benth- L c0 leaves ovate, acuminated, or
on Sr than *II'* crenated, wrinkled, villous; corolla one half
Silh etand T e yX; flowers racemose. ©. , Native of
InWa ll ca; VOy >onthemo untains. Adenosma villosum, Benth.
Pilous Pi n0# 3851- CoroIIa ^ lines lon<P.

3 p' Pterostl ?ma- PL 2 to *3* feet.

Serra tely_c r p C R0PH LLUM (Benth- J- c0 leaves ovate, acuminated,
Coro Uas onp 1!i? i narrowed at the base, flaccid, smoothisti ;
Q' Native /Pen - gertnanthecalyx; lowers racemose. ©.
y, Adenn Blr man Empire, on the banks of the Irrawad-
*lo n^lp2 j Cro^h llum^* Benth- in Wall. cat. no. 3853.

4 P SPI Pterost igma. PI. 1 to *3 feet.*

Unt!y serr ?M ^Benth, l c0 l eaves nearly ses*sile, oblong,
Spitate p i ; flowers disposed in dense oblong spikes, sub-
Nati ve of tl n dl stinct ly 5-parted; capsule beaked. ©. S.
^ Benth ' ^e mula of India and Ceylon. Stemodia capi-
Spicat Pfl m alL cat no. 3926.

5 P. c A P ed Pterostigma. PI. 1 to 3 feet.

e? Hosed iA T (Benth - *l c* -) leaves ovate or oblon g; flow-
at 5-part P f globose or oblong heads; calyx hispid, some-
P nous Pam ; /a P sule ob long. ©. S. Native of the moun-
^>ir e, p enan Ot India> Nipaul, Kamaon, Hindostan, Birmann
59 926. V g) *7?* Ste m6dia capitata, Benth. in Wall. cat.
Sa be tween ?' J ke the Preceding, but the capsule is interme-
Cal 'Wfl r *Llnd nUr* g^ and *Pterostigma.*

^. For W 7 ed Pte rostigma. PI. 1 to 2 feet.

culture and propagation see *Bonnaya,* p. *538.*

§ 2. *Stamens* 4, *all fertile.*

XV. L
Bu hor of a I s ^ DENBFRGIA (^ honour of J. B. Lindenberg,
ab lid, P. 95 T IS of Euro pean Hepatic^.) Link et Otto,
ou f> Adenn ' benth- scroph. ind. p. 21.—Stemodia, Brachy-
IN SYST n and Bovea's P ecies of authors.
10r % 5-cleV *Jytdmia, Angiospermia.* Calyx campanulate,
h? per lip em - Segments ovate, often leafy. Corolla ringent;
b OUs\in closed ?T te: 10Wer one 3,lobed- Starfl ens 4, didyna-
St? P^irs, f re : lower ones the longest; anthers approximating
p lgrria a littlj cel ls se parate, stipitate, all fertile. Style simple;
ca 2^valved ckened> en tire, dilated. Capsule oblong, bisul-
f r> from th ' WU^ a l o cu^c^da l dehiscence ; dissepiment dupli-
S 6e; Placent 6 C onnate inflexed margins of the valves, at length
de Sr*iall n\f nate t0 the disse piment, or at length free,
in nt Or d ivari stri ated.—-Branched herbs, sometimes scan-
s' T aves c ate, scentless, usually becoming blackish on dry-
opposite, toothed. Flowers sessile, sometimes axillary and opposite, sometimes disposed in terminal or axillary racemes or interrupted spikes.

1 L. SINA'ICA (Benth. scroph. ind. p. 22.) hard, divaricately branched, villous; leaves small, roundish-ovate, coarsely toothed: floral ones shorter than the calyx; racemes elongated, axillary and terminal; flowers opposite, secund; corolla twice the length of the calyx. %. ? H. Native *of* Sinaica, in deserts, Bove. Bovea Sinaica, Decassne in ann. sc. nat. par. 2. ser. 2. p. 253.

Sinai Lindenbergia. PI. 1 to 2 feet.

2 L. GRANDIFLORA (Benth. 1. c.) climbing, and villously downy; leaves large, unequally ovate, acuminated, toothed: floral ones shorjter than the corolla; racemes axillary, loose; flowers opposite, secund; corollas 4 times the length of the calyx. 1/.? S. Native of Nipaul. Stemodia grandiflora, Hamilt. in D. Don, prod. fl. nep. p. 89. Leaves *3-6* inches long. Corolla more than an inch long, purple.

Great-flowered Lindenbergia. PI. 2 to 3 feet.

3 L. MACROPHY'LLA (Benth. 1. c.) somewhat scandent, hard, smoothish; leaves oblong, very acutely-serrated: floral ones ovate-lanceolate, shorter than the calyx; racemes elongated, many-flowered, axillary and terminal; flowers subalternate; corollas twice the length of the calyx. ©. S. Native of Oude, Serpur; Martaban, at Prome,. Stemodia macrophylla, Benth. in Wall. cat. no. *3925.* 'Adenosma cuspidatum, Benth. in Wall, cat. no. 3852. Leaves hardly\\ inch. Herb always becoming black on drying.

Long-leaved Lindenbergia. PI. 2 to 3 feet.

4 L. URTICJEFOLIA (Lehm. jn Link et Otto, abbild. 95.) erect or ascending, annual, villous; leaves ovate: floral ones similar; flowers solitary, axillary; corolla 3 times the length of the calyx. ©. H. Native of the mountainous parts of India, as of Nipaul, Hurdwar, Oude, Silhet, Birman Empire, Sansedarra, and Mussooree. Stemodia ruderalis, Vahl, symb. 2. p. *69.* Benth. in Wall. cat. no. *3923.* Brachycoris parviflora, Schrad. Much branched, usually purplish. Leaves ovate, purplish beneath. Flowers nearly sessile, secund, yellow, purplish outside.

Far. /J, major (Benth. scroph. p. 22.)* stems elongated, and moje branched. ©. H. Native of Martaban, on the banks of the Irrawaddi.

Nettle-leaved Lindenbergia. PI. \ to 1| foot.

5 L. POLYA'NTHA (Royle, mss. ex Benth. scroph. ind. p. *22.)* erect or ascending, annual, villous; leaves ovate: lower floral ones similar: superior ones shorter than the calyx; racemes many-flowered; flowers opposite, secund; corollas *twice* the length of the calyx. ©. H. Native at Delhi, along the river Jumna, Royle. Allied to *L. ufticcefblia,* but the inflorescence is distinct.

Many-flowered Lindenbergia. PI. 1 to 2 feet.

Cult. For culture and propagation see *Bonnaya,* p. 538.

XXVI. STEMCTDIA (said to be from *aTt)^v, stemon,* a stamen; and *dig, dis,* double; in reference to each stamen bearing 2 anthers, or 2 distinct lobes.). Lin. gen. no. 777. Schreb. gen. no. 1043. Gaertn. fruct. t. 52. Juss. gen. p. 118. ed. Usteri, p. 133. Lam. ill. t. 534. f. 1. Benth. scroph. ind. p. *23.*—Stemodiacra, Browne, jam. t. 22. f. 2. Jacq. amer. p. 181.

LIN. SYST. *Didynamia, Angiospermia.* Calyx tubularly campanulate, 5-parted, nearly equal. Corolla ringent; upper lip emarginate: lower one 3-lobed. Stamens 4, didynamous, inclosed: lower ones the longest; anthers approximating by pairs, free; cells separate, stipitate, all fertile. Style simple; stigma entire, a little dilated. Capsule oblong, or nearly globose, bisulcate, 2-valved; valves bifid; dissepiment duplicate

from the inflexed margins of the valves, at length free; placentas adnate. Seeds small, naked.

SECT. I. MODE'STIA (from *modestia,* humility ; in reference to the humble growth of the plants.) Cham, et Schlecht, in Linnsea, 3. p. 5. Benth. scroph. ind. p. 23. Capsule with a luculicidal dehiscence ; valves bifid at the dissepiment.—Usually glabrous herbs, almost with the habit of *Gratiola* or *Limnophila,* becoming blackish on drying. Leaves opposite or verticillate, sessile or on short petioles. Flowers axillary, or the superior ones approximate into a head or raceme, usually blue.

Flowers nearly sessile,

1 S. MENTHA'STRUM (Benth. in Wall. cat. no. 3927. scroph. ind. p. 23.) erect, smoothish ; leaves nearly sessile, ovate-oblong, narrowed at both ends : floral ones similar, longer than the calyx ; flowers sessile: superior ones collected into a glabrous, nearly globose head ; calycine segments lanceolate-subulate. ©. ? H, Native of the Monghyr mountains, Hamilt.

Mint4ike Stemodia. PI. 1 foot.

2 S. HYPERICIFOLIA (Benth. in Wall. cat. no. 3934. scroph. ind. p. 23.) glabrous, rooting at the base, ascending,; leaves sessile, ovate-oblong, obtuse, cordately stem-clasping at the base : floral ones smaller ; racemes terminal or axillary; flowers sessile, remote; segments of the calyx lanceolate. %. G. Native of Nipaul, at Narainhetty. Cybbanthera connata, Hamilt. in D. Don, prod. fl. nep. p. 23. Corollas blue. Flowers tribracteate.

***St. Johri s-wort-leaved* Stemodia. PL 1 *to* 1^ foot.**

3 S. BALSA'MEA (Benth. in Wall. cat. no. *3928.* scroph. ind. p. 23.) stem procumbent; branches rather hairy ; leaves ovate, obtuse, narrowed into the petioles, glabrous : floral ones similar in shape ; flowers axillary, sessile, solitary, or 2-3 on both sides, glomerate; segments of calyx lanceolate-subulate. %. ? G. Native of the Birman Empire, at Tavoy, Wall.

Balsameous Stemodia. PL procumbent.

4 S. SE'SSILIS (Benth. in Wall. cat. no. 3939. scr&ph. ind. p. 23.) procumbent, glabrous ; leaves sessile, oblong, obtuse, crenated, narrowed at the base: floral ones similar in shape; flowers solitary, axillary, nearly sessile ; calyxes glabrous, with lanceolate-subulate, strict segments ; corolla hardly longer than the calyx. 1/. ? G. Native at Goalpara, Moolmyne, and of Ceylon.—A humble rooting herb, native of bogs. Flowers hardly 4 lines long.

Sessile-Covered Stemodia. PL creeping.

5 S. TENUIFLORA (Benth. in Wall. cat. no. 3940. scroph. ind. p. 23.) procumbent, glabrous ; leaves sessile, lanceolate, acute, serrated, rounded at the base : floral ones similar in shape ; flowers solitary, axillary, almost sessile ; calyx glabrous, with lanceolate-subulate, strict segments; corollas hardly longer than the calyx. %. S. Native of the Birman Empire, near Jerome. Very nearly allied to the preceding ; but the plant is [illegible] ^ WCU ^ the flowers Habit of *Lythrum hyssopifo*

Thin-flowered Stemodia. PL procumbent.

6 S. MICRA'NTHA (Benth. in Wall. cat. no. 3936. scroph. ind. p. 23.) small, diffuse, much branched, glabrous; leaves sessile, oblong-lanceolate, acute, narrowed at the base : floral ones similar in shape ; flowers sessile, solitary, axillary; calyx cxlabrous, with lanceolate-subulate, recurvedly spreading segments ; corolla twice the length of the calyx. 3/. S. Native of Silhet, Wall. Nearly allied to the preceding ; but differs from it in the calyxes being shorter, and nearly globose ; and in its segments being recurvedly spreading. Stems hardly 3-4 inches high. Habit of *Jnagallis tenella.*

Small-flowered Stemodia. PL diffuse, 3-4 inches high.

7 S. RE'PENS (Benth. in Wall. cat. no. 3935. scroph. ind. p. 24.) creeping, glabrous, rather clammy; leaves sessile, o[illegible] long-lanceolate, narrowed at the base, acute, serrated : nora^ ones hardly longer than the calyx; flowers nearly sessile, racemose or glomerate ; calyxes nearly glabrous, with lanceolate segments, which are subulate and recurvedly spreading at apex* corolla twice the length of the calyx. %. S. Native of the Indian Peninsula, about Madras. Stems elongated, generally more than a foot. Racemes rather loose, terminal and axillary.

Creeping Stemodia. PL creeping.

8 S. CAMPHORA^TA (Vahl, symb. 2. p. 69. ? Benth. scropn. ind. p. 24.) erect, clothed with clammy pubescence ; leaves petiolate, ovate-oblong : floral ones linear-lanceolate ; racemes axillary, rather shorter than the leaves ; flowers almost sessile , calyxes downy, with lanceolate-acute segments; corolla almost 3 times as long as the calyx. %. *1* S. Native of Hindostan, and of the Birman Empire, at Prome ; and of Ceyldn. S. ciminica, Benth. in Wall. cat. no. 3933. Stems floriferous at the base. Racemes numerous, short, loose, leafy. " Leaves 1| inch long, sharply and unequally serrated. Corolla of a greenish citron colour," ex Vahl.

Camphorated Stemodia. PL 1 to 1| foot.

**** Flowers pedicellate; pedicels longer than the calyx.***

9 S. VISCOSA (Roxb. cor. 2. p.* 23. t. 163.) erect, downy, clammy ; leaves sessile, ovate-oblong, acute, narrowed towards the base, and dilately cordate at the base, and stem-clasping: floral ones similar in shape; flowers axillary, solitary : upper ones racemose; calycine segments lanceolate, acute. ©. • »• Native of Coromandel and Bengal. S. maritima, Heyne, ex Benth. in Wall. cat. no. 3931. but not of Lin. Corolla blue.

Clammy Stemodia. Fl. July, Aug. Clt. 1818. PL 5 to foc

lo S. H W T A (Heyne, ex Wall , cat. no. 3930- Benth. scroph. ind. 24.) stem erect, hairy; leaves " ^ y[illegible] S: floral ones rather shorter than the pedicels ; raceme ^ ..... flowers solitary, opposite ; segments *of* the calyx lanceolate-subulate. ©. ? S. Native of the Indian Peninsula ? Hindostan, and Silhet.

Hairy Stemodia. PL 1 to *foot.*

11 S. DIFFU'SA (Benth. in Wall. cat. no. 3937. scroph. ind. p. 24.) diffuse, glabrous ; leaves sessile, oblong-lanceolate, narrowed at the base : floral ones similar-in shape; flowers solitary, axillary ; calyx glabrous, with lanceolate-acute segments ; corolla twice the length of the calyx. "2/ . ? S. Native *of* the Birman Empire, at Tavoy. Stature of & *micrdntha* ; but the flowers are pedicellate, larger; &c.

Diffuse Stemodia. PL diffuse, 3-4 inches.

12 S. GRATIOLOI'DES, (Benth. in Wall. cat. no. *3938.* scropn. ind. p. *25.)* glabrous, erect; leaves sessile, oblong-lanceolate, narrowed at the base, stem-clasping: floral ones similar i* shape; flowers axillary, opposite, solitary; segments *oi* * ^ calyx lanceolate ; corolla one half longer than the calyx. *••• S. Native of the Birman Empire, at Tavoy.

***Hedge-hyssop-like* Stemodia. PL \ foot.** *£\

13 S. PHILIPPE'NSIS (Cham, et Schlecht, in Linnsea, 3. p^-> downy; leaves falsely opposite, petiolate, lanceolate, ° acute at both ends, sharply serrated, quite entire at the ba ; floral ones similar in shape ; spikes terminal, many-nower calyx bractless, with lanceolate, acute, ciliated segments. 4-' i Native of the Island of Lucon, on high lands. Leaves inches long. Corolla half an inch long, downy outside.

Philippine Stemodia. PL erect. 39,)

14 S. MURAW (Roxb. mss. ex D.Don, prod. fl. nep. P*

similar in ... leaves ... Petiolate, serrated : floral ones ... flowers ... axillary, usually solitary, pedicellate ; ... Ovate, mucronulate. %. F. Native of ... tufted ... Stems numerous, erect, branched, ... opposite. Corolla pale rose- ... twice the length of the calyx.

Stemodia. PI. J to f foot.

sect. MONNIERA (an anagram of *Modestia,* the name of a Spanish botanist) Schlecht. in Linnaea, *3.* p. 4. Capsule with ... dehiscence.—Herbs or under-shrubs. Leaves opposite, or in a whorl, entire. Flowers axillary, blue, solitary.

* *Calyx bractless.*

... VERTICILLARIS (Link, enum. 2. p. 144.) erect, clothed ... leaves opposite, or 4 in a whorl, lanceolate, serrated, half stem-clasping; flowers ... solitary in the axils of the leaves, therefore verticillate. ... Native of tropical and extra-tropical Brazil. ... verticillaris, Spreng. nov. prov. p. 13. Branches numerous, erect, branched in the cultivated plant; but the stem is small, ... hardly an inch long in the wild plant. Corolla ... Calyx bractless.

... Stemodia. FL July, Aug. Clt. 1825. PL ... to 1 foot.

... RENVOIZIA (... et Kunth, nov. gen. amer. 2. p. 257, ... leaves opposite, petiolate, ovate, crenately ... axillary, solitary or twin, on short pedicels ; ... linear? ... nerved, ciliated, nearly equal, *if.* ... Native on the inundated banks of the river Magdalena, ... Penon, between Mompox and Morales. ... Conobea pumila, Spreng. nov. prov. p. ... diffusa, Willd. herb. n0. 11444. Herb much ... Calyx ... ; ... whether hairy. Leaves smoothish, 3-5 lines ... twice the length of the calyx, blue. Perhaps the ... Stemodia. PI. procedumbent.

... TORA (... et Kunth, nov. gen. 2. p. 357.) ... branches ... exclusive of the syn. of Spreng.) procumbent, ... ovate or downy; leaves opposite, or 3 in a whorl, petiolate, ... Native of South America, ... Stemodia. Fl. July, Aug. Clt. 1759. PL \ foot, ... Corollas small, white; ... curved.

... Smooth-flowered Stemodia. ... et Kunth, nov. gen. 2. p. *357.)* ... flowers axillary, usually twin, pedicellate ; segments ... somewhat 5-nerved. fc. S. Native of ... of 1200 ... and the river Saraguru, at the alti- ... Stem ... Columnea trifoliata, Link. enum. 2. p. ... Broad-leaved trifoliata, Rchb. Leaves 9-18 lines long, and ... blue ... larger than those of *Thymus serpyllum.* ... nearly ... outside ; tube hardly exceeding the calyx.

* *Suffruticose durantifolia.* Calyx bractless.

... Stemodia. FL July, Aug. Clt. 1820. Shrub ... Stem ... Columnea ... P. 811.) stem ascending, ... leaves opposite, stem-clasping, lanceolate, ... of Mexico ... Video, Sello.

... Glabrous Stemodia. PI.

... KSIS (H; B. et Kunth, nov. gen. 2. p. 358.) ... axillary ... whorl, petiolate, ovate ; flowers ... Native of ... segments of calyx linear. 3f. ... at the ... Spain, at the foot of the burning Mount ... altitude of 490 hexapods. Stem branched. Leaves doubly and deeply crenate-serrated, entire at base, *5* lines long. Corolla twice the length of the calyx, blue ?

Jorullo Stemodia. PL 1 to 1J foot.

21 S. PALUSTRIS (Aug. St. Hil. rem. bras. p. *216.* mem. mus. 12. p. 314.) root creeping; stems ascending; leaves opposite, and *3* in a whorl, sessile, oblong-linear, acute, obsoletely toothed : superior ones narrower, nearly linear : upper ones, and those of the branches, linear, very narrow; flowers subspicate, on short pedicels; calyx puberulous. 1/. S. Native of the South of Brazil, on the margins of marshes, and in humid places on the banks of the Rio Negro and la Uraguay. Corolla blue; palate convex on one side, and concave on the other, white. Capsule about equal in length to the calyx. Plant puberulous at top.

Marsh Stemodia. PL \ to f foot.

22 S. GRATIOLOIDES (Aug. St. Hil. pl. rem. bras. p. 217. mem. mus. 12. p. 315.) leaves opposite, sessile, linear, acute, obsoletely toothed, glabrous ; flowers panicled, nearly sessile, usually solitary in the axils of the bracteas ; calyx smoothish. *If.* F. Native of Brazil, in the province of Rio Grande do Sul, on the edges of woods on the banks of the Ploropasso. Corolla pale blue.

Gratiola-leaved Stemodia. PL \ to 1 \ foot.

* * *Calyx bibracteate.*

23 S. MARITIMA (Lin. spec. 881. Jacq. amer. p. 181. t. 174. f. *66.* pict. 261. f. 48.) procumbent, hairy ; leaves opposite, hastate at the base, and half stem-clasping; flowers axillary, solitary, sessile. *$.* ? S. Native of Jamaica, in inundated parts by the sea side ; Cuba, in humid places near Havannah ; also of New Andalusia, near Bordones.—Brown, jam. 261. t. 22. f. 2.—Sloane, hist. 1. p. 175. t. 110. f. *2.* Leaves viscid. Calyx bibracteate. Corolla blue. The plant has a bitterish taste, and a pleasant aromatic smell.

Sea-side Stemodia. Fl. July, Aug. Clt. 1817. PL 2 to 3 feet.

24 S. DURANTIFOLIA (Swartz, obs. p. 240.) erect; leaves *3* in a whorl, and connate, serrated ; flowers axillary, solitary, therefore usually 3 in a whorl, nearly sessile. *$.* S. Native of Jamaica, in marshy places by the sea side. Capraria durantifolia, Lin. spec. p. 876. amcen. acad. 5. p. 379.—Sloane, hist. 1, p. 196. t. 124. f. 2. Branches hairy, viscid. Leaves pubescent. Calyx bibracteate, with subulate segments, shorter than the corolla. Corolla small, blue.

Duranta-leaved Stemodia. FL July, Aug. Clt. 1823. PL 1 foot.

25 S. HYPTOIDES (Cham, et Schlecht, in Linnaea, 3. p. 8.) pubescently hairy ; leaves opposite, and 3 in a whorl, ovate-lanceolate, sharply toothed, narrowed below, and auriculately stem-clasping at the base ; spikes terminal, dense-flowered, panicled ; calyx bibracteate, with narrow-linear, acuminated segments. %. G. Native of the southern provinces of Brazil. Habit of *Hyptis* or *Mentha.* Branches axillary, erect, shorter than the stem, pyramidally panicled. Root throwing out stolons. Cauline leaves 2\ inches long. Flowers on short pedicels.

Hyptis-like Stemodia. PL 1 to 2 feet.

26 S. STRICTA (Cham, et Schlecht, 1. c. p. 10.) clothed with clammy pubescence ; leaves obovate, acute, toothed, narrowed at bottom, but sessile and subdilated at the base, and quite entire : lower ones opposite: superior ones 3 in a whorl; spikes terminal, verticillate; calyx bibracteate, like that *of* the preceding. 1/. S. Native of tropical Brazil, Sello. Flowers smaller than those of the preceding, disposed in leafy verticillate racemes, on short pedicels. Floral leaves similar to the rest in shape.

Strict Stemodia. PL *I toll* foot.

j" Species hardly known,

%7 S. MINU'TA ; annual, spreading, 4-sided; leaves* sessile, ovate, cordate, serrulated ; flowers axillary, on long peduncles ; calyx 5-cleft; corolla ringent ; capsule globular. ©. H. Native of various parts of India, appearing during the rainy or cold season. Colûmnea minûta, Roxb. fl. ind. 3. p. 98.

Minute Stemodia. PI. spreading.

£8 S. TOMENTÔSA ; annual, diffuse ; leaves generally opposite, wedge-shaped, with gashed margins; racemes terminal ; calyx ample, 5-cleft; corolla ringent. ©. H. Native of Bengal, appearing during the cold season. Colûmnea toment6sa, Roxb. fl. ind. 3. p. 98.

Tomentose Stemodia. PI. spreading.

Cult. The species grow well in a light rich soil; and are readily increased by cuttings and seeds. The annual kinds may be planted in the open border about the end of May, in a warm sheltered situation.

XXVII. DODA'RTIA (so named by Tournefort after M. Dodart, member of the Academy of Sciences at Paris, and physician to the princess dowager of Conti.) Tourn. inst. 478. itin. *3.* t. 208. Lin. gen. no. 780. Schreb. gen. 1047. Gsertn. fruct. 1. p. 245. t. *53.* Juss. gen. 119. ed. Usteri, p. 134. Lam. ill. t. 530. f. 1.

LIN. SYST. *Didynamia, Angiospermia.* Calyx campanulate, short, angular, 5-toothed. Corolla tubular; limb bilabiate; upper lip emarginate : lower lip broader and trifid, twice the length of the upper one. Stamens 4, didynamous, inclosed ? anthers small, roundish, twin. Stigma 2-lobed. Capsule globose, covered by the calyx, 2-celled; placentas convex, growing to the dissepiment.—An herbaceous glabrous plant, with creeping roots ; branched, of simple, solitary stems. Leaves distant: lower ones opposite : upper ones alternate, linear, entire. Branches axillary. Flowers axillary, nearly sessile, at the tops of the stem and branches, bracteate. Corollas deep purple or blue.

1 D. ORIENTA'LIS (Lin. spec. p. *883.) %.* H. Native of Tartary; and on Mount Ararat. Mill. fig. 127. Sweet, fl. gard. t. 147. Lower leaves serrated : upper ones entire.

Eastern Dodartia. Fl. July, Aug. Clt. 1739. PI. 1 to 1J foot.

Cult. The plant loves a light dry soil, and a warm sheltered situation. It propagates very fast by its creeping roots; so that when once established in a garden, it will multiply fast enough.

XXVIII. MA^VSUS (from *fiaoog, masos,* a teat ; tubercles closing mouth of corolla.) Lour. coch. p. *385.* R. Br. prod, p. 439. Benth. scroph. ind. p. 26.—Hornemânnia species, Link—Gratiola species, Horn.

LIN. SYST. *Didynamia, Angiospermia.* Calyx campanulate, f~ff [illegible] nearly equaL Coroll a bilabiate; upper lip bidentate or bind : lower one longer, trifid, furnished with 2 gibbosities at the base ; lobes entire. Stamens 4, didynamous, inclosed ; filaments entire ; anthers cohering, or approximating by pairs; cells diverging or divaricate, but at length confluent. Stigma bilamellate. Capsule 2-valved, with a loculicidal dehiscence ; valves entire, bearing the dissepiment in the middle ; dissepiments at length free ; placentas adnate to the dissepiment.—Humble herbs, generally creeping or procumbent. Radical leaves numerous, petiolate, coarsely toothed or lobed : those of the sterile branches opposite; but those of the floral ones are *few* and alternate. Racemes of the floral branches, or of the scapes, naked, terminal, unilateral. Flowers alternate, pedicellate. Bracteas none, or 1-2 on a pedicel.

1 M. SURCULÔSUS (D. Don, prod. fl. nep. p. *86.)* stolons creeping; leaves deeply crenated, wrinkled, hispid, and a little curled ; those of the sterile branches roundish ; segments of calyx shorter than its tube, ovate, obtuse; corolla hardly twice the length of the calyx. %. F. Native of Nipaul, Kamaon, and Mussooree. Herb hairy. Racemes radical, pilose, *ox* scapes racemose. Corollas size of those of *Masus rugbsus,* but the plant is more branched.

Surculose Masus. PL creeping.

2 M. RUGÔSUS (Lour. coch. 385.) hardly stoloniferous; leaves all oblong, cuneated, coarsely toothed ; segments *of* the calyx ovate-lanceolate or lanceolate, acute, equal in length to the tube; corollas hardly twice the length of the calyx. 0. H. Native of Nipaul, Kamaon, Silhet, Wall.; Saharanpur and Mussooree, Royle ; Cochinchina, Lour.; Japan, Thunb. Sweet, fl. gard. t. *36.* M. bicolor, Benth. in Wall. cat. no. 3913. Hornemânnia bicolor, Willd. enum. 634. Rchb. icon. bot. exot. *25.* t. 37. Gratiola goodenisefdlia, Horn. hort. hafn. p. 19. Lindernia Japônica, Thunb. fl. jap. p. *253.1* Corolla blue, with a yellow or white palate.

Wrinkled-leaved Masus. Fl. May, Sept. Clt. 1780. PL procumbent.

3 M. DENTA^TUS (Wall. cat. no. 3914. Benth. scroph* ind. p. *27.)* stolons none ; leaves ovate, sinuated ; corolla 3 times the length of the calyx. ©. ? H. Native of Nipaul. Leaves larger, broader, smoother, and less lobed than the preceding; and the corolla is double the size.

***Toothed-leaved* Masus. PI. \ foot.**

4 M. PUMI'LIO (R. Br. prod. p. 439.) superior lip *of* corolla deeply bifid; scapes 1-4-flowered, and are, as well as the calyxes, glabrous. ©. ? H. Native of Van Diemen's Land. Flowers purple ?

Far. a; racemes 3-4-flowered ; pedicels furnished with a setaceous bracteole near the apex.

Far.fi; scapes 1-flowered.

Dwarf Masus. Fl. June, July. Clt. 1823. PI. small.

5 M. L^VIFÔLIA (Blum, bijdr. p. *753.)* leaves spatulate, repand, smooth on both surfaces ; racemes terminal, loose, glanduliferous. ©. H. Native of Java, in humid places about Buitenzorg.

Smooth-leaved Masus. PI. trailing.

Cult. The seeds of annual species require to be reared on a gentle hot-bed ; and when the plants are of sufficient size, but not before the end of May, they should be planted out in a warm sheltered situation in the open ground. *M. surculosus,* being perennial, will require to be kept in the greenhouse during winter.

XXIX. LIMNO'PHILA (from *Xtfivri, limne,* a lake ; and *(biXewy phileo,* to love ; in reference to the plants loving water.) R. Br. prod. 442. Benth. scroph. ind. p. 25.—Columnea species, Roxb.—Gratiola species, Willd.

LIN. SYST. ***Didynamia, Angiospermia.*** **Calyx tubular, *o**** cleft, equal. Corolla funnel-shaped ; limb somewhat bilabiate , upper lip 2-lobed: lower lip trifid; lobes all flat. Stamen* 4, didynamous ; filaments entire, usually abruptly mcurvea apex, sometimes dilated; anthers cohering by pairs, parallel, distinct. Stigma oblique, dilated, bilamellate, ^aps bisulcate, 2-valved; valves with a loculicidal dehi^?ce, tnev dehiscing slowly; dissepiment from the margins of or d^ at length free ; placentas adnate.—Erect marsh herbs. Leaves opposite : lower ones submersed, deep parted, as in *Ranunculus aqudtilis,* with capillaceously segments ; emersed leaves entire, toothed or cut, often and hence they appear as if they were verticillate.

opposite, sometimes sessile, sometimes pedicellate, axracemose ; pedicels usually bibracteate at apex.

§ 1. AXILLARIFLOR^E. *Flowers axillary. Emersed leaves hardly half an inch long.*

1 L. (Benth. in Wall. cat. no. 3904. scroph. ind. p. 25.) stem slender, glabrous; emersed leaves usually opposite, quite entire; flowers sessile, axillary ; teeth of calyx short, mutic ; capsule at length reflexed. ©.? %. S. Native of the Birman Empire, at Tavoy.

Reflexed-capsuled Limnophila. PL aquatic.

2 L. (Benth. in Wall. cat. no. 3905. scroph. ind. P- 25.) stem whorled, glabrous ; emersed leaves usually 3 in a whorl, lanceolate, subulately acuminated ; flowers sessile axillary, subverticillate ; teeth of calyx subulately acuminated. %. S. Native of Nipaul at 4,000 feet, Wall. ; Peninsula, Hamilt. ; Peninsula, Coromandel, Roxb. fl. ind. 3. p. *97.*

Subule-leaved Limnophila. PL aquatic.

3 L. (Blum, bijdr. p. 749.) stem villous ; leaves opposite, petiolate, lanceolate, obtuse, entire; spikes axillary and terminal, shorter than the leaves. T?. S. Native of India. Capraria diffusa, Roxb. fl. ind. *3.* p. *92.* Plant spreading, young parts puberulous. Leaves 1-3 inches long, and under one in breadth. Flowers small, purple. Racemes villous, clammy.

Diffuse Limnophila. PI. diffuse.

11 L. RACEMOSA (Benth. in Wall. cat. no. *3907.)* emersed leaves opposite, or subverticillate, 3-nerved, serrated, or the lower ones are parted ; racemes dense, many-flowered ; calyxes membranous, smooth, pedicellate. %. S. Native of the Indian Peninsula and Bengal, Wall. Bejar Royle. Cyrilla aquatica, Roxb. cor. *2.* p. 47. t. 189. L. hyssopifolia, Roth, nov. spec. 297. ? Corollas purple.

Racemose-flowered Limnophila. PI. aquatic.

12 L. GRATISSIMA (Blum, bijdr. p. 749.? Benth. in Wall, cat. no. 3906. scroph. ind. p. *26.)* emersed leaves 3 in a whorl, lanceolate-linear, serrated, feather-nerved ; raceme loose ; calyx with elevated stripes, on long pedicels. 1/. S. Native at Goalpara, Hamilt. ; Peninsula, Wight ; Ceylon, Macrae; Java, Blume.—Rheed. mal. 10. t. G, ex Blume. Leaves all ternate, sessile. Peduncles and calyxes clothed with glandular hairs, ex Blume.

Very grateful Limnophila. PI. aquatic.

13 L. POLYSTA'CHYA (Benth. in Wall. cat. no. 3909.) emersed leaves *3* in a whorl, 3-nerved ; racemes branched, slender, many-flowered ; flowers small, sessile. 1/. S. Native of the Indian Peninsula and Bengal.

Many-spiked Limnophila. PL aquatic.

N.B. L. campanuloides, Benth. in Wall. cat. no. 3908, probably belongs *to* Gentianese.

Cult. All the species of Limnophila being aquatic, they should be grown in a cistern placed in a stove, or warm part of a greenhouse, and treated like other tender aquatics.

XXX. MORGA^NIA (named in memory of Hugh Morgan, an apothecary of London, whose botanic garden is spoken of highly by Lobel and Gerarde in several parts of their works.) R. Br. prod. p. 441.

LIN. SYST. *Didynamia, Jngiospermia.* Calyx 5-parted, equal. Corolla ringent; upper lip 2-lobed : lower lip trifid ; lobes nearly equal, obcordate. Stamens 4, didynamous, inclosed ; lobes of anthers divaricate, mutic. Stigma bilamellate. Capsule 2-celled, 2-valved; valves bipartite; dissepiment from the inflexed margins of the valves.—Herbs with opposite leaves. Stems erect, tetragonal. Leaves linear. Peduncles axillary, 1-flowered, bibracteate at apex. Flowers blue. This

genus is nearly allied to *Herpéstis,* but is readily distinguished by the equal calyx, and more unequal corolla.

1 M. GLA'BRA (R. Br. prod. p. 441.) glabrous ; leaves linear, entire, or few-toothed; flowering peduncles about equal in length to the calyx. If. ? S. Native of New Holland, within the tropic.

Glabrous Morgania. PI. J foot. ?

2 M. PUBE'SCENS (R. Br. prod. 441.) downy ; leaves lanceolate-linear, toothed ; flowering peduncles shorter than the calyx. !£.? S. Native of New Holland, within the tropic. Very nearly allied to the preceding, and is, perhaps, only a variety of it.

Dowvy Morgania. PI. \ foot.

Cult. For culture and propagation see *Slemódia,* p. 542.

XXXI. HERPE'STIS (from *Ipirtierrie, herpestes,* any thing that creeps, in allusion to the creeping habit of the plants.) Gaertn. fruct. 3. p. 187. t. 214. R. Br. prod. p. 441. Benth. scroph. ind. p. 29.—Monniéra, Browne, Michx. &c. Gratiola species, Lin. and others. Calýtriplex, Ruiz, et Pav. Brâmia, Lam. Mart. pi. bras. 3. p. 16.

LIN. SYST. *Didyñamia, Jngiospermia.* Calyx 5-parted ; upper segment large, ovate, covering the rest: 2 lower ones narrower : 2 lateral ones linear. Corolla tubular, somewhat bilabiate : upper lip bifid : lower one trifid ; segments all flat, and nearly equal. Stamens 4, didynamous, inclosed ; anthers approximating by pairs ; cells diverging, or divaricate, at length nearly confluent. Style simple ; stigma emarginate, or 'bilamellate. Capsule hardly furrowed, 4-valved ; margins of the valves flat; dissepiment at length free ; placentas adnate.—Usually creeping, glabrous, or villous herbs. Leaves opposite, quite entire, or toothed. Flowers axillary, sessile, or pedicellate, solitary, or 2-3 together. Bracteas wanting, or furnished with 1-2 on each peduncle. Corollas generally blue.

§ 1. *Calyx bractless.*

1 H. ? AMÁRA (Benth. scroph. ind. p. 30.) plant almost glabrous ; leaves petiolate, ovate, crenated, cuneated at the base ; peduncles axillary, shorter than the leaves, 2-4-flowered, somewhat racemose; flowers pedicellate. %. S. Native of the Moluccas, Java. Gratiola amára, Roxb. fl. ind. ed. Car. 1. p. 136. ? Caranga amára, Vahl, enum. 1. p. 100. Curania amara, Juss. 1. c. Blum, bijdr. 746. Serrátula amara, Rumph. amb. *5.* p. 459. t. 170. fv 1. According to Roxburgh only 2 of the filaments are fertile. Rumphius says, the leaves are exceedingly bitter, and might, no doubt, answer valuable purposes in medicine.

Bitter Herpestis. PI. creeping.

2*TL OVATA (Wall. cat. no. 3896. Benth. scroph. ind. p. 30.) glabrous, procumbent; leaves short, petiolate, ovate, crenated; flowers solitary, opposite, nearly sessile. %. S. Native °\'. f® .Airman Empire at Tavoy. Habit of//, *chrysdntha,* from which it hardly differs unless in the sessile flowers.'

Ouafe-leaved Herpestis. PI. procumbent.

3 H. LiNEARis (Spreng. syst. 2. p. 802.) stem humble, branched ; leaves linear, quite entire, glabrous ; peduncles axillary, twin, 1-flowered. }/. S. Native of Coromandel. Lindérnia sesamoides, Spreng. new. entd. p. 14.

Li?iear-le2Lved Herpestis. PI. humble.

4 H. CHRYSA'NTHA (Cham, et Schlecht, in Linnsea, 2, p. 577.) herbaceous, glabrous ; stems at first erect, but at length decumbent ; leaves petiolate, ovate, serrated; peduncles opposite, a little shorter than the leaves ; outer sepals ovate, nearly entire. ©. H. Native of Mexico. Corolla yellow.

Yellow-flowered Herpestis. PI. decumbent.

5 H. LANCEOLA^TA (Wight, in Wall. cat. no. 3899. Benth. scroph. ind. p. 30.) glabrous, erect; leaves lan^olate* linear, quite entire, narrowed at the base; flowers pedicellate, together. 1/. S. Native of the Peninsula of India.

Lanceolate-leaved Herpestis. PL % foot.

6 H. SERPYLLOI^DES (Cham, et Schlecht, in Linnsea, 2, p. 574.) suffruticose ; stems radicant, tufted ; leaves nearly late, remotely and obsoletely serrated ; flowers sessile, alternate and opposite ; outer sepals lanceolate, acute. Native of Brazil, within the tropic, Sello. Habit of *serpyllum.* Flowers small.

Wild-Thyme-like Herpestis. Shrub creeping.

7 H. FLAGELLA^RIS (Cham, et Schlecht, in Linnaea, 2, p. 576.) sessile, suffruticose, glabrous ; stems whip-like, filiform ; leaves long, lanceolate, nearly entire, or serrated; peduncles alternate; outer sepals lanceolate, acute. In the South of Brazil, in the province of Monte Video. Herpestis tevidénsis, Spreng. syst. 2. p. 802. Flowers deep coloured.

Var. 0, *veroniccefólia* (Cham, et Schlecht. p. 576.) herbaceous, slender; leaves narrower, usually serrated ; serratures few, deep, rarely obsolete; flowers smaller. %. G. Monte Video.

Whip Herpestis. PL creeping.

8 H. TENE'LLA (Cham, et Schlecht. L c. p. 576.) herbaceous, glabrous; stems prostrate; leaves on short petioles ovate, acutely serrated ; peduncles very long, alternate ; sepals ovate, cordate. %. S. Native of the South of Brazil, at Rio Pardo, Sello.

Tender Herpestis. PL prostrate.

9 H. cALLiTRicHoi^ES (H. B. et Kunth nov. gen. et spec. p. 367.) quite glabrous, prostrate ; leaves alternate, cuneated at the base, remotely toothed ; peduncles longer than the leaves. ⊙. S. Native of Mexico.

nia callitrichoides, Spreng. syst. 2. p. 8(M. Perhaps a species of *Linderma.*

Callitriche-like Herpestis. PL P « g " £ j c>) glabrous, p"-

10 H. VANOELLIOIW (H-?-,f^{n}ed.' peduncles long?' cumbent; leaves obovate, ^f'J'XloWong, acute, obsolete, than the leaves; outer segment, of calyx ^ . ^ *fnd* ures of rec.t MS M^ and Omitlan, at the aH.tude 1:120 hexapods. Root perpendicular.

Tmdellin-like Herpestis. Pl. procumbent.

11 H. cARAMOI'DES (H. B. et Kunth. L c. p. 368.) quite glabrous, procumbent, creeping ; leaves ovate, obtuse> cuneated at the base, serr ; peduncles out eqa^ a) ·r length to the leaves; uts of calyx oblong, acute, sub-crenated. 4. S. New Granada, in dry sandy places on the banks of the river Magdalena, near El Penon. Corolla yellow, longer than the calyx; upper lip emarginate : lower one bi

. c.) glabrous, procum- ut the base, serrated; bent; leaves oblong, acuUs^.c leaves^; ^ segments of peduncles twice the length of h e S. calyx oblong, acute, quite ^ d*sondorillo, at the alu« the humid places near Guancabamlwana, Yerba & *Coulebra*^ ode of 1000 hexapods, wiiere it is ^ea emarginate: io«e natives. Corolla yellow; upper lip ^^ against tbe bite bearded at the base. Ine piani venomous animals.

Snake Herpestis. PL P> ocum S m et Schlecht, L *c)*

13 H.CWNSIS (P^PP-ff j f X ' peduncles being .«£„, species differs from *H.* tef"™ l i e and obtuse, not site, and in the outer sepals beingjwp- g> Native ot that plant, ovate, cordate, acuminated. 4

Plant gl bro S: nu lated- np!q branches twiggy. Leaves roundish-ovate, creleaves. pecfuncles axillary, filiform, opposite, exceeding the

Cuba Herpestis. Pl. creeping.

14 H. CHAMISSONIOI'DES (H. B. et Kunth, l. c. p. 369.) glabrous, procumbent; leaves obovate, obtuse, crenately serrated; peduncles longer than the leaves; outer segments of calyx ovate-oblong, acutish, quite entire. 7/. S. Native of Quito, in temperate places near Chillo and Lulumbamba, at the altitude of 1960 hexapoda. Lindernia dianthera, Swartz, prod. 92. fl. occ. 2. entire; the This is hardly distinct from *H. collu-* ... bearded, ... *ina,* H JR** ... et Kuntll> and *H. chrysantha,* Cham, is probably the same.'

f« ***r-like Herpestis.* PL procumbent.

REPENS - ... et Cham, in Linnaa, 5. p. 107.) stems creeping, filiform; leaves sessile, roundish-ovate, entire, glabrous; peduncles downy, shorter than the leaves; outer segments of calyx ovate. Y. S. Native of Jamaica, in watery places, Gratiola repens, Swartz. prod. p. 14. fl. ind. 1. p. *39.* icon. t. 8. Corollas small, white,

Creeping H erpestis. PI. creeping.

16 H. OBOVATA (Poepp. pi. cub. exsic. ex Schlecht, et Cham. in Linnaea, a. p. 107.) stem woolly; leaves obovate. Y. S. Native of Cuba. Gratiola repens, Willd. herb. Gratiola parviflora and Hydrotrida Beccabunga, Juss.

°tovate leaved Herpestis. PI. creeping.

17 H. CAESPITOSA (... Cham. et Schlecht, in Linnaea, 8. p. 33.) ... late ... entire, rather fleshy, 1 -nerved; peduncles ... than the leaves; calyx somewhat ... Sello ... Native of ... and ... stature of *Veronica saxdtilis,* but ... the intern... slender- leaves scarcely 2 lines long, exceeding ... ones ... blontish, subconnate. Sepals unequal, the ... apart, ... acute: the 2 inner narrower, ovate, acumi-

Tufted Herpestis. Pl. creeping.

18 H. NUMMULARIOI'DES (Cham. e* Schlecht, in Linn^a, 8. p. ... glabrous; ... tetragonal, much branched, ... to the ... few-crenated, obtuse, fern, ... 5 Petioles connate; flowers axil- ... state, not ... Pedicels; calyx loose in the fructi- ... exceeding the capsule; valves of capsule ensi... Native ... obtuse; outer ones ovate-lanceolate. ... Plant ... Brazil, Sello. Root rather woody, nearly ... tufted. Lobes of the limb of the corolla almost equal in length, rather unequal.

Herniaria-li... 6 Herpestis. PI. creeping, and tufted.

§ 2. *Calyx bracteate.*

19 H. BRACTEOSA (R. Br. Prod. P. f. ... glabrous, erect; ... quite entire; sepals or segments ... reticulated and subcordate; peduncles ... the apex, shorter than the leaves. 7/. S. Native of New Holland, within the tropic; and of Java, in ... fields.

Bundle-flowered Her...

20 H. Do PI. ... (Spren. syst. 2t P. 801.) Stem erect, glabrous, branched, ... Petiolate, oblong, attenuated at the base, crenate ... peduncles verticillate; fruitiferous calyx reticulated. Y. ? C. Native of Hispaniola, Bertero.

St. Domingo Herpestis. Pl. erect.

21 H. ERECTA (Spren. syst. 2. p. 801.) villous; stem erect; leaves ... sli...oblor; ... subcrenulated; peduncles axillary, oppo... Site ... erect ... Native of Brazil, Sello.

Erect Herpestis. PI. erect.

22 H. STRICTA (Schrad. ex Link, enum. 2. p. 142.) stem erect, glabrous, branched; leaves oblong-lanceolate, acute, running into the petioles, unequally serrated; peduncles axillary, usually solitary, short; calyxes crenulated. *%.1* S. Native of Brazil. Flowers 4-6 in a whorl, blue.

Strict Herpestis. Fl. Aug. Clt. 1824. PL erect.

23 H. AMPLEXICAU'LIS (Pursh, fl. amer. sept. 2. p. 418.) stems woolly; leaves short, cordate-oval, stem-clasping, entire, obtuse; peduncles shorter than the leaves. %. H. Native of Carolina and Georgia, in ponds and ditches. Monniera amplexicaulis, Michx. fl. bor. amer. 2. p. 22. Flowers blue, larger than in the other North American species.

Stem-clasjnng'leaved Herpestis. Fl. July, Aug. Clt. 1818. PI. creeping.

24 H. ROTUNDIFOLIA (Pursh, l. c.) minutely pubescent; leaves suboval-orbicular, many-nerved; peduncles opposite, about equal in length to the leaves. 1/. H. Native of Illinois and other western parts, on overflowed banks of rivers. Monniera rotundifolia, Michx. fl. bor. amer. 2. p. 22. Flowers small, pale blue.

Bound-leaved Herpestis. Fl. July, Aug. Clt. 1824. PI. creeping.

25 H. MICRA'NTHA (Pursh, l. c.) glabrous, succulent; leaves sessile, oval, obtuse, quite entire, striately nerved; peduncles shorter than the leaves; calyx 5-leaved; style bifid. 0. H. Native from Pennsylvania to Virginia, on the banks of rivers to the edge of low water mark. Flowers very small, white. This species approaches near to *Lindernia.*

Small-flowered Herpestis. Fl. July, Aug. Clt. 1817. PI. creeping.

26 H. MONNIE'RA (H. B. et Kunth, nov. gen. amer. 2. p. 294. Benth. scroph. ind. p. *30.)* creeping, glabrous; leaves cuneiform, quite entire, or toothed at apex; flowers solitary, opposite, on long pedicels, bibracteate under the apex. 2/. S. Native throughout India, China, and the Moluccas; and throughout North and South America, West Indies, Sandwich Islands, &c. Gratiola Monniera, Lin. amcen. acad. 4. p. *306.* Jacq. obs. bot. p. 4. t. 1. Roxb. cor. 2. p. 41. t. 178. fl. ind. ed. Car. 1. p. 141. Capraria Monniera, Roxb. in herb. Willd. no. 11526. Gratiola portulacacea, Wenm. in syll. pi. nov. bot. zeit. 1. p. *222.* Sims, bot. mag. 2557. Monniera Brownei, Pers. ench. 1. p. 166, Monniera cuneifolia, Michx. fl. bor. amer. 2. p. *22.* Herpestis cuneifolia, Pursh, fl. amer. sept. 2. p. 418. Herpestis Brownei, Nutt. gen. amer. 2. p. 42. Link, enum. 2. p. 142, exclusive of synonymes. Herpestis procumbens, Spreng. nov. prov. p. 22. syst. 2. p. 802. Bramia Indica, Lam. diet. 1. p. 459. Calytriplex obovata, Ruiz, et Pav. syst. fl. per. p. 164. —Ehrh. pict. t. 14. f. 2.—Browne, jam. 1. p. *296.* t. 28. f. 1. —Sloan, hist. 1. p. 203. t. 129. f. 1.—Rheed. mal. 10. p. 27. t. 14. Outer segments of calyx ovate-oblong, acute, entire. Corollas small, pale blue. The natives of India use the expressed juice of this species mixed with *Petrblium* to rub on parts affected with rheumatic pains.

Monnier's Herpestis. Fl. July, Sept. Clt. 1772. PI. creeping.

27 H. STELLARIOIDES (Cham, et Schlecht, in Linna?a, 8. p. *32.)* glabrous; stem erect, nearly simple, loose; leaves subsessile, linear-lanceolate, obsoletely serrated at apex; peduncles axillary, equal in length to the leaves; calyx bibracte^ ate: the larger segments ovate, obtuse, reticulated. *U.* S. Native of Brazil, Sello. Leaves longer than the internodes, about an inch long, rarely opposite, but usually *3* in a whorl, half stem-clasping. **Bracteas and calyx** as in *H. Monniera,* but the corolla is smaller, and more deeply cleft, and the segments are narrower and longer, oblong, obtuse.

Stichwort-like Herpestis. PI. 1 to 1| foot.

28 H. MORANE'NSIS (H. B. et Kuntb, nov. gen. amer. 2. p. 367.) creeping, glabrous; leaves cuneate-oblong, obtuse, obsoletely and remotely denticulated at apex, rather fleshy ; peduncles longer than the leaves, bibracteate under the calyx ; outer segments of calyx ovate-oblong, bluntish, quite entire. *1J..* S. Native of New Spain, between Mount Ventoso and the mines of Moran, at the altitude of 1340 hexapods.

Moran Herpestis. PL creeping.

29 H. TOMENTÒSA (Schlecht, et Cham, in Linnaea, 5. p. 106.) plant clothed with white wool, creeping, branched ; leaves spatulate, elliptic, acutish, sessile, somewhat crenately serrated towards the apex ; flowers axillary, sessile ; calyx bibracteate ; bracteas and calycine segments linear-acuminated and acute. %. S. Native of Vera Cruz, in sandy places.

Tomentose Herpestis. PL creeping.

30 H. LANUGINO'SA (Blum, bijdr. p. 747.) woolly; leaves ovate, doubly crenated; peduncles shorter than the petioles; calyx bibracteate. %. S. Native of humid places near Sadjram.

Woolly Herpestis. PI. erect. ?

31 H. JAVA'NICA (Blum, bijdr. p. 743.) stems procumbent, rather villous; leaves ovate, unequally crenated, smoothish, lull of depressed dots beneath ; flowers nearly sessile ; calyxes bibracteate. 1/. S. Native of Java, in rice fields.

Java Herpestis. PL procumbent.

32 H. SPATULA^TA (Blum, bijdr. p. 743.) quite glabrous ; leaves spatulate, obsoletely serrulated above ; peduncles longer than the leaves ; calyx bibracteate. %. S. Native of Java, in bogs about Batavia and Buitenzorg.

SpatulateAeaved Herpestis. PL procumbent. ?

N.B. Herpestis floribiinda, Roth, nov. spec. *289,* but not of R. Br., and H. rugosa, Roth, 1. c. p. 290, do not belong to this genus, or even probably to the order. They are, perhaps, Acanthaceous plants.

Cull. Most of the species require to be grown in moist soil, or in shallow water. They are readily increased by separating the rooted stems.

XXXII. MECARDO^NIA(named^after Antonio Meca y Cardona, a Spanish botanist, and one of the founders of the botanic garden of Barcelona.) Ruiz, et Pav. fl. per. syst. p. 164. Mart. nov. gen. 1. p. 16. t. 208.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, unequal ; the 3 outer segments the largest, propped by adnate twin bracteas. Corolla tubular ; limb short, sub-bilabiate, 5-lobed. Stamens 4, didynamous, inclosed; anthers discrete. Stigma oblique, subcapitate, on an incurved style. Capsule 2-celled, completely 2-valved ; dissepiment placentiferous, at length free; valves parallel.—Small, herbaceous, decumbent plants, with tetragonal stems, and opposite leaves on short petioles; and axillary and terminal flowers. This genus is nearly allied to *Herphtis* and *Morgania.*

1 M. PUSILLA (Mart. pi. bras. 1. p. 16. t. 208.) leaves lanceolate, or broad-lanceolate, obsoletely serrated. %. S. Native of Brazil, in the provinces of St. Paul and Bahia, in sandy desert fields.

Least Mecardonia. PL decumbent.

2 M. OVATA (Ruiz, et Pav. syst. veg. per. p. 164.) leaves ovate, serrated. %. S. Native of Peru.

Ovate-leaved Mecardonia. PL decumbent.

Cult. For culture and propagation see *Herpestis* above.

XXXIII. BRA'MIA *(Brami* is the Malabar name of *Herpestis Monniera,* according to Rheed. mal. 10. p. *27.* t. 14.) but not of Lam. nor Mart. Herpestis, Mart. pi. bras. 3. p. 13, but not of Gaertn. and R. Br. Mĕlia, Vand.

LIN. SYST. *Didynamia, Angiospermia.* ' Calyx unequal; the 3 outer segments the broadest, and subcordate : the 2 inner ones keeled. Corolla ringent, bilabiate ; upper lip 2-lobed: lower lip 3-lobed. Stamens 4, didynamous ; anthers discrete. Ovarium girded by a long, toothed disk. Stigma bifid. Capsule 2-celled; dissepiment placentiferous ; valves bipartite.—Herbs with opposite leaves. Peduncles axillary, bibracteate.

1 B. LANIGERA; %. S. Native of tropical Brazil, Sello. Herpestis lanigera, Cham, et Schlecht, in Linnaea, 2. p. *572-* Veronica rotundifdlia Brasiliensis, Spreng. syst. 1. p. *67.* Stem creeping, woolly. Leaves sessile, ovate, orbicular, entire, feather-nerved ; peduncles equal in length to the leaves and longer, bibracteate under the calyx.

Wool-bearing Bramia. PL creeping.

Cult. For culture and propagation see *Herpestis,* above.

XXXIV. SPH^ROTHFCA (from *tnraipa^spaira,* a sphere; and *OrjKrj, theke,* a case, or sheath, in reference to the globular capsule.) Cham, et Schlecht, in Linnaea, 2. p. *608.*

LIN. SYST. *Didynamia, Angiospermia.* Calyx deeply 5-parted, equal, permanent. Corolla tubular; limb unequal, 5-lobed, bilabiate; upper lip 2-lobed: lower one stretched out, and 3-lobed; lobes entire, obtuse. Stamens 4, didynamous, inclosed; filaments filiform, glabrous, short, inserted a little beneath the throat: lower ones the longest; anthers 2-celled, roundish, mutic, naked, approximating by pairs. Style inclosed ; stigma bilamellate. Capsule globose, 2-celled, dehiscing slowly at the dissepiment, as also in the middle *of* the cells, and, therefore, the capsule appears 4-valved ; dissepiment wholly placentiferous Seeds numerous, minute, oblong, angular, striated, and as if they were foveolate.—Glabrous herbs with opposite dotted leaves ; axillary, 1-flowered peduncles, and bibracteate calyxes.

1 S. SCOPARIOIDES (Cham, et Schlecht, 1. c. p. *606.)* %. H. Native of equinoctial Brazil. Root creeping. ? Stem tetragonal, erect, ornamented with flowers and leaves from the base to the apex, as well as the branches. Leaves lanceolate, acute, obsoletely, unequally, and sharply serrated, feather-nerved, 2 inches long; margins and teeth cartilaginous; petioles short. Flowers small. Segments of calyx linear-lanceolate, 3-nerved. Corollas small, downy outside, bluish in the dried state.

Scoparia-like Sphaerotheca. PL 2 to 3 *feet.* ^

Cult. For culture and propagation see *Herpestis* above.

XXXV. DI'CEROS (from *dig, dis,* twice ; and *xepoc, keros,* a horn ; in reference to the bicornute anthers.) Lour. coch. p. 381. Blum, bijdr. p. 751.

LIN. SYST. *Didynamia, Angiospermia.* Calyx bractless, *o*-parted, equal. Corolla funnel-shaped ; limb bilabiate, sometimes nearly equal. Stamens 4, didynamous ; filaments ascending : longer ones callous at the base; cells *of* anthers diverging, conniving in a cruciate manner. Stigma bilamellate. ^apsu nearly globose, 2-celled, 2-valved; valves undivided; dissep ment parallel; placentas adnate to the dissepiment.—wer^ with opposite leaves, and with generally terminal racemes flowers.

SECT 1. *Corolla subcampanulate; limb Globed, nearly equa •*

1 D. COCHINCHINE'NSIS (Lour. coch. p. 381.) leaves fl! in ^ whorl, ovate-lanceolate, serrated, fleshy, glabrous; F solitary, axillary, 1-flowered, villous. 1/. G. Native *ot* ^ . ^ china, in marshy places. Root creeping. Flowers pale

Corolla PJ»™V™ I... segments of the limb cordate, one of them larger than the others, stalked, spoon-shaped, inflexed. *Cochin*). *Cochinchina* Diceros. Pl. 1 foot.

Sect. 2. Ziw6 *of corolla bilabiate : upper lip emarginate: lower lip 3-lobed.*

2 D. ... (Blume, bijdr. P- *52.)* leaves opposite, nearly ... tQothed, ... Ptlc, obtuse, cuneated at the base, bluntly ... Scabrous 5 racemes terminal, elongated ; stem nearly simple. ... U. ? S. Native of Java, in humid places on the mountains. *Broad-leaved* Diceros. PL It* 2 feet?

3 D. ... (Blum, bijdr. P- 752.) leaves opposite, ovate, bluntly tombi... Peduncle* ... er pilose on both sides, as well as the stem» ... axillar... S- Native ... y» solitary» sub-umbellate, 3-5-flowered. *%.l faun tain* n' ... on M o Unt Salak_

4 j»'«m Diceros. PI. 1 to 2 feet?

°PPosite ^.^.". B R u s (Blum, bijdr. p. 752.) downy; leaves ... thed 'wirt! I ... Vate, obtuse, crenulated; raceme terminal, ... synlar-ca glandular hairs. %. ? S. Native of Java, in *Wand br* ... near Buitenzorg, and about Batavia.

5 D ... ? ... DICeros- PL 1 to 2 feet?

... (Blum- bijdr- P- *IM-)* downy; leaves sessile, opposite, ... PITOSUS ... Vate, serrulated; peduncles 1-flowered, usually ... ern Provinces. ... ary* V ? S* Native of Java, in the west. Variety ... among grass. There is a pilose and a glabrous

C^ ... ros. PI. tufted.

... Or cult... ure and propagation see *Herpestis,* p. 546.

XXXVI. LOXOPHY'LLUM (from λοξος, *loxos,* a bow; and φυλλον *phyllon,* a leaf; in reference to the oblique leaves.) Blum. bijdr. p. 75f. Lin. sys...

... ? HartecT. 1 *Didynamia. Angiospermia.* Calyx bilabiate ; tricose : UDD ... T Grlij P bi Partite- Corolla bilabiate ; tube ven-... 6qUal; thro... erect, emarginate: lower one larger, tri fid, ... ers Conne... a Pilose. Stamens 4, didynamous, exserted; ... apsule glob... ... ^/^e ... lc^osed 5 stigma obtuse, emarginate. ... length f... S ^ ? ~ celled, 4-valved ; placenta central, 4-parted, ... ves altenf\ ... if^ downy> with a branched, nodose stem. ... Pedn... ic... GS rac... emose, axillary.—This genus differs from ... foeta in the ... yx being bilabiate, but the structure of the ... Ult and anthers are similar as well as the habit. ... L- Rackosiana ... um. bijdr. p. 751.) ... ? S. Native of Java, among stones at the foot of Mount Menari» »n the province of Buitenzorg.

Racemose-flowered Loxoph ... ylum PL

Cult. For culture and propagation see *Herpestis,* p. 546.

XXXVII. ... ^ATOU'REA (the meaning of this word is not explained by ... Aublei.) Aubl. guian. 2. p. 641. t. 253.

Lt. ... Corolla tubu... ar, incurved ; limb bilabiate: upper one erect, ... lower ... Didynamia, Angiospermia.* Calyx 4-parted. ... Stir... one deflexed, trifid, unequal. Stamens didyna-... se^abl... y i... bila... ellate. Capsule 1-celled, ex Aubl., but ... ^inifeous ... o... dj 2-valved, many-seeded; placenta central, ... branches ... ^eeds minute.—Herbs with tetragonal, nodose ... flowers. opposite leaves, and axillary, almost solitary

1 M. ... (Benth. scroph. ind. p. 16.) glabrous; stem erect, branched ; leaves lanceolate, bluntish, toothed towards the apex. 2/. H. Native from Pennsylvania to Carolina, in ditches and wet places. Gratiola acuminata, Walt. fl. carol, p. 61. Ell. fl. carol, p. 15. Gerardia cuneifolia, Pursh, fl. amer. 2. p. 422. Flowers large, pale yellow. ? Calyx 5-parted.

Blackish Matourea. PL 1 to \\ foot.

2 M. PRATE'NSIS (Aubl. guian. 2. p. 642. t. 259. under M. Guianensis.) leaves petiolate, ovate-oblong, acute, crenated. ©. S. Native of the Island of Trinidad, and of Brazil, on road-sides. Vandellia pratensis, Vahl, eclog. 2. p. 48. Willd. spec. 3. p. 343. Tupeicavi, Pis. bras. 249. Corollas blue.

Meadow Matourea. PL 2 feet.

3 M. ? DUNBIA ; leaves lanceolate, acutely serrated, attenuated at the base, and somewhat auricled; flowers nearly sessile, subspicate. %. G. Native of Buenos Ayres. Gratiola tetragona, Hook. bot. mag. t. 3134. Flowers blue.

Doubtful Matourea. FL Aug. Clt. 1830. PL 1 foot.

Cult. For culture and propagation see *Herpestis,* p. 546.

XXXVIII. CACONAVPEA (meaning unknown to us.) Cham, et Schlecht, in Linnsea, 8. p. 28.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, unequal ; upper segment the largest. Corolla tubular: limb 4-cleft, bilabiate : upper lip shorter, emarginate: lower one trifid, equal. Stamens 4, didynamous, inclosed ; anthers roundish, 2-celled, emarginate at the base. Stigma compressedly bilamellate, bent a little forward. Capsule cylindrical, inclosed, 2-celled, 4-valved; dissepiment separating slowly from the inflexed valves.—An herb with the habit of *Gratiola amara.* Leaves opposite, decussate, quite entire, full of pellucid or glandular dots. Flowers small, in axillary contracted cymes, falsely verticillate. Calyx bibracteate.

1 C. GRATIOLOIDES (Cham, et Schlecht, 1. c. p. 29.) %. ? S. Native of Brazil, Sello ; Bahia, Lhotski, in marshes. Plant glabrous, or rather pilose on the midrib and margins of the leaves. Stem purplish. Leaves complicate, linear, or linear-lanceolate, acute, longer than the internodes. Bracteas setaceous.

Gratiola-like Caconapea. PL \\ to 3 feet.

Cult. For culture and propagation see *Herpestis*^ p. 546.

XXXIX. RANA'RIA (from *rana,* a frog, in allusion to the habitation of the plant, in inundated places.) Cham, et Schlecht, in Linnaea, 8. p. 30.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted; segments of equal length ; outer 3 the broadest. Corolla venb'icosely tubular ; limb 4-cleft, nearly equal. Stamens 4, didynamous, almost erect ; anthers sagittate, obtuse within the throat; cells elliptic. Stigma capitellately emarginate. Capsule inclosed, 4-valved; dissepiment membranous, thin, free, seminiferous at the axis.—A small, marsh, creeping herb. Leaves opposite, decussate, quite entire, full of pellucid dots. Flowers small, axillary, fascicled, on short pedicels. Calyx bibracteate ; bracteas minute.

1 R. MONNIERIOIDES (Cham, et Schlecht, in Linnsea, 8. p. 31.) %. S. Native of Brazil, in inundated places, Sello. Leaves half stem-clasping, from ovate, scarcely subcordate, narrowed at the base, bluntish, rather fleshy, shorter than the internodes.

Monniera-like Ranaria. PL creeping.

Cult. For culture and propagation see *Herpestis,* p. 546.

XL. VANDEXLIA (so named by P. Browne, in honour of Dominico Vandelli, professor of natural history at Lisbon.) Lin. mant. p. 89. Schreb. gen. no. 1040. Juss. gen. p. 122.

ed. Usteri. p. 136. Lam. ill. t. 522. f. 4. Benth. scroph. ind. **p. *35.***

LIN. SYST. *Didynamia, Angiospermia.* Calyx tubular, or campanulate, nearly equal, 5-toothed, or 5-parted. Corolla with an exserted tube, and a 5-cleft, bilabiate limb; upper lip the shortest. Stamens 4, didynamous : the *2* superior ones short; filaments entire : the *2* lower ones inserted at the base of the lower lip ; filaments elongated, arched, furnished with a tooth-formed or filiform appendage each at the base ; anthers cohering by pairs, 2-celled ; cells diverging or divaricate, confluent at apex. Style simple ; stigma flattened, bilamellate, or simple. ? Capsule globose, oblong, or linear, 2-valved ; valves entire, membranous, with flat margins ; dissepiment parallel, placentiferous, at length free.—Glabrous or hairy herbs, sometimes with the habit of species of *Torenia,* and sometimes with the habit of species of *Bonnaya.* Stems tetragonal. Leaves opposite, usually toothed. Flowers axillary, opposite, or fascicled : the upper ones generally racemose.

§ 1. BRACHYCA'RPJE *(from/3paxvg, brachys,* short; and rapTTOC, *karpos,* a fruit.) Benth. scroph. ind. p. *35.* CapsuJe nearly globose, or ovate-oblong, shorter than the calyx, or hardly longer.

**** Calyx 5-toothed before florescence. Capsule shorter than the calyx.***

1 V. OBLONGA (Benth. scroph. ind. p. *35.)* glabrous, erectish ; leaves oblong, or lanceolate, narrowed at the base, quite entire, thickish ; peduncles few, elongated, subracemose ; calyx tubular, almost equally 5-toothed, or semiquinquefid ; capsule* globose, shorter than the calyx. ©. H. Native of China, near Macao, Vachell.

Oblong-leaved Vandellia. PI. | to I foot.

2 V. MOLLUGINOIDES (Benth. 1. c.) glabrous ; leaves nearly sessile, ovate-oblong, cuneated at the base, with scabrous margins ; peduncles stiff, fascicled, hardly longer than the calyx; calyx narrowed at the base, 5-toothed at apex, at length cleft irregularly ; capsule ovate-oblong, shorter than the calyx. ©. ? S. Native of the Birman Empire. Torenia molluginoides, Benth. in Wall. cat. no. 3960. Calyxes stiff, *2* lines long. Corolla a little longer.

Mollugo-like Vandellia. PI. \ to 1 foot.

3 V. A'LBA (Benth. 1. c) diffuse, nearly glabrous; leaves on short petioles, ovate, rounded at the base, or cuneated ; peduncles slender, fascicled, much longer than the calyx ; calyx slender, somewhat 5-loothed at apex, at length hardly cleft ; capsule oblong, shorter than the calyx. 0. ? S. Native of the East Indies, at Nathpur. Torenia alba, Hamilt. in Wall. cat. no. 3961.

White-dowered Vandellia. PI. creeping.

4 V. CRUSTA^NCEA (Benth. 1. c.) diffuse, glabrous; leaves ovate ; peduncles axillary, or subracemose, *2-3* times as long as the calyx; calyx 5-toothed before florescence, but at length becoming 5-parted, exceeding the ovate capsule. ©. S. Native throughout India ; in the Peninsula ; at Macao in China ; and at Saharumpur. Capraria Crustacea, Lin. mant. p. 87. Torenia Crustacea, Cham, et Schlecht, in Linnsea, 2. p. 570. Gratiola lucida, Roxb. cor. 3. p. *2.* t. 202. fl. ind. ed. Car. 1. p. 138. Morgania lucida, Spreng. syst. 2. p. 802. Torenia lucida, Hamilt. in Wall. cat. no. 3962. Gratiola aspera, Roth, nov. spec. p. 11. Hornemannia ovata, Link, et Otto, abbild. 1. t. 9. Tittmannia ovata, Rchb. icon. exot. 1. p. 27. Antirrhinum hexandrum, Forster, prod. p. 43. no. 235.—Rheed. mal. 9. p. 113. t. *58.* Morgania aspera, Spreng. syst. *2.* p. 803. Calyx 2 to *2* lines long. Corolla deep blue.

Crusiaceous Vandellia. Fl. June, July. Clt. 1816. Pi-trailing.

**** * Calyx 5-parted before florescence. Capsule shorter than the calyx.***

5 V. ERE'CTA (Benth. 1. c. p. *36.)* erectish, glabrous ; leaves nearly sessile, ovate or oblong, narrowed at the base; peduncles axillary or racemose, *2-5* times as long as the calyx ; calyx 5-parted, or deeply 5-cleft before florescence ; segments of the calyx lanceolate, membranous, exceeding the capsule, which is ovate. ©. S. Native of India; as of the Peninsula, Deyra Doon, Munghyr, Nipaul, Silhet, Birman Empire, &c. Tittmannia trichotoma, Benth. in Wall. cat. no. 3943. Very nearly allied to *V. Crustacea,* but distinct.

Erect Vandellia. PI. \ foot.

6 V. ELA'TA (Benth. 1. c.) glabrous, or sparingly pilose ; leaves petiolate, ovate, subcordate at the base ; pedicels racemose, at length hardly twice the length of calyxes; calyx 5-parted before florescence ; segments lanceolate-subulate, exceeding the ovate capsule. ©. S. Native of the Birman Empire, at Tavoy, Wall. Tittmannia elata, Benth. in Wall. cat. no. 3942.

Tall Vandellia. PI. \ foot.

7 V. HIRSU'TA (Hamilt. mss. ex Benth. scroph. ind. p. *36.)* hairy; leaves ovate: lower ones petiolate, narrowed at the base : superior ones nearly sessile, cordate at the base ; pedicels racemose, at length 2-3 times as long as the calyx ; calyx 2-parted before florescence ; segments lanceolate, subulate, exceeding the nearly globose capsule. ©. H. Native of India, at Goalpara, Silhet, Peninsula, and Ava. Tittmannia ovata, Benth. in. Wall. cat. no. 3942. but not of Rchb. Gratiola viscasa, Horn. hort. hafn. p. 19. Hornemmannia viscosa, WilW* enum. p. 654. Tittmannia viscosa, Rchb. icon. bot. exot. 1. P' 26. t. *38.* Corolla blue.

Hairy Vandellia. Fl. June, July. Clt. 1823. PI. *i hot.*

8 V. SCABRA (Benth. I.e.) diffuse, hairy, or almost glabrous; leaves nearly sessile, broad-ovate, subcordate at the base^ ^ rounded; peduncles axillary or racemose, 2-5 times as long as the calyx ; calyx 5-parted before florescence : segments lanceolate, exceeding the nearly globose capsule. ©. S. ^ the Indian Peninsula, and at Tavoy ; and of the Island Torenia hirta, Cham, et Schlecht, in Linnaea, 2. p. 36. Tittmannia pusilla, Benth, in Wall. cat. no. 3945. exclusive 0 C. Tittmannia sulcata, Benth. in Wall. cat. no. 3946. of *V. Crustacea;* but the plant, and especially the calyx* black on drying. It is also like *Bonnaya rotundifdlia** fers in the inflorescence and stamens.

Scabrous Vandellia. PI. diffuse, \ to 1 foot.

9 V. LA'XA (Benth. 1. c.) diffuse, hairy; leaves nearly s rounded at the base, or subcordate ; pedicels axillary mose, *2-3* times as long as the calyx; calyx 5-parted florescence ; segments subulate, very hairy, exceeding t sule, which is nearly globose. ©. S. Native of the fen of India, Wight. Perhaps only a variety of *V. scabra,* DU habit and calyx are distinct.

Loose Vandellia. PI. diffuse, \ foot.

10 V. MOLLIS (Benth. 1. c.) hairy; leaves nearly ; e oblong-ovate or ovate-lanceolate, clothed with soft vim eels axillary or racemose, 2-4 times as long as the calyx 5-parted before florescence, very hairy, With subulate s exceeding the capsule, which is oblong. 0. S. ^ het. Tittmannia hirta*, Benth. in Wall. cat. no. 394»- ments of calyx at length 4 lines long, but in most *ot*

species long. Containe(1 m the present section hardly more than 2 lines

^Vandellia. PI. | to 1 foot.

* * * *Calyx 5-toothed or 5-cleft. Capsule ovate, a little longer than the calyx.*

11 V. ish> subcord S S ILIFL6RA (Benth - l - C O ^aves nearly sessile, round- to othed, at len/f tue baSG flowers sessile, fascicled ; calyx 5- calyx a littlp "e6! c. left a *ltt:*e > capsule oblong, exceeding the Tacng Dona w. all. Native of the Birman Empire, at Mount no - 3959. Torenia sessiliflóra, Benth. in Wall. cat.

f ^ ° w ^ Vandellia. Pl. ½ foot.

nearly glabrous ; I:MA(; Roylej msS> ex Benth - Lc 0 small> simple> erect> COrdate; flowe ex aVG S almo St sessile> mounded at the base, sub- lule ovate PV f essile> fascicled ; calyx semiquinquefid ; cap- Royle. e, exce eding the calyx. ©. S. Native of Mussooree,

Least Vandellia. PI. small.

13 V. RUBICUNDIFÓLIA (D. Don, prod. fl. nep. p. *86.1* Benth. scroph. ind. p. 87.) erect, branched; leaves nearly ses- Sanded ; peduncles axillary, subfasciculate, -1 -flowered or calyx. 5 capsule XT OVate or oblong, about twice as long as the ©. S. Native of Nipaul, Wall. Mussooree, Royle. Flowers small.

Mercy-wort-leaved Vandellia. PL ½ foot.

§ 2. SICCULÒSÆ (from *sitiqua*, a long pod, in reference to the elongated capsules.) Capsule oblong-linear, longer than the calyx.

14 V. DIFFU SA Lindley P. 8? - Benth. L c -) diffuse> down y; leaves broa(i. g wk » calvv sl K te> neai^y sessile; flowers axillary, almost sessile, oh is oblona qUmC V lerid, one half shorter than the capsule, P ninsula of f \. ©• S- Native of Brazil, Mauritius, and the Gratiola ^ n ^A a: islands of Montserrat and Santa Cruz. Fitia, Spreng. syst. 1. Vahl, enum. 1. p. 99.? Bonnaya organi- of Veronica serpyllifolia. p. 42.—Marcgr. bras. t. *32.* f. 1. Habit Diffuse V *ha.* Corolla white.

15 V. * E Z eUla \ FL Jul ^ A" g- Clt. 1824. PI. diffuse. cumbent; ULATA (Benth. 1. c.) smoothish, loosely pro- leaves rivate : calyx 5-parted, ; pedicels axillary, solitary, elongated ; oblong-linear. aoout one half shorter than the capsule, which is lun, Silbet, &c. *Wb.* Native of the Peninsula of India ; Cey- no. 3949. • ar^i l ttmannia grandiflora, Benth. in Wall. cat. *edunculate* fl y distinguishable from *Bonnaya grandiflora.* Yl V. Arenstipula (Benth. l. c.) glabrous, loosely diffuse ; leaves oblong-linear ; pedicels axillary, elongated ;" calyx 5- §:?. ne half shorter than the capsule, which is oblong-linear. Native of Nipaul, Wall. ; at Nathpur, Hamilt. Titt- mannia angustifolia. Benth. in Wall. cat. no. 3951. Narrow-leaved Vandellia. PI. diffuse, 1 foot.

† *Species hardly known.*

17 V ERASA DRYS ; stem dichotomous, rather pilose ; leaves oppc, obtuse at ta^er;ng into the petioles, 3-nerved, coarsely and blancly ser te? d, c^^ate d; peduncles longer than the leaves ; calyx obsole y pentagonal, 5-cleft, length of capsule, which is roundish. fe Native of the East Indies. Gratiola cha- of the br anches. Roth. nov. spec. p. 10. Flowers axillary at the tops A species of Stemodia ? Calycine teeth acuminated, obtuse. Perhaps Coromandel Vandellia.

18 V. CORDIFÒLIA ; Fh dlffuse leaves subcordate-ovate, petiolate, ere- nated; peduncles axillary; stems prostrate. ©.? S. Native of the East Indies, in humid grassy places. Gratiola cordifòlia, Konig. in Vahl, enum. 1. p. 97. Bonn&ya cordifòlia, Spreng. syst. 1. p. 42. Stems quite simple, 1| foot long. Upper leaves sessile, half a foot long : lower ones smaller, remote. Pedun- cles one half longer than the leaves. Segments of calyx linear. Corolla white, with a yellow thrcfet. Capsule subulate, one half longer than the calyx.

Heart-leaved Vandellia. PI. prostrate.

19 V. STRIGÒSA; stems dichotomous, and are, as well as the alternate divaricate branches, strigose ; leaves opposite, ovate, acutish, running into the petioles, serrulated, glabrous ; racemes terminal, nearly naked, loose; capsule ovate, acuminated, a little higher than the calyx. ©. S. Native of the East Indies. Gratiola strigòsa, Roth, nov. spec. p. 12. Morgania strigosa, Spreng. syst. 2. p. 803. Flowers small. Pedicels filiform, fur- nished with a minute, ovate, obtuse bractea each at the base. Calyx 5-parted almost to t!.e base, glabrous ; segments linear- lanceolate, acute, unequal : upper one longer and narrower than the rest.

Strigose Vandellia. PL diffuse.

20 V. ROXBI/RGHII ; annual, diffuse ; leaves sessile, cordate, serrated; flowers solitary, on long peduncles; calyx *5*-parted ; superior filaments with a sterile branch. ©. S. Native of Coromandel, where it appears during the rainy season. Van- dellia diffusa, Willd. spec. *3.* p. *343.* but not of Lin. ? Torènia diffusa, Roxb. fl. ind. 3. p. *95.*

Roxburgh's Vandellia. PL diffuse.

21 V. VARIANS ; annual, erect, 4-sided, smooth; ^Caves op- posite, petiolate, cordate-ovate, serrated ; flowers axillary, soli- tary ; calyx 5-toothed; corolla ringgiit; longer filaments with a sterile branch. 0. g. Native of Coromandel and Bengal, where it appears during the rainy season. Torènia varians, Roxb. fl. ind. *3.* p. *96.*

Varying Vandellia. PL erect.

22 V. MULTIFLÒRA ; annual, erect, 4-sided, smooth ; leaves opposite, oblong, subserrated ; flowers terminal; calyx 5-part- ed ; corolla bilabiate ; superior filaments with a sterile branch ; capsule ovate. ©. S. Native of Bengal, appearing in the rainy and cool season. Torènia multiflòra, Roxb. fl. ind. *3.* p. *96.*

Many-flowered Vandellia. PL erect.

Cull. For culture and propagation see *Masus,* p. 542.

XLI. ELLO'BUM (meaning not explained by M. Blume.) Blum, bijdr. p. 746.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, equal. Corolla funnel-shaped ; limb bilabiate ; upper lip re- tuse: lower one 3-lobed, larger; middle lobe narrower. Sta- mens 4, didynamous, exserted; anthers 2-celled, connected, mutic. Stigma obtuse, emarginate. Capsule silique-formed, subulate, 2-celled, many-seeded.—A radicant pilose herb, with opposite, petiolate, ovate, serrated leaves ; and axillary, few- flowered racemes ; fructiferous pedicels recurved.

1 E. MONTA'NUM (Blum, bijdr. p. 747.) "2/. S. Native of Java, in the province of Bantam, among the mountains.

Mountain Ellobum. PI. creeping.

Cult. For culture and propagation see *Herpestis,* p. 546.

XLII. ARTANE^MA (from *apraio, artao, to* append ; and *nema,* a filament; and is intended to designate the struc- ture of the stamens.) D. Don, in Sweet, fl. gard. n. s. t. 234. Benth. scroph. ind. *39.*—Diceros species, Pers. Benth.—Ar- chimènes species, Vahl.—Columnea species, Lin.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted,

ed. Usteri. p. 136. Lam. ill. t. 522. f. 4. Benth. scroph. ind. p. 35.

LIN. SYST. *Didynamia, Angwspermia.* Calyx tubular, or campanulate, nearly equal, 5-toothed, or 5-parted, Corolla with an exserted tube, and a 5-cleft, bilabiate limb; upper lip the shortest. Stamens 4, didynamous : the *2* superior ones short; filaments entire: the 2 lower ones inserted at the base of the lower lip ; filaments elongated, arched, furnished with a tootb-formed or filiform appendage each at the base ; anthers cohering by pairs, ^-celled ; cciis diverging or divaricate, confluent at apex. Style simple ; stigma flattened, bilamellate, or simple.? Capsule globose, oblong, or linear, 2-valved; valves entire, membranous, with flat margins ; dissepiment parallel, placentiferous, at length free.—Glabrous or hairy herbs, sometimes with the habit of species of *Torenia,* and sometimes with the habit of species of *Bonnaya.* Stems tetragonal. Leaves opposite, usually toothed. Flowers axillary, opposite, or fascicled : the upper ones generally racemose.

$ 1. BJUCHYCA'RP;E (from *(fya%v£, brachys,* sbort ; and trap-«-o[, *karpos,* a fruit.) Benth. scropb. ind. p. 35. Capsule nearly globose, or ovate-oblong, shorter than the calyx, or hardly longer,

** Calyx 5-toothed before florescence. Capsule shorter than the calyx.*

fJiu^i^oNaA (Benth. scroph. ind. p. *35.)* glabrous, erectish ; *Narrcm-leavedl*[ceoliite,] "arrowed at the base, quite entire,

3 A. SESAMOI'DES (Be'riW^d, subracemose ; calyx tubular, late; corollas subcampamdate,' ttfffie* > capsule" globose, %. S. Native of the Peninsula of India. Columnea [Maca0]> Lin. mant. p. 90. Archimedes sesamoides, Vabl, symb. 2, p. 71. Sesamum Javanicum, Burm. **ind.** p. 133, Retz, obs. 4. p. i!8. Dlceros longifolius, Pers. ench. *2.* p, 164. Blum, bijdr. p. 751.—Hbeed. mal. 9. p. 169, t. 87.

Sesatttvm-likc A r tan em a. PI. *2* to 8 feet.

Cult. The species grow freely in light rich soil, and are readily increased by cuttings.

• XLIII. TORE'NIA (so named by Linnaeus after Olof Toreen, a Swedish clergyman, who discovered *T. Ask'ttica,* with other plants, in China. His voyage to Suratte, China, &c, from 1750 to 1752, is printed with Osbeck's Voyage to China.) Lin. gen. no. 754, Schreb. gen, no. 1011. Juss. gen. p. 122, ed. Usteri, p. 136. Benth. scroph. ind. p. 38. Lam. ill. 523. f. 1.

LIN. sygT. *Didynamia, AngiospHrmia.* Calyx tubular, plicate, obliquely **5-toothed** or bilabiate ; lips 2-3-tootheU. Corolla ringent; upper lip bifid : lower one trifid ; segments almost flat. Stamens 4, didynamous : the 2 upper ones short, with entire filaments: the *2* lower ones inserted at the base of the luwer lip ; **with** arched elongated filaments, which are each furnished with a tooth-formed or filiform appendage at the base; anthers approximating or cohering by pairs, 2-celled: cells diverging or divaricate, confluent at apex. Style simple. Stigma flattened, bilamdlate or simple? Capsule oblong, shorter than the calyx, 2-valved ; valves entire, with flat margins ; dissepiment parallel, placentiferous, at length free.—Branched, "labrous, or villous herbs, diffuse at the base. Stems tetragonal. Leaves opposite, usually toothed. Flowers •mlhry opposite, or fascicled, sometimes racemose.

1 ? S (Benth. in Wall. cat. no. 3957. B.C. seroph. **ind. p. 38.) hairy**; leaves ovate, acute, wrinkled ; flowers oppo- **mal.** 9. p. 113. t, 58. Morginia dspera, Spreng. syst. 2, p-803. Calyx 2 to 2\ lines long. Corolla deep blue.

Crustaceous Vandellia. Fl. June, July. Clt. 1816- ™ trailing.

** * Calyx 5-parted before florescence. Capsule shorter than the calyx.*

5 V. ERE'CTA (Bentli. I. c. p. 36.) erectish, glabrous ; leaves nearly sessile, ovate or oblong, nanoived at the base; peduncles axillary or racemose, 2-5 times as long as the calyx ; calyx 5 parted, or deeply 5-cleft before florescence; segments of **the** calyx lanceolate, membranous, exceeding the capsule, which K ovate. 0. S. Native of India; as of the Peninsula, Deyra Doon, Munghyr, Nipaul, Silhet, Birman Empire, *Sec.* Tittrnannia trichotoma, **Benth.** in Wall. cat. no. S94S. Very nearly allied to *V. Crustacea,* but distinct.

Erect Vandellia. PI. **i** foot.

6 V. ELA'TA (Benth. I. c.) glabrous, or sparingly pilose ; leaves petiolate, ovate, subcordate at the base ; pedicels racemose, at length hardly twice the length of calyxes; calyx 5-parted before florescence ; segments lanceolate-subulate, exceeding the ovate capsule. 0. S. Native of the Birman Empire, at Tavoy, Wall. Tittmannia eJata, Benlb. **in** Wall. cat. no. 3942.

Tall VandeMia. PI. -| foot.

7 V. HIRSUVA (Hamilt. mss. ex Benth. scroph. ind. p. 36.) hairy; leaves ovate: lower ones petiolate, narrowed at the base ; superior ones nearly sessile, cordate at the base ; pedicels racemose, at length 2-3 times as long as the calyx ; calyx imparted before florescence ; segments lanceolate, subulate, exceeding the nearly globose capsule. ©- H. Native of India, at Goalpara, Silhet, Peninsula, and Ava. Tittmannia ovata, Benth. in. Wall. cat. no. 3943. but not of Rchb. Gratiolav^ cosa Horn. hort. hafn. p. 19. Hornemmannia visedsa, Willo. [r-w-»__ „ „»„ ^/^-^ v|scosa). Rchb. icon. bot. exot. 1. ?• tive oi the western provinces ^. j^m,

O&fwse-leaved Torenia. . PI. creeping. \»r- creeping, leaves

5 T. MIKUTA (Blum, bijdr, p. 755.) stem subciliated ; **pe-** on short petioles, ovate, setaceously serrated, --- lip of *co'* duncles axillary and terminal, 1-flowered ; **superior** Y, S. roila emarginate; capsule equal in length to the cay Native of Java, in humid grassy places about »"- ^ *hir-* Illieed. mal. 10. t. 50. Said by Blumc to be allied ***siUa.***

Minute Torenia. Fl. Year. PI. creeping.

6 T. COKIMFOLIA (Koxb. cor. 2. p. S3. t. **161.)** leaves ovate- [core»]llas cordate ; peduncles axillary, subfascicied, or solitary . [ud<]J about twice the length of the calyx, which is ovate an' ^ \Ius- at the base. 2/. S. Native of the Circars, ^"f j,[a]rdrj sooree, Royle. Fructiferous calyx broadly win{J[e"]', lines long. Corollas bluish purple. Plant rather hairy.

Cordate-leaved Torenia. PI. ^ foot,

7 T. PARVIFLORA (Hamilt. in Wall. cat. n[o]. 3958.) leaves ovate; flowers axillary, somewhat fascicled; cJoroH[3] hardly exceeding the linear calyxes, which is attenuated [at] the base. 2.? S. Native at Goalpara, HamiH.; Birman [Empire, Wall.; and] of Brazil, near Bahia and Rio Janeiro; and [in the Mauritius] and Madagascar, Nortenia Thouarsii, Cha^ [n. et Schlecht, in] Linntea, 3. p. 18. Torenia pedunculata, [Willd. herb. no.] 11547. Torenia veronictefolia, WiJJd. herb [no. 11546.]

Small-flowered Torenia. PI. *I* to 1 foot, f[l.]

8 T. POLYGONOI'DES (Benth. scroph. ind. [p. 39.) procumbent;] leaves roundish ; peduncles axillary, unibei[lately 3-4-flowered;] calyx campanulate, broadly 3-winged ; tub[e of corolla shortly] exserted. — Native of Singapore. Herp[atis polygonoides,] Benth. in Wall. cat. no. 3897,

species long. Containe <1 m the present section hardly more than 2 lines

sofi Vandellia. Pl. ½ to 1 foot.

***Cal yx ^toothed or deleft. Capsule ovate, a little longer than the calyx.

11 V. SESSILIFLÒRA (Benth. l. c.) leaves nearly sessile roundish, subcordate at the base; flowers sessile, fascicled; calyx 5-toothed, at length cleft a little; capsule oblong, exceeding the calyx a little. ©. S. Native of the Birman Empire, at Mount Taong Dong, Wall. Torènia sessiliflòra, Benth. in Wall. cat. no. 5519.

Sessile-flowered Vandellia. Pl. ½ foot.

12 V. MINÒRA (Royle, mss. ex Benth. l.c.) small, simple, erect, nearly glabrous; leaves almost sessile, rounded at the base, subcordate; flowers ; peduncles , iasciclecl; calyx semiquinquefid; capsule ovate, exceeding the calyx. ©. S. Native of Mussooree, Royle.

Least Vandellia. Pl. small.

13 V. NUMMULARIIFÒLIA (D. Don, prod. fl. nep. p. *86.* ? Benth. scrophulariaceis) erect, branched; leaves nearly sessile, rounded, ; peduncles axillary, subfasciculate, 1-flowered or 2-flowered; calyx unequally 5-parted, ovate or oblong, about twice as long as the capsule. ©. S. Native of the Mountains of Nipaul, Wall. Small Mussooree, Royle.

Money-wort-leaved Vandellia. Pl. ½ foot.

§ 2. SILIQUÒSÆ (from *siliqua* a long pod; in reference to the elongated capsules.) Capsule oblong-linear, longer than the calyx.

14 V. DIFFUSA (Lin. mant. p. 141. Benth. l. c.) diffuse, downy; leaves broad-ovate, sessile; calyx nearly sessile; flowers axillary, almost sessile; capsule oblong, equalling one half shorter than the capsule, S. Native of India. Isl?- t creeping at the base,

^-and propagation see *Herpestis,* p. 546

LINDERNIA (so named by Allioni, from Franc. Linder, physician at Strasburgh, author of "Horticus Pedelinensis," 1767.) Allion. misc. taur. 3. p. 178. t. 5, no. 203. Schreb. gen. no. 1031. Lin. mant. p. 141. Lam. ill. t. *522.* J. S. R. Br. prod. p. 440. ed. Usteri, p. 137.

Lin. syst. *Didynamia, Angiospermia.* Calyx 5-parted, equal. Corolla ringent; upper lip retuse: lower one trifid, bearded at the base. Stamens didynamous; lower filaments cleft; anthers parallel. Capsule 2-celled; valves 2, bearing the dissepiment in the middle; dissepiment parallel, free, fragile. Herbs. Leaves opposite. Peduncles axillary and terminal, 1-flowered. Flowers blue, but white in *Pedunculàris.* Corolla ringent; upper lip erect, bifid; lower one trifid, spreading. Anthers parallel, 2-celled, connected by pairs by a lamella. Capsule 2-celled; valves 2, bearing the dissepiment in the middle; dissepiment parallel, free, fragile. Herbs. Leaves opposite. Peduncles axillary, 1-flowered. Flowers blue, but white in *Pedunculàris.* Corolla ringent; upper lip erect, bifid; lower one trifid, spreading. Anthers parallel, 2-celled, connected by pairs by a lamella. Capsule 2-celled; valves 2, bearing the dissepiment in the middle; dissepiment parallel, free, fragile. Herbs. Leaves opposite. Peduncles axillary and terminal

nearly equal. Corolla funnel-shaped or campanulate; limb 4-cleft, sub-bilabiate ; upper segment broader ; tube furnished with 4 scales inside. Stamens 4, didynamous : the 2 upper ones short, with entire filaments : and the 2 lower ones inserted at the base of the lower lip, with elongated arched fdaraents, which are furnished each with a short blunt appendage; anthers cohering by pairs : with divaricate confluent cells. Capsule miarly globose, 2-valved; valves entire, with flat edges ; dissepiment parallel, placentiferons, at length free.—Glabrous herbs, wish the habit of *Stsamitm;* and with the character almost of *Torenia.* Stems tetragonal. Leaves opposite, subserrated. Flowers disposed in terminal racemes, opposite, on short pedicels. Corollas generally blue.

1 A. FIMBMA'TA (D, Don, in Sweet, fl. gard. *334.)* leaves lanceolate, acute, serrated ; corolla large, tubularly funnel-shaped ; calycine segments lanceolate, mueronuiate ; bracteas ovate. It, G. Native of New Holland, on the banks of die Brisbane river at Moreton Bay. Torenia ? fimbriata, Grabam, in edinb. phil. journ. sept. 1831. Torenia scabra, Graham, in bot. mag. 3104. Racemes terminal, 4-lf>-flowered. Corolla large, blue, clothed with minute glandular pubescence outside ; lobes of corolla unequally serrated. Stem smooth, glossy. Leaves rough to the touch from numerous elevated dots.

*Fring*erf-flowered Artanema. Fl. June, Nov. CJt. 1830. PI. a to *S* ieet.

2 A. ANGUSTHTOLIA (Benth. scroph. ind. p. *39.)* leaves narrow-) a nceo late ; corollas nearly funnel-shaped, twice the length of the calyx. *%.* S. Native of Singapore. Diceros angusti-tOfl"*---^piith. in Wall. cat. no. 3885.

Narrow-leave \ *vtmemaLt* p]. 2 t0 3 feet,

A. SESAMOIDLS *{£>\.. \ hc.f* leaves oblong or ovate-lanceo-Jate; corollas subeampanulate, <„-.. ^*u,* Wgth of the calyx. *%* . S. Native of the Peninsula of India. CSTWTK*, $l_{ol)}g|f_0[j_a)$ Lin. mant. p. 90. Archhnenes sesamoides, Vahl, syint,. *.., 71, Sesamum Javanicum, Barm. ind. p. 183. Retz, ohs. 4, p. 28. Diceros longifolius, Pers. ench. *2.* p, 164. Blum, bijdr, p. 751.—Rheed. ma). 9. p. 169. t. 87.

Sesamum-Uke Artanema. PI. 2 to 3 feet.

Cult. The species grow freely in light rieh soil, and are readily increased by cuttings,

XLIII. TORE'NI A (so named by Linna:us after Olof Toreen, a Swedish clergyman, who discovered *T. /Isiatica,* with other plants, in China. His voyage to Suratte, China, &c. from 1750 to 1752, is printed with Osbeck's Voyage to China.) Lin. gen. no. 754. Schreb. gen. no. J0I1. Juss. gen. p. 122. <;d. Usteri, p. 136. Benth. scroph. ind. p. 38. Lam. ill. 523. f. I.

Lis. SI'ST. *Didynitmia, Angtospermh.* Calyx tulwlar, plicate, obliquely 5-tooihed or bilabiate ; lips 2-3-tootheti. Corolla ringent; upper lip bifid: Jower one trifid; segments almost flat. Stamens 4, didynamous: the 2 upper ones short, with entire filaments: the *2* lower ones inserted at the base of the lower lip ; with arched elongated filaments, which are each furnished with a tooth-formed or filiform appendage at the base; anthers approximating or cohering by pairs, 2-celled:^ cells diverging or divaricate, confluent at apex. Style simple. Stigma flattened, bilamellale or simple ? Capsule oblong, shorter than the calyx, 2-vaJveil; valves entire, with flat margins ; dissepiment parallel, placentiferous, at length free.—Branched, glabrous, or villous herbs, diffuse at the base. Stems tetragonal. Leaves opposite, usually toothed. I'lowers axillary, opposite, or fascicled, sometimes racemose,

1 T. R/CEKOSA (Benth. in Wall. cat. no. *3957.* J. C. scroph. ind. p. S3.) bairy; leaves ovate, acute, wrinkled ; flowers opposite, racemose ; corolla more than a half longer than the *%.* S. Native of Silbet and Penang. Fructiferous calyx lines long. Corollas blue.

Racemose-flowered Torenia. PI. 1 to 2 feet.

2 T. FLA'VA (Hamilt. in Wall. cat. no. 3957. Benth. scro^ ind. p. 38.) rather bairy; leaves ovate-oblong, obtuse, > ^ kied ; flowers opposite, racemose ; corolla hardly exceeding calyx. *%.* S. Native at Goalpara, Hamilt. Fructiferous C-7 lines long- Corolla yellow.

Yellow-flowered Torenia. PI. 1 foot.

8 T. ASIA'TICA (Lin. spec. p. 862, amcen. 3. p. *%•?•* ^ ill. t. 523. f.].) leaves ovate or ovate-lanceolate; axillary, gubfasciculate; corolla twice the length of the ca *jt* which is oblong, and attenuated at the base. *%• S.* throughout India, especially in the mountainous parts, scroph. ind. p. 88. T. cordifoJia, Benth. in Wall. cat. no but not of Roxlj. T. diffusa, D. Don, prou". fl. nep. p. S6. £ peduncnlaris, Benth. in Wall. cat. no. *Si)*56. T. alb;;, Han"'1' ex Benth. in Wall. cat. no. 3961. T. bians, and T. va'gan> Roxb. fl. ind. 3. p. *96.* T. hirsuta, WiHd. spec. 3. p. 206. Gratiola alata, Roxb. fl. ind. o<l. C.-ir. 1. p. 3S7. ? Bonn&ya aJUt* Sprcng. syst. 1. p. 41. Henckelia alata, Link ct Schwagr. *et* Dietr. sjicc. pi. 1. p. 573__Rheed. mal. 9. p. 103. t. 53.-- Plukn. amalth. 85. t, 373. f. 2. This species varies in hairiness form of leaves, and size of corollas, as it now stands ; but thei« are probably several species confused under the name. The original plant is said to have been quite glabrous. Fructiferous calyx 8-10 lines long. Calyx 5-winged. Stems creeping, ' foot.

Asiatic **Torenia.** Fl. July, Aug. CIt. 1823. PI. 1 to 2

4 T. OBTU'SA {Blum, bijdr. p. 754.) stem creeping; nearly sessile, ovate, biuntisb, obsoletely and repandly serra smoothish; peduncles axillary, terminal, 1-flowered ; o£porclla 'iliMuft,- cansule longer than the calyx. "U- S. Native of the western provinces of Javn., in humid places.

Obttue-le&ved Torenia. . PL creeping.

5 T. IOHUY* (Blum, bijdr. p. 755.) stem creeping on short petioles, ovate, setaccously serrated, snbciliated; P * tlunclos axillary and terminal, 1-flowered ; superior iip "' C g rolla emarginate; capsule equal in length to the calyx. V-_J Native of Java, in humid grassy places about Buitenzorg- Kheed. mal. 10. t. 50. Said by Btume to be allied to *I- siila.*

Minute Torenia. Fl. Year. PI. creeping.

6 T. CORDIFOLIA (Roxb. cor. 2. p. S2. t. 161.) leaves ova cordate j peduncles axillary, Bubfeaeided, or solitary; c°ro" \ about twice the length of the calyx, which is ovate and roiim^ at the base. *If.*. S. Native of the Circars, R°*b< ; JrjS sooree, Royle. Fructiferous calyx broadly winged, hardly lines long. Corollas bluish purple. Piant rather hairy

Cordate-leaved Torenia. PI. *&* foot.

7 T. PAKVIFL6RA (Hamilt. in Wall. cat. n ovate; flowers axillary, somewhat fascicled; corolla ceeding the linear calyxes, which is attenuated fet the base S. Native at Goalpara, Hamilt.; Birroan EtLpire, of Brazil, near Bahia and Rio Janeiro; and* and Madagascar. Nortenia Thouarsii, Chi Linnaea, S. p. 18. Torenia pedunculata, herb- *no-* 11547. Torenia veronicafolia, WiHd. herb

Small-Jhwered Torenia. PI. j- to 1 foot.

8 T. POLYGONOI'DES (Benth. scroph. ind. leaves roundish ; peduncles axiilary, umbel calyx campanulate, broadly 3-winged; tul exserted. — Native of Singapore. Her; Benth. in Wall. cat. no. 3897.

Polygonum-like Torenia. ^' Procumbent.

Serrated scabrous; stem erect, pubescent; calyx 5-toothed, [illegible] of New Hollandf within the tropic. Scabrous Torenia. Pl.?

10 T. crenata Andrews (Bot. Rep. t. 800.) leaves broad-ovate, obtuse, crenate; flowers axillary, sessile. Native of New Holland, within the tropic. Fluccid Torenia.

Cult. For culture and propagation see *Herpestis,* p. 546.

XLIV. HETERA'NTHA (from *irepoe, heteros,* variable; and *av6o;, anthos,* a flower; flowers variable.) Nees et Mart. Nov. act. bonn. 11. P. 1. p. 102. and 4 p. 165. and 4 p. 102. PS PS

Jun. syst. 1. p. 1. Panulate 5-cleft; *dngiospirmia.* Calyx membranous, entire or lower one broader; concave, 3-lobed; middle lobe grand emarginate, cells confluent; Stamens didynamous; anthers cordate, Capsule ovate, lobes of the upper ones clasping the Placentas first expanded, «-valved, with a septicidal dehiscence. Seeds numerous, middle of the dissepiment.—A perennial Creeping Plant, with ascending branches. Branches terete, angular, obtuse, clothed with small hairs. Leaves alternate, nearly sessile or petioles very short, lanceolate, a small point, quite entire, running into the subsecund *Lax* racemes disposed in simple, erect, bracteated, racemes rising from the upper internodes, exceeding the leaves. Flowers disposed in simple, erect, bracteated, racemes rising from the upper internodes, exceeding the leaves. Flowers dark blue; Corolla white. Capsule ovate, a little BEAKED, acute, smooth, white.

Native of Brazil, Cult. For culture and propagation see *Herptstis,* p. 546.

XLV. LINDE'RNIA (so named by Allioni, from Franc. Balthasar a Linden, physician at Strasburgh, author of "Horticultus Alsaticus." 1747.) Allion. misc. taur. 3. p. 178. t. 5. f. 3. Pedicularis, no. 203. Schreb. gen. no. 1031. Lin. mant. p. 141. Juss. Gen. p. 125. 540. ed. Usteri, p. 187. Lam. ill. t. 622. R. Br. prod. p. 440. Lin. syst. Didynamia; *Angiospermia.* Calyx 5-parted, tubular at the base; Corolla ringent; upper lip retuse: lower one trifid, bi. Anthers reniform, Stamens didynamous; lower filaments bifid, 2 valved, Stigma bilamellate. Capsule ovate, acuminated by pairs, Stigma bilamellate. Capsule ovate, acuminated, 2 valved, Valves entire, dissepiment parallel, free, but [illegible] Herbs. Leaves opposite. Peduncles axillary and terminal, bracteless, deflexed while bearing the fruit after the dehiscence of the capsule.

h2E- Filaments 4, all fertile, 2 longer ones forked.

Pyxidaria (Lin. syst. p. 475.) leaves oblong-ovate, quite entire, 3-nerved, sessile; peduncles axillary, 1-flowered; stems procumbent. ©. H. Native of Alsatia, Silesia, Germany, Carinthia, Piedmont, &c. in hortis. Lam. ill. t. 522. Pyxidaria annua. Pedunculis 1-floris. Linn. spec. 15. annua. fl. suecicis monopetalis unilabiatis, Lindern. t. 8. f. 6. Amoen. 1. and 2. p. 207. Capraria gratioloides, Lin. Pedunculis agalloides Procumbens, Krok. siles. 2. no. 1001. Usually shorter than the leaves; but the upper ones sometimes longer. Corolla pale purple.

Pyxidaria Lindernia. FL June, Aug. Clt. 1789. PL procumbent.

2 L. KITAIBE'LII; lower leaves obovate: superior ones oblong-ovate, all obtuse and quite entire, nerveless; peduncles axillary, 1-flowered, exceeding the leaves; stem creeping. ©. H. Native of Pannonia, in marshes. Gratiola inundata, Kit. in Schultz, austr. fl. 2. p. *32.* Spreng. pug. 1. p. 1. Leaves 3, nerved beneath. Perhaps the same as *Lindernia pyxidaria.*

KitaibeVs Lindernia. PL creeping.

3 L. ALSINOI'DES (R. Br. prod. p. 441.) leaves ovate, entire or few-toothed: cauline ones distant: floral ones minute; tube of corolla a little longer than the calyx; stem erect. 0.? S. Native of New Holland, within the tropic. Tittmannia alsinoides, Spreng. syst. 2. p. 800.

Chickweed-like Lindernia. PL erect.

4 L. SCAPI'GERA (R. Br. 1. c.) leaves broadly ovate, almost quite entire: lower ones crowded: cauline ones very few, smaller: floral ones minute; tube of corolla twice as long as the calyx. ©.? S. Native of New Holland, within the tropid Tittmannia scapigera, Spreng. syst. 2. p. 800.

Scape-bearing Lindernia. PL small.

5 L. SUBULA'TA (R. Br. 1. c.) leaves linear, subulate, entire. ©.? S. Native of New Holland, within the tropic. Tittmannia subulata, Spreng. syst. 2. p. *800.*

Subulate-leaved Lindernia. PL small.

§ 2. AMERICA'NE. Filaments 4, the 2 longer ones forked and sterile.

6 L. MONTEVIDE'NSIS (Spreng. syst. 2. p. *769.)* stem procumbent, branched; leaves spatulate, linear, nerveless; peduncles axillary, I-flowered; calyxes foliaceous. ©. H. Native of Monte Video, Sello.

Monte Video Lindernia. PL small, procumbent.

7 L. MONTI'COLA (Nutt. gen. 1. p. 9.) stem erect, dichotomous; radical leaves spatulate: cauline ones linear, remote; peduncles elongated; fructiferous ones deflexed. 7/. H. Native of North Carolina. Tittmannia monticola, Spreng. syst. 2. p. 800.

Mountain Lindernia. PL \ foot. ?

8 L. GRANDIFLO'RA (Nutt. gen. amer. 2. p. 43.) leaves almost round, thickish, entire and nerveless, somewhat stem-clasping; peduncles very long, axillary and terminal; sterile filaments forked; stem creeping. %. H. Native of Georgia, on the spongy margins of sandy springs and ponds betwixt Savannah and Augusta, in many places. Leaves crowded. Segments of the calyx linear-subulate. Corolla large, *of* a violet blue: lower lip paler, 3-lobed: upper lip very short, bidentate. The lateral forks of the sterile filaments producing an imperfect 1-celled anther. Capsule ovate.

Great-flowered Lindernia. PL creeping.

9 L. DILATA'TA (Muhl. cat. ex Elliott, fl. car. 1. p. 16.) leaves dilated at base, stem-clasping, sparingly toothed; peduncles longer than the leaves. ©. H. Native from New York to Virginia, Carolina, &c. on the banks of rivers, in gravelly [illegible] Walt. car. p. 81. Gratiola inequalis, 1. p. 8. [illegible] -eaves obscurely 3-o-nerved. Calyxes pubescent, ciliated. Corolla purple.

Dilated-lezved Lindernia. PL procumbent.

10 L. ATTENUA'TA (Mllhl. *Cat. ex* Elliott, 1. *C.* p. 17.) leaves lanceolate and obovate, attenuated at the base; peduncles one half shorter than the leaves. ©. H. Native of Georgia, in wet places. Leaves serrulated, villous. Calyxes ciliated. Sterile filaments villous.

Altenvated-]ea\eA Lindernia. PI. procumbtrm.

Cult. For culture and propagation see *Herpcstis,* p. 546.

XLVI. LIMOSE'LLA (a dim. *of Limits,* mud, in which the plants delight to grow.) Lin, gen. no. 776. Schreb. gen. no. 1039. Gocrtn. fruct. 1. p. 228, t, 50. Juss. gen. p 96. ed Usteri, p. 108. Lam. 31. t. *535.* f. 2. R. Br. prod. 443.

LIN. SYST. *Didynamia, Angiosperm'm,* Calyx 5-cleft, equal. Corolla short, **campsnulate,** 5-cleft, equal. Stamens didynamous,' or rarely equal; sometimes only 2. Stigma capitate. Capsule semibilocular, 2-valved ; valves entire ; dissepiment incomplete. —Small marsh creeping herbs. Leaves fascicled ; petioles **dilated,** at the base, half sheathing. Scapes 1-floivered, bractless In the natural series this genus comes near ***Pittgukvla.***

1 **L.** AQUA TICA (Lin. spec. 881.) leaves Sanceolate-spatulate A"fv[r]ti[lla]nthesca Pes; flowers didynamous, rarely diandrous. (£>. W, H. Native of the North of Europe, in inundated places ; in some parts of Britain, in like situations. Smith, engl. bot. *S57.* Oed. fl, dan. t. 69. L. annua, Lindern. als. 260. t. 5. Plantagindla, Hall. jen. 23. t. *G.* f. 2. Plantaginelia palustris, Bauh. pin. p. 190. Mor. hist. 3. p. COS. sect. 15.t.2.f. 1. Petiv. brit t. 65. f. 12—Loes. pruss. 261. t. 81.—Plukn. aim. 20. t. 74. f. 4.—Mentz. 2. t. 7. f. 6. Corollas small, whitish without, and reddish within.

far. [i, Limosella ***di&ndra,*** Krock. fl, sil, *2.* no. 1006. t. 27. f. *ft,* flowers diandrous.

Aquatic Mudwort. Fl. July, Sept. Britain. PI. creeping.

2 L. AUSTRA'HS (R. Br, prod. p. 443.) leaves spatuJate-linear, longer than the scapes; flowers didynamous, rarely diandroits. ©. W. G. Native of Van Dicmen's Land, and the south coast of New Holland, in marshes.

Southern Mudwort. PI. creeping.

3 L. TENUIEOLIA (Nutt. journ. acad, sc. phiJ. 1. p. 115. gen. amer. 2. p, 43.) leaves linear and very narrow, scarcely dilated at the points; scapes **1-flowered,** about equal in length with the leaves; flowers tetraudrous. 0.W, H. Nativeof Germany, and North America, on the banks of **the** Delaware. Corolla white, externally blue, 4-5-lobed.

'Fine-leaved Limosella. PI. creeping.

Cult. The species being hardy, aquatic annuals, the seeds may be sown by the edge of a pond, Or cistern,

XLVII. HYDRANTHEXIUM (from **SSwp,** *hjdor,* water ; iind *av6i/\wv, anthelion,* a little flower.) H. B. et Kunth, HQV. gen. 7. p. 202. Wiliichia, Mum.

LIN, SYST. *Triandria, Monogtjnia.* Calyx deeply 4-parted, bractless, permanent; segments opposite, by pairs, 2 of which are oblong, obtuse, 3-nerved; and the other *2* are lanceolate, acutish, 1-nerved. Corolla funnel-shaped ; limb trifid; the third lobe twice the breadth of the others, and emarginste. Stamens 3, inserted in the throat of the corolla, and alternating with its lobes, and shorter than them; anthers oblong, 2-celled. Stigma 2-lobed. Capsule ovate-roundish, mucronate, membranous, 2-celled *1* 2-valved *1* dissepiment placentiferous on both sides, at length free. Seeds many, subcylindrical, a **little** arched, exalbuminous, striated, pendulous. Embryo cylindrical, 2-lobed. Radicle superior looking to the hilum.—A small, floating, glabrous, radicant herb. Leaves opposite, quite entire, 7-nerved. Flowers axillary, solitary, alternate, pedicellate, minute, white. This genus comes very near to *Lindernia* and *Limosella* ; but is distinguished from them in the structure of calyx, corolla, and number of stamens.

1 H, CALLITIUCHOI'DES (H, B. et Kunth, 1. c. 7. p. 203. t. U447)– G-TV. S". "Native'in the Missions ***et'i*** the cataract of Atures.

Callitriche-like Hydranthelium. PI. aquatic.^

Cult. For culture and propagation see *Limnophila,* p-

XLVHI. CONCTBEA (meaning not explained by Aubl. guian. *2.* p. 639. t. *257. Juss,* gen. p. *97-* ed p. 109. Lam. ill. t. 522. f. 2.

LIN. SYST. *Didynamia, Angiospermia.* Calyx [to]r, ?-toothed, bibracteate at tlie base. Corolla tubular, bilabia^> upper lip erect, emarginate ; lower lip 3-lobed, unequal. ^ mens 4, didynamous; anthers sagittate. Stigma 2-lobed. side pea-formed, girded by the calyx, 1-celled, 4-valved, seeded; placenta central, free.—A creeping marsh herb, tetragonal. Leaves opposite. Flowers solitary, axillary: pedicellate.

1 C. AQUATICA (Aubl. l. c.) stems procumbent, nodose; renifbrm, toothed, half stem-clasping; peduncles longer t the leaves, solitary.—Native of Guiana, on the edges of Flowers blue. Plant glabrous. Calyx 5-£oothed.

Aquatic Conobea. PI, creeping.

2 C. POKCTA'TA (Mart, in act. bonn. IT. p.43.) stem ing, rooting at the base ; leaves ovate, acute, serrated, scabrous above ; flowers axiliary, twin, a little sborter^than petioles. %. G. Native of Brazil, on the road to Leaves 1 to 1| inch long. Calyx 5-parted ; segments lanceolate, acuminated, **with** membranous edges. Corolla t' as long as the calyx. Segments of the lower Hp oblong, lated.

Dotted Conobea. PI. 1 foot, procumbent at the base.

3 C. VISCOSA (Spreng. syst. 2. p. 771.) stem erect, top; leaves lanceolate, sharply serrated, quite glabrous ; p[el]u cles usually twin, shorter than the leaves.—Native of Brazil

Clammy Conobea. PJ. erect.

Cult. For culture and propagation see *Herpistis,* p. 5i&

XLIX. MI'MULUS (from p p , *mimo,* an ape or\nct[or]; so named from the ringent corollas of the species.) I no. 783. Schrad. gen. no. 1049. Gaertn. fruct. 1. p. 53. Juss. gen. 122. ed. Usteri, 137. R. Br. prod. 4sB. B. et Kunth, nov. gen. 2. p. 369. Benth. scroph. ind. 2?

Lix. SYST. *Didynhmia, Angiospkrrina.* Calyx tubul" angled, 5-toothed. Corolfa ringent; upper lip 2-lobed :J one trifid, usually bi-gibbous at the base; segments all Stamens 4, didynamous, inclosed; cells of anthers divert,;) divaricate, at length subconfluent. Stigma biiamellate,a\ sule hardly furrowed, 2-valved, with a loculicidal dem\:Jj valves entire, with flat margins ; dissepiment at length W placentas adnate.—Erect or procumbent, glabrous, rarely T' lous herbs; with usually tetragonal stems. Leaves opp°*' usually toothed, rarely quite entire. Flowers axillary, soJi' pedicellate: superior ones sometimes racemose.

§ 1. *Stems erect. Leaves feather-nerved. Calyx tubular.*

1 M. LINEA'RIS (Benth. scroph. ind. p. 27.) **cose, very clammy**; stem erect, branchtd; leaves entire, with revolute edges; peduncles elongated, plicate, with lanceolate-linear, ob[tus]C; Jj . F. Native of California, Douglas.

Linear-leaved Monkey-flower. Shrub erecf [hty]

2 M..GLUTIN6SUS (Wend), obs. p. 51.) s'^[or] stem erect, downy; leaves glabrous above, ob?

^arrowed at th h
shorter than fl2 fSG erosel y toothed or quite entire ; peduncles lat e-linear . i GS ; cal ?x elo «gated, plicate, with lanceo-
[illegible] Native of California,
Flowers orange-coloured, generally growing in pairs from the axils of the leaves.

to 4 S? Monke y-fl ower. Fl. Year. Clt. 1794. Shrub 2·

W e s oMon cr i (Lin# Spec* 884 0 <l uite g^brous ; stem erect; cr with lanceolate-clasping; calyx tubular, a little incurved, plicate, America, f m- Linear unequal teeth. 1/. H. Native of North Jiort. U PS 17fi ; lr gmia t0 Canada - Cur*- bot. mag. 283.—Lin. '• 39 3. f v — j j o t. 2 * ect u ps. 1741. p. 52.—Plukn. amalth. *83.* Viol ceous or p^fe ' *' P, 429, SecL 5i *U* 8, f, 6, Corolla Pl l "ff fl 0 Wered ^onke y-flower. Fl. July, Aug. Clt. 1759. ?ect ; letvelT ^ hort* kew, 2, P- 361') g^brous; stem ile Petioles at tl s oblon g"elli Ptic, acuminated, narrowed into lnea r teeth -7 r? ase ; cal ?x tub ular, plicate, truncate, with Cab, 410, 'iii.. 1 H. Native of North America. Lodd. bot. ecu rrence of f e i the P rec eding. Stem 4-winged from the eq % serrated B, Corollablu8 Or Pur Ple, Leaves un" Pl> /gj^temmed Monkey-flower. Fl. July, Aug. Clt. 1783.

P,28 0 e r ^ ' T k (Benth- in Wall. cat. no. 3918. scroph. ind. ^Uite entire ' n oUS ; leaves oblong-lanceolate, obtuse, almost k ng; Pedunnl l y narrowe d at the base, cordately stem-clasp- r ardl y Plicat e o nger than the leaves 5 cal y x ovate-tubular, b e of *TI%.* ovate» short . "early equal teeth. If. H. l oyle. naia, ln Rajemahl, Wall. ; and at Kheeree Pass,

Strict Monkey-flower. PL

S 6 M. JUNGU'TUS (Blum in. bijdr. p. *756.)* hairy; leaves petiolate, ovate-lanceolate, serrated ; pedicels racemose, opposite ; stem erect, sharply Provi nce of B a tetra S onal- *V"* s- Native of Java, in the Mo

r y Monkey.hW Fl.Feb. PI. erect.

Leaves 3, 5 ^enera lly *procumbent or creeping, rarely erect.* ir fl«ted. ~nerved> *toothed. Calyx ovate or tubular, usually*

7 M. BRACHYPUS (Benth. scrop b- ^d. p. 28.) downy ; stem erect, clammy; leav s oblon g-lan ceolate or linear, a little toothed, narr ovved at the j ase and nea rly sessile; or the upper ones are stem-clas nin j 5 ^ 6th lanceolat e, unequal. 3/. F. Native of o^ onesided f ^^ "early sessile ; calyx ovate, plicate, cli fl alifo n " ? *"short-pedicelled* Mimbres Mount ns. erect.

He X Sh? fl* amer, se tB 2, P' 427% fc, 20,) P lant Ve ed, erect d wny. leaves sessile, oblong-lanceolate, acute, mu ulately denticulated; flowers *few,* terminal, on ly long pedi on the j-rp.ce is; teeth of calyx acuminated. 1/. H. Native Flower Missouri, at the foot of Portage Hill, Lewis's Monkey-flower. pale purple. Fl. Aug. Clt. 1824. PI. | to f

9 M. CARDINA'LIS (Doug L mss- ex ^enth- scroph. ind. p. *28.)* gil ous; leav s 5 pedunc e S sterti uc lasping, ovate, with erosely toothed mar- ^ W, h ar(l wnger than the leaves; calyx large, inflately • F xativ-y P micate, with ovate-acute teeth; anthers villous. U>^Z din «l *Monl* Cal ifornia» Douglas. Corollas large, red. v, fe et. nKe y-nower. Fl. June, Aug. Clt. 1835. PI.

10 M. ROSEUS (Dougl. mss. Lindl. bot. reg. 1.1591. Benth. scroph. ind. p. 28.) pubescent; leaves stem-clasping, oblong, a little toothed, 5-nerved ; peduncles shorter than the leaves; calyx large, subinflately tubular, with ovate-acute, nearly equal teeth ; anthers glabrous. 1/. F. Native of North West America, along the Columbia river. Corollas rose-coloured.

Rose-coloured-Cowered Monkey-flower. Fl. July, Aug. Clt. 1831. PI. 1 foot.

11 M. LUTEUS (Lin. spec. 884.) glabrous ; leaves erosely toothed : lower ones on long petioles, ovate, or somewhat lyrate : superior ones rounded, cordately stem-clasping; calyx ovate, but campanulate in the fructiferous state, with ovate-acute teeth: the upper tooth larger. %. F. Native of Chili. Lindl. bot. reg. t. 1030. 1796. Hook. bot. mag. t. *3336. 3353.* and 3363.—Feuill. per. *2.* p. 745. t. 34. Corolla yellow, with a dark mark in the mouth. There are several hybrids reared from the seeds of this species, which vary much in the colour and size of the flowers, some of which are very showy.

FIG. 50.



Far. ft, rivulàris (Lindl. bot. reg. no. 1030.)

r<?//ow;-flowered Monkey-flower. Fl. June, Sept. Clt. 1826. PI. f foot.

\2 M. LYRATUS (Benth. scroph. ind. p. *28.)* glabrous at the base, and downy at top, clammy ; leaves erosely toothed, cordately stem-clasping; calyx ovate, but inflately campanulate *in* the fructiferous state, with ovate-acute teeth : the upper tooth the largest. %. F. Native of California, Douglas.

Lyrate-lewed Monkey-flower. PI. f foot. ?

13 M. GUTTATUS (D. C. cat. hort. monsp. p. 127.) glabrous; leaves almost quite entire: lower ones on long petioles : superior ones rounded, cordately stem-clasping ; calyx ovate, inflated in the fructiferous state, with a contracted mouth : teeth of calyx ovate : the upper one very broad; corolla twice as long as the calyx. If. H. Native of California, and North America. M. lùteus, Sims, bot. mag. 1501. Pursh, fl. amer. sept. *2.* p. *426.* Corolla yellow, spotted in the mouth. Surculi creeping.

Spotted-Cowered Monkey-flower. Fl. June, Sept. Clt. 1S12. PI. 1 to lj foot.

14 M. RIVULARIS (Nutt. in journ. acad. nat. sc. phil. 7. p. 47.) leaves oval, obtuse, crenated : cauline ones sessile; flowers axillary and terminal; calycine teeth very short. 1/. H. Native in the valleys of the Rocky Mountains. Stoloniferous, quite glabrous. Leaves oval, sharply crenated, petiolate ; cauline leaves similar, sessile. Flowers large, bright yellow.

Rivulet Monkey-flower. PI. f foot. ?

15 M. PARVIFLORUS (Lindl. bot. reg. t. 874. Benth. scroph. ind. p. *28.)* glabrous, or hardly downy ; leaves broad-ovate, erosely toothed, broadly and truncately cordate at the base : lower ones petiolate : superior ones sessile; calyx ovate, but broadly campanulate in the fructiferous state : teeth broad, short : upper tooth large ; corolla one half longer than the calyx. ©. H. Native of Chili. Flowers small, yellow.

Small-flowered Monkey-flower. Fl. Year. m Clt. 1824. PI.

16 M. GLABRATUS (H. B. et Kunth, nov. gen. *2.* p. 370.) glabrous, or scarcely pubescent; leaves broad-ovate, obtuse, erosely toothed, broadly and truncately cordate at the base :

lower ones petiolate : superior ones sessile; calyx ovate, inflately campanulate in the fructiferous state ; teeth of calyx broad, short: upper tooth large ; corolla one half longer, or hardly twice as long as the calyx. %. H. Native of Mexico, near Moran, at the altitude of 1338 hexapods, and near Jalapa, and at the foot of Mount Orizaba. M. propinquus, Lindl. bot. reg. 1330. Corolla yellow. Surculi creeping.

Smooth Monkey-flower. Fl. April, Oct. Clt. 1827. PL f foot.

17 M. ANDI'COLUS (H. B. et Kunth, 1. c.) quite glabrous; leaves petiolate, ovate, obtuse, toothed, subcordate or cuneated at the base ; calyx campanulate, 5-toothed: upper tooth the largest; corolla longer than the calyx. %. F. Native on the declivities of the burning Mount Pichincha, near Chorro de Cantuna, at the altitude of 1730 hexapods. Stems creeping, branched, *2-3* inches. Peduncles longer than the leaves. Co-ToWa yellow ?

Andicolous Monkey-flower. PL creeping.

18 M. PILOSIU'SCULUS (H. B. et Kunth,°l. c.) rather pilose; leaves petiolate, roundish-ovate, obtuse, subcordate at the base, toothed; peduncles shorter than the leaves; calyx sub-campanulate, 5-toothed, the upper tooth the largest; corolla twice as long as the calyx. %. F. Native of Peru, near Patibilca, in shady places. Stems creeping. Leaves 3-5-nerved. Corolla yellow.

Rather-hairy Monkey-flower. PL creeping.

19 M. MOSCHATUS (Dougl. in bot, reg. t. 1118.) stems diffuse, clothed with woolly **villi**; leaves petiolate, ovate, or ovate-lanceolate, a little toothed, rounded at the base, rather pilose, and somewhat clammy ; calyx tubular, but oblong in the fruit-bearing state, with lanceolate, unequal teeth. %. H. Native about the Columbia river, on the north-west coast of America. 1 he plant exhales a strong scent of musk. Flowers small, yellow. Plant diffuse, rooting at the base.

Musk-scented Monkey-flower. FL June, Sept. Clt. 1826. PL diffuse.

20 M. FLORIBU'NDUS (Dougl. in bot. reg. 1125.) diffuse, loosely pilose, clammy ; leaves petiolate, broad-ovate, a little toothed, truncate at the base, or rounded ; calyx small, ovate-tubular, almost equally truncate, with very short, acute teeth. ©*. H. Native of California, and the north-west coast of America, at the Columbia river. Corollas yellow.

Bundle-flowered Monkey-flower. FL Aug. Clt. 1826. PL f foot.

21 M. ALSINOIDES (Doug. mss. ex Benth. scroph. ind. p. 29.) glabrous, diffuse; leaves on long petioles, ovate, a little toothed, cuneated or rounded at the base ; calyx small, tubularly-ovate, obliquely truncate, with short teeth. ©.? H. Native of the north-west coast of America, Douglas ; and California, Menzies. Corollas yellow. ?

***Var.* a, *paniculdtus* (Benth. 1. c.)**

Var. /3, minimus (Benth. 1. c.) peduncles 1-3-flowered.—Native at the Columbia river, Douglas and Scouler.

Chickwecd-like Monkey-flower. PL diffuse.

Z2 M. PRIMIHOIDES (Benth. scroph. ind. p. 29.) glabrous; stolomferous; floriferous branches short; leaves nearly obovate, obscurely toothed, and quite entire; peSSsTS gated, solitary, terminal; calyx tubular, with short teeth. ©.? H. Native of the north-west coast of America, Douglas.

Primrose-like Monkey-flower. PL creeping

23 M. PEDUNCULA^RIS (Dougl. mss. ex Bemh. scroph. ind. p. 29.) plant downy, humble ; leaves petiolate, ovate, acute, a little toothed, cuneated or rounded at the base ; calyx small tubularly ovate, with short, acute, nearly equal teeth. ©. ? H! Native of the north-west coast of America, Douglas.

Peduncular Monkey-flower. PL dwarf.

24 M. JAVA'NICUS (Blum, bijdr. p. *755.)* stem creeping; leaves petiolate, ovate, toothed, rather scabrous; peduncles axillary* solitary, or terminal, subfastigiate. 1/ . S. Native *of* Jaya, in grassy places in the western provinces, where it is called *Dwku-matta-Kujup.* **Plant downy. There is also a *var. ft, pusuw** Blum, bijdr. *756.*

Java Monkey-flower. PL creeping.

§ *3. Stems diffuse. Leaves feather-nerved, thin, toothed. tubularly ovate.*

25 M. NEPALE'NSIS (Benth. in Wall. cat. no. 3917.) glabrous, diffuse ; leaves petiolate, ovate, serrated, cuneated at the base, or rounded ; calyx ovate-tubular, with short, acute teeth : tn upper tooth a little larger than the rest.—Native of Nipaul.

Nipaul Monkey-flower. PL diffuse.

§ 4. *Stems creeping. Leaves thickish, quite entire, and quite glabrous.*

26 M. ORBICULA^RIS (Wall. cat. no. 3919.) Benth. scroph. ind. p. *29.)* glabrous, creeping ; leaves petiolate, orbicular, quite entire, thickish; calyx ovate-tubular, truncate, with very short teeth.—Native of the Birmann Empire, at Rangoon and Tavoy, Wall.

Orbicular-\eave& Monkey-flower. PL creeping.

27 M. RIPENS (R. Br. prod. p. 439.) glabrous, creeping; leaves ovate, obtuse, quite entire, half stem-clasping, thickish; calyx ovate-tubular, truncate, with very short teeth. %. F. Native of Van Diemen's Land, Gunn. ; and New South Wales. **Habit of *Herphtis Monniera.***

Creeping Monkey-flower. PL creeping.

28 M. GRA'CILIS (R. Br. 1. c.) quite glabrous, erect; leaves linear-oblong, or oblong, obtuse, entire ; peduncles elongated. %. G. Native of New South Wales, about Port Jackson.

Slender Monkey-flower. PL erect.

Cult. Most of the species are showy, and worth cultivating for ornament. The shrubby kinds grow well in a light rich soil; and cuttings of them strike root readily under a hand-glass in the same kind of soil. The perennial herbaceous kinds are well adapted for decorating flower-borders, thrive in any common garden soil, and all prefer a moist shady situation. AH of them require some protection in severe weather: they are readily increased by division and seeds. The seeds of annual species may either be sown where the plants are intended to remain, or they may be reared on a hot-bed, and afterwards planted out into the open ground.

L. LEUCOCA'RPUS (from *Xevicog, leucos,* white ; and fcap7roc, *karpos,* a fruit; in reference to the white baccate fruit.) D. Don, in Sweet, fl. gard. n. s. t. 124. Conobea species, Graham. Mimulus species, Kunth.

LIN. SYST. *Didyndmia, Angiospermia.* Calyx campanulate* 5-toothed, 5-angled, or 5-ribbed; teeth nearly equal. Corolla tubular, ringent ; throat furnished with *2* elevated bearded plicae; limb bilabiate; lobes roundish, with revolute edges. Stamens 4, didynamous : the *2* superior ones the shortest; *Joy^es* of anthers divaricate, inserted into a hemispherical connective^ Stigma bilamellate ; lobes or lamellae ovate, acuminated, pap^l~ lose above. Berry roundish, succulent, spongy, 2-celled, m^ hiscent, many-seeded ; placentas *2,* large, succulent, fixed the dissepiment, which is contrary, with revolute edges. *Jf $* disposed in a single series, not cumulated, reticulately wrink e» hardly scrobiculate.—An erect, branched, green, annual *1* Angles of the stem and branches winged, acute. Leaves °P^jy site, stem-clasping, perfoliate, lanceolate, acuminated, slia p ^ serrated, membranous, varicose and paler beneath, a bar^ ^ span long. Flowers axillary, cymose. Cymes usually ^ trifid, many-flowered, rarely 3-flowered: the middle

rest *h* y threes > or sevens _ Corolla sul_ pressed g) hardly an inch long. Bracteoles subulate, ad- *nidsus* w,fi ern6S Wnite> size of those of *Symphoricdrpus race-* i i Wlth * nauseous bitter sweet taste.

by the sn ATUS r (Dt Donj L c>) Q - ? H - Native of Mexico > the province o * s tream s at Cuesta Grande de Chiconquiera, in il iou TM. era Cruz, con6bea alata, Graham, in edinb. nov. 0Ct 1830 - Mimulus perfoliatus, H. B. et Kunth, n 2 Graham » ^ bot. mag. t. 3067.

Leucocarpus. Fl. Clt. Pl. 2 to 3 feet, when Sta s of this Plan s should be started about the end of Ma y, they ma s are or suffici h l d b d o tbad, ent size, or about the end of Weltered Panted out into the open border in a warm * and ripen seed. Where, if the su summer prove fine > they

LI. UVEDALIA (named by the author in memory of Uvedale, Esq. who had a botanic garden near Enfield, where he cultivated many exotic plants» on which account he is L^. SYST. Wuk enetand Petiver.) R. Br. prod. p. 440.

Clothed *or* *Tribe* *Angiospermia.* **Calyx prismatic, 5-** Wi nff 'th e ll arin gent: upper lip 2-lobed : lower one trifid, the base ^ liddle se g^ent unlike the lateral ones, bigibbous at ^ti^tna fl' -amens didynamous; lobes of anthers divaricate. Piment f en d, Ca Psule inclosed, 2-celled, 4-valved ; dissepiments the c from the inflexed margins of the valves, inserted cles ax lTra P^centa.—Herbs with opposite leaves. Pedunculary and terminal, 1-flowered, bractless. Corollas blue, than the pedu LINEAVRIS (R> Br. 1. c.) leaves linear, much shorter the tropi ncles * ^ ? Gi Native of New Holland > wuhin

Lincur-leaved Uvedalia. PL 1 foot.?

Cult. For culture and propagation see *Leucocdrpus* above.

LII. WA!OHAMIPHRAGMA (from *Jifiiavg*, *hemisus*, half; and *ent* vf-^ *mos* > a dissepiment; in reference to the dissepifcenth rfhd at tbe aPex 0 Wall- tent- fl- ne P- 17. t. 8. L SCr0ph, ind- P- 47,

Corolla *V\?* *Tribe* *Angiospermia.* **Calyx 5-parted.** rather th k U 5 Hmb 5ncleft» sub-bilabiate ; lower segments Corolla n T*0^®8*- Stamens 4, inserted in the base of the Ste sim 6 y 6(^Ual> distant; others 2-celled; cells parallel. Celled, 2-Vi , stl Sma hardly thickened. Capsule baccate, 2- apex ' ni ; va lves bipartite ; dissepiment parallel, bifid at 1 placentas adnate. Seeds numerous, naked.

^•?G E£ROPHY'LLUM (Wall. tent. fl. nep. p. 17. t. 8.) Herb L native of Nipaul, Wall.; and at Jumnotri, Royle. roi*ndish Cu nbent 5 branches flagelliform. Cauline leaves Short, co* ?. te> crenated, rather pilose. Axillary branches Flowers 6re -l W^th short» l^ear, quite entire, ciliated leaves. lea, shin SeSSile, so litary, within the leaves. Capsule size of a Va -

Cu?? bll c- eaved Hemiphragma. PL procumbent.

Cult. For culture and propagation see *Leucocdrpus* above.

LIII. COLLINSIA (named by Nuttall, in honour of Zaccheus Collins, a vice-president of the Academy of Natural Sciences of Philadelphia.) Nutt. in journ. acad. nat. sc. phil, 1. t 9 Weruanier - 2 - p- 45 «

Generic equiv YST ^ % n « m » «, *Angiospermia.* Calyx campanulate, on the back Corol la bilabiate; orifice closed; tube gibbous ; upper lip erect, bifid : lower one trifid : the middle segment cucullate, and clasping the stamens. Stamens didynamous, with the rudiment of a fifth. Anthers glabrous. Ovarium 2-celled; placenta fleshy. Ovula peltate. Capsule globose, partly 2-celled, 2-valved ; valves bipartite. Seeds few, umbilicate.—Annual plants, with entire, opposite and verticillate leaves and pedicels. Corolla party coloured.

1 C. VE'RNA (Nutt. in journ. acad. nat. sc. phiL 1. t. 9. gen. amer. 2. p. 46. Sweet, fl. gard. t. 220.) stem erect, a little branched ; leaves lanceolate ; pedicels axillary, solitary, much longer than the flowers ; calyx downy, about equal in length to the corolla. ©. H. "Native of north-west America, upon inland rocks ; banks of the Missouri and Mississippi; on the Alleghanies ; and on the borders of Lake Erie. Antirrhinum tenellum, Pursh, fl. amer. sept. 2. p. 421. Corolla white, except the lower lip, which is blue (fig. 51).

FIG. 51.



Spring Collinsia. FL May, July. Clt. 1826. PL 1 foot.

2 C. GRANDIFLÒRA (Lindl. bot. reg. 1107.) stem erect, branched ; lower leaves spatulate : superior ones oblong-linear ; pedicels verticillate, shorter than the flowers ; segments of corolla dilated, retuse ; calyx glabrous, about half the length of the corolla. ©. H. Native of the dry banks of the Columbia river. Stem downy. Leaves glabrous, entire, or denticulated. Corolla pale purple, except the lower lip, which is blue.

Great-flowered Collinsia. Fl. May, July. Clt. 1826. PL 1 foot.

S C. BICOLOR (Benth. in hort. trans, n. s. vol. 1. p. 48.0. Lindl. bot. reg. 1734.) stem erect, downy ; leaves glabrous, ovate-lanceolate, subcordate at the base ; pedicels verticillate, racemose. 0. H. Native of California. Leaves nearly sessile, serrated: upper ones smaller, and quite entire. Calyx clothed with glandular down. Corollas twice the size of those of C. *grandiflòra:* upper lip and tube white : lower lip of a rosy purple colour.

Two-coloured-fiowered Collinsia. FL Aug. Sept. Clt. 1833. PL 1 foot.

4 C. VIOLA^CEA (Nutt. in amer. phil. trans, n. s. vol. *5.* p. 179.)puberulous; leaves ovate-lanceolate, remotely denticulated; corolla almost of one colour: upper lip one half smaller than the lower one : segments bifid at apex ; capsule about 10-seeded. ©. H. Native of North America, on hills and upland woods of the Arkansas and Red rivers. Stems purplish. Radical leaves oblong-ovate : cauline ones sessile, opposite : uppermost ones 3 in a whorl. Corolla bright violet, like that of many species of *Phlòx;* upper lip paler. Allied to *C. grandiflòra.* Seeds smaller than those of *C. vèrna.*

Fiolaceous-fiowered Collinsia. PL \ to 1 foot.

5 C. MI'NIMA (Nutt. in journ. acad. nat. sc. phil. 7. p. 47.) leaves opposite, cuneate-oblong, obtuse, somewhat denticulated; segments of the calyx hardly half so long as the corolla. 0. H. Native of North America, at Flat Head river, flowering early in spring. Peduncles axillary, longer than the leaves. Flowers smaller than in *C. vèrna,* but larger than in C. *parviflòra.* The upper lip of corolla is white, the lower blue. Very closely allied to *C. violàcea,* Nutt.

Least Collinsia. FL Spring. PL 1 to 2 inches.

6 C. PARVIFLÓRA (Lindl. bot. reg. 1082.) stem prostrate,

downy; leaves ovate-oblong, nearly entire, downy; pedicels axillary, solitary, much longer than the flowers; segments of corolla acutish, entire; calyx downy, about equal in length to the corolla. ©. H. Native of America, in the vicinity of the river Columbia. Corollas small, purple and blue.

Small-flowered Collinsia. Fl. June, July. Clt. 1826. PI. procumbent.

7 C. SPARSIFLORA (Fisch. et Meyer, cat. sem. hort. petrop. 2d. 1836.) diffuse ; leaves all opposite ; flowers solitary ; pedicels a little longer than the calyx; capsule globose. ©. H. Native of California, about the Russian colony, Ross. Smoothish, much branched. Stems and branches filiform. Leaves all, or only the upper ones opposite, on which account it is distinguished from the other species. The flowers are solitary, rarely opposite, of a size intermediate between those of C *grandiflbra* and C *parviflora.* Corolla pale violet: lateral segments of the lower lip deep purple.

Scattered-flowered Collinsia. Fl. June, July. Clt. 1836. PI. diffuse.

Cult. All the species being showy, they are well fitted for decorating flower borders, or to be grown in beds or large patches. The seeds only require to be sown where the plants are intended to remain in March or April.

TRIBE IV. GERARDIE'^E (this tribe contains plants agreeing with *Gerardia* in the characters indicated below.) D. Don, in edinb. phil. journ. vol. 19. p. 111. July, 1835. Benth, in bot. reg. under no. 1770^ Calyx tubular, 5-toothed. Corolla campanulate, funnel-shaped, or tubular ; limb 5-lobed, bilabiate. Stamens 4, didynamous ; anthers approximate, 2-celled, often bearded ; cells diverging, distinct at apex, for the most part spurred at the base. Stigma clavate, undivided. Capsule bipartible ; dissepiment composed of *2* connate lamina; valves entire, or bifid ; placentas narrow, spongy. Seeds angular, with a thick favosely cellular, loose testa. Albumen fleshy. Embryo sub-foliaceous, almost the length of the seeds. Radicle short, obtuse.—Herbs or under shrubf, for the most part natives of America. Leaves opposite, scabrous. Flowers axillary, solitary, or disposed in terminal, spicate racemes, yellow or purple.

LIV. GERA'RDIA (a name originally given by Plumier to a plant now hardly known, and intended by him to commemorate our old English botanist, John Gerarde, author of the Herbal, 1597, folio, and a great cultivator of exotic plants, of which he published a catalogue in 1596.) Lin. gen. no. 747. Schreb. gen. no. 1004. Juss. gen. p. 119. ed. Usteri. p. 134. Benth, in Hook. comp. 1. p. 204. Virgularia, Ruiz, et Pav.

LIN. SYST. *Didynamia, Angiospermia.* Calyx campanulate, 5-toothed, or 5-cleft. Corolla campanulate, or ventricosely and tubularly-campanulate : limb 5-cleft, with roundish, half-spreading segments. Stamens didynamous, or rarely nearly equal, shorter than the corolla, sometimes all antheriferous, and sometimes the *2* smaller or shorter ones sterile. Capsule acute, or obtuse, without a beak.-Herbs or under shrubs natives of America. Flowers solitary, axillary, sessile, or pedicellate; ped.cels generally bractless. Corollas yellow, or of a ros^ purple colour.

SECT. I. CYRTOCODON (from *KVPTO£, kyrtos,* a curve; and «*«„, *kodan,* a little bell.) Benth. in Hook. comp. 1. p. 204. Calyx deeply 5-cleft. Corolla yellow; tube usually short and incurved. Anthers mutic. Species natives of North America.

1 G. SERPYLLIFOLIA (H. B. et Kunth, nov. gen. *2.* p. 343) procumbent; leaves ovate, obtuse, quite entire ; flowers axillary, solitary, sessile ; calycine segments entire. ^. G. Native of New Spain, near Carpio, and on the borders of Lake St. Christopher, at the altitude of 1180 hexapods. Plant glabrous in every part. Leaves about *2* lines long. Corolla pale yellow, almost funnel-shaped; tube 3 times as long as the calyx. Stamens and ovarium glabrous.

Wild-Thyme-leaved Gerardia. Shrub procumbent.

2 G. PROSTRATA (H. B. et Kunth, 1. c.) prostrate ; leaves pinnatifid: segments linear, acutely mucronate: lower ones cut; flowers axillary, solitary, sessile; calycine segments pinnatifidly cut. ^ . G. Native of New Spain, between Pachuca and Mount Ventosa, at the altitude of 1320 hexapods. Plant glabrous, tufted, 2-3 inches long. Leaves 3-4 lines long. Corolla an inch and a half long.

Prostrate Gerardia. Shrub prostrate.

3 G. VIRGVTA (H. B. et Kunth, 1. c. p. 344.) erect, pubescent ; leaves pinnatifid : segments linear, obtuse, entire, or cut; calycine segments oblong, entire, and toothed ; tube of corolla incurved ; stamens nearly equal; anthers erect, glabrous ; capsule ovate, acute, T? . G. Native of Mexico, between Guanaxuato and Santa Rosa, at the altitude of 1330 hexapods. Leaves *5-6* lines long, and 2-3 lines broad. Flowers pedicellate. Corolla campanulate, yellow, glabrous. Filaments woolly. Tube of corolla longer than in *G. macrophylla.*

Twiggy Gerardia. PI. erect.

4 G. MACROPHYLLA (Benth. ger. in Hook. comp. 1. p. *205.)* pubescent; leaves deeply toothed, pinnatifid, or the lower ones are bipinnatifid : segments ovate, or oblong-lanceolate : upper leaves almost quite entire; flowers nearly sessile ; calyx hairy, with ovate, subdentate segments; tube of corolla short, incurved, villous inside ; stamens didynamous; anthers rather pilose. 2£. H. Native of the United States; Ohio; Kentucky ; Arkansas. Seymèria macrophylla, Nutt. gen. amer. — p. 49. The form and colour of the corolla connect this *species* with the following. The shorter stamens have smaller anther than the longer ones__Habit nearly that of *G. grand/flora^* Capsule small, ventricose, with a compressed point, somevvna 4-valved.

Large-leaved Gerardia. ' PI. 4 to 5 feet.

SECT. II. OTOPHYLLA (from *OVQ* wroc, *ous otos,* an ear ; a *(j>v\\or, phyllon,* a leaf; in reference to the auriculately 1° leaves.) Benth. ger. in Hook. comp. 1. p. *205.* ,Calyx deep'J 5-cleft. Corollas purple, campanulate. Stamens didynamous' anthers of the longer ones fertile, of the shorter ones small* , and bearded.

5 G. AURICULATA (Michx. fl. bor. amer. 2. p. 48.) If. Native of the United States, chiefly in the Western ones, Seymèria auriculàta, Spreng. syst. 2. p. 810. An erect Leaves oblong-lanceolate, generally auriculately lobecl base. Flowers almost sessile.

Auricled Gerardia. PL \ to 1 foot.

SECT. **III.** PEDICULARIOIDES (SO called by reason of the plants having the habit of the species of *Pediculdris.)* Benth, g Hook. comp. 1. p. 205. Calyx semi-5-cleft. Corolla *yeu^* tubularly campanulate. Stamens didynamous; ant hers equal; cells twin, fertile, spurred at the base.—Herbs of North America. Leaves broadish, usually cut. *l*ooc* corolla often ciliated.

6 G. FLVVA (Pursh, fl. amer. sept. *2.* p. 423. Benth. ^ but not of Lin.) downy; leaves ovate-lanceolate, or ^ obtuse, quite entire, or sinuately lobed; calyx the oblong, obtuse segments, which are rather shorter tube. %. H. Native of the United States, common.

almalth. t. 389. f. 1. Corolla about an inch and a half long, glabrous, yellow.

Narrow-flowered Gerardia. Fl. July, Aug. Clt. 1796. PL erect.

7 G. QUERCIFOLIA (Pursh, l. c.) quite glabrous; lower leaves large, bipinnatifid: superior ones oblong-lanceolate, pinnatifid, acute or obtuse; calyx a little inflated, with lanceolate, acute segments, which are shorter than the tube. V. H. Native of the United States, common. G. flava, Lin. spec. 848, but not P. 841. Rhinanthus Virginicus, Gron. virg. 192. Lin. spec. 1. Calyx rather larger than that of the preceding, divided nearly to the middle, the segments varying much, but are always more deeply cleft than in *G. flava,* ex Benth.

Yellow Gerardia. Fl. July, Aug. Clt. 1812. Pl. 3 to 4 feet.

8 G. QUERCIFOLIA (First ger. in Hook. comp. p. 206.) downy; leaves ovate-lanceolate, acute, serrated at top, pinnatifid at the base; calyxes longer than the pedicels; calycine segments entire or toothed; corolla 4 times as long as the calyx. Native of Mexico, in the province of Texas. Pointed segments. Capsule coriaceous, large, 2 inches long.

Oak-leaved Gerardia. PL 2 to 3 feet. ?

9 G. PEDICULARIA (Lin. spec. p. 849.) smoothish, or pubescent; leaves ovate-lanceolate, obtuse, pinnatifid, with toothed segments; calyxes shorter than the pedicels, with toothed segments; corolla 3 times as long as the calyx. %. H. Native of the United States, common. Corolla 15 lines long. Capsule coriaceous, pointed. Plant drying black like *Pedicularis.*

Pedicularis-like Gerardia. PL 1 to 2 feet. ?

10 G. PECTINATA (Torrey, mss. ex Benth. ger. in Hook, comp. p. 206.) hairy; leaves pectinately pinnacifid; lobes a little cleft; peduncles very short; calyx very hairy, deeply 5-cleft; segments toothed; corolla 3 times as long as the calyx. %. H. Native of Carolina and Georgia, in sandy Pine barrens, Uttall, Rocky Mountains, Torrey. G. pediculária, *ft, torr.* & Gray, Nutt. gen. amer. 2, p. 48. Corolla as in *G. pedicularia,* which it differs in being more hairy, the leaves usually smaller and more divided, and in the pedicels being much shorter.

Pectinate-leaved Gerardia. PL 1 to 2 feet. ?

11 G. DEFLORA (Benth. ger. in Hook. comp. p. 206.) scabrous and glandular; leaves pinnatifid, with narrow-linear, stiff, spreading segments; flowers secund, spicate; calycine segments lanceolate, very acute; tube of corolla attenuated at the base, and dilated at top; capsule obtuse. T. H. Native of Mexico, and in the province of Texas. Corolla an inch long. Anthers like those of the next section *Eugerardia,* more pointed, and slightly pilose at the base.

Deflowered Gerardia. PL ?

Sect. IV. EUGERARDIA (from *eu,* well or good, and *Gerdrdia*; the species contained in which are considered the genuine species of Gerardia, Benth. l. c. Calyx 5-toothed, rarely half 5-cleft. Corolla campanulate, rarely tubular or funnel-shaped, rarely campanulate. Anthers nearly equal; cells twin, fertile, parallel or unequal. Herbs or under shrubs natives of America. Leaves little cut, very rarely lanceolate, quite entire, or the lower ones are a few pairs of lobes.

12 G. SMOOTHII (Benth. l. c.) glabrous; leaves linear, fleshy; flowers nearly sessile; teeth of calyx short, truncate, with very villous edges; corolla amply campanulate, 4-5 times longer than the calyx. V. G. Native of South America, at Maldonado. Flowers disposed in terminal interrupted spikes; the floral leaves being very small. Calyx of *Sopubia.* Corolla above an inch long, very open.

Fingered Gerardia. PL ?

13 G. RIGIDA (Gill. mss. ex Benth. l. c.) glabrous and scabrous; leaves linear, very acute; flowers racemosely spicate; calyx longer than the pedicels, truncate: teeth short, acute; corolla amply and tubularly campanulate, villous, 4-5 times longer than the calyx. 1£. G. Native of South America, in the province of San Louis, Gillies. Flowers the same size, but more hairy than in *G. linarioides.*

Stiff Gerardia. PL ?

14 G. BRACHYPHYLLA (Cham. et Schlecht, in Linnsea, 3. p. 15.) shrubby, glabrous, smooth; leaves small, narrow-lanceolate, mucronulate; flowers pedicellate; teeth of calyx short, acute, shorter than the ovoid calyx. J?. S. Native of Tropical Brazil. Esterhazya alpestris, Spix. et Mart, reise in bras. 1. p. 397. Virgulária alpestris, Mart. nov. gen. 3. p. 10. t. 205. Leaves rather fleshy, 4 lines long. Pedicels shorter than the leaves. Corollas like those of *G. linarioldcs,* but rather smaller. Filaments with a few hairs at the base. Valves of capsule at length split, (fig. 52.)

FIG. 52.



Short-leaved Gerardia. PL 1 foot.

35 G. LANCEOLATA (Benth. 1. c. p. 207.) glabrous, smooth; leaves oblong-linear, mucronate, narrowed at the base; flowers on short pedicels; calycine teeth short, acute; corolla amply and tubularly campanulate, villous, 4 times as long as the calyx. %. G. Native of Peru, between Huariaco and Huanuco, Mathews. Virgulária lanceolata, Ruiz, et Pav. syst. fl. per. p. 161. Virg. revoluta, Ruiz, et Pav. 1. c. Closely allied to the preceding, of which it may be a variety. It differs chiefly in the leaves being rather broader, especially near the apex, and longer. The anthers and filaments are perfectly glabrous.

LanceolateAeaved Gerardia. PL 1 to 2 feet.

16 G. LINARIOIDES (Cham, et Schlecht. in Linnsea, 3. p. 13. Benth. 1. c.) glabrous, rather scabrous; leaves linear, acute, 1-nerved; flowers racemose; calyx shorter than the peduncles: teeth ovate, truncate, or lanceolate acuminated, much shorter than the tube; corolla amply and tubularly campanulate, downy, 4-5 times as long as the calyx. %. G. Native of South America; at Banda Oriental, Tweedie; southern provinces of Brazil, Sello. Differs chiefly from the preceding by its narrower leaves.

Toad-jlax-like Gerardia. PL 1| to % feet.

17 G. GENISTIFOLIA (Cham, et Schlecht. 1. c. p. 15. Benth. 1. c.) glabrous and rather scabrous; leaves lanceolate, acute, sub-trinerved; flowers racemose; calyxes shorter than the peduncles: teeth ovate, truncate, or lanceolate, acute, much shorter than the tube; corolla ample, tubularly campanulate, downy, 4-5 times as long as the calyx. 1/. F. Native along with the preceding, Tweedie and Sello. Plant woody at the base. Corolla almost \\ inch long. Leaves and branches 3 in a whorl. Largest cauline leaves 2\ inches long.

Genisla-likc Gerardia. PL 1 to~2 feet.

18 G. ANGUSTIFOLIA (Mart. bras. 3. p. 12. t. 206. Benth. L c.) quite glabrous; stem erect, virgately branched; leaves

more than an inch long, narrow linear, acute, erectly spreading ; peduncles bractless, about equal in length to the leaves ; teeth of calyx equal, mucronulate; corolla *5* times as long as the calyx. %. G. Native of Brazil, in the province of Minas Geraes. Habit of *G.pedunculàris,* but with a tubular corolla a little dilated at the top, and about an inch long *(fig. 53.)*

FIG. *53.*



Narrow-leaved Gerardia. PI. 1 to 2 feet.

19 G. HISPÍDULA (Mart. bras. 3. p. *13.* t. 207.) plant beset with spreading hairs ; stem fastigiately branched; leaves beyond an inch long, linear, acute, spreading, papillose, especially along the margins ; peduncles bibracteate, exceeding the leaves ; calyx equal, with acute teeth ; corollas *3* times as long as the calyx. 0. G. Native of Brazil, in the provinces of Pianhia and Para. No other species of this genus has bracteate peduncles. Corolla form of the preceding, but about half the size.

Hispid Gerardia. PI. 1 to *2* feet.

20 G. COMMUVIS (Cham, et Schlecht, in Linnaea, 3. p. 12.) glabrous, smooth ; leaves linear, cartilaginously marginate ; flowers nearly sessile; teeth of calyx longer than its tube ; corolla tubularly campanulate, exceeding the calycine teeth a little. 0. G. Native of the South of Brazil, from Rio Janeiro to the Banda Oriental. Corolla downy, ^ an inch long. Filaments and anthers slightly hairy. Capsule truncate, or emarginate.

Common Gerardia. PI. 1 to 2 feet.

21 G. DASYA'NTHA (Schiede, et Deppe, ex Cham, et Schlecht, in Linnaea, 5. p. 104.) stem bifariously pubescent; leaves linear, glabrous; teeth of calyx a little longer than its tube ; corolla downy outside, about twice as long as the calyx. 1/. G. Native of Mexico, in the Terra Fria, Schiede et Deppe. Said to resemble *G. purpùrea* in its appearance.

Thick-flowered Gerardia. PL 1 to *2* feet.

22 G. HETEROPHY'LLA (Nutt. in amer. phil. trans, n. s. *5.* p. 180.) glabrous; radical leaves broad, cut: cauline ones linear, or linear-lanceolate, acute, stiff, with scabrous margins ; flowers almost sessile ; calyx angular, with lanceolate-linear, very acu^e teeth, which are a little shorter than the tube; corolla amply campanulate, clothed with pubescent tomentum outside, 3-4 times as long as the calyx. 1(,. H. Native of the Arkansas territory, in prairies near the great salt river, Nuttall. Texas, Drummond. Corollas very open, from 8 lines to 1 inch long, purple, crowded towards the summits of the branches. The lower leaves are described as trifid, or laciniated, by Nuttall and Drummond.

Far. ft, grandiflòra (Nutt. 1. c.) flowers larger.

Variable-leaved Gerardia. PI. *2* feet.

23 G. FASCICULA'TA (Elliott, bot. car. *2.* p. 115.) very scabrous; stem stiff, branched at top ; leaves narrow-linear, acute; peduncles very short; calyx truncate, with short acute teeth; corolla ample, campanulate, downy, 5 times as Jong as the calyx. %. H. Native of Jacksonville, Drummond ; South Carolina and Georgia, Elliott. Corolla 10-11 lines long. Young leaves sometimes fascicled in the axils of the stem leaves. Perhaps only a variety of *G. purpùrea.*

Fascicled-leaved Gerardia. PI. 1 to *2* feet.

24 G. DOMINGE'NSIS (Spreng. syst. *2.* p. 817.) finely hispid; stem strict, erect, somewhat fastigiately branched; leaves about an inch long, narrow-linear, acute, erectish, *3* times as long as the short peduncles / calyx equal, with acute teeth; corolla 3 times as long as the calyx. 1/. S. Native of St. Domingo. Appears to be allied to *G. purpùrea* and *G. fasciculàta,* but the flowers are described as but 4 lines long, ex Benth.

St. Domingo Gerardia. PL 1 to 2 feet.

25 G. MARÍTIMA (Rafin. new york med. rep. *2.* p. 3°h) humble, glabrous, fleshy ; leaves linear, obtuse ; racemes terminal ; peduncles short; calyx truncate, with short, obtuse, mutic teeth ; corollas glabrous, campanulate, 8-4 times as long as the calyx. 4. H. Native of New Jersey and New York, in salt marshes. G. crinita, Eddy. G. purpùrea, β, crassifòlia, Pursh, fl. amer. sept. 2. p. 422. Plant usually 2-8 inches high. Corolla scarcely 8 lines long.

Far. /3, grand'flbra (Benth. 1. c. p. 208.) plant 4-6 inches high, with few leaves on the upper part; corolla about 8 lines long. % . H. Native of Texas.

Sea-side Gerardia. PI. 2 to 6 inches.

26 G. PLUKENE^TII (Ell. bot. car. *2.* p. 114.) quite smooth ; leaves small, remote, filiform, sub-fascicled ; peduncles shorter than the leaves and calyxes ; calyx truncate, with short, acute teeth; corolla finely pubescent, 3 times as long as the calyx. 1/. H. Native of Carolina and Georgia, Elliott; of the Cherokee country, Banks herb. Said by Mr. Bentham to come near to var. y, of *G. tenuifòlia,* but the leaves are still more slender, and the peduncles constantly very short.

PlukeneCs Gerardia. PL 1 foot.

27 G. PURPU'REA (Lin. spec. 848.) leaves linear, acutish, flat, with scabrous edges ; flowers on short peduncles; calyx almost nerveless, with acute teeth, which are one half shorter than the tube ; corolla glabrous, amply campanulate, with a short, tubular base. $. H. Native of the United States, common in ir[illegible] and of Mexico, in the Hacienda de La Laguna. Si[illegible] mag. 2048.—Plukri. phyt. t. 12. f. 2. mant. t. *388.* f. 1.

Far. a, parviflbra (Benth. 1. c. p. 208.) corolla har[illegible] lines long. %. H.

Far. p, grandiflora (Benth. 1. c.) corolla an inch long. H. Native of New Jersey. The two varieties at firsj; appear different, Benth.

Purpfe-flowered Gerardia. Fl. July, Aug. Clt. 177^2. ljfoot.

28 G. LONGIF6LIA (Nutt. in amer. phil. soc. trans, n. js. 180.) leaves narrow-linear, with scabrous edges : the floral exceeding the flowers; peduncles much longer than the calyxes almost nerveless ; teeth lanceolate, acute, hardly than the tube; corollas glabrous, ample, campanulate, tubular at the base. ©. H. Native on the banks of Arkansas, Nutt.; Red River, on the north-west coast, Dougl[illegible] Leaves I\ to 2 inches long. Corolla of *G. purpitrea,* var. r» which it resembles in many respects, (Benth.)

Long-leaved Gerardia. PI. 1 to If foot.

29 G. LINIFOLIA (Nutt. gen. amer. 2. p. 47.) stem smooth, much branched; branches floriferous at apex; linear, acute, smooth or roughish, longer than the pedu calyx truncate, campanulate, minutely toothed; corolla a campanulate, with a downy throat, and ciliated segments. H. Native of North Carolina to Florida, Nuttall; Dr. Gates. Root creeping. Leaves smooth [illegible] the Nuttall; but according to Bentham they are rougn margins.

Flax-leaved Gerardia. PI. 2 to 3 feet.

30 G. PEDUNCULA'RIS (Benth. 1. c. p. 209.) leaves edges, and are, as well as the stem, very revolute racemes panicled ; peduncles long; calyx angular, tr[illegible]

short acute teeth; corolla amply campanulate, downy, furnished with long cilia on the edges, 4 times as long as the calyx. $. ? Native of Mexico, Tate. This species chiefly differs from *G. purpurea,* by the narrow leaves and long peduncles. Capsule globose, longer than the calyx. (Benth.)

Long-peduncled Gerardia. PL 1 to 2 feet,

for the most part alternate, subfasciculate, and are, as well as the stem, scabrous, ex Benth, smooth, ex Nutt.; racemes paniculate, corymbose. Peduncles much longer than the leaves; calyx truncate, with short acute teeth; corolla ample, ventricosely campanulate. Native of West Florida, Nuttall; Jacksonville, Louisiana, and Texas, Drummond, Lat. from *G. Pedlmc«tiris* and *G. tenuifohay*; and » distinguished from the former in the slender stem and in having fascicled leaves and from the last ft™ fl™'' !? i ^ Peduncles. (Benth.)

Thread-leaved **Gerardia.** PI. 1 to 2 feet.

Very acute teeth, and are as well as the stem, much branched, and subpanicled; peduncles longer than the calyx. truncate, with setaceous teeth; corolla campanulate, nearly 4 times longer than the calyx. ? F. Native of the United States, common in dry forests. G. erecta, Walt. fl. carol. 170.—Plukn. t. 12. f. 4. The following varieties may perhaps be species, especially the last; but the characters are very slight. They all differ from *G. pedunculdris,* by the glabrous, hardly ciliated corolla; from *G. scihcea* by the slender capsule, and habit; and from *G. longiflora* by the truncate calyx with minute teeth. They have all the same slender stems, and always marked with decurrent lines from the base of the leaves; the anthers with long, white, woolly hairs. (Benth.)

Var. a (Nutt. in amer. phil, trans, n. s. *5.* p. 179.) flowers smaller, tube of calyx equal in length to the corolla; teeth acuminated, 5 fruit larger, of the Arkansa. Native in the prairies between the Verdigris river and the Canadian. Apparently a distinct species than the *G. pedunculdris,* branched, and inclined to grow taller than the *G. longiflora,* whose flowers are larger, with a much smaller calyx.

Broad-leaved Gerardia. Fl. July, Aug. Clt. 1812. PI. 1 to 2 feet,

are, as well as the setaceous leaves, rather scabrous; flowers few, on long peduncles; teeth of calyx short, setaceous; capsule ovate, longer than the calyx. ©.? F. Native from Pennsylvania, in sandy forests. Allied to *G. tenuifblia.*

Var. /3 arvidlia (Benth. in DC. prod. 10. p. 520.) leaves distant, flowers racemose. £. ? F. Native of Jacksonville, Louisiana, and Texas. Some resemblance to *G. aphylla,* but the leaves are never reduced to scales. It does not dry so black as other species of the genus.

Setaceous-leaved Gerardia. PI. 1 foot,

gated, filiform, nearly naked, scabrous; leaves short, remote, linear, or all minute and scale-formed; flowers pedunculate; calyx truncate, with very short acute teeth; capsule globose, exceeding the calyx. ©. F. Native from North Carolina to Florida, Nuttall; Jacksonville, Drummond.

Far. filicaulis (Benth. 1. c. p. 210.) branches very slender, few-flowered; flowers small.

Far. y, grandifibra (Benth. 1. c.) branches stiff; flowers racemose, rather large.

Leafless Gerardia. PI. 3 to 4 feet.

SECT. V. DARCEIDIA (an anagram of *Gerardia.*) Benth. ger. in Hook. comp. 1. p. 210. Calyx 5-toothed. Corolla purple; segments emarginately bifid. Stamens didynamous; anthers all equally 2-celled, fertile. An Indian herb, with pinnate leaves, and linear segments. Perhaps a proper genus.

36 G. PARVIFLORA (Benth. in Wall. cat. no. 3888. scroph. ind. p. 48.) stems tall, acutely tetragonal; racemes numerous, disposed in an ample panicle; flowers on short pedicels; corolla hardly 2 lines long; capsule ovate-globose, retuse, a little compressed; valves recurved at maturity, entire.—Native of the Himalaya Mountains. Leaves subpinnatifid. Teeth of calyx short, acute.

Small-flowered Gerardia. PL tall.

Cult. All the species of *Gerardia* are elegant when in blossom, but are difficult to cultivate. The hardy species require to be planted in a bed of peat soil, as they will not grow in pots; and they are only to be increased by seeds, and then with much difficulty. The tender species may be grown in pots, in peat earth, should any of them hereafter be introduced to our gardens.

LV. SOPIPBIA *(Sopubi swa* is the Nawarice name of the first species.) Hamilt. mss. ex D. Don, prod. fl. nep. p. *88.* Gerardia, sect. VI. Sopubia, Benth. ger. in Hook. comp. 1. p. 210.

LIN. SYST. *Didyncimia, Angiospermia.* Calyx campanulate, 5-toothed. Corolla campanulate, tubular at the base; limb spreading, 5-lobed, nearly equal; lobes rounded, entire. Stamens 4, exserted, nearly equal in length, somewhat didynamous, glabrous. Cells of anthers free, spurred at the base; the one fertile, erect; and the other sterile, small, and diverging, tubular. Stigma undivided. Capsule 2-celled, 2-valved; valves usually bifid. Dissepiment complete, continuous, parallel, placentiferous on both sides. Seeds numerous.—African and Indian perennial herbs. Leaves narrow, generally cut. Peduncles 1-flowered, solitary, in the axils of the upper leaves, opposite or alternate, therefore racemose, bibracteate. Corollas purple or yellow.

1 S. TRIFIDA (Hamilt. mss. ex D. Don, prod. p. 88.) stiffs branched; leaves pinnate, with linear scabrous segments; teeth of calyx ovate, with ciliately membranous edges, much shorter than the tube. %. F. Native of the Himalaya range of mountains, Common; Upper Nipaul, at Suembu; Ceylon, Macrae; Madagascar, Lyall. Gerardia scabra, Wall. cat. no. *3889.* Benth. scroph. ind. p. 49. but not of Lin. Gerardia Sopubia, Benth. ger. in Hook. comp. p. 210. Manulea Sopubia, Hamilt. mss. Leaves pinnate, simple or trifid. FJovvers purple, ex D. Don, 1. c.; yellow ? Benth. 1. c.

Trijid-lesLved Sopubia. PI. \ to 1 foot.

2 S. STRICTA; rough, stiff, a little branched; leaves lanceolate-linear, toothed or cut; teeth of calyx lanceolate, acute, naked, much shorter than the tube. %. S. Native of Martaban and Prome, Wall. Gerardia stricta, Benth. in

Wall. cat. no. 3889. scroph. ind. p. 49. ger. 1. c. Corollas pale purple, like those of *S. delphinifòlia.* Capsule globose at the base, but compressed at top.

Strict Sopubia. PI. 2 to 3 feet.

3 S. DELPHINIFÒLIA ; much branched, smooth; leaves pinnatifid, with narrow-linear segments ; calycine teeth linear-subulate, longer than the tube. 1/. S. Native of India, chiefly in the Peninsula, and as far North as Lohargan, Royle, always in wet soil, and sometimes even in water. Gerârdia delphinifòlia, Lin. spec. p. 848. Roxb. cor. 1. t. 90. Benth. scroph. ind. p. 49. ger. in Hook. comp. 1. p. 211. t. 11. Euphrâsia Coromandeliâna, Rottl. in Spreng. syst. 2. p. 775.—Plukn. aim. 17. t. *358.* f. 3. Leaves simple, trifid or tripinnatifid. Corolla 7-8 lines long, reddish, with a deep coloured spot on the under lip. Lower pair of anthers united.

Far. fi, parvijlbra (Benth. in scroph. ind. p. 49. ger. 1. c. p. 211.) 1£.S. Geiârdia Heyneâna, Benth. in Wall. cat. no. 3891. Corolla *5-6* lines long.

Larkspur-leaved Sopubia. Fl. June, July. Clt. 1800. PL 3 to 4 feet.

4 S. SCA'BRA ; glabrous ; leaves oblong-lanceolate, entire, cuneately 3-5-cleft, with rather scabrous edges ; teeth of calyx lanceolate, scarcely shorter than the* tube; corolla tubularly campanulate, more than 3 times longer than the calyx. %. F. Native of the Cape of Good Hope. Gerârdia scàbra, Lin. suppl. 279. Benth. ger. in Hook. comp. p. 211. Stems usually simple. Flowers almost sessile, near together. Corolla an inch long, apparently purple. Filaments hairy.

Scabrous Sopubia. PL J to 1 foot.

5 S. OBTUSIFÒLIA ; stem hairy at top ; leaves oblong-lanceolate, entire, or a little toothed, obtuse, scabrous, glabrous; calycine teeth broad-lanceolate, obtuse, scarcely shorter than the tube, which is a little inflated ; corollas tubularly campanulate, twice as long as the calyx. *If.*. S. Native of Madagascar. Gerârdia obtusifòlia, Benth. ger. 1. c. p. 211. Flowers similar to those of *S. scàbra,* but the calyx is larger. Filaments almost glabrous. Empty cells of anthers terminated by a long point.

Obtuse-leaved Sopubia. PL 1 to *2* feet.

6 S. FILIFÒRMIS ; leaves filiform, scabrous; peduncles opposite, short, 1-flowered, subsolitary. 1/. S. Native of Guinea, near Pramprom and Ningo, Thonning. Gerârdia filifòrmis, Schum. pi. guin. p. 272. Root horizontal. Stem simple at bottom, and fastigiately branched at top. Corolla pale purple ; throat large, campanulate. Anthers bipartite ; the lobes oblong, unequal, diverging.

Filiform Sopubia. PL \ foot ?

Cult. The species of *Sopùbia* might be grown in pots placed in pans of water. A peat soil is that best suited to them ; and they may either be increased by cuttings or seeds. They are, however, extremely difficult to cultivate.

LVI. SEYME^RIA (named by Pursh after Henry Seymer, an English naturalist.) Pursh, fl. amer. sept. 2. p. *737.* Benth. ger. in Hook. comp. p. 203.—Afzèlia, GmeL, but not of Smith. Gerârdia species, Michx. and Pers.

LIN. SYST. *Didyncimia, Angiospermia.* Calyx campanulate ; segments 5, linear, longer than the tube. Corolla with a short tube, and *5* oblong segments, which are at length subrotately spreading. Stamens 4, almost equal in length, rather longer than the corolla; anthers erect, all 2-celled and fertile. Stigma slender. Capsule globose at the base, and compressed at apex. —Herbs natives of North America. Leaves pinnate, with linear or filiform segments. Flowers small, somewhat paniculately racemose. Corollas yellow.

1 S. TENUIFÒLIA (Pursh, fl. amer. sept. 2. p. 737.) clothed with fine clammy down; leaves setaceously pinnatifid; segmen cut; capsule glabrous, beaked. ©. H. Native of Carolina* Georgia, Florida, and Louisiana, &c. Gerârdia Afzèlia, Mien** fl. bor. amer. 2. p. 20. Afzèlia cassioides, GmeL syst. nat. 927. Gerârdia cassioides, Pers. ench. 2. p. 154. Branches slender. Leaves small, distant. Flowers \ an inch in diameter. Capsule size of a grain of pepper.

Thin-leaved Seymèria. Fl. July, Aug. Clt. 1730. foot.

2 S. PECTINA'TA (Pursh. 1. c.) downy; leaves pinnatifid, wit linear, obtuse, rather cut segments"; capsule downy, obtuse. ©. H. Native of South Carolina, Pursh ; Louisiana, Drummond ; from North Carolina to Florida, Pursh. Leaves large* and their lobes much broader than in the preceding. Capsu le larger, compressed, obtuse, and almost emarginate at apex.

Pectinate-leaved Seymeria. Fl. July, Aug. Clt. 1820. P 1 foot.

Cult. For culture and propagation see *Gerdrdia,* p. 559.

LVII. MACRANTHFRA (from *fiaKpog, makros,* long; and *avdtipa, anthera,* an anther; in reference to the long anthers.) Torrey, mss. ex Benth. ger. in Hook. comp. 1. p. 203. —Conràdia, Nutt. and Pickering, in journ. acad. nat. sc. **phil-** 7. p. 88. t. 12. but not of Mart.

LIN. SYST. *Didynamia, Angiospermia.* Calyx campanulate, with 5 linear foliaceous segments, which are longer than the tube. Corolla tubular ; limb of 5 short, nearly equal, spreading segments. Stamens 4, nearly equal, exserted; anthers erect, all 2-celled, fertile. Stigma slender. Capsule nearly globose, acute.—An erect American herb. Leaves opposite, o sected. Flowers racemose, yellow.

1 M. FUCHSKHDES (Benth. 1. c.) %. H. Native of t^ southern states of North America ; Louisiana, Drummon • Cornelia fuchsioides, Nutt. 1. c. Plant slightly downy. ments of the leaves lanceolate : those of the lower ones divi Racemes long, unilateral. Peduncles opposite, spreading slightly reflexed. Flowers erect. Corolla an inch long, incurved at the top; mouth oblique. Stamens downy. Leaves like those of *Gerdrdia quercifòlia,* ex Nutt.

Fuchsia-like Macranthera. PL 2 to 3 feet.

Cult. For culture and propagation see *Gerdrdia,* p. 559.

LVIII. ESTERHA^ZIA (probably named after some ber of the family of Prince Esterhazy.) Mikan, del. pl. et bras. t. 5. Benth. ger. in Hook. comp. 1. p. 203. —Virg species, Mart.—Gerârdia species, Cham, et Schlecht, in vol. 8.

LIN. SYST. *Didyndmia, Angiospermia.* Calyx cam P? 5-toothed. Corolla tubularly funnel-shaped ; lobes ot ovate-roundish, nearly equal. Stamens didynamous, e villous : anthers all fertile ; cells very villous, acute at —Much branched shrubs, natives of Brazil, naked at Leaves usually opposite, quite entire, rather disposed in short racemes, pedicellate towards the branches ; pedicels bracteate.

1 E. CAMPE'STRIS (Spix et Mart, reise in bras. leaves lanceolate or oblong-lanceolate, mucronuiate, at the base, 1-nerved: floral ones exceeding racemes almost simple. *h* - G. Native of brazn, vince of Minas Geraes, in the Diamond district, campéstris, Mart. gen. bras. *3.* p. 7. t. 203.

Field Esterhazia. Shrub.

2 E. MONTVNA (Spix, et Mart. 1. c.) both ends, 1-nerved, fascicled; flowers exceeding

Gel[illegible] compound- *2 • G. Native of the province of Minas Mart l[illegible] topical Brazil, Sello. Virgulária montana, in Linnæa, 3. p. 17. Gerardia caesarea, Cham, et Schlecht,

Mountain Esterhazia. Shrub.

narrow[illegible] (Mikan> del- P[illegible]- et faun- bras- *• 50 leaves racem[illegible] lanceolate> acute, narrowed into the petioles at the base; tromvf[illegible] Simple, few-flovvered, leafy. ^ • G. Native of gen[illegible], Mart< and Sello, Virgulana splendida, xMart. f[illegible] Linnaea, 3# P# 1(5# Gerardia gnidioides, Cham, et Schlecht, ciliatef[illegible] Segments of corolla ovate, very blunt, specie[illegible] Accordir>g to Cftam. et Schlecht, 1. c. the 3 foregoing of[illegible] run so lnt0 each other> that *the*y *ma*y onlv be varieties

^*endid* Esterhazia. Shrub.

leaves i[illegible] MACROD6NTA (Cham, et Schlecht, in Linnsea, 8. p. 26.) apex • D[illegible] lanceolate» narrowed at the base, acute and mucronate at flowered h[illegible] terminal» pyramidal, comose, composed of 2-lets • tept^T[illegible] ; Peduncles exceeding the leaves and branch- Brazil c[illegible] if calyX subulatelv acuminated. ^ . G. Native of brous on l[illegible] Villous outside; segments ciliated, and gla- W /[illegible] faces- Filaments villous or bearded.

Culf[illegible] Esterhazia. Shrub.

[illegible] or culture and propagation see *Gerdrdia,* p. 559.

LIX. GLOSSOSTYLIS (from *yXuxrara,glossa,* a tongue; and *vrvXoc \n7*, J in allusion t0 the form of the stigma in «*Pera\rl* Ser- in Hamet Schlecht, in Linnsea, 3. p. 22. Benth. Pet. Th. gen. COmp, p, 2n-—Gerardia species, Vahl. Starbia, mad' P" 7-?

LIN SYST. *Didynamia, Angiospermia.* Calyx campanulate, 4 to 5-lobed, lobes unequal. Corolla obliquely campanulate, with a short tube and the largest lobe below. Stamens didynamous, inclosed; anthers all equal and fertile, acute at the base. Seeds small, with a membranous, linear-cuneated membrane, ^^erica. Sub-Arbusculae, S> with the habit of *Melampyrum* natives of Chili and South Asia. Leaves opposite, sinuately toothed, flat, deeply two- to three-lobed or bracteas broadest at the base, and solitary, alternate, acuminated at apex. Flowers nearly sessile, Glomerate, spicate. Calyx ovate, acute, very short, in 7 deep segments. Corolla short or lanceolate, cuneated at the base, on the outside and are as well as the stem rough from minute glandular hairs. Calyx broadj acute, with short cilia- ©• s- e on T.[illegible] J[illegible] ^ Glossostylis, found on Mount Salvador, a mountain near Ava.

G. [illegible] (^ham, et Schlecht, in Linna*, *8.* p. *23.)* Leaves dearly Sessile, oblong-lanceolate, truncately cordate at the base, and [illegible] yllS" FL *l* to 2 feet- length of calyx viT[illegible] as well as the stem, his[illegible]id and veiT rough; [illegible] acute, and are as well as the bracteas, hisneiro, in Vitalve of Brazil, at Bahia, Salzmann ; and Rio [illegible]nceolate [illegible]les> Chamisso. Corolla 5 lines long. Stigma pea. [illegible]cochleate, uncinately recurved. Capsule size of a

[illegible]y Glossostylis. PL II to 3 feet.

leaves [illegible]neaH- (Benth- scroph. ind. p. 50. ger. 1. c. p. 212.) [illegible]r ones [illegible]sessile> ovate-cordate : lower ones obtuse : superior tub[illegible]CUn[illegible]nate, and are> as well as the stem» scabrous from [illegible]Ute» and [illegible]es, and smooth ; calycine teeth lanceolate, very R. O, [illegible] are> as well as the bracteas, nearly naked, glabrous. [illegible]inanth[illegible] Ve of tlle Cape of Good Hope> and Madagasçar. Veng[illegible]caber, Thunb. prod. p. *98.2* Bartsia scabra, [illegible]-syst. *2.* p. *7*[illegible]*5t* Gerardia sessiliflora, Vahl, symb. 2. [illegible]riul[illegible]dina to Bentham, there is a specimen in Hooker's [illegible] the j[illegible] which appears to be a fourth species of this genus [illegible]t. Iy[illegible] Caves ^ &• *Capensis,* but hispid, like *G. dspera,* with larger and more foliaceous calyxes than any of the other species.

Cape Glossostyles. PI. 1 to *2* feet.

Cult. For culture and propagation see *Sopūbia,* p. *560.*

LX. PHTHEIROSPE'RMUM (from ^pu, *phtheiro,* to corrupt; and *(nrepfxa, sperma,* a seed ; in reference to the seeds being wrapped in a spongy reticulated membrane.) Bunge. Fisch. et Meyer, ind. sem. hort. petrop. 1835. Benth. ger. in Hook. comp. 1. p. 212.

LIN. SYST. *Didynamia, Angiospermia.* Calyx campanulate, 5-cleft. Corolla campanulately ringent; upper lip flat, bifid ; lobes replicate: lower lip a little longer and trifid; throat gaping. Stamens didynamous, almost straight ; anthers free; with mucronate parallel cells. Stigma 2-lobed. Capsule beaked, compressed, 2-valved, 2-celled, many-seeded. Seeds oblong, angular, wrapped in a spongy reticulated membrane.

1 P. CHINE'NSIS (Bunge, 1. c.) 0. H. Native of the North of China.—An annual or biennial herb, with the habit, leaves, calyx, and capsule of *Pedicularis palustris ;* but the corolla is almost that of *Mimulus,* of a dirty red colour ; throat marked by *2* yellow lines.

China Phtheirospermum. PL 1 to 2 feet ?

Cult. For culture and propagation see *Sopūbia,* p. 560.

LXI. ESCOBEDIA (named after George Escobedo, a Spanish naturalist.) Ruiz, et Pav. syst. fl. per. et chil. p. 158. H. B. et Kunth, nov. gen. amer. 2. p. 371. Benth. in Hook, comp. 1. p. *202.*

LIN. SYST. *Didynamia, Angiospermia.* Calyx long, tubular, pentagonal, 5-cleft at apex ; segments acute, spreading a little. Corolla funnel-shaped; with a long slender tube; and an ample, 5-lobed, oblique, spreading limb. Stamens didynamous, inclosed ; anthers all fertile, linear-sagittate ; cells awned at the base. Capsule covered by the calyx, 2-celled, 2-valved.—American herbs, with generally opposite leaves. Peduncles axillary, solitary, 1-flowered, bibracteate. Flowers large, showy, white.

1 E. SCABRIFOLIA (Ruiz, et Pav. 1. c. p. 159. H. B. et Kunth. nov. gen. amer. 2. p. 571. t. 174.) leaves ovate and oblong, cordate at the base, toothed, scabrous on both surfaces. %. G. Native of New Granada, among stones between the town of Mariquita and the mine of Santa Anna, at the altitude of 530 hexapods, Humb. et Bonpl.; Eastern declivities of the Cordillera of Peru, Mathews ; Brazil, in the province of Minas Geraes, Langsdorff. Branches furrowed, hairy. Leaves sessile, 4 inches long. Both species are called *Asa/ran* by the natives of New Granada.

Rough-leaved Escobedia. PI. 2 to 4 feet.

2 E. LINEA'RIS (Schlecht, in Linnaea, 8. p. 246.) leaves long-linear, denticulated. %> G. Native of Mexico, in grassy places at the Hacienda de la Laguna. C. lsevis, Cham, et Schlecht, in Linnsea, 5. p. 108. Leaves 4-5 inches long, scabrous. Tube of corolla 4 inches long, and the limb 2 inches in diameter.

Linear-leaved Escobedia. PI. 2 feet.

Cult. For culture and propagation see *Gerardia,* p. *559.*

LXII. PHYSOCAXYX (from *yvoa, physa,* a bladder; and [illegible]t\i/£, a *calyx;* in reference to the inflated calyx.) Pohl, pl. bras. 1. p. *65.* t. 53. Mart. bras. *3.* p. 2, 3. t. 201, *202.*

LIN. SYST. *Didynamia, Angiospermia.* Calyx inflated, 5-toothed, coloured. Corolla tubularly salver-shaped ; limb spreading, somewhat equally 5-lobed. Stamens didynamous, inclosed. Anthers all fertile; cells shortly awned at the base.

—Shrubs natives of Brazil, densely covered with erect, thickish, quite entire, opposite or alternate leaves. Peduncles axillary, 1-flowered, bibracteate, racemose at the tops of the branches. Corollas red or blood-coloured. The three species are very nearly allied, and are scarcely distinct.

1 P. MA'JOR (Mart. bras. 3. p. *2.* t. 201.) leaves ovate or ovate-oblong, obtuse, mucronulate; bracteoles subulately linear, beneath the flowers; filaments glabrous; anthers bearded on the back. Tj. G. Native of Brazil, in the province of Minas Geraes, in the Diamond district, Martius; on Sierra da Muela, Sello.

Larger Physocalyx. Shrub.

2 P. MI^NOR (Mart. 1. c. p. *3.* t. 202.) leaves obovate, acutish ; bracteas subulately linear under the flowers ; filaments glabrous; anthers bearded on the back. J? . G. Native along with the preceding, in the Diamond district, Martius (fig. 54.)

FIG. 54.



Smaller Physocalyx. Shrub 1 foot.

3 P. AURANTIACUS (Pohl, pi. bras. 1. p. *65.* t. 53.) leaves obovate-elliptic ; bracteas oblong-lanceolate under the flowers ; filaments villous above, and the anthers on the back. J? . G. Native of Brazil, in the province of Minas Geraes ; on Serro Frio ; and on the tops of mountains, in arid, gravelly, rocky places, between Rio Jetiquinhonha, on the road between Bonfm and Villa de Fanado. Leaves oval-elliptic, obtuse, sessile, ex Pohl.

***Orange-colotired-calyxed* Physocalyx. Shrub 1 foot.**

Cult, For culture and propagation see *Gerdrdia,* p. 559.

LXIII. MELA'SMA (from yueXac, *melas,* black ; application not evident in any way, unless from the plants turning black on drying—a circumstance common to this order.) Berg. cap. t. *3.* Gsertn. fruct. t. *55.* Benth. ger. in Hook. comp. p. 202.. Nigrina, Lin. mant. p. 42.—Gerardia species, Lin. fil. suppl. 278, Physocalyx and Lyncea species, Cham, et Schlecht, in Linnaea.

LIN. SYST. *Didynamia, Angiospermia.* Calyx loose, folfaceous, at length inflated, 5-cleft at apex. Corolla campanulately funnel-shaped ; lobes of limb short, broad. Stamens subdidynamous, shorter than the corolla; anthers all fertile ; cells apiculate at the base.—American or Cape herbs ; with usually opposite leaves ; and axillary, 1-flowered, bracteate pedicels, which are disposed in a subracemose manner.

1 M. ? HI'SPIDUM (Benth. 1. c.) plant hispid from white pili; leaves lanceolate, a little toothed, narrowed at the base; peduncles bracteate at apex. %. G. Native of Mexico, near Hacienda de La Laguna, Schiede and Deppe. Lyncea hispida, Cham, et Schlecht, in Linnaea, 5. p. 108, and 8. p. 24. Leaves alternate or falsely opposite, on short petioles, quite entire or sinuately denticulated. Calycine segments 3-nerved. Lobes of corolla obtuse.

Hispid Melasma. PL *S to* 4 feet.

2 M RHINANTHOI'DES (Benth. 1. c.) plant very scabrous ; leaves oblong, a little toothed, hardly narrowed at the base; SS shorter than the calyx, bracteate m the middle. *v* - G. Na Jvp of Brazil, at Rio Grande, in many places, Sello and b! PhysoSyx rhinanthoides, Cham, et Schlecht, in Linnaea, 8. p. *23.* Floriferous calyx about half an inch long. Corolla nearly an inch long. Fructiferous calyx resembling that of *Physalis.* Capsule obtuse ; valves apparently entire, ex Benth. Leaves linear-lanceolate, obtuse, toothed, ex Cham* 1. c.

Yellow-rattle-like* Melasma. PI. a span to *2 feet.

3 M. SCA^BRUM (Berg. fl. cap. 162. t. *3.* f. 4.) leaves lanceolate, broadest at the base, toothed, scabrous ; peduncles longer than the calyx, bracteate in the middle. %. G. Native of the Cape of Good Hope. Nigrina viscosa, Lin. mant. p. 42. Gerardia Nigrina, Lin. suppl. 278. Flowers closely resembling those of the preceding, and of the same size. Teeth of calyx rather shorter ; and corolla rather fuller, ex Benth.

Scabrous Melasma. PI.

Cult. For culture and propagation see *Gerardia,* p. *559.*

LXIV. GASTROMFRIA (from *yatrrrjp, gaster,* a belly ; and *fxepig, meris,* a part; in reference to the inflated calyx.) D# Don, in Sweet, fl. gard. n. s. vol. 1. in a note under no. *75.*—• Lophospermum species, D, Don, in Lin. trans, vol. 15. p. *353-*

LIN. SYST. *Didynamia, Angiospermia.* Calyx almost globose, membranous, inflated, 5-toothed. Corolla eampanulate, nearly equal at the base ; limb 5-lobed, bilabiate. Stamens 4, didynamous; filaments glabrous; anthers oblong; cells confluent **at apex, loose at the base,** ***diverging, mutic. Ovarium 2**** celled ; dissepiment placentiferous on both sides ; ovula minute, angular, very numerous. Fruit unknown.—A Mexican shrub, scabrous from callous bristles. Leaves opposite, on short petioles, oblong, acute, toothed, pinnately nerved. Flowers axillary* solitary, pedunculate. Peduncles bibracteate. Calyx green. Corolla large, purple ? an inch and a half long.

1 G. PHYSALOI'DES. F? . G. Native *of* Mexico, Sesse ana Mocinno. Lophospermum physaloides, D. Don, in Lin. trans* 15. p. *353.* Scrophularia physaloides, Moc. et Sesse, mss.

Physalis-like Gastromeria. Shrub erect.

Cult. For culture and propagation see *Gerdrdia,* p. *559.*

LXV. CENTRANTHE'RA (from *icevrpov, Jcentron,* a spur; and *aydrjpa, anthera,* an anther ; cells *of* anthers mucronate *or* spurred.) R. Br. prod. p. 438. Benth. scroph. ind. p. 50.

LIN. SYST. *Didynamia, Angiospermia.* Calyx compressed cleft on one side, entire, or at length somewhat 4-cleft. Corolla tubular or funnel-shaped ; limb spreading or bilabiate ; lobes *5>* roundish : the lower one the largest. Stamens shorter than the coroh^. ^Q^i>nthers approximate by pairs, 2-celled ; cells parallel or transverse, mucronate or spurred. Stigma oblong, thickened* Capsule ovoid or oblong, 2-valved; valves entire. Seeds minute* with a loose aril-formed testa.—Erect or diffuse, scabrous, stiff herbs, becoming black on drying. Leaves almost sessile, opp^0^ site, oblong or lanceolate, quite entire or few-toothed. Flower sessile, alternate, or the lower ones are opposite, usually secun lower ones remote : superior ones sometimes spiked.

1 C. GRANDIFLORA (Benth. in Wall. cat. no. 3880. ind. p. 850.) erect, glabrous, scabrous from tubercles; ^ secund, approximate, large ; calyx oblong, inflated, cleft ^ side and very acute on the other. %. ? G. Native ^ on the mountains, Wall. Calyx 9 lines long. lines long, purplish.

Great-flowered Centranthera. PI.

2 C. HI'SPIDA (R. Br. prod, 438.) erect, clothed w^ ^ pili; flowers remote ; calyx ovate, cleft on one side, 2-3-cleft on the other. ©. G. Native of New *Hoi* the tropic, R. Br. ; East Indies, throughout Hmdost^ Kamaon, and the mountains of Prome, Wall. ; an konta, Royle. Wall. pi. rar. asiat. 1. p. 39. t. *o.*

inTo D, Donj Prod, fl_ne P- P- 88- Digitalis stricta, Roxb. fl. roll" P, " Gumteolis, Hamilt. mss. ex D. Don, 1. c. Co- fo Has purplish.

Uspid Centranthera. PL I to 1 foot.

p. 5o V BR UNON. IVNA (Wall. cat. no. *3882.* Benth. scroph. ind. onp erect> ^^pid ; flowers remote ; calyx oblong, cleft on and acute on the other. ©•? G_ Native of the Bri,, fcrnpn-e, at Moolmyne and Martaban, Wall.

down's Centranthera/ PI. 1 foot?

P, 50 V !AMIFU,SA (Wall. cat. no. *3883.* Benth. scroph. ind. ers d> bum ble, much branched, almost glabrous ; flowon *tl* ant; Cal_vx ovate cleft on one side and acutish or bifid Wight, other. G, Native of the Peninsula of India, syst. 9 atNath Pur> Hamilt. Razumovia Tranquebarica, Spreng. long. P< *8l2i?* Cal y x hardly ^ lines long. Corolla 4 lines

Trailing Centranthera. PI-diffuse, Cult. culture and propagation see *Sopubia,* p. 560.

Tribe V.

^e gen rs ^^ (This tribe contains plants agreeing with in edinh *TM *ica* in the characters indicated below.) D. Don, 43. Caj phl!< Journ- vol. 19. p. 111. Benth. scroph. ind. p. or fun Jf 4-5-parted, imbricate in aestivation. Corolla rotate 2-4 f exs med, 4-lobed> rarely irregularly bilabiate. Stamens ^ T distant» nearly equal, all antheriferous. Anthers Capsule Ce^S Para Hel, distinct. Stigma capitate or slender. valves membrano us, 2-valved, with a loculicidal dehiscence ; Pos$ed *QP o^* ^d or bipartite. Dissepiment narrow, com- the *xn'n\A]* ~ se Para le lamina ; placenta short, inserted into or inc jQ ® ?f the dissepiment. Seeds compressed, naked Embryo m an ar^'^orme(l testa. Albumen cartilaginous. Herbs or minute, terete, Seated in the base of the albumen.— ^ttu'sphe Un der's^ruDS» common in the temperate zones of both ^nal reS# leaves usually opposite. Flowers axillary, ter-

LXvf 'vffp? blue, white, or red

tain, j/ ^ NIC A (the derivation of this word is uncer- *tOlt* the 1^*8 Sa^S *l *S c^an ged or corrupted from Vetonica,)with Beto etOnes». a People of Spain; but that confounds it Is also a p llCa* ^mery derives it from *ver,* the spring. There *H. tt 6 Q oman female saint of the name of Veronica.) Tourn. ?en. p' 9q* i^n. gen# no# 25# Schreb. gen. no. *32.* Juss. lll§ ' 13 f aertn fruct fc 54 R Br. prod. p. 434. Lam. Li*. sy T# Benth. scroph. ind. p. 44. ed> carnPa ^ndria, *Monogynia.* Calyx 4, rarely 5-part- short tube ula te or com Pressed. Corolla rotate, with a very U^Pe one tl u a 4' Parte^ spreading limb; segments all entire : Upper se^m le broadest* Stamens *2,* situated at the sides of the ?e lower Gnt of the corol la» diverging, without any vestige of tigifia h i?neS# ^ntllers 2-celled ; cells confluent at top. bradle o k rly thickened. Valves of capsule septiferous in the shrubs< \bl Parti ble. Seeds naked.—Herbs, under-shrubs, or Inscence aves opposite, alternate, or verticillate. Inflo- or re<Jt axi^ary, racemose, or spicate. Flowers blue, white,

Benth. § 1. VERONICA (see genus for derivation.) Reichb. seeds * Cro Ph. ind. p. 44. Capsule swollen, emarginate at top, Olon g, compressed a little.

§ 1. *Racemes terminal.*

Leaves verticillate, and opposite, serrated. Racemes numerous.

little VERONICA (Waldst. et Kit. hung. *2.* p. 106. t. 102.) leaves 3-4 in a whorl, ovate, or ovate-lanceolate, deeply and unequally serrated. *y..H.* Native of Hungary; Galicia ; about Halle, in Saxony, in humid meadows. Schrad. spic. f>. *35.* Willd. enum. p. 18. Spreng. fl. hal. p. 6. no. 9. t. 1. f. *2.* V. brevifolia, Bieb. cauc. 1. p. 6. ? V. triquefra, Kit. Root creeping, scaly. Leaves cuneated at the base, glabrous, shining. Racemes long, and loose. Flowers blue, or purple. Bracteas one half shorter than the pedicels. Calycine segments obtuse, shorter than the capsule.

Far. /3, nitida ; taller and more glabrous. %. H. V. nitida, Ehrh. pi. exsicc. no. *21.* V. maritima, *(3,* Willd. spec. 1. **p. *55.***

Far. y, *spilria.* 1/. H. V. spiiria, Spreng. fl. hal. t. 1. f. 1.

Leafy Speedwell. Fl. July, Sept. Clt. 1805. PI. *2* to 4 feet.

2 V. CRENULA'TA (Vahl, enum. 1. p. *57.* HofFm. phyt. blat. p. 95. t. E. f. *3.)* leaves *3* in a whorl, and opposite, oblong-lanceolate, subcordate ; calycine segments acute; segments of corolla undulated and crenulated. %. H. Native country unknown. V. villosa, Schrad. Stem downy at top. Racemes downy. Leaves villous, or downy. Capsule glabrous.

Crenulaled-fiowered Speedwell. Fl. July, Sept. Clt. 1814. PL lj foot.

3 V. MARITIMA (Lin. spec. p. 13. fl. suec. no. 8. fl. lapp. p. 4.) leaves 3-4 in a whorl, ovate-lanceolate, cordate at the base, deeply and doubly serrated, and are, as well as the stems glabrous ; calycine segments shorter than the capsule. 2/. H. Native of the North of Europe. Retz, obs. 1. p. 9. HofFm. phyt. blat. t. E. f. *2.* Schrad. coram. ver. p. *29.* t. i. f. 1. Vahl, enum. 1. p. *51A* Vahl, fl. dan. t. 374. Racemes dense, Flowers blue, purple, or white. Leaves in some varieties opposite, and in others the flowers are white, This is a very variable plant.

Sea-side Speedwell. Fl. July, Sept. Clt. 1570. PL 1 to 3 feet.

4 V. TICINE'NSIS (Poll. fl. veron. 3. append, p. *768.)* leaves 3-4 in a whorl, and opposite, linear-lanceolate, acuminated, serrated, and are, as well as the calyxes and capsules, glabrous. %. H. Native about Ticin, in humid meadows. V. maritima, Noc. et Balb. fl. tic. 1. p. 6, but not of Lin. V. Hostii, Moretti, in bibl. ital. 12. p. 369.—Tab. kreut. *2.* p. 99. f. 4. Racemes terminal, numerous. Flowers azure blue.

Ticin Speedwell. Fl. July, Sept. Clt. 1819. PI. *2* to 3 feet.

f5 V. SPU^RIA (Lin. spec. p. 13.) leaves 3-4 in a whorl, or opposite, lanceolate,' cuneated at the base, simply serrated, downy; serratures equal. %. H. Native of the South of Europe, Siberia, &c. Vahl, enum. 1. p. 57, exclusive of the syn. of Pollich. Schrad. ver. no. 19. t. *2,* f. 4. V. amethystina, Willd. enum. 1. p. 17. V. rubella, Pall.—Barrel, icon. t. 891. —Gmel. itin. 1. p, 169. t. 39. This differs from *F.foliosa* in the more slender habit, in the lanceolate, more acute, simply and equally serrated leaves, in the bracteas being about equal in length to the pedicels, not much shorter.

Spurious Speedwell. Fl. July, Sept. Clt. 1731. PI. *2* to 3 feet.

6 V. SERRULA'TA (Pall, in herb. Willd. Link, jahrb. 1-3. p. *38.)* stem slender, tomentose ; leaves opposite, or 3 in a whorl, petiolate : lower ones oblong: superior ones alternate, lanceolate, attenuated at the "base, serrulated ; lower bracteas longer than the pedicels; calyx downy. %. H. Native of Siberia. Flowers blue, or purple.

Serrulated-leaved* Speedwell. PL *2 to 3 feet.

7 V. STEPHANIANA (Rcem. et Schultes, syst. p. 96.) stem slender, tomentose; leaves opposite, and 3 in a whorl, lanceolate, attenuated at the base, acute, serrated, white from fine

tonientum ; bracteas shorter than the pedicels. 3/. H. Native of Persia. V. m611is, Link, jahrb. 1-3. p. 39, but not of Zea. Very nearly allied to *V. spùria,* but differs in the whole plant being white from tomentum.

Stephan's Speedwell. Fl. July, Aug. Clt. 1821. PI. 1 to 2 feet.

8 V. PANICULA'TA (Pall. itin. 1. p. 196.) downy; leaves opposite, and 3 in a whorl, lanceolate, attenuated and entire at the base, sharply and distantly serrated, stems ascending. %. H. Native of Tartary, Siberia, and Caucasus. Lepechin, itin. 1. p. 206. V. capitulàta, Poir. suppl. 5. p. 466. V. virgàta, Willd. herb. Link, jahrh. \-*3.* p. 39. V. spùria, Gmel. itin. 1. p. 169. t. 39. Bieb. fl. cauc. 1. p. 6. V. brevifòlia, Bieb. fl. cauc. 1. p. 6. ex Stev. in mem. soc. mosc. 5. p. 338. V. angustifolia, floribus paniculatis, Amm. ruth. p. *32.* Racemes very long and loose. Flowers blue, or purple. Calyx 4-5-cleft, hairy, ciliated, ex Poir.

Var. /3, leucdntha ; flowers white. %. H. Native of Altaia. V. leucantha, Helm. mem. soc. mosc. 2. p. 104. t. 8. V. Altaica, Fisch. cat. hort. gorenki, 1812.

Panicled-fiowered Speedwell. Fl. June, July. Clt. 1797. PI. 1 to 1J foot.

9 V. COMPLICA'TA (Hoffm. phyt. blatt. p. 98. t. E. f. 4.) leaves opposite, rarely 3 in a whorl, complicate, lanceolate, toothed; teeth thickened. 3/. H. Native of Europe. Vahl, enum. 1. p. *58.* Willd. enum. 1. p. 18. Radical leaves hoary, and more elliptic. Plant downy. Leaves coarsely crenate-toothed. Flowers blue, or purple. Leaves very long and narrow. Very nearly allied to *V. longifolia.*

Complicate-lewed Speedwell. Fl. Aug. Sept. Clt 1812. PI. 2 feet.

10 V. AZU'REA (Schott, ex Link, enum. 1. p. 22.) leaves opposite, or 3 in a whorl, very long, gradually attenuated, sharply serrated even to the apex: the lower serratures deep; bracteas longer than the pedicels. . %. H. Native country unknown. Plant downy. Leaves 3 inches long, and 4 lines broad, form of those of *V. complicdta;* the serratures are also similar, but much longer, fewer, and larger. Flowers blue, or purple.

Azure-h\ue Speedwell. Fl. July, Sept. Clt. 1821. PL *2 to 3* feet.

11 V. GLA'BRA (Ehrh. pi. exsic. no. 11. Vahl. enum. 1. p. *358.* Link, enum. 1. p. 21.) leaves opposite, or 3 in a whorl, ovate-lanceolate, acute, attenuated at the base, quite entire at the apex, simply serrated, and are, as well as the stems, glabrous: serratures remote, nearly equal. *If..* H. Native of the Somh of Europe. Schrad. comm. ver. t. 1. f. 4. Willd. enum. 1. p. 17. This species is readily distinguished by its smoothness. It differs from *V. argùta* in its greater stature, in the leaves being longer, broader, and more equally serrated. Petioles ciliated. Lower leaves subcordate at the base. Flowers blue, or purple. There is also a variety with white flowers. This is, probably, nothing but a glabrous variety of *V. maritima.*

Glabrous Speedwell. Fl. July, Sept. Clt. 1804. PI. 2 to 4 feet.

12 V. PERSICIFO'LIA (Schott. hort. vind. Link enum. 1. p. 21.) leaves opposite, of 3 in a whorl, ovate-lanceolate, or lanceolate, long-acuminated, serrated even to the apex ; bracteas longer than the pedicels. %- H. Native country unknown. Stem glabrous at bottom. Leaves 3 inches long, and 7-8 lines broad, glabrous. Lower bracteas long. Calyx rather downy. Corollas blue This seems to be intermediate between *V. longifdlia,* and *V. maritima,* but differs from both in the leaves being attenuated at the base.

Peach-leaved Speedwell. Fl. July, Sept. Clt. 18*. PI., to 3 feet.

13 V. ELA'TIOR (Ehrh. pi. exsic. no. 31. Willd. enum. 1« p. 17. Bieb. suppl. p. 8.) glabrous; leaves 3 in a whorl, lanceolate, acuminated, somewhat cordate at the base, doubly and deeply serrated : the serratures at the base deeper. %f\ Native of the South of Europe, and Caucasus. V. maritima, Bieb. taur. no. 15, exclusive of the syn. Gorter ingr. p. 2. spicàta urticae folio, Amm. ruth. no. *35.*—Riv. mon. t. 9. Bases of the superior leaves cuneated, of the lower ones subcordate. Corollas blue or purple.

Tall Speedwell. Fl. Aug. Sept. Clt. 1808. PL 4 to 7 feet.

14 V. LONGIBRACTEATA (Link, enum. 1. p. 20.) stem *svnoowish* ; leaves opposite, and 3 in a whorl, oblong, or lanceolate acute, serrated, gradually attenuated at the base; lower bracteas foliaceous, quite entire. %. H. Native country unknown. V. mèdia, Willd. enum. 1. p. 16. Leaves 3 inches long, and 5 lines broad, serrated, downy, ciliated. Lower bracteas much longer than the flowers. Corollas blue.

Var. j3 ; stem smoothish ; leaves from oblong, gradually attenuated at the base. %. H. V. hybrida, Willd. diar. Schrad. 1799. p. 388. Leaves 5 inches long, and 1| inch broad, long" acuminated.

Long-bracted Speedwell. Fl. Aug. Sept. Clt. 1817. *?)' 2 to 3* feet.

15 V. NI'TENS (Link, enum. 1. p. 20, under V. nitida.) leaves opposite, or 3 in a whorl, ovate, acute, attenuated at the base, serrated in the middle, and sub-serrated at apex, glabrous. %* H. Native of Europe. V. arguta, Willd. enum. 1. p. 16. Link. Plant glabrous. Leaves 2| inches long, and 1 broad. Bracteas longer than the pedicels. Corollas blue. This species differs from *V. argùta* in the leaves being shorter and broader, and racemes long.

Var. (3,falcata; serratures of leaves approximate, curved. %. H. V. falcata. Mart. enum. hort. erl. p. 10. Corollas blue.

Shining Speedwell. Fl. July, Aug. Clt. 1817. PL 2 to 3 feet.

16 V. ARGUTA (Schrad. comm. ver. no. 7. t. 2. f. 2.) downy, leaves lanceolate, acute, simply serrated, quite entire at base and apex, opposite, clothed with hoary down : serratures remote, equal, simple. *%.H.* Native in the groves *of l*Vahl, enum. 1. p. 3G0. Moretti, giorn. de fis. dec. 2. vol. 5. p. 41. V. mèdia, Moretti, bibl. ital. dec. 1816. t. 4. vol. 4. p. 494. Leaves cuneated at the base, deflexed, hoary, but rather naked above. Racemes numerous. Bracteas longer than the pedicels. There is a variety of this with more slender stems and narrower leaves.

Var. /3; raceme spicate, solitary ; leaves not half so broad as those of the species.

Sharp-toothed Speedwell. Fl. July, Sept. Clt. 1812. 2 feet.

17 V. MENDIA (Schrad. comm. ver. no. 8. t. 1. f. 20 opposite, or 3 in a whorl, lanceolate, acute, serrated, and as well as the stems, clothed with tomentose down: serratures approximate, unequal. %. H. Native of Carniola, Hungary, Bohemia, &c. in hedges and humid meadows. *Schreber, wetter,* p. *359.* Link, enum. 1. p. 21. N. longifolia, *i. e. no. 13. Roth, fl. germ. 2. p. 7. Mcench. meth. p. spùria and V. incàna, Schmidt. Leaves cuneated at Calycine segments shorter than the capsule.

Middle Speedwell. Fl. July, Sept. Clt. 1804. Pl. 2 to 4 feet.

18 V. AUSTRA^LIS (Schrad. 1. c. no. 9. t. *. ^'H ated, opposite, or *3.* in a whorl, ovate-lanceolate, simply serrated, quite entire at top, and are; as well as the stems, downy

tures approx'

Euro n e v T le, Une(lual- •«• H- Native of the South of Link «, , enum> L P- 36o- Willd- enum- >• P- 17. jahrb'. 1 T'u J' *» I. V< long ibract eata, /3, poliocaulis, Link, in «hes lo R Kadical leaves ovate. Racemes spicate, *2-3* t0 the c l S' i5racteas linear-lanceolate, about equal in length blue» or pu yX| or exceedin S il: lower ones longer. Flowers

2 *t*TM*hern* s PeedweH. Fl. July, Sept. Clt. 1812. Pl. lj to 19 V. in * wh Lo NGIFO ^LIA ^Lin, spec, p* 13>) leaves opposite> or 3,,4 and are c<^da*e-lanceolate, acuminated, doubly serrated, ^- H, ' ^S * aS ^e Stem> c lo tne(l with downy tomentum. d°ws # Q yf^dVe throughout Europe and Siberia, in humid mea- X V- m 7 COmm Ver. pp. 20. *t. 2 z. f i. 1l. Wwhl fl la p of thesv ma, Hoffm- comm. gcett. 1800. p. 118. exclusive *fcorl. y n y TMes; Spreng. fl. hal. t. 1. f. 3, with leaves 3 in a tma a> 'Schmidi ns» ^°ffm. comm. gcett. 1. c. t. 5. V. mari- sPUria Sou boh* no 5 and of many other authors. V. handb, L P, 9 * Thuill.H.* pat ed 2d p 6, V. acdta 11 r enum- hort. erl. p. 12.—Besl. eyst. vein. t. 10. W Wl. y urtl ?*f o l«a, Amm, ruth. p. 26, with leaves 4 in a Une qu'al J Sp lcata longifolia altera, Amm. ruth. 34. Calyx purpl* * L qUl ln length to the capsule. Flowers blue, or Posite in *th***^* bracteas longer than the flowers. Leaves op-

Var. « Pecimens of Lin.

lan ceolat*e angUsti folia* (Li»k, enum. 1. p. *22.)* leaves narrow, ups. p. 3 3 v- maritima, Willd. enum. p. 18. WahL fl. x ^r. *B* *£: ? S06"- gel. anz. 1821. 1766.

V. longer Av (Link» L c 0 leaves broad-lanceolate. y. H. er U. 12 V lld, enum, l- P*]9- V. grossa, Mart. hort.

Var. J' eaves deeply serrated.

acutTJ inated a mdta (Link>]- c) lower leaves generally short- n gens, M "f 1^' -H* Vt acdta, Mart. hort. erl. p. 13. V. a mbi gUaj y£ c- in which the leaves are hardly cordate. V.

th°se of *v* sub ^n^sa (Link, 1. c.) leaves deeply serrated, like VK, €/ • tld ^or> but smaller.

l »kZ7, I - S^ebhr(Lapeyr.

^ 4 f eet eaved Speedwell. Fl. July, Sept. Clt. 1731. Pl *2* 2o y'

d o Wnv; ste M %SA (Pall/ ex Link> J ahrb- 1-3- P- 390 stem a r u^ated: r eaves 3 in a whorl, oblong-lanceolate, remotely ^es quite' r ^eal on es opposite, crowded, linear : uppermost o*y spec f es tlre- ^ - H - Native of Siberia. This is a very

Speedwell. Pl. 1 to 2 fee,

ted. €aV !> alwa V^s *opposite, never verticillate, serrated and* <i with ace TMes *numerous or solitary. Plants usually fur-* 21 y l Sterde *surculi, or branches.*

tOltl^t Urn NEG LE, CTA (Vahl» enum. 1. p. 59.) white from hoary *te d at thJ i aves lanceolate, crenately serrated, acute, cune- and Base y and (uite entire- *• H, Native of Hungary S Siberia. o r hills* Wiild- enum. 1. p 15. V. canescens, Se lds t e Yt 3* P- 2^L t. 244. Besser. fl. gall. p. 28. K Se- , C r Str# ed 2d* 1# P 18# Radical leaves oblong, I en^g auane leaves opposite, or alternate, attenuated at VPP ermost ones quite entire. Bracteas usually 11 tlnc lowers. Racemes spicate, usually numerous, Flowers bl»e, or purple. 21 Speedwell. Fl. July, Aug. Clt. 1797. Pl 1J

Hi te fi;\ INc^N A (Lin. spec. p. 14. Vahl. enum; 1. p. 59.) OC hoary tomentum ; leaves lanceolate, oblong, crenated, and nearly entire, obtuse. %. H. Native of the Ukraine and Samara, and Altaia. Bieb. fl. cauc. 1. p. 7. suppl. p. *9.* HofFm. in comm. gott. 15. p. 123. t. 6. Steven, mem. mosc. 5. p. 339. V. canescens, Pall. itin. 2. p. *522.*—Amm. ruth, no. 30. Stem simple. Radical leaves a foot long, ovate-oblong, very blunt. Raceme spicate, terminal, solitary. Flowers blue, or purple. There is a variety of this having all the cauline leaves, or only the upper ones, quite entire.

Hoary Speedwell. Fl. July, Sept. Clt. 1759. Pl. \ to 1 foot.

23 V. CARTILAGI'NEA (Ledeb. fl. ross. alt. ill. t. 210. fl. alt. 1. p. 28.) stem downy: leaves glabrous: lower ones opposite, spatulate, serrated towards the apex : superior ones alternate, linear, serrulated ; lower bracteas exceeding the calyxes ; calyx 4-parted, with ovate, 3-nerved, glabrous, ciliated segments, i/. H. Native of Dauria, near Nertschinsk. Surculose at the base. Raceme usually solitary. Corolla blue.

Cartilaginous Speedwell. Pl. 1 to 2 feet.

24 V. RUBICU'NDA (Ledeb. fl. ross. alt. ill. t. 208. fl. alt. l.p. 28.) villously downy ; leaves tapering into the petioles, oblong, or lanceolate, serrated; bracteas all longer than the pedicels, and are, as well as the calyxes, clothed with glandular hairs. %. H. Native of Dauria. Superior leaves sub-alternate, coarsely serrated. Racemes several. Calyx 4-parted, unequal, obtuse. Corollas showy, rose-coloured. Perhaps the same as *V. rubella,* Pall. Said to be nearly allied to *V. serrulata,* Pall, and *V. élegans,* D. C, but differs from the first in the leaves being opposite, and from both in the leaves not being petiolate, but tapering to their insertion.

Reddish-flowered Speedwell. Pl. 1 to 2 feet.

25 V. E'LEGANS (D. C. cat. hort. monsp. 1813. p. 154. Link, enum. 1. p. 21.) leaves serrated, quite entire at top, petiolate, ovate-oblong, or oblong, attenuated, acute, and are, as well as the stems downy; racemes numerous ; lower bracteas longer than the pedicels: upper ones shorter. 2£. H. Native about Verviers, in humid meadows. FJowers rose-coloured. V. incarnata, G. Don, in Loud. hort. brit. p. 6. ?

Elegant Speedwell. FL May, June. Clt. 1822. Pl. 1 to 2 feet.

26 V. SPICA^VTA (Lin. spec. p. 14.) downy, canescent, rather clammy; leaves crenated: radical ones oblong, or obovate, running into the petioles : cauline leaves lanceolate, or oblong-lanceolate, or linear-lanceolate, sessile, toothed, entire at top; bracteas and calyxes pilose. %. H. Native of Switzerland, Germany, France, Siberia ; in England in high dry chalky pastures, especially on Newmarket Heath, and about Bury St. Edmund's. Smith, fl. brit. l.p. 15. engl. bot. t. 2. Schmidt, fl. boh. no. 7. Oed. fl. dan. 52. Poit. et Turp. fl. par. 1. p. 19. t. 19. Schrad. fl. germ, exclusive of the synonymes of Poll. Crantz, Vaillant and FL dan. WahL fl. ups. p. 3. Svensk, fl. suec. t. 2. Bieb. fl. cauc. 1. p. 8. V. hybrida, Bieb. 1. p. 8, and 3. p. 9. V. spicata, and V. orchidea, Besser, enum. pi. volh. p. 2. no. 8 and 9.—Clus. hist. p. 347.—Hall, helv. no. 452.—Mor. hist. 2. p. 318. sect. 3. t. *22.* f. 4. Root hard, creeping. Stems usually simple. Leaves sessile, firm, entire at top. Racemes spicate, dense, usually solitary. Flowers blue, or purple, or white ; tube of corolla thicker than in its congeners, longer and white, and the segments *of* the limb narrower. Capsules downy.

Far. (3, spicata alpina (Rcem. et Schultes, syst. 1. p. *93.)* %. H. Native of the Pyrenees. V. Sterbergiana, Bernh. Lapeyr, pi. des. pyr. p. 5. Leaves glabrous.

Spicate-ftowered Speedwell. FJ. July, Sept. England. Pl. \ to 1 foot.

27 V. CLU^SII (Schott. ex Rcem. et Schultes, syst. 1. p. 94.) tomentose from pedicellate glands; leases toothed : radical ones

ovate, running into the petioles : cauline ones lanceolate, petiolate; bracteas and calyxes ciliated. %. H. Native of Hungary, Bohemia, Austria, and Denmark. V. spicata, var. a, *2.* Scop. earn. ed. 2d. p. 17. Poll. pal. no. 7. Schultes, fl. austr. ed. 2d. p. 7. V. hybrida, Schmidt, ft. boh. no. 8. V. spicata, Vahl, fl. dan. t. 52. ? Raceme usually solitary, spicate, dense. Flowers blue, or purple. This is probably only a variety of *V. spicata,* clothed with viscid glandular pubescence.

Clusius's Speedwell. Fl. July, Sept. Clt. 1822. PL | to 1 foot.

28 V. HY'BRIDA (Lin. spec. p. 14.) leaves unequally and bluntly crenated, and are, as well as the stem, villous and canescent ; radical ones petiolate, ovate : cauline ones nearly sessile, elliptic-oblong ; bracteas linear, longer than the calyxes. 1/. H. Native of Europe, on the mountains ; in England, at the sides of mountains, rare ; on Craig Wreidhin, Montgomeryshire ; on Humphrey Head, a steep rock near Cartmell Wells, Lancashire. Vahl, enum. 1. p. 60. Willd. spec. 1. p. 50. enum. 1. p. 16, and in Schrad. diar. bot. 1799. t. 3. Baumg. fl. trans. 1. p. 19. Ray. syn. p. 278. t. 11. f. 1. Smith, engl. bot. t. 673. good. Schrad. ver. p. 22. fl. germ. 1. p. 17. V. Barrelieri, Schott, ex Rcem. et Schultes, syst. 1. p. 94. V. spicata minor, Vaill. par. t. S3. f. 7. V. spicata, D. C. fl. fr. no. 2408.—Barrel, icon. t. 682. Leaves all obtuse. Raceme spicate, solitary, or few together. Bracteas and calyxes ciliated. Flowers, blue, or purple. There is a variety of this with numerous spicate racemes.

Hybrid Speedwell. Fl. July, Sept. England. PI. \ to 1 foot.

29 V. CONFU'SA (Rcem. et Schultes, syst. 1. p. 95.) leaves opposite : lower ones cordate : superior ones ovate-lanceolate, acuminated, doubly and unequally serrated, and are, as well as the stem, clothed with soft canescent pubescence; segments of corolla divaricate, acuminated; capsules pilose. %. H. Native country unknown. Said to be nearly allied to *V. complicata.* Young leaves soft: adult ones more rough : lower ones petiolate : superior ones almost sessile. Calycine segments pilose, ciliated. Racemes spicate, usually solitary.

Confused Speedwell. Fl. June, July. Clt. 1819. PL 1 foot.

SO V. LONGIFLO'RA (Roem. et Schultes, syst. 1. p. 95.) leaves cordate-lanceolate, sharply and unequally serrated, almost glabrous ; tube of corolla twice as long as the calyx, which is small and unequal. %. H. Native country unknown. Plant downy at top ; petioles ciliated. Leaves cuneiform : superior ones having the teeth tipped with red. Pedicels and calyxes downy. Corolla lilac; tube lj line long. Capsule obcorda:e, pilose.

Long-flowered Speedwell. Fl. July, Aug. Clt. 1824. PL Ijfoot.

31 V. POLYSTA'CIIYA (Link, enum. 1. p. 23.) leaves nearly sessile, ovate, acute, serrated, downy ; spiciferous branches crowded ; flowers nearly sessile. 1/. H. Native country unknown. V. corymbosa, Hort. Plant downy. Leaves serrated even to the top, with a reflexed acumen. Lower bracteas longer than the flowers. Flowers small, pale blue. Racemes crowded in a corymbose manner at the tops of the branches, comose.

Many-spiked Speedwell. FL June, July. Clt. 1817. PL li to *2* feet.

32 V. RUTHE'NICA (Hort. vind. ex Roem. et Schultes, syst. 1. p. *96.)* leaves ovate-lanceolate, unequally serrated ; bracteas length of calyxes ; calyx unequal; capsule a little longer than the calyx. %> H. Native country unknown, being gathered in the botanic garden of Vienna. Very like *V. arguta,* but the leaves are serrated to the apex. Flowers blue, or purple.

Russian Speedwell. FL July, Aug. Clt. 1821. PL 1 foot.

33 V. VILLO'SA (Schrad. ver. p. 13. t. 1. f. 3.) leaves oblong-ovate, serrated, and are, as well as the stems, villous and canescent. %, H. Native country unknown. Willd. enum. 1. p. 361. Poir. encycl. 8. p. 513. Stems ascending. Leaves reflexed at top, thickish, wrinkled, and shining above: lower ones ovate, obtuse : the rest ovate-oblong, acutish, tapering into the petioles. Racemes spicate, long for the size of the plant, erectish, often flexuous. Flowers blue, or purple, and white. Capsule a little higher than the calyx. This specie has been joined by Willd. and Mart, with *V. crenulata.*

Villous Speedwell. FL July, Aug. Clt. 1804. PL 1 to 1? foot.

34 V. LUXITRIANS (Ledeb. fl. ross. alt. ill. t. 211. fl. alt. P. *27.)* stem pilose; leaves smoothish, petiolate, oblong, acuminated, rounded at the base, acutely and simply serrated : serratures nearly equal; bracteas about equal in length to the P^J" eels ; calyx 4-cleft, spreadingly reflexed, unequal. % • *^' Native of Siberia, near Irkutch. Leaves 4 inches long, or longer. Racemes 3 or more. Corolla blue.

Luxuriant Speedwell. PL *2* to 3 feet.

35 V. LINARLEFOLIA (Pall, in herb. Willd. Link, jahrb. 1-S- p. *35,)* leaves opposite, linear, gradually attenuated, long-acU" minated, remotely serrated ; bracteas longer than the pedicels- %. H. Native of Siberia. V. angustifolia, Fisch. hort. gorenk* Link, enum. 1. p. 19. Stem angular, with a few scattered hairs. Leaves entire at base and apex, serrated only in the middle. Raceme elongated ; rachis downy. Calyx glabrous* with ciliated segments. Corollas large blue.

Toadflax-leaved Speedwell. FL July, Sept. Clt. *1822.* P- 1 to 2 feet.

36 V. BRACHYPHY'LLA (Rcem. et Schultes, syst. 1. p. #^ stem downy, simple ; leaves opposite, lanceolate to oblong, *gl^* dually attenuated at the base, acuminated, serrated, quite ^ at the apex: upper ones sub-serrated ; lower bracteas foliaceous, longer than the pedicels. 1/. H. Native country unknown. V. brevifolia, Link, enum. 1. p. 21. Leaves 2 mcftes long, and 4-5 lines broad. Calyx downy. Corolla blue.

Short-leaved Speedwell. FL June, July. Clt. 1822. 1 foot.

37 V. MENTILEFOLIA (Schott. 1. c.) villous ; leaves unequal^ crenated : radical ones ovate : cauline ones oblong, acute, p^ olate, quite entire at base and apex ; bracteas linear. %. Native of Austria, and on the shores of the Volga.—J» hist. 3. p. 282.—Clus. hist. 347. Flowers racemose, blue, purple. Schultes had specimens of this plant from the £ at Gorenki, under the name of *V. spicata affinis,* R usually solitary. The segments of the corolla are twisted, as *V, orchidea,* but shorter.

Mint-leaved Speedwell. FL July, Sept. Clt. 1823. ?* to 1 foot.

38 V. CRASSIFO'LIA (Kit. ex Rcem. et Schultes, syst. 96.) leaves ovate-lanceolate, running into the petioles, *re* lower ones crenated : superior ones quite entire; corolla deous. *%.H,* Native country unknown. Stem red. rather downy beneath, fleshy. Racemes spicate, tern, a foot and more long. Calyx downy, unequal. all longer than the calyxes. Corolla violaceous, with segments. Capsule downy. Allied to *V. orclndea.*

Thick-leaved Speedwell. Fl. July, Aug. Clt. 18^. to3feet_

39 V. ORCHI'DEA (Crantz, austr. fasc. 4. p. *** > accpty the synonymes of Vaill. and Fl. dan.) downy ; serrated : radical ones oblong-ovate, running into cauline ones lanceolate, acutish, almost sessile; %. corolla lanceolate, twisted a little, exceeding H. Native of Austria, Pannonia, and Cape Cauca as,

Killa. Watil. Bess. fl. gal. i. p. 27. Baumg. fl. trans. 1. p. 18. Berob. fl. carp. p. 4, Sims, bot. mag. 2210. V. cristata, siber, einig- ehrenpreis, p. 14-21. V. Crantzii, Schultes, obs. bot. no. 16, V. hybrida, Bieb. cauc. pp. 8, exclusive of most of the hist. 2 sect 7 *nonym f*— Baub. hist. 3. P. 283. icone.—Mor. P* 246 *H-w^i•* J7 2, bad* V# s*Picata latifolia* Bauh. Pin- dense 'u*«Ili° V *sPlcata* and *V. hybrida.* Racemes spicate, very i ly sollta ry. Corollas purple or blue. This is a corolla- r Species from the long twisted segments of the pl- irC f^eo M5 flowered Speedwell. Fl. July, Sept. Clt. 1819.

sessile P o N ^ (Gouan- ill- t. 1. f. 1.) leaves cordate-ovate, quite si U minated» and are, as well as the stems, which are i/,f| V-JP'? Pdose; racemes few-flowered; calyxes downy.]- P. 83 is1? of M o Unt Baldo and the Pyrenees. Link, enum. W fl "f ^c ilrad- ver. p. 34, exclusive of/3. V. sempervirens, 5. p. 41. T 6(L 2il P- 46. V. Gouanii, Moretti, giorn. de fis. ^ower leaves small, roundish, crenated : the rest an ^acuminated and coarsely serrated, pale beneath. rJ^teas length of pedicels. Flowers distant, size of those of Seeds small, Calyx 5-parted. Capsule swollen a little.

Par IT''' p. 5, • P, *acutijblia;* leaves acute. %. H. Lapeyr. pl. pyr.

Par f triloha leaves 3-lobed. %. H. Lapeyr. 1. c.

Lapeyr. 1 *romosissima;* branches numerous, axillary. %. H.

Cate raVp'rvf *roc nor* taller, with broader leaves, and a long spi-

Par r A flOWers, V • H, Lapeyr. L c. c* V. 2 f 1 \ dwarf with large flowers. %. H. Lapeyr. 1. foot."" ^dwell. Fl. May, July. Clt. 1822. Pl. \ to 1

simple i hair ^ RI (Pall GX Link, Jahrbt *l3,* P* 5 o ^ Stems racerne sho^ sessile, cordate, serrated crenated, obtuse; corymbose; bracteas crenated, shorter than the jj: yx hairy. ^.H. Native of Kamtschatka. Nearly *'J^on <z,* but the stems and racemes are shorter, &c.

42 v. * Speed welL PL J to ^ foot.

? aves cord RANDIS ^Fisch, ex s preng. neu. entd. 2. p. 122.) at the at e o long, obtuse, deeply toothed, somewhat pinna- naked ; raceme elongated; capsules nearly simple, glabrous. %. H. Native of Siberia. Stem usually and y ec l ual, 4 ncle ft. Corollas white; Pecie PISt u flesh colour ed. This species has a habit of of tfm with latera l racemes, but with the characters of *Great* S P CSent sectio n-

speedwell. Fl. July, Sept. Clt. 1826. Pl. 1 to 2 feet.

* * * *lea*

vfs always opposite, never verticillate, pinnate, and PWnatifid. Racemes solitary or numerous.

leaves V. ^ (Ait. . hort. kew. ed. 1st. vol. 1. p. 19.) pinnatifid at fascicled : lower ones pinnate: superior ones case: calyx simple : leaflets and segments filiform, divari- tely, ed. 1. 5-parted. %. H. Native of Siberia. Ait. hort. p. 61. V. P- 19. ed. 2d. vol. 1. p. 28. Vahl, enum. p. 80 fecund. comm. ver. p. *32.* Hoffm. in comm. gott. spdnica *L10* Laxm- act. petrop. 1770. t. 29 f. 1. V. 33^eerb. t. 11 ex Poir. encycl. 8. P- 513 Amm: the cultivated stem ascending, downy, but usually glabrous in unequal Segments state. Leaves approximate, very narrow, with but many in the cultivated plant. Corollas blue or white. Capoval.

Qr. ß ; leaves simple, filiform. Link, jahrb. 1. 3. p. 39.

Pinnate-leaved **Speedwell. Fl. June, Aug. Clt. 1776. Pl** 1 foot.

44 V. SESSILIFLORA (Bunge, in Ledeb. fl. ross. alt. ill. t. 126. fl. alt. 1. p. *32.)* leaves oblong, cuneated at the base, tapering into the petioles, pectinately pinnatifid, with entire bluntish segments; superior leaves linear, quite entire, and are, as well as the stem, downy; spike usually solitary, dense ; flowers exactly sessile. *If.* H. * Native of Altaia, in sterile places at the rivers Kurai and Tschuja. The whole plant villously pubescent. Bracteas exceeding the calyxes. Calyx 4-parted, rather unequal. Corollas blue.

Sessile-flowered **Speedwell. Pl. | foot.**

45 V. INCISA (Ait. 1. c.) leaves somewhat fascicled, petiolate, lanceolate, pinnatifid : segments almost entire; calycine segments lanceolate. 1£. H. Native of Siberia. Vahl, enum. 1. p. 61. Schrad. comm. ver. p. *33.* Lodd. bot. cab. 1397. Stem downy. Racemes numerous, never solitary. Leaves cuneated at the base. Calyx 5-cleft, unequal. Corollas blue or white.

CW-leaved Speedwell. Fl. July, Aug. Clt. 1397. Pl. 1 to 2 feet.

46 V. LACINIA'TA (Ait. 1. c.) leaves somewhat fascicled, on short petioles, lanceolate, pinnatifid : segments quite entire, unequal, linear, or lanceolate ; calycine segments oblong-ovate. 1/. H. Native of Siberia. Vahl, enum. 1. p. 60. Willd. enum. 1. p. 19. V. spuria, Junghans, icon. rar. C. L. f. 2. Veronicastrum laciniatum, Moench. Stem downy. Leaves spreadingly deflexed. Racemes usually solitary, about a foot long, loose. Bracteas equal in length, or exceeding the calyxes. Calyx 5-cleft, unequal. Flowers blue, or purple. Capsule equalling the calyx in length.

***Jagged-leaved* Speedwell. Fl. June, Aug. Clt. 1780. Pl. 2 feet.**

47 V. SUBLACINIA'TA ; rather downy; leaves opposite or 3-4 in a whorl, subfascicled, ovate-lanceolate, shining above, so deeply and doubly toothed as to be almost pinnatifid; calyx 4-cleft, unequal. 1/. H. Native country unknown. Corolla purplish-blue. V. maritima, Lin. herb.

***Somewhat-jagged-leaved* Speedwell. Fl. Aug. Sept. Clt. ? Pl. 1 to ljfoot.**

SECT. II. GENTIANOIDES (from *gentiana,* gentian ; and *idea,* form ; in reference to the appearance of the plants.) Capsule swollen, emarginate. Seeds large, flat, oblique, somewhat saucer-shaped. Leaves opposite, connate, or sheathing at the base, smooth and glossy. Racemes usually solitary, terminal, elongated, loose.

48 V. GENTIANOIDES (Vahl, symb. 1. p. 1. enum. 1. p. 62.) radical leaves oblong, crenated : cauline leaves ovate-lanceolate, with cartilaginous edges, crenated at top, and narrowed at the base : uppermost leaves acute, quite entire ; stems simple, ascending ; upper segment of corolla smaller than the lateral ones. *11.* H. Native of Tauria, Cappadocia, and Armenia. Vent. malm. t. 86. Sims, bot. mag. t. 1002. Sibth. et Smith, fl. graec. 1. p. 5. t. 5. V. Buxbaumiana, Pall. ind. taur. ex Bieb. fl. cauc. 1. p. 9.—Buxb. cent. 1.1. *35.* Stem glabrous at bottom. Leaves rather downy, obscurely 3-nerved. Bracteas villous. Calycine segments unequal. Flowers pale blue.

***Gentian-like* Speedwell. Fl. May, June. Clt. 1748. Pl. 1 to 3 feet.**

49 V. PA'LLIDA (Horn. hort. hafn. 1. p. 17.) leaves lanceolate, obtuse, subserrated ; superior segment of corolla larger than the lateral ones ; stem ascending. %. H. Native country unknown, V. olympicum, Pall.? Very like the preceding; but the leaves are much thinner and narrower, length of internodes, not twice their length, as in that species. Flowers distant, pale blue.

Pale Speedwell. FL May, June. Clt. 1821. PL 1 to 1* foot.

SECT. III. SERPYLLIFOLIA (from *Serpyllium,* Wild Thyme ; and *folium,* a leaf; in reference to the small leaves of the species.) Capsules ovate or obovate, usually emarginate, compressed. Seeds compressed. Leaves small, opposite. Racemes terminal, elongated, or corymbose, few-flowered. Small, alpine, erect, creeping, or trailing plants.

50 V. BELLIDIOIDES (Lin. spec. p. 15.) leaves obovate, crenated, and are, as well as the stems, which are simple and ascending, hairy ; cauline leaves remote, few; racemes corymbose, hairy, few-flowered; capsules obovate, hairy. %. H. Native of Switzerland and the Pyrenees, on the alps. Vahl, enum. 1. p. 61. Lapeyr. pi. pyr. p. 6. D. C. fl. fr. 3. p. 2414. —Hall. helv. no. 543. t. 15. f. 1. The whole plant is clothed with articulated hairs. Leaves crenated from the middle to the apex, half stem-clasping at the base. Calyxes nearly equal. Corollas blue, with a white throat. Radical leaves rosulate.

Daisy-leaved Speedwell. Fl. June, July. Clt. 1775. PI. | to \ foot.

51 V. BAUMGARTE'NII (Roem. et Schultes, syst. 1. p. 100.) erect, glabrous ; lower leaves opposite, sessile, oval, or ovate-lanceolate, serrated : upper ones alternate, half stem-clasping, linear-lanceolate ; corymbs dichotomous ; pedicels filiform, erectly spreading, 1-flowered ; segments of the calyx equal; corolla twice as long as the calyx, pale blue. 1/. H. Native of Transylvania, in the fissures of rocks on the alps. V. petraea, Baumg. trans. 1. p. 21. no. 27.

Baumgarten's Speedwell. PL \ foot.

52 V. NUMMULA'RIA (Gouan, ill. 1. t. 1. f. 2. exclusive of the synonymes) stem downy or smoothish ; leaves obovate-orbicular, tapering into the petioles, crowded, entire, or obsoletely crenated ; racemes short, few-flowered, crowded; calycine segments obtuse, ciliated ; stem prostrate, fruticulose. ^ . H. Native of the Pyrenees. D. C. fl. fr. no. 2413. V. saxātilis, /3, Vahl, enum. 1. p. 63. Willd. spec. 1. p. 62. V. strictiflōra, Lapeyr. abr. p. 6. no. 8. fl. pyr. t. 51. exclusive of the synonymes and figure, but not the diagnosis. Flowers nearly sessile, pale blue. Lower segments of corolla cuneiform, obtuse, the other 3 linear. Leaves decussate, imbricated.

Money-wort-\e&ved Speedwell. Fl. June, Aug. Clt. 5 820. PL prostrate.

^*53* V. JAVA'NICA (Blum, bijdr. p. 742.) procumbent; leaves almost sessile, opposite, ovate, bluntly serrated, downy ; spikes axillary and terminal ; calycine segments obtuse.—Native *of Java, on Mount Gede, and elsewhere.

Java Speedwell. PL procumbent.

54 V. NU'TANS (Bongard. mem. acad. imp. st. petersb. 2. p. 157.) stems simple, nutant at apex ; leaves sessile, ovate, serrated, acutish ; capsule nearly glabrous, about equal in length to the calyx ; corymbs terminal. !£. H. Native of the Island of Sitcha. Stem downy. Leaves opposite, half stem-clasping, downy, about 4 on a stem. Bracteas and calyxes pilose; segments of calyx nearly equal. Corolla small, blue, unequal. Capsule ovate, emarginate. Nearly allied to *F. Stelleri;* but differs in the flowers being smaller ; in the stems being nutant; and in the capsule being nearly glabrous, not pilose; and in the corolla being glabrous inside.

Noddwg'Stewmed Speedwell. PL J to J foot.

55 V. DENSIFLORA (Ledeb. fl. ross. alt. ill. t. 125. fl. alt. 1. 34 *)* stem fruticulose, bifariously pilose ; leaves sessile, elliptic densely serrated, obtuse, smoothish, ciliated at the base ; racemes terminal, crowded, subcap.tate; braeeas and calyxes articulately pilose ; calyx 5-parted: the fifth segment very short. %. H. Native of Altaia, on the tops of the alps, at the river Koksun (Ledeb.); and at the rivers Aigulac, Kurai, and Tschuja (Bunge); and on the mountains of Farbagatai (Sieve*). V. alpina, Siev. in Pall. fl. nord. beytr. 7. Bracteas twice as long as the pedicels. Corolla large for the size of the plant, pale blue. Nearly allied to *V. nummularia* and *V. capitata*.

Dense-flowered Speedwell PL \ to \ foot.

Jf>Q V. CAPITATA (Royle, mss. ex Benth. scroph. ind.) pilose; stem simple; leaves sessile, ovate-roundish, toothed ; raceme terminal, crowded, capitate, arcuate ; stamens a little exserted. %. H. Native of Kanaour, Royle. Flowers double the size of those of *V. alpina.* 1^P seen.

Capitate-flowered Speedwell. PL small.

57 V. ALPINA (Lin. spec. p. 15.) glabrous; leaves sessile, elliptic-ovate, obtuse, quite entire or subserrated; racemes terminal, subspicate, articulately pilose ; calyxes hairy, shorter than the corolla; capsules oval, emarginate; stems tufted, simple. %. H. Native of the alps of Europe, and Scotland, on the margins of rivulets on the highest mountains; in the Himalaya, at Peer Pungal, Royle. Smith, n. 18. engl. bot. 484. Vahl, enum. 1. p. 64. Lapeyr. —Oed. fl. dan. 16.—Hall. helv. no. 544. t. 15. blue. sometimes furnished with articulated hairs. it is rather Capsule ovate, emarginate, downy. The Asiatic plant more villous than the European, but otherwise quite entire.

Far. a, *alpīna;* leaves elliptic, ovate, obtuse, quite of 1/. H. Native of the North of Europe, on the alps Lapland, Denmark, Britain, and Switzerland. V. alpina, engl. bot. t. 484. fl. dan. t. 16. Lin. fl. suec. no. p. 7. t. 9. f. 4.—Hall. helv. t. 15. *£.2.* crated. %.

Far. j3, *pūmila;* leaves elliptic-ovate, acutish, ser. H. Native of Piedmont. V. pumila, All. pedem. 22. f. 5. spec. 1. p. 19. t. 13. f. 3. V. Ponap, var. -Hall. helv. 1. p! 235. t. 15. f. 2. V. Teucrium Etsciie Crantz, p. 337. up nuite entire

Far. y, *integrifolia;* leaves elliptic-ovate, obtuse, %. H. Native of Transylvania, Silesia, and alps. V. integrifolia, Willd. spec. 1. p. 63. Pers. 12. Braune, salisb. no. 12. Baumg. fl. trans, i. F- alpina, Krock. fl. siles. t. 3. lower ones

Far. ^ *Schultesii;* leaves almost quite entire roundish: superior ones ovate. %* H. V. ap Roem. et Schultes, syst. 1. p. 101.

Far. e, *rotundifolia;* leaves serrated : lower roundish: superior ones ovate. %. H. Native of V. rotundifolia, Braune, salisb. no. 15. t. 2. Braune, 1. c. no. 11. f. 1. V. saxatilis, 0, nummuian dict. nearly

Far. {; smaller, very hairy; leaves alternate, acute, linear. %. H. Native of the Pyrenees. Lapeyr. p. 4.

Alpine Speedwell. Fl. May, June. Scotland, foot. Schultes* 1'

58 V. GRANDIFOLIA (Vest, in litt. ex Roem. et Schultes, mant. 1. p. 103.) stems firm, villous, prostrate; leaves sessile, ovate-oblong, smoothish : superior ones toothed, oblong; spike cylindrical, nearly one half the length of the stem ; spike about equal in corolla exceeding the calyx a little; bracteas equal, on the axils length to the calyx. %. H. Native ot tne i of Zillerthal. Leaves \\ inch long, and more, of the upper leaves rise short few-flowered racemes.

Great-leaved Speedwell. PL J to J *toot.* creeping.

59 V. EUPHRASIIFOLIA (Link, jahrb. serrated; ing, downy at top; leaves nearly sessile, pedicels elongate? nated, glabrous; racemes few-flowered. Native of Persia; calycine segments ovate, glabrous, herb. Plant slender. on Mount Ghilan. V. thymifolia, Willd.

Euphrasia-leaved Speedwell. Pl. creeping.

60 V. THYMIFOLIA (Sibth. et Smith, fl. græc. 1. t. 6. prod. 1.

shrubby, diffuse ; leaves elliptic, revolute, hoary, entire ; racemes terminal, capitate or corymbose, solitary; calyx 5-parted; capsule divaricate. %. H. Native of Candia on the Spacio tic mountains. Habit of *F.fruticulbsa.* Uracteas obovate. Corolla blue, with a white tube.

***yme-leaved* Speedwell.** PI. suffruticose.

PAUCIFLORA (Kit. ex Link. l. c.) **stems procumbent,** acute, glabrous; leaves nearly sessile, oblong, serrately crenated, calycine lobes few-flowered; pedicels elongated; Segments ovate, glabrous. 2/. H. Native of the Carnat Mountains. Plant slender.

-flowered Speedwell. PI. procumbent,

villous- ORMSKIOLDI (Roam, et Schultes, syst. 1. p. 101.) Stems terete, leaves ovate quite entire, obtuse, villous, ciliated ; racemes terminal, crowded; stems simple, ascending. 1/. H. Native throughout Europe, on the mountains of Greenland. V. viHosa, Wormsk. V. alpina, /J, *ensis* Cham. et Schlecht. in Linnaea, 2. p. 556. V. alpina, var. Unalaschkensis, Ledeb. fl. ross. 1. p. 29. V. alpina, var. pinnatifida Trautv. in Mem. Acad. St. Petersb. ser. 6. t. 5. p. 61. Plant slender, almost glabrous, with a few glandular hairs, as well as the calyxes and leaves. Radical leaves ovate-roundish : cauline ones sessile. Flowers blue.

G3 *v* Speedwell. Fl. June, July. Clt.1819. PL £ foot. oblong. JbXATILIS (Lin. SUPP1- 8^0 glabrous; superior leaves few-flower ovate or elliptic crenulated ; racemes corymbose, diffuse, Capsules ovate, exceeding the calyx ; stems fruticulose; alps; 'jng "see" *? • H. Native throughout Europe, on the tains, ft cot/and> on rocks and stony ground, among the mountains, Dickson. Wulf. in Jacq. coll. 3. p. *25.* P. 63, p. 6. Vahl, enum. 1. p. 63. ex Willd. spec. 1. trans. of var. *(3* and *y.* Lapeyr. abr. P- 6- Baumg. trans. T T fn" V* fruticuldsa, fl. dan. t. 342. Smith, in Lin. Hist. g. p. ISO. engl. bot. t. 1027.—Pona, bald. 181. f.—Mor. is very like *V* *fruticulbsa;* but the stems are procumbent; the leaves sinuate, the bracteas deeper green ; the pedicels longer than the flowers disposed in corymbose racemes ; the Capsule is obtuse ; and the corollas azure blue. The *Rock* variate compressed, nearly entire, hairy or downy.

64 v T *ell' Fl.July. Scotland. PL prostrate.

Intire leaves RBICA (PalL ex Link> Jahrb. lS, P- 41-> Pumila. Stems linear-spatulate, very scabrous ; racemes short, smaller. Native of Candia. Allied to *F%. saxatilis,* but Cretan. Procumbent. Speedwell. Fl. May, June. Clt. 1819. PI. pro-

65 V. leaves ovate, obtuse, entire, or nearly so: stems erect, fruticulose> rather (Linn. Spec. P. 15.) nearly glabrous; Supervery downy ; racemes many-flowered, downy; capsule roundish, calyx ; stem, ovate, equal in length or shorter than the and the Shire, on the alps in Scotland, on Ben Cruachan, Arrochar, Rev. Dr. Walker ; Ben Lawers, R. Brown. Vahl, Enum. 5. exclusive of the syn. Wulf. in Jacq. coll. 4. P- 229, not. P. 6. Clus. syn. Smith, engl. bot. 1028. Lapeyr. n :0. exclusive of the syn. of Mor.—Hall. hist. 1. p. 235. t. 10. f. j^ Lower leaves obovate, tapering into the petioles. Corolla Pal at first red with deeper veins. Capsule hairy. Bracteas Seeds comfer and the pedicels. Segments of calyx obtuse. *friiiscose.* Pubescent. foot. Vedwell. Fl. June, Aug. Scotland. PI. J to

6 V. Lanosa (Hoyle, mss. ex Benth. scroph. ind. p. 45.) stem woolly, leaves sessile oblong, base ; branches erect, and hairy beneath, racemes rather loose ; calyx unequally 4-5-parted ; capsule ovate, acute in the immature state. T? . H. Native of Kanaour, Royle.

JFoo%-branched Speedwell. PL shrubby.

**/Q7* V. MACROSTEMON (Bunge, in Ledeb. fl. ross. alt. ill. t. 127. fl. alt. 1. p. *35.)* stems fruticulose, branched ; lower leaves roundish-ovate, quite entire : superior ones oblong, serrulated, villously pubescent; racemes villous, many-flowered, at length elongated ; capsule downy, twice as long as the calyx, which is 5-parted and unequal. F?. H. Native of Altaia, on alps at the river Tschuja, among stones. Corollas large, violaceous. Capsule obovate, emarginate. Stamens much exserted.

Long-stamened Speedwell. PL \ to \ foot.

sJ)8 V. SERPYLLIFOLIA (Lin. spec. 15.) glabrous ; leaves nearly sessile, oblong or ovate, 3-nerved, entire and crenated ; racemes elongated; flowers distant; stems creeping. %. H. Native of Europe, Siberia, and North America, in pastures and meadows ; plentiful in all parts of Britain; in the Himalaya, Royle. Vahl, enum. 1. p. 21. Smith, engl. bot. t. 1075. FL dan. t. 492. Bieb. fl. cauc. 1. p. 9. Curt. fl. lond. fasc 15. t. 3. Bertol. pi. rar. ital. dec. 3. p. 5. Lapeyr. abr. p. 7.—Lob. icon. 1. t. 472. f.—Riv. mon. t. 99. f. 1. Stem creeping at base, ascending at top, downy. Leaves fleshy, shining, glabrous. Bracteas shorter than the pedicels. Corolla blue, pale red and white. Capsule obcordate, didymous, compressed.

Var. (3, tenella ; leaves ovate-roundish. 7/ . H. V. tenella, Flor. wett. and Schmidt, fl. bohem.

Far. y, neglecta ; leaves 4 in a whorl. %. H. V. neglecta, Schmidt.

Far. $, nummularicefblia (Thuil.) %. H. Native of France.

Var. f, *humifusa ;* prostrate ; leaves cordate-roundish ; stems creeping. %. H. Native of the Highlands of Scotland, on wet shady rocks; and on the Cheviot Hills, Northumberland. V. humifusa, Dicks, in Lin. trans. *2.* p. 288. Plant downy.

Far. £, *hirsilta;* hairy ; hairs short, crowded. %. H. Native of the Pyrenees.

Wild-Thyme-leaved Speedwell. FL April, July. Britain. PL creeping.

69 V. HERNIARIOI'DES (Pourr. chl. hisp. no. 60. Lapeyr. suppl. abr. p. 4.) leaves obovate, glabrous, quite entire, small: lower ones reflexed ; stems prostrate, scattered, rooting ; raceme terminal, dense, ovate. 1/. H. Native of the Pyrenees, at Port de Jacca. Flowers blue, with pale claws.

Herniaria-like Speedwell. PL creeping.

70 V. FONTANA (Pall, ex Link, enum. 1. p. 102.) stem creeping, downy ; leaves sessile, ovate, obtuse, crenated, glabrous ; bracteas foliaceous ; pedicels much shorter than the bracteas. %. H. Native of the Island of Unalaschka and Kamtschatka, Pall.

Fountain Speedwell. PL creeping.

71 V. GEBHARDIANA (Vest, ex Rcem. et Schultes, syst. 1. mant. 1. p. 104.) branches prostrate, rooting; leaves elliptic, roundish, quite entire, glabrous : lower ones petiolate ; raceme terminal; flowers and capsules erect. %. H. Native on alp Schwarzenstein, in Zillerthal, beside rivulets formed by the melting of ice. Pedicels length of bracteas. Capsule broadly obcordate.

Gehhard's Speedwell. PL creeping.

72 V. TENELLA (AIL pedem. no. *272. t. 22.* f. 1.) leaves roundish, a little wrinkled, subcrenated, all petiolate: stems creeping, and are, as well as the calyxes, villous. 3/ • H. Native of Piedmont, Pyrenees, &c. Vahl, enum. 1. p. *65.* Lapeyr. abr. p. 8. Willd. spec. 1. p. 64. exclusive *of* the syn. of Dill__Pluck, t. 233. f. 4. This is very like *V. serpyllifolia*, and probably only a variety of it. Leaves on longer petioles. Flowers blue or purple, on long pedicels.

Far. (3; stems erectish ; leaves distant ; flowers rose-

coloured. 1/. H. Native of the Pyrenees. Lapeyr. abr. suppl. p. 4.

Slender Speedwell. Fl. May, Aug. Clt. 1820. PL creeping.

73 V. MICROPHY'LLA (Kit. in Schultes, fl. austr. ed. 2d. vol. 1. p. 20.) leaves ovate, inordinately crenated; bracteas hardly the length of the pedicels; stems ascending. %• H. Native of Hungary, in sandy places. Stems creeping at the base. Perhaps only a variety of *V. serpyllifdlia,* occasioned by the dry sandy soil in which it grows.

Small-leaved Speedwell. Fl. April, July. Clt. 1822. PL £ to | foot.

74 V. TELEPHIIFOLIA (Tourn. cor. p. 7.) glabrous; leaves obovate, almost quite entire; stems creeping. %. H. Native of Armenia. Vahl, enum. 1. p. 64. Stems filiform. Leaves petiolate, hardly half a nail in length, obsoletely crenulated outside. Perhaps a variety of *V. serpyllifblia.*

Telephium-leaved Speedwell. PL creeping.

75 V. RUDERAXLIS (Vahl, enum. 1. p. *66.* H. B. et Kunth, nov. gen. amer. 2. p. 312.) leaves ovate-oblong, obtuse, crenated, somewhat 5-nerved: superior ones subciliated, quite entire; stems creeping. %. H. Native of Peru, in waste humid places; and near Santa Fe de Bogota, and on Mount Quindiu. Vahl, enum. 1. p. *66.* V. serpyllifdlia, Ruiz, et Pav. fl. per. 1. p. 6. Stems filiform, diffuse, red. Bracteas longer than pedicels. Corolla violaceous; the smaller segment white. Probably a mere var. of *V. serpyllifdlia.*

Rubbish Speedwell. PL creeping.

SECT. IV. PIRI'TIA (the vernacular name of one of the species.) Capsule elliptic or roundish, acuminated. Leaves opposite, quite entire. Racemes terminal. Shrubs natives of New Zealand.

76 V. SPECIOSA (R. Cunningh. ex bot. mag. no. 3461.) quite glabrous; stem shrubby, erectish or diffuse; leaves opposite, flat, obovate, coriaceous, decurrent, with a callous obtuse point, and quite entire, thickened, coloured margins; racemes terminal, short, erect, crowded with flowers; bracteas ovate-lanceolate, one half shorter than the pedicels; calycine segments ovate, acutish, finely ciliated, about equal in length to the middle of the tube of the corolla. J?. F. Native of New Zealand, on the north side of the island; and on sandy hills near the estuary of the Hokianga, on the west coast. Leaves 3-4 inches long. Flowers showy, bluish-violet, almost like those *of Lysimachia atropurpurea.* Stamens exserted. Capsule elliptic, acuminated, glabrous, twice as long as the calyx.

Showy Speedwell. Shrub 3 to 6 feet.

77 V. LIGUSTRIFOLIA (Cunningh. 1. c.) quite glabrous; stem shrubby; leaves opposite, ovate-oblong or narrow-lanceolate, bluntish, quite entire; racemes peduncled, terminal, pubigerous, about equal in length to the leaves; bracteas oblong-lanceolate, about half the length of the pedicels; calycine segments ovate-lanceolate, acutish, length of the tube of the corolla. T?. F. Native of New Zealand, on the north coast, on shady hills on the banks of the Kana-Kana river; and Bay of Islands. A slender shrub, 2 feet high. Leaves sessile. Flowers white, spicately racemose. Calyx equal. Segments of corolla acutish. Said to be very like *V. angustifUia,* Richard.; but the racemes in that plant are slender, pedunculate, and axillary, and more than twice as long as the leaves; the segments of the calyx are obtuse, and not half so long as the tube of the corolla; and the leaves are linear-lanceolate, acute, and glaucescent beneath.

Privet-leaved Speedwell. Shrub 2 feet.

78 V. DiosMiEFOLiA (R. Cunningh. in bot. mag. under no. 3461.) shrubby, erect; leaves decussate, lanceolate, acute, quite entire or serrulated, petiolate, concave and smooth above, and of a different colour beneath: serratures simply cut, remote; corymbs axillary or terminal, many-flowered; bracteas ova about half the length of the pedicels; calycine segments ovai, obtuse, equal in length to the middle of the tube *of* the corol T?. F. Native of New Zealand, in dense woods near th source of the river Wycaddi; at the Bay of Islands, and elsewhere on the south coast, where it is called *Piriti* by the nativ A slender twiggy shrub, about 3-12 feet, with the *Trachymene.* Leaves 9 lines long, keeled beneath. rl white. Capsule elliptic, acute, compressed, 3 times as long the calyx, which is ciliated.

Diosma-leaved Speedwell. Shrub 3 to 12 feet.

SECT. V. HEBE (a mythological name, the daughter *of* Juno Capsule ovate, or oval, or oblong, acute, or obtuse, compresse Racemes lateral and axillary. Leaves quite entire. Plants n tives of New Holland, Van Diemen's Land, and New Zealand.

79 V. PARVIFLORA (Vahl, symb. 3. p. 4. enum. 1. P« leaves linear-lanceolate, quite entire, glabrous, mucronate; ste shrubby. J?. F. Native of New Zealand. V. floribunda, Br. in herb. Smith. Plant glabrous. Leaves approximate, sessile, stiff, 2 inches long. Racemes erect, \\ inch long, many-flowered; bracteas minute. Segments of corolla obtuse. Capsule oval, twice as long as the calyx.

Small-flowered Speedwell. Fl. June, July. Clt. 1822. Shrub 1 foot.

80 V. MACROCA'RPA (Vahl, symb. 3. p. 4. enum. 1. p. *obJ* leaves lanceolate, quite entire, glabrous, flat; racemes stem shrubby. F? . F. Native of New Zealand. B articulated. Leaves 4 inches long, nerveless. Racemes of leaves. Bracteas minute. Tube of corolla twice as long the calyx; segments obtuse. Capsule ovate, acute, 3 times long as the calyx.

Large-fruited Speedwell. Shrub.

81 V. SALICIFOLIA (Forst. prod. no. 11. Vahl, symb. 4.) leaves lanceolate, attenuated at both ends, quite racemes drooping; stem shrubby. J?. F. Native ot Zealand. Glabrous. Leaves 2-3 inches long, subundu Racemes longer than the leaves; pedicels capillary equal. Tube of corolla twice as long as the calyx; seg acute. Capsule oblong, acute, twice as long as the calyx.

Willow-leaved Speedwell. Shrub 2 to 3 feet.

82 V. ELLIPTICA (Forst. prod. no. 10.) leaves elliptic, olate, quite entire, glabrous; racemes short, few-flowe rymbose. T?. F. Native of New Zealand. Very near to *V. decussata.*

Elliptic-leaved Speedwell. Shrub 1 to 2 feet.

83 V. DECUSSAXTA (Ait. hort. kew. ed. 1. vol. 1. P; 2d. vol. 1. p. *68.)* glabrous; leaves permanent, elliptic, entire, decussate; racemes few-flowered; stem F. Native of the Falkland Islands, and the Straits of Ian. Curt. bot. mag. t. 242. Hebe Magellanica, J Gmel. syst. p. 27. Leaves mucronate, stiff, with cartil margins. Racemes shorter than the leaves. Bracteas ciliated. Corolla funnel-shaped, blue.

Decussate-leaved Speedwell. FL June, Aug. Shrub 1 to 2 feet.

84 V. PERFOLIATA (R. Br. prod. 434.) quite entire, ovate, acuminated, connate at lateral, pedunculate, many-flowered. %. G. South Wales, about Port Jackson. Sims. bot. mag. Plant glaucous. Leaves sometimes furnished with a Racemes long, secund; pedicels hardly the engt lyxes, which are 4-parted and unequal. Corolla purp Capsule oblong, oval. Flowers blue.

Perfoliate-leaved Speedwell. FL July, Aug. PL 1 to 2 feet.

cussatP " FORM oSA (R-Br. prod. p. 434.) leaves evergreen, deba«l -- ianceolate, quite entire, quite glabrous, acute at the Udse; racemes KAa»:^ «L ^i UP ed; racemes bifariously pilose; corymbs axillary, few-flowered; stem shrubby. *Jq* . F. Native of Van Diemen's Land.

Shrubby Speedwell. Shrub 1 to 2 feet.

linear-lanceolate, entire; stems nearly simple; corymbs lateral, few-flowered. P>rt T *i* ^' Gi Native of New South Wales, about Port Jackson. Flowers blue.

nder Speedwell. Fl. May, July. Clt. 1820. PI. \ to \ foot.

Sect. VI# CHAMiEDRYS (name of Germander.) Capsule compressed, flat on one side, and convex on the other. Racemes lateral and axillary.

§ 1. *Leaves quite entire.*

late-oblong, qUUe 6ntire> hoary as well as the stem> which is P^strate; ^acemes 2*3* inches long; bracteas length of flowers. form, vill atlve of Svria> Labillardiere. Stems numerous, filicylcine seeds. US ES Tdl aS the leaves> which are nearly sessile, Calength of ca? ntS eqUali Capsule obcordate, compressed, yx.

La Billardier's Speedwell. PI. prostrate.

§ 2. *Leaves serrated, crenated, or denticulated.*

species natives of New Holland, New Zealand, $c.

p. 67.) * CATARACT^ (Forst. prod. no. 9. Vahl, enum. 1. fl^uo'us to a browns; ^eaves lanceolate, serrated; racemes loose, LeavesI' ^T shrubby- *2• F. Native of New Zealand. lan<l lon!r g, of a different colour beneath. Racemes a and L hin- ardlere collected a plant which he considers identical with the of Foster; t0 which he appends the following diagnosis.* «T on £> with V aves sessile, lanceolate, acuminated, 3 inches tvvic e as b S "acute teeth; racemes strict; bracteas subulate, oVat e, entire, turgid."

89 V. I Pfawelk PL ascending.

late» long ABIATA (R- Br. prod. p. 434.) leaves broad-lanceo- Hillary, Ummnated, unequally and sharply serrated; racemes COast of New Holland, and Van Yemen's Land. Sims, bot. 1660 H V• G. Native of the south mag. L 531 B?ok< bot# ma^ 3461, V- Derwentii, Andr. bot. Barred, ratl glabrous. Flowers pale blue. Calyx 4- uiate» spre^r Une(lual- Ovarium emarginate. Corolla bila- mamor's ^PPer lip undivided: lower one 3-parted; *r*liPPed* fl, rod Speedwell FL **April, July. Clt. 1**802.

90 V. CALYCINA (R* Br> Prod- 435,) leaves broadly ovate, subcordate, Wrin^ed, unequally serrate-crenated, petiolate, and ^e hairy as f Ovvered rn T aS tbe creeping stems; racemes lateral, few- ^n tiia U^ lon Ser ^an the leaves; calyxes pilose, ciliated, V• G. Native of New Holland and L iern fi ca Psule- *V-* ?er >ver K £and, R- Br- 5 New Zealand, on the banks of creen eri) amon g grass, R. Cunningh. "Stems 5-6 co^°Ured b or decurn bent. Leaves opposite, hispid or dis- h is ^enea^b- Calyx 4-parted, longer than the capsule, Jd^n, compressed, emarginate or obcordate," ex *targe I* T # ma^, under no. 3461.

91 *S. mca tyxed* Speedwell. PI. creeping.

2nd ^eenly ^8^ ^R* Br* Prod- P- 435>) leaves ovate> unequally er petiol errated» glabrous; stem clothed with fine down; Se- *v A* one llal lon ger than the leaves; racemes lateral, * • <* Native of New Holland. Flowers blue.

Plebeian Speedwell. Fl. June, July. Clt. 1820. PI. 1 foot ?

92 V. DI'STANS (R. Br. prod. p. 435.) leaves ovate, broadly serrated, glabrous; petioles ciliated; stem decumbent, bifariously pilose; corymbs lateral, pedunculate, few-flowered. 7/. G. Native of New Holland. Flowers blue.

Zh'stawJ-flowered Speedwell. Fl. May, June. Clt. 1825. PI. decumbent.

93 V. BROWNEI (Roam, et Schultes, syst. 1. p. 118.) leaves ovate-lanceolate, glabrous, unequally serrated; stem bifariously pubescent; lower petioles 3 times shorter than the leaves; racemes lateral, loose. %. H. Native of New South Wales, about Port Jackson. V. arguta, R. Br. prod. p. 435. Nearly allied to *V. plebeia.* There is a plant in Smith, herb, under this name, which has cordately-reniform, sharply-toothed leaves, which he there proposes to call *V. vitifblia.*

Brown's Speedwell. PI. 1 foot ?

94 V. NOVJE-HOLLA'NDLE (Poir. encycl. 8. p. *526.)* leaves ovate, deeply crenated, petiolate; racemes lateral; flowers on long pedicels; stems downy. %. G. Native of New Holland. Very like *V. Chamcedrys.* Calyx glabrous. Bracteas ovate. Capsule obcordate, compressed, shorter than the calyx.

New Holland Speedwell. PL diffuse.

* * *Species natives of Europe.*

95 V. OFFICINALIS (Lin. spec. p. 14.) creeping, hairy; leaves oval or oblong, serrated; petioles sheathing at the base; racemes spicate, alternate or opposite; calyx 4-parted, nearly equal; bracteas longer than the pedicels. %. H. Native of Europe and North America, in woods and dry sandy banks; plentiful in Britain. Vahl, enum. 1. p. 74. Gaertn. fruct. 1. p. 257. t. *56.* f. *7.* Fl. dan. t. 248. Curt. fl. lond. fasc. 3. t. 1. Woodv. t.219. Smith, engl. bot. 765. Bull. herb. t.293. Plenck. off. t. 12. Lam. ill. t. 13. f. 2. Poit. et Turp. fl. par. 1. p. 12. t. 8. Svensk, bot. t. 59.—Riv. mon. irr. t. 93. Stem procumbent, rooting at the base. Corollas small, pale blue, with deeper veins. Capsule obcordate, compressed, downy, larger than the calyx. This species is recommended as a sort of medicinal tea; and Simon Paullix, an old Danish botanist, contended it was the identical tea of China. The flavour is astringent and bitter, and by no means agreeable.

Far. /J; leaves obovate-roundish, pubescent. %. H. V. Tournefortii, Schmidt, boh. no. 12.

Far. y; leaves obovate or obovate-roundish, almost glabrous. *%K* H. V. Allidni, Schmidt, 1. c. Hook. scot. 7. excluding ttfe synonyme. Found on the mountains of Scotland and Ireland.

***Far. S, albifibra;* flowers white.**

Far. e, plena; flowers double.

Far. I, variegata; leaves variegated with white or yellow.

Officinal Speedwell. Fl. April, July. Britain. PI. creeping.

96 V. TOURNEFORTII (Vill. dauph. 2. p. 9.) creeping, hairy; leaves ovate, entire at the base, and serrated at apex, narrowed into the short petioles at the base; racemes spicate, opposite; calyx 4-parted. %. H. Native of the South of France. Stem procumbent. Corolla blue. Hardly distinct from *F. officindlis.*

Far. /3, *dubia* (D. C. fl. fr. 3. no. 2395.) leaves glabrous, ovate, toothed; stem rooting at the base, ascending; hairs spreading, or disposed in 2 rows. %. H. This variety differs from *F. chamce'drys,* in the stems being procumbent: from *F. qfficinalis,* in the leaves being glabrous; and in the calyxes being longer; and from *F. Allidni,* in the stem and peduncles being villous; and from *F. pildsa,* in the leaves being entire at the base, and in the calyxes being equal.

Tournefort's Speedwell. Fl. May, June. Clt. 1821. PI. creeping.

97 V. ALLIÒNI (Vill. daupb. 2. p. 8.) glabrous, creeping, procumbent; leaves oblong, stiff, shining, slightly crenated; racemes spicate, crowded; calyx 4-parted. %. H. Native of Switzerland, South of France, Italy, on the Alps. Vahl, enum. 1. p. 74. Smith, in Lin. trans. 1. p. 190. D. C. fl. fr. 8. p. 463. V. pyrenàica, All. ped. 1. p. *73.* no. 265. V. rèpens, All. spec. 1. t. 4. f. 3. V. officinàlis, j3, Lin. This species differs from *V. officinalis* in the rigidity and smoothness of the parts. Flowers blue, crowded into a short ovate spike.

AllionCs Speedwell. Fl. June, Aug. Clt. 1748. PI. creeping.

98 V. SETI'GERA (D. Don, rar. pi. scot. p. 4.) very hairy; hairs stiff, glandular; stems ascending; leaves elliptic-lanceolate, serrated, subcrenated; racemes elongated; calyx 4-parted; capsule abrupt, undivided. %.. H. Native of Scotland, in Ayrshire, in heathy parts of Garick. V. hirsùta, Hopk. fl. glott. p. 9. Link, enum. 1. p. 24. Leaves small. Bracteas longer than the flowers. Corolla very pale blue. Capsule ovate, compressed, glabrous. Perhaps only a small hispid variety *of V. officinàlis.*

Seiigerous Speedwell. Fl. April, July. Scotland. PI. \ foot.

99 V. MULLERTA'NA (Vest, in litt. ex Rcem. et Schultes, syst. 1. mant. 1. p. 108.) leaves elliptic, quite entire, obtuse, hairy, ciliated, on short petioles; stems short, prostrate, rooting; racemes lateral; flowers and capsules erect. If. H. Native of Upper Styria. Pedicels length *of* bracteas. Calyx 4-cleft. Nearly allied to *V. officinàMs, F. Allibni,* and *F. Tournefortii,* but the flowers are larger.

Mutter's Speedwell. Fl. June, July. Clt. 1825. PI. prostrate.

100 V. APHY'LLA (Lin. spec. 14.) villous; stems creeping; leaves radical, roundish or oblong, slightly crenated; peduncles scape-formed, usually 3-flowered. 2£. H. Native *of* the southern alps of Europe. Vahl, enum. 1. p. 68. V. subacaùlis, Lam. ill. no. 171.—Seguier, pi. veron. 1. p. 241. t. 3. f. 2.—Bocc. mus. t. 10. t. 9.—Pluck, aim. t. 114. f. 3. Plant hairy. Scapes 1-2 inches long, bearing each 2-4 large blue flowers. Capsule large, violaceous, thrice as long as the calyx, obovate, compressed, more or less emarginate, downy.

Far. /3, Kamtchdtica (Lin. suppl. p. 83.) leaves ovate or oblong, serrated, hairy; scapes hairy, 3-5-flowered. %. H. Native of Kamtschatka. V. grandiflora, Gaertn. nov. comm. petrop. 14. t. 18. f. 1. Racemes lateral, loose. Stem ascending, stoloniferous.

Var. y, nudicaulis (Lam. ill. no. 181.) capsule obtuse, not emarginate. %. H. V. nudicaùlis, Pers. ench. 1. p. 11.

Leafless-stemmed Speedwell. Fl. May, July. Clt. 1775. PI. \ foot.

101 V. MONTA^NA (Lin. spec. p. 17.) leaves cordate-ovate, petiolate, obtuse, coarsely serrated; stem and petioles hairy; racemes elongated, filiform, loose, axillary. 1/. H. Native of Europe, in groves; in Britain, in woods, chiefly in moist calcareous soil, but not very common. Vahl, enum. 1. p. 68. Jacq. fl. austr. 2. p. 6. t. 109. Fl. dan. t. 1201. Curt. fl. lond. 4. t. 2. HoffFm. fl. germ. t. I. Poit. et Turpin, fl. par. 1. p. H.# t. 10. Smith, engl. bot. t. 766. V. procùmbens, Riv. mon! irr. t. 93. Stems weak, procumbent, rooting at the joints, villous. Leaves usually villous, with generally purplish margins. Corolla pale blue or white, variegated with purplish veins. Calyx 4-parted, unequal. Capsule orbicular, compressed, emarginate at both ends, ciliated, didymous; cells 4-seeded.

Mountain Speedwell, or Mountain Madwort. Fl. June, July. Britain. PI. prostrate.

102 V. CHAM^DRYS (Lin. spec. 17.) downy or hairy; leaves deeply and unequally serrated: lower ones petiolate, ovate: upper ones cordate-ovate, sessile; stems bifariously pilose, creeping at the base; racemes axillary, exceeding the stems. %. H. Native of Europe, common on dry banks, and in groves, meadows, pastures, and hedges. Vahl, enum. 1. p« Lam. ill. t. 13. f. 1. Curt. fl. lond. 1. t. 2. Martyn, fl. rust. t. *66.* St. Hil. pi. fr. t. 8. Smith, engl. bot. *623.* FL dan. t. 448. Poit. et Turp. fl. par. 1. p. 13. t. 9. Svensk, bot. t. 239. Teucrium V. Clus. hist. p. 350.—Riv. mon. irr. t. <**• Chamsevdrys, Brunsf. herb. 1. p. 125. f. 1. Herb pale green. Stems more or less ascending, 1-2 feet long. Flowers large, blue, rarely flesh-coloured or white. Calyx 4-cleft, lanceolate. Capsule compressed, obcordate, shorter than the calyx. There are many varieties of this plant. Some take this for the true German *Forget-me-not.*

Far. /3, lamiifòlia; leaves cordate, cuneated at the base, o'' tuse: lower ones sessile, the rest petiolate. 1/. H. Native country unknown. V. lamiifòlia, Hayne, in mag. amic. hist. natt berol. 7. (1805.) p. 132. V. Rudolphiana, Hayne, 1. c. p. 1S$*

Germander Speedwell. Fl. July, Aug. Britain. PI. \ to I *foot.*

103 V. MICRA'NTHA (Hoffm. et Link, fl. port. p. 286. t. *57-)* downy and canescent, soft; leaves nearly sessile, ovate, obtuse, coarsely crenated, hairy; racemes axillary; flowers rather crowded. If. H. Native of Portugal. V. Teucrium, Brot. fl. lus. 1. p. 13. V. mollis, Zea. ex Roem. et Schultes, syst. 1. p. 112. V. mollfssima, Hort. Hairs of plant curled. Bracteas linear, longer than the pedicels. Calycine segments 4, lanceolate, acute, nearly equal. Corolla small, white, with a purplish ring in the throat. Capsule compressed, emarginate, shorter than the calyx, with ciliated edges. Very like *V. c»a' mc&drys;* but the flowers are smaller, and the whole plant hoary.

Small-flowered Speedwell. Fl. May, July. Clt. 1819. ?*• \ foot.

104 V. PLICA^TA (Pohl, tent. fl. boh. p. 15. f. 1.) leaves cordate-ovate, plicate, deeply toothed, clothed with white hairs as well as the stems; racemes axillary, alternate; flowers imcate, nearly sessile. %. H. Native of Bohemia, on hills, pilosa, Schmidt, 1. p. 17. Willd. spec. 1. p. *66.* Root creeping. Stem bifariously pilose. Lower leaves petiolate supf ones sessile. Calyx unequal. Bracteas linear, length of peeels. Flowers blue.

Plicate Speedwell. Fl. May, Aug. Clt. 1817. PL *i* foot.

105 V. UMBROSA (Bieb. fl. cauc. 1. p. 11. fl. ross. 1. lower leaves ovate, coarsely serrated: superior ones obio subserrated; racemes lateral, few-flowered; stems calyx nearly equal in length to the corolla. %> H. Tauria, in woods about Karassubasar. Plant loosely Pedicels elongated. Corolla showy. The leaves of ste branches are sometimes nearly entire.

Shaded Speedwell. PI. creeping.

106 V. PEDUNCULA'RIS (Bieb. casp. 126. append, no. cauc. 1. p. 11.) downy; leaves ovate, deeply and rated; racemes loose; stem hairy, with 2 more dense hairs; pedicels capillary, twice as long as the bracteas Native of Caucasus, in shady groves. V. pedunculate, enum. 1. p. 77. Pers. ench. 1. p. 12.—Buxb. cent. t. 41. f. 1. Flowers blue. This plant differs from *Vy yines drys* in the stems being villous all over, and also having both of more dense hairs; in the leaves being more villous surfaces, and more deeply cut, in the pedicels being si elongated, and in the calycine segments being blunter.

Far. /?; stems flaccid; leaves more deeply cur. Native of Caucasus, in groves.

Var. γ ; humble, Native of Caucasus, on rocks; and about Chinalug. P rostrate 5 leaves small, obtuse, crenated. V. nemorum, Pall. 'oothed. Ver? like *F, -Petr^a,* Bracteas all to ^ Speedwell. Fl. May, June. Clt. 1826. PI. J

P- 340 T' PETRiEVA (Stev- in mem. mosc. vol. 3. p. 250, and 5. leafy • l Stems creepin^, much branched, prostrate, densely the ste CaVtS -elliPtic, obtuse, subcrenated, and are, as well as dicek fiyr ry ; racemes subcorymbose, many-flowered ; pe- Nativp Yn™ lon Ser than the calyx, which is 4-parted. 1/. H. al so in Laucasus » on the alps of Schuchdagh and Tyfendagh ; V, npi X Places about the Terek. Bieb. suppl. cauc. p. 12. obcorJVT Q Waris, v, Bieb_ fl_ canc_ -*• P- «7. Capsule hispid, from tl a le shortev tha» the calyx. This plant differs beine ^ ^! ece(lin S in all its parts being pubescent, in the leaves shor Sn_er and much firmer, and narrower, in the stems being *Rn* ?c Prostrate. Calyx nearly equal. Corolla blue.

108 V Peed vWelL FL *M^* June_ Clt_ 182K PL Prostrate. spec, l rPILoSA (Lin> sPec* P- aPpend. 1663. syst. 59. Willd. racem -n^ ^eaves ovate, obtuse, plicate, deeply toothed ; Native r l ary; stems Prostrate, bifariously pilose. %. H. Lower l ohemia- See Smith in Lin. trans. 1. p. 191. teeth PI 6aves petiolate : upper ones sessile, pilose ; lower Calyx u t e d, Bracteas Pilose, longer than the pedicels. sr«allp J ^ ^ ' Segments of corolla acute, connivent. Leaves Plant th ose of *F- Chamafdrys.* This is a very doubtful *prostr-T* Probably only a variety of *V. Chamafdrys,* or *V. Pilnc V, Pbcata.*

trate. bPeedweH- Fl. May, June. Clt. 1819. PL pros-

sterns fulf MINIJXTA (Meyer, verz. pflanz. p. 105.) rather pilose ; tuSe, ere m, branched, diffuse; leaves obovate-lanceolate, obpedicels enat^d or ^uite entire 5 racemes lateral, few-flowered ; Calyx 4 ^P 11 ^^ longer than the bracteas, which are spatulate; Or^»cula?arte^J W^^ obtuse segments ; capsule reniform : lobes in stony 1 ' ** ^ative of tlie alpine regions of Caucasus, *MinL i CGS,* Said to be nearly allied to *V. pildsa.*

-1ICT\? Speedwell. PI. diffuse.

45.) proc # CAiNA (Wall. cat. no. 401. Benth. scroph. ind. p. Prolate Um bent at the base; stem ?tt^ose^ or woolly; leaves ^abrous'- oVate> deeP ly cr enated, hoary from hairs, at length 4~Parted'- raoemes few» axillary and terminal; calyx unequally ^•H lj Capsule broadly and rhomboidally dilated, entire. Hoyle; iNatly e of Gosainsthan, and Nipaul, Wall. ; Kanaour,

^ll°rv Speedwell- pl-Procumbent.

ind. p. 45\ DELTl/oERA (Wall. cat. no. 4Q2. Benth. scroph. woolly Un j Procut«bent at the base ; stem glabrous, bifariously nately serrated leaves sessile, ovate-lanceolate, crecalyx 4-parted ; glabrous ; racemes few, alternate, downy ; ^mmature capsules rhomboidally dilated, emargin Native at Gosainsthan, Wall.

Delta-berries g Speedvvell. PL proc.

leav es n l L AXA (^e111!* scroph. ind. p. 45.) sparingly pilose; rath er ? ar v sessile, ovate, or ovate-oblong, deeply serrated, roUn dish pilo Ser raceme s alternate ; calyx 4-parted; capsule at £ifi in, em arcuinate, hairy. %. H. Native of the Himalaya, *loo* Onta' Royle.

j jl*e-Ik*>*ered* Speedwell. PL

cordat e, A Pubescent glabrous, creeping ; leaves reniformly 8^Ort> ohl6^y crenated; racemes spicate, lateral, pedunculate, ban ks0f T g; ca^x 5nc left» unequal. %. H. Native on the P* 10, h Missouri. V. reniformis, Pursh, fl. amer. sept. 1. *8» roo tl nOt o^ ^a^n* Leaves on long petioles. Stem creepm g at the joints. Peduncles alternate, length of leaves. Bracteas oblong, crenated. Flowers large, crowded, pale blue. Filaments length of corolla.

Pursh's Speedwell. PL creeping.

114 V. ACUTIFLÓRA (Lapeyr. abr. suppl. p. 7. Roem. et Schultes, syst. 1. p. 112.) pilose; leaves linear, obtuse: lower ones deeply serrated, pilose : upper ones lanceolate, nearly entire, rugose ; racemes elongated ; segments of corolla acuminated. %. H. Native of Tolosa, at La fontaine d'amour, among rushes. Pedicels longer than the bracteas. Corollas red. Very nearly allied to *V. Chamce^K drys* and F. *pildsa.*

Acute-flowered Speedwell Fl. May, June. Clt. 1821. PL 1 foot.

115 V. MICHAI/XII (Lam. ill. no. 163. Poir. encycl. 8. p. 532.) stems a little fistular, clothed with clammy villi; leaves half stem-clasping, oblong-lanceolate, denticulated, smooth ; racemes spicate, short, on axillary, stiff peduncles; calyx 4-cleft: segments ovate, acutish. 1/. H. Native of the Levant. Leaves 1| inch long, and 6 lines broad. Corollas middle sized.

Michauxs Speedwell. PL \ to \ foot.

116 V. DEPAUPERA'TA (Waldst. et Kit. hung. 3. p. 273. t. 245.) creeping and ascending, pilose ; leaves obovate, obtuse, subserrated ; peduncles axillary, subracemose; calyx 4, rarely 3-5-cleft. %. H. Native of Hungary and Liptavia, on calcareous rocks. Corolla blue, upper segments emarginate. Capsule obcordate-ovate. Probably the V. aphylla, var. /3, Baumg. trans. 1. p. 22, of which he gives the following diagnosis. Sterile stems creeping; leaves crowded in a rosulate manner at apex, hairy, subdentate; scapes half an inch high, hairy, very simple, leafy at the base, ascending, terminating in 2-3-flowered racemes; pedicels a little drooping in the flower-bearing state ; bracteas oblong, bluntish. Corolla pale blue. Calyx unequally 4-parted.

Impoverished Speedwell. FL April, July. Clt. 1823. PL creeping.

117 V. SYRI'ACA (Roem. et Schultes, syst. 1. p. 116.) erect; leaves ovate, serrated: lower ones petiolate: superior ones sessile ; pedicels spreading, 3 times longer than the bracteas; capsule ciliated. ©. H. Native of Syria, near Damascus, on a mountain called Dgebelcher. V. pedunculáta, Labill. pi. syr. dec. 5. p. 8. t. 5. f. 2, exclusive of the synonymes of Buxb. and Bieb. Leaves subciliated. Pedicels rather pilose, 2 to 4 times longer than the bracteas, which are lanceolate and ciliated. Calycine segments equal, obtuse. Capsule compressed.

Syrian Speedwell. PL \ to f foot.

118 V. DIVARICA'TA (Tausch. bot. zeit. 1821. p. *562.)* stem decumbent, bifariously pilose, much branched ; branches opposite, divaricate ; leaves all petiolate, cordate, smooth, doubly crenated; racemes axillary, about equal in length to the stems ; pedicels capillary; calyx 4-parted, nearly equal. 1£. H. Native of Savoy, in shady valleys, particularly at Petersgrund. Root creeping. Leaves pilose, most so beneath, 3 times the size of those of *V. Chamce drys,* not wrinkled. Racemes opposite. Flowers remote, pale blue, larger than those of *V. Chamctfdrys.* Pedicels twice as long as the bracteas.

Divaricate Speedwell. PL prostrate.

119 V. STOLONI'FERA (Lehm. sem. hort. hamb. 1820. ex Linnaea, 3. p. 8.) stolons creeping, hairy ; hairs at length distinct ; leaves petiolate, cordate-ovate, coarsely serrate-toothed, rather hairy; racemes axillary; calyx foliaceous, longer than the capsule. %m H. Native of North America.

Stoloniferous Speedwell. Fl. June, July. Clt. ? PL creeping.

120 V. MAXIMA (Stev. in mem. mosc. 2. p. 173. Bieb. cauc. 3. p. 13.) leaves ovate, almost sessile, coarsely serrated, pilose; racemes lateral; calyxes and capsules ciliated. ©. H. Native of Iberia, in mountain meadows.—Buxb. cent. 1. p. 23. t. 34. Plant hairy. Calyx 4-parted, exceeding the capsule. Corolla

small, blue, hardly exceeding the calyx. Capsule compressed, obcordate.

Largest Speedwell. Fl. May, July. Clt. 1824. Pl. 1 to *2* feet.

121 V. URTICJEFOLIA (Lin. syst. p. 60.) erect, pilose; leaves sessile, cordate-ovate, acute, coarsely serrated ; racemes lateral, slender, few-flowered. %. H. Native of the South of Europe, in shady places, and of Bithynia. Vahl, enum. 1. p. *77.* D. C. fl. fr. no. 2388. Jacq. fl. austr. 1. p. 37. t. 59. Bertol. amoen. p. 324. Guss. pi. rar. p. 5. V. galeopsifolia, Gilib. V. latifolia, Lam. fl. fr. 2. p. 441, exclusive of the syn. of Vill. but not of Lin. V. circaeoides, G. Don, in Loud. hort. brit. p. 7. V. maxima, Dalech. hist. 1165. f. 1.—Mor. hist. 2. p. 322. sect. 3. t. 23. f. 18.—Buxb. cent. 2. p. 23. t. 34. Stems simple. Leaves with rufescent nerves, those in the middle of the stem broad. Pedicels longer than the branches. Calyx 4-parted, equal. Corollas small, red, or pink. This species has much the habit of a species of *Circafa.*

Nettle-leaved Speedwell. Fl. May, June. Clt. 1776. Pl. 1 to 1 foot.

122 V. MELISS^FOLIA (Poir. encycl. 8. p. 526.) leaves sessile, subcordate-ovate, crenately cut, downy beneath ; racemes spicate, lateral, opposite. %. H. Native country unknown. Stem erect, downy, slender. Leaves obtuse, an inch long, and 10 lines broad. Bracteas ovate, hardly the length of the calyx. Calyx equal. Corollas small, pale blue, or white. Capsule glabrous, obcordate. Seeds red.

Balm-leaved Speedwell. Fl. May, June. Clt. 1826. Pl. 1 foot.

123 V. VESTIA'NA (Roem. et Schultes, syst. 1. mant. 1. p. 111.) stems hoary, villous; leaves coarsely serrated, petiolate : cauline ones ovate : rameal ones oblong ; style thicker than the filaments; racemes spicate, elongated; bracteas filiform, exceeding the calyxes a little. %. H. Native country unknown. V. melissaefolia, Vest, in litt. Leaves entire at the base, usually subcordate. Calyx rather unequal.

Vest's Speedwell. Pl. 1 foot.

124 V. PROSTRA'TA (Lin. spec. p. 17.) canescent and pubescent ; leaves sessile, oblong, obtuse, serrated: superior ones lanceolate, flat; racemes axillary, opposite, elongated; floriferous stems ascending: barren ones prostrate. %. H. Native of Germany, Italy, and Switzerland, on hills. Vahl, enum. 1. p. 75. Moench. hass. t. 1. V. Teucrium, /3, Savi, bot. etrusc. 1. p. 12. V. canescens, Bastard, suppl. fl. Main et Loire, p. 21.—Bauh. hist. 3. p. 287, with a good figure. Flowers blue. Capsule compressed, glabrous. Calyx unequal, nearly glabrous.

Var. /3, *minor* (Riv. mon. t. 95.) plant smaller.

Far. y, *satureijolia* (Poit. et Turp. fl. par. p. 22.) racemes exceeding the prostrate stems : lower leaves oblong, serrated at top : middle ones subdenticulated : the rest linear, and quite entire.

Var. B9 dlba; flowers white, wrinkled.

Prostrate Speedwell. Fl. May, June. Clt. 1774. Pl. pros.

125 V. TEU'CRIUM (Lin. spec. p. 16.) downy; lower leaves ovate-oblong, half stem-clasping, obtuse, coarsely serrated : superior leaves sessile, narrower, serrated; racemes axillary, opposite, on long peduncles; stems ascending, or prostrate. %. H. Native of Italy, Switzerland, Germany, in argillaceous soil. Vahl enum. 1. p. *76.* Schmidt, fl. bohem. p. 16. D. C. fl. fr. 2. p. 390. Lodd. bot. cab. 425.—Lob. icon. 473. Verbnica mondna, Riv. mon. t. *95.* Pall. itin. 2. p. *522.* V. Teucrium, var. intermedia, Led. fl. alt. 1. p. 40. V. latifolia, ft minor Schrad. fl. germ. 1. p. 86. Racemes rather dense. Calyx 4-5-parted, unequal. Corollas blue, larger than those of *V. latifolm.* Capsule compressed, emarginate, nearly glabrous, slightly ciliated, shorter than the unequal calyx. There is in gardens a stiffer variety, with rather broader leaves, and having capsules longer than the calyx. V. florida, of Schmidt, fl. boh. cent. J. p. 23, is probably also a variety of this, but the stems are said to be bifariously pilose, and the leaves equally serrated.

Germander-leaved Speedwell. Fl. May, June. Clt. 1[illegible]. Pl. 1 to \\ foot.

126 V. CHAI'XI (Lapeyr. pyr. abr. suppl. 1. p. *6.)* leaves sessile, wrinkled, elongated, deeply toothed; racemes lateral, calyx 4-parted, unequal. %. H. Native of the Pyrenees, on the Pic de Gerard. V. latifolia, y, dubia, Lapeyr. abr. p. *9.* dubia, Chaix, herb, et fl. fr. no. 2395. Plant smaller than *latifolia.* Leaves narrower, more acute ; calyxes and bractes more elongated. The whole plant pilose. Flowers large, pale blue.

Var. /3, *minor* (Lapeyr. 1. c.) leaves obtuse, somewhat pinnatifid at the base. %. H. Native of the Pyrenees.

Chaix's Speedwell. Fl. June, July. Clt. 1825. Pl. 1 foot.

127 V. LUTETIVNA (Rcem. et Schultes, syst. 1. mant. 1. p. 109,) leaves lanceolate, quite glabrous, a little toothed, obtuse, racemes lateral, very long. *U.* H. Native country unknown. V. nitida, Hort. par. ex Poir. suppl. 5. p. 467, but not of Ehrh. Perhaps only a variety of *V. Teucrium,* having the stem hardly downy, and the leaves deep green and shining? and almost entire. Corollas pale blue. Capsule glabrous, compressed.

Lutetian Speedwell. Pl. 1 foot.

128 V. LATIFOLIA (Lin. spec. p. 18. Ait. hort. kew. eq. 1. p. 24. ed. 2d. vol. 1. p. *33.)* downy; stems erect; leaves subcordate-ovate, sessile, half stem-clasping, bluntly serrated ; racemes axillary, opposite, dense ; calyx 5-parted. %. H. Native of Sweden, Switzerland, and Germany, and of Siberia, #Jj' Vahl, enum.]. p. 76. Schrad. fl. germ. 1. p. *35.* Sweet, *V-* gard. t. 23. Link, enum. 1. p. *25.* V. Teucrium, Poll. pal. no. 13. Hoppe, cent. sic. 1. no. *76,* and of many other authors. V. Teucrium, a, latifolia, Led. fl. atl. 1. p. 40. V. chamaedrys, Patrin, mss. V. pseudo-chamaedrys, Jacq. il. austr. 1* P* 37. t. 60.—Weinm, phyt. t. 1005. a. Flowers dense. Bracteas a little longer than the pedicels. Capsule compressed, emarginate, downy. Corollas blue, with deeper veins. There is » dwarf variety of this, having leaves so deeply serrated, & to be almost jagged. The variations of the five preceding species run so gradually into each other, as hardly to be distinguished ; in *V. latifolia,* however, the leaves are perfectly ovate, and broad in the middle ; in *V. Teucrium* they are ovate-oblong, broad at the base ; and in *V. prostrdta* the leaves are elliptic to nearly linear.

Broad-leaved Speedwell. Fl. May, June. Clt. 1748. F[illegible] 2 feet.

/129 V. HIMALE'NSIS (D. Don, prod. fl. nep. p. 92. Benth. scroph. ind. p. 44.) pubescently hairy, but at length glabrous, leaves sessile, ovate, or ovate-oblong, deeply crenated, hairy while young; racemes opposite, on long peduncles ; calyx unequally 5-parted; capsule ovate, acute, exceeding the calyx. %. H. Native of Nipaul, at Gosainsthan, Wall. V. *f^he* flora, Wall. cat. no. 403. Bracteas lanceolate, longer than the blue. pedicels. Calycine segments ciliated. Flowers azure D Said to be very nearly allied to *V. Teucrium.*

Himalaya Speedwell. Pl. \ to f foot.

130 V. CRINITA (Kit. in Schultes, fl. austr. ed. 2d. *vol.* ^ 26.) erect, downy; leaves nearly sessile, ovate-lanceolate, equally serrated ; racemes axillary, twice as long as the calyx 5-parted, unequal. %. H. Native of *fJ'onesian* hills. Stem tomentose. Lower leaves obtuse: upper variety acute, quite entire at base and apex. Bracteas longer than pedicels. Capsule emarginate, compressed. Fernap of *V. Teucrium,* or *V. latifolia.*

^ Speedwell. Fl. July, Aug. Clt. 1822. PL 1 foot, dental VV D C ENTANTA (Schrad. fl. germ. 1. p. *37,* exclusive of the Kreen W 8chmidt 0 ascending, nearly glabrous ; leaves dark rated • olon S"lan ceolate, or lanceolate, acutish, remotely ser- Nativ' r Cemes ax^ary, elongated; calyx 5-parted. %. H. Bes*J a* the South of Europe, and Siberia, on dry hills, fl. Ca/D tt - f - no. 26. V. Teucrium, Host, syn. p. 8. Wahl. prostX^ *n* no' 14> exclusive of the synonymes of Lin. V. ex w A* ^e ners, elench. seep. no. 13. Bieb. cauc. 1. p. 10. Led fl i Teucrium, /3, angustifdlia, Vahl, enum. 1. p. *76 A* **tifblia B *I'*** P, 40 V D* C, fl- fn *s*; no- *23 90*, *P'* V, an S us" 349 ' V *ey* -Teucrium IV. tertia species, Clus. hist. p. We *h* 7, a narrow-leaved variety of *V. Teucrium,* but of being e mb!e growth. Leaves glabrous to the naked eye, but they ar * amin 6d b ? a lens the y will be found to be ciliated; *Tooth* If i S Slle> almost all lanceolate.

a «cendin i T ed Speedwel L F*' May, June. Clt. 1818. PI. 139 V *oo t.

^abrous \ S(? MI DTI1 (R o2m. et Schultes, syst. 1. p. 115.) nearly °W re* l £ reen> asc ending, or erect; leaves narrow-lance- ec|ges. te v serra ted, and linear, quite entire, with revolute ^H * > ? eines axilla ry, opposite, elongated; calyx 5-parted. -i IVe of Bonemia. Link, enum. 1. p. 25. V. den- d* - fl - boh. cent. 1. p. 20. V. paniculata, Willd. enum - 1B P' 23> exclusive of the syn. of Pall, bracteas l opposite, but sometimes 3 in a whorl. Lower eels, *Q* l On g e r than the flowers: superior ones length of pedi- deep bl a yx une (l u a], hairy, ciliated. Corollas large, showy, *Schmi* Sterns prostrate, sub-tomentose, ex Link.

133 Y S peedwel - Fl- May, June. Clt. 1820. PI. pros. vi Uo Us f MACRO ST A X CHYA (Vahl, enum. 1. p. 71.) hoary and axi Uarv« GaVeS nnear" oblong, deeply serrated outside; racemes Stemfiiif StemS P rostrate - ¥• H - Native of Syria, Labill. ol)c ordate 0rttl# leaves sessile, obtuse. Calyx 4-cleft. Capsule of this sc c om P ressed, length of calyx. In cultivated plants racemes J T Ie S t ne stems are a f oot and a alf l o n g and tne Long-spiked i rter long.

Speedwell. PI. prostrate.

134 *Leaves P innat $d> or bipinnatifid, or pectinately toothed.*

Pect natel v PECTINATA ^Vahl) enum L P- 71 /^ leaves oblon g» at tlle base Serrated: St6niS P rostrate 5 racemes elongated, leafy Cent *• t go f^' ^' Native about Constantinople.—Buxb. Sce ndi nor a \ y Stem shrubby at the base, and branched, eav es snK n olate, acute at the base- ft" P'oatrlr ed S Pe edwell. Fl. May, June. Clt. 1819.

135 V Cent » Wv ARVIF5LIA ^Vah ? ' enum ' l ' P" 72^ ascending, pubes- e QUal * Snia"» pinnatifid; racemes many-flowered; brac- Hocia aJ n A length to the Pedicels. %. H. Native of Cap- Jj 2. ' Le na Ar menia, in grassy places.—Buxb. cent. 1. t. 41. J o Wer s ai ?J 6S all dee ply pinnatifid, except the upper ones. Ca P sul es 3-4 times smaller than those of *V. orien- Small f* con P re ssed, obcordate.

136 v r P eed well. PL ascending.

a Scen dimr\ R ; o SEA ^Desf * fl- atL L P- 13 0 down y ? stem shrubby, ^^ments aves pinnatifid, on short petioles, acute, with 2-3 A ^ I in l on each side, racemes elongated, axillary; bracteas tlas > nea T§ th t0 the P edj cels. ^ - *O.* Native of Mount *o11 ** r os p lems en. Pedicels capillary. Calyx unequal. Co- *fto Se.c* e colo ured, size of those of *V. latifvlia.*

137 V bt OUred fl owered Speedwell. Shrub ascending.

2 ' Vo L \ o RIENTA LIS (Ait. hort. kew. ed. 1. vol. 1. p. 23. ed. 6: lo ' / 32t) procumbent, downy; leaves linear-lance- ^*xj* ones pectinately pinnatifid : superior ones entire ; racemes axillary, elongated. 1/. H. Native of Armenia and Iberia. Vahl, enum. 1. p. *73.* Bieb. fl. cauc. 1. p. 12. Willd.spec. 1. p. 69. Lodd. bot. cab. t. 419. V. Austriaca, /3, Lin. spec, no. 17. V. heterophylla, Sal. par. lond. p. 7. t. 4. Pedicels longer than the bracteas. Flowers blue. Calyx unequal, 5-parted.

Oriental Speedwell. Fl. June, Aug. Clt. 1748. PI. proc.

138 V. TAU'RICA (Willd. spec. 1.p. 70.) procumbent; leaves crowded, tridentate at apex, or linear, and pinnatifidly toothed, rather pilose ; pedicels longer than the bracteas; calyx downy, 4-parted, unequal. 1/. H. Native of Tauria. Lodd. bot. cab. 914. V. orientalis, /3, Vahl, enum. 1. p. *72.* Bieb. fl. cauc. 1. p. 12. Flowers blue.

Taurian Speedwell. Fl. May, July. Clt. 1820. PL pros.

139 V. JACQUI'NI (Schott. ex Rcem. et Schultes, syst. 1. p. 108. Baumg. fl. trans. 1. p. *26.)* hairy or downy, erectish ; lower leaves sessile, bipinnatifid : superior ones pinnatifid ; racemes long, filiform, axillary: lower bracteas trifid, longer than the pedicels ; calyx 5-cleft, unequal. 1/. H. Native of Austria, Carniola, Croatia, and Tauria. V. Austriaca, and V. multifida, Jacq. austr. 4. p. 16. t. 329, exclusive of the synonymes of Bauh. and Buxb. V. multifida, Scop. fl. earn. ed. 2d. p. 16. no. 15, exclusive of the synonymes of Lin. Ait. hort. kew. 1. p. 23, but not of Lin. V. Austriaca, Willd. spec. 1. p. 70, exclusive of the syn. of Jacq. vind. Crantz, Bauh. and Morison. Hoffm. fl. germ. p. 8. Vahl, enum. 1. p. *73,* exclusive of the syn. of Lin. Bauh. Crantz. V. tenuifolia, Schrad. fl. germ. 1. p. 39, exclusive of the syn. of Host, Schrank, Schmidt, Morison, and Bauhin. Pers. ench. 1. p. 12, and Bieb. fl. cauc. p. 13, exclusive of the syn. of Morison. Besser. fl. gall. 1. p. *35,* exclusive of var. a. Ait. hort. kew. ed. 2d. vol. 1. p. 32. Plant ascending. Stems terete, much branched, clothed with minute, white, short hairs. Leaves rather pilose, multifidly parted ; segments pinnatifid, linear, acute, toothed: lower ones longer, divaricate. Racemes filiform, erect, long, pilose. Lower bracteas trifid, or bifid, the rest entire, ciliated. Flowers blue. Capsules glabrous.

Jacquin's Speedwell. FL May, June. Clt. 1748. PL 1 foot.

140 V. TRICHOCA'RPA (Rcem. et Schultes, syst. 1. mant. 1. p. 106.) stems erectish ; lower leaves bipinnatifid ; pedicels longer than the bracteas ; capsules hairy. 3/. H. Native country unknown. V. pilocarpa, Link, enum. 1. p. 25. V. orientalis, Willd. enum. 1. p. 22, but not of Ait. Very nearly allied to *V. Jacquini,* but the capsule is hairy. Calyx 5-parted.

Hairy-fruited Speedwell. Fl. May, July. Clt. 1820. PL \ foot.

141 V. AUSTRI X ACA (Lin. spec. p. 17.) plant weak, trailing, or ascending ; leaves sessile, lanceolate, deeply serrated, and pinnatifid : racemes lateral, elongated ; calyx 4-parted ; bracteas entire, shorter than the pedicels. *If.* H. Native near Vienna, and of Bohemia, also of Spain. Jacq. enum. vind. p. 3. Schultes, fl. austr. ed. 2d. vol. 1. p. 27, exclusive of the syn. of Jacq. Krok. fl. siles. p. 23, exclusive of the syn. of Riv. Schwenkf. and Jacq. Mill. diet. no. 9. Host, syn. p. 9, exclusive of all syn. Link, enum. 1. p. 25. V. polymorpha, Willd. enum. suppl. p. 2. Schweig. enum. hort. regiom. p. *78.* V. laciniata, Mcench.—Bauh. hist. 3. p. 287.—Mor. hist. 2. sect. 3. t. 23. f. 12. V. Austriaca, foliis tenuissime laciniatis, Tourn. inst. p. 144. V. pratensis, var. a. Crantz, austr. p. 344, exclusive of the syn. of Tourn. V. multifida, Schmidt, fl. boh. p. 21, exclusive of the syn. of Lin. and Jacq. Plant downy. Flowers blue.

Austrian Speedwell. Fl. May, June. Clt. 1748. PL 1 foot.

142 V. ORSINIA X NA (Tenore, prod, append. 5. ex Linnaea, 3. p. 97.) stems erectish, villous, with 2 lines of more dense villi; leaves oblong, obtuse, pectinately sub-pinnatifid ; calyx 5-parted, with linear segments ; pedicels capillary, about equal in

length to the bracteas. %. H. Native of Abruzzo, on the mountains. Plant canescent from pubescence. It differs from *V. Austriaca* in the calyx being 5-parted, in the leaves being less cut, and in the whole habit; and from *V. peduncularis* in tlie calyx being 5-parted, in the segments being narrower, in the leaves being oblong, and in the pedicels being shorter.

Orsin's Speedwell. PI. 1 foot.

143 V. CAUCA'SICA -(Bieb. fl. cauc. 1. p. 13. suppl. p. 14.) erectish, nearly glabrous; leaves bipinnatifid ; segments lanceolate and linear; racemes axillary, few-flowered; pedicels capillary ; calyx large, 4-parted, nearly equal. %. H. Native of Caucasus and Iberia. Lodd. bot. cab. 1369. Calyx 4-cleft. Pedicels much longer than the bracteas, pendulous in the fructiferous state. Flowers pale red, or white, variegated by deeper veins. There are varieties of this, having the segments of the leaves narrower and broader. In mem. soc. nat. mosc. 2. p. 180. no. 8. Steven defines a variety of this, or a new species nearly allied, under the name of " *V. ossetica ;* leaves bipinnatifid; bracteas shorter than the pedicels, and are, as well as linear calycine segments, downy."

Caucasian Speedwell. Fl. June, July. Clt. 1816. PI. \ foot.

144 V. TENUIFOLIA (Stev. ex Bieb. cauc. 1. p. 13.) ascending; leaves pinnatifid, with linear, filiform segments; racemes axillary ; calyx unequal. 1/. H. Native of Iberia. Very nearly allied to F. *multifida,* but the stems are more elongated, the leaves less compound ; the pedicels are equal in length to the bracteas, or longer. The 3 superior segments of calyx are small. Perhaps the same as V. parvifldra, Vahl. ? but the flowers are never smaller than those of *V. orientalis, V. mullifda,* &c.

Fine-leaved Speedwell. Fl. May, July. Clt. 1821. PL | foot.

145 V. MULTI'FIDA (Lin. spec. 17.) procumbent, rather *wQody* at the base, canescent ; leaves bipinnatifid, with lanceolate, or linear segments ; racemes axillary. 1/. H. Native of Siberia, on hills ; also of Tauria and Caucasus ; an^J between Smyrna and Bursa. Bieb. fl. cauc. 1. p. 12. Will/J. spec. 1. p. 69. Smith, in Lin. trans. 1. p. 191. Sims, bot. mag. 1679. Calycine segments unequal, subulate. Coro]Jas pale blue. Pedicels equal in length to the bracteas, or sh^ter.

Var. /3, hirsuta; plant more majory, corollas rose-coloured. %. H. Amm. ruth. p. 25>; no> 33.

Mult$d-\eaYed Speed^H. pi. May, June. Clt. 1748. PL procumbent.

SECT. VII. SCUTELLA*TA (from *scutella,* a little saucer ; shape of valves of capsule.) Capsule orbicular, deeply 2-lobed, compressed. Seeds compressed on one side, and convex on the other. Aquatic plants with opposite leaves, and loose, axillary racemes of flowers.

146 V. SCUTELLA'TA (Lin. spec. p. 16.) erectish, creeping, and rooting at the base ; leaves linear-lanceolate, nearly entire ; racemes axillary, alternate, loose ; pedicels pendulous, or spreading ; calyx 4-parted, equal. %. H. Native of Europe, Siberia, and North America, in inundated places, particularly in watery spongy bogs, chiefly on a sandy soil. Vahl, enum. 1. p. 70. Fl. dan. t. 209. and t. 1561. Curt. lond. t. *56.* Smith, engl. bot. t. 782. Poit. et Turp. fl. par. 1. p. 15. f. 13. Riv. mon. irr. *96.* f. 1. Root creeping. Leaves sessile, nearly connate, rarely furnished with a few teeth. Racemes alternate, longer than the leaves ; pedicels longer than the bracteas. Corolla of a pale flesh colour, the smaller segment palest. In the American plant the peduncles are opposite, and shorter than the leaves, and the flowers are nearly sessile.

Var a, glabra; leaves subovate-lanceolate, denticulated, and are, as well as the stem, glabrous. 1/. W. H. Gesn. icon, aen. t. 10. f. *87**

Var.frpilosa (Vahl, 1. c.) plant pilose, or villous ; leavcs linear-lanceolate, sub-denticulated. %. H. V. villdsa, Scnum-fl. saell. 1. p. 7. Serrature glandular.

Var. a, *latifolia* (Rosen, et Weber, hols. no. 13.) leaves ovate-lanceolate. %. H. Lapeyr. pi. pyr. suppl. ined. *(?}* pilose.) V. parmularia, Poit. et Turp. fl. par. t. 14, ex Lois.

Saucer-capsuled Speedwell. Fl. June, Aug. Britain. *u to 2 feet.

147 V. PARMULARIA (Tratt. fl. austr. t. 20.) stem erectish* hairy ; leaves narrow-lanceolate, denticulated, ciliated. ^/. '. H. Native of Austria. Very nearly allied to *V. scutellata^* and differs from it only in the leaves being acute, not acuminated, hardly length of the intemodes, not longer. Bract bluntish. Probably only a slight variety of *V. scutellata.*

Small-shielded Speedwell. Fl. June, Aug. Clt. 1824. 1 to 2 *feet.*

148 V. CAROLINIA^NA (Poir. encycl. 8. p. 520.) g/*h*oU*\ stem erect, dichotomous at top; leaves ovate-oblong, °y nearly entire: lower ones petiolate. %. W. H. Native Carolina, in water. Leaves rather fleshy, 6 lines long a broad. Racemes loose, leafy ; bracteas petiolate, longer t the pedicels. Calycine segments ovate. Capsule obcorda Perhaps this is *V. scutellata* of American authors.

Carolina Speedwell. Fl. June, July. Clt. 1821. PL 2 1 foot.

SECT. VIII. BECABU'NGA (the name *Becabunga* comes the German Bach-pungen ; bach meaning a rivulet; in >o• shire and Norfolk a beck.) Capsule inflated', entire, or emarginate, subdidymous.. Seeds oblong, or globose. Aquatic F

*H0-V. •DJGCJISTJNGA (Lin. spec." p.-if\> glabrous, stems procumbent, rooting at the base ; leaves elliptic, oval oblong, obtuse, on short petioles, crenately serrulated or entire racemes loose, axillary. %. W. H. Native throughout Europe, Siberia, and North America, in ditches and rivulets clear water, and in running streams ; plentiful in Britain. Nipaul, Hamilt., and Kanaour, Royle. Vahl, enum. 1. P» ?. Fl. dan. t. 511. Curt. fl. lond. 2. t. 3. Woodv. t. 7. Sm engl. bot. t. *655.* Svensk, bot. t. 127. V. punctata, D. prod. fl. nep. p. 93.—Bocc. mus. p. 22. t. 6.—Riv. mon. ir 100. f. 1. Stems terete. Leaves running into the short petioles. Bracteas narrow, lanceolate, shorter than the pedice Calyx 4-parted. Corolla blue, veined with red. Capsule tire, or hardly emarginate. The Nipaul plant differs from European, in the bracteas and calyxes being obtuse ; a the capsule being entire. This plant is considered median being included in *Pharmacopoeias.*

Brook-lime Speedwell. Fl. May, July. Britain. PL \ *° 7

150 V. TENUIS (Ledeb. fl. ross. alt. ill. t. 217. fl. alt# 39.) stem erect, strict, and are, as well as the leaves, g leaves oblong-lanceolate, acutish, serrulated ; racemes ax intermediate ones opposite; calyx 4-parted; cap obovate, obtuse, entire. ©. H. Native of the *No* Persia. Leaves opposite, nearly connate. Racemes opposite. Pedicels twice as long as the bracteas minute, globose, not flat on one side, and convex on t as in F. *scutellata.*

Slender Speedwell. PL \ to 1 foot.

151 V. ANAGALLOIDES (Guss. pi. rar. p. *5. t. 3.)* « jebrous; leaves linear-lanceolate, stem-clasping, entire lateral; calyx 4-parted, about equal in length *to* capsules elliptic, obtuse. 0. H. Native of the Calabria, in low marshy places near Catanzarc at bottom. Pedicels longer than the bracteas^ a blue or white. Capsule rather emarginate. feet Very like *V. anagdllis.*

*J*r.* /J; stem downy ; hairs glandular at top.

J?52 V*** Speedwell. PI. \ to i foot.

ANAGA'LLIS (Lin. spec. p. 16.) glabrous, erect, root-acute at the base; leaves oblong-lanceolate or lanceolate, serrated, flat-stemclasping or subconnate ; racemes opposite, (1> 10nger than those of *V. Becabunga.* ©. W. H. and Native of Europe, Siberia, Levant, Virginia, Japan, in rivulets and muddy water also of Nipaul, Silhet, Hindostan Kamaour. Vahl, enum. 1. p. 69. Fl. dan. t. 903. Hil. Smith, engl. bot. t. 721.? 781. St. Roxb fl. 37, t# 6, Svensk> bot. 127. V. undulata, Wall, in sessil' P# *4^' Stem subtetragonal; superior leaves lower s pale blue, or white lined with blue. Calycine lobes roundish, emarginate.

Var. *minor* (Vahl. I.e.) stem and leaves much shorter.

Var. *P,* pusflla, Poir.— Tabern. icon. 1718.

rima (Schmidt, boh. cent. 1. no. 23.) leaves entire; stem erect; racemes terminal and axillary ; raceme solitary ; leaves lanceolate, crenated.

^mpernell-\\ke Speedwell. Fl. July. Britain. PI. 1 to 2

COCHLIDIOSPE'RMA (from *KOX^OQ, kochlos,* a shell; reference to the shape of the Capsule compressed, obcordate. Seeds naviular JLA. leaves alternate, with axillary 1-flowered pedicels. Floral leaves ovate, sessile, oblong or lanceolate, quite entire or serrated. ?*) Parted, exceeding the corolla; capsule 2-ob* longer than the style, and shorter than the calyx. Native of the Himalaya, on Mount Choor, Royle ; in corn fields ; Caucasus, on Mount Schahdagh, Vahl, symb. 1.p. 1. Rchb. icon. 645.—Buxb. cent. 1. t.36. 'p,

Two leaves longer than the peduncles. Corolla blue.

Pi. I *I^"-capsuled Speedwell. Fl. April, May. Clt. 1819.

RESTIS (Lin. spec. p. 18.) stem procumbent, ^mes leaves petiolate> ovate, crenately-serrated ; pedicels on an the capsule, reflexed in the fructiferous state; obcordate: lobes turgid, approximate, obsolete. keefd of Asia Europe, in cultivated fields ; fond. Saharampore. Vahl, enum. 1. p. 80. Curt. fl. cent. 3. Borrer, engl. bot. suppl. 2603. Rchb. icon. P^hella, P *U 227, f_ 44 - St_ HiJ_ Pi- fr_ P- 39- <• 3- V_ and Wright ex D_ c_ fl* fr_ SUPPL 308_ Corollas Pale blue, shorter than the calyx. Seeds about 6 in each cell. Speedwell. FL March, July. Britain. PL procumbent.

POLI'TA (Fries, ex Borrer, in engL bot. supp. under Veronica, segments proximate, « t. 19.) procumbent, hairy; leaves cordate-ovate, deeply serrated, shorter than the peduncles; calycine five ovate, acute; capsule obcordate : lobes turgid, approximate, keeled ; seeds many in each cell. ©. H. Native of Caucasus, Constantinople, and Kaki Tartary. Particularly in the North, in gardens. Rchb. icon. 247, sub *V. agrestis,* Smith, engl. bot. 783. Corolla bright blue, shorter than the calyx.

*** Speedwell. FL March, July. Britain. PL procumbent.

^LIFORMIS (Vahl, enum. 1. p. 82.) stem procumbent, filiform, Uncles, terminal, villous ; leaves roundish-cordate, crenated: petioles cordate, long, reflexed in the fruit-bearing state ; capsule Vot,,^ir^her turgid; calyx 4-cleft, unequal. ©. H. Native of the south of Europe and Caucasus. Bieb. fl. cauc. 1. p. 39. Rchb. icon. t. 644. Ver. orientalis foliis hederae terrestris, flore magno, Tourn. cor. 7.—Buxb. cent. 1. p. 25. t. 40. f. 1. Leaves furnished with scattered pili. Calycine segments lanceolate. Corolla large, pale blue. Stems long, procumbent. Perhaps the same as *V. Buxbaumii*

Filiform-stemmed Speedwell. Fl. May, July. Britain. PI. trailing.

157 V. BUXBAU'MII (Tenore, fl. neap. p. 7. no. 7. t. 1.) procumbent, hairy; leaves ovate-cordate, deeply crenated, petiolate ; peduncles drooping in the fructiferous state, rather longer than the leaves ; corollas larger than the calyx, which is 4-parted ; capsule compressed, 2-lobed : lobes divaricate, keeled. ©. H. Native of Europe, in fields; in England, in Kent. Rchb. icon. t. *268.* V. Tournefortii, Gmel. fl. bad. 1. p. 39. V. hispida, Hort. V. cymbalariaefolia, Schmidt. V. agrestis, var. Byzantina, Smith, fl. grsec. t. 8. V. Persica, Poir. encycl. 8. p. 542.—Buxb. cent. 1. p. 22. t. 40. f. 6. Much larger than *V. agrestis.* Stems much branched, bifariously pilose. Corollas blue.

Buxbaum's Speedwell. Fl. April, June. Clt. 1800. PI. procumbent.

158 V. GLAU'CA (Sibth. et Smith, fl. graec. 1. p. 5. t. 7. prod. 1. p. 9.) procumbent, hairy; leaves cordate, deeply serrated, petiolate : peduncles capillary ; calyx 4-cleft, with toothed segments. ©. H. Native near Athens, on Mount Hamettos. Much branched. Stem bifariously pilose. Leaves glaucous. Corolla blue, bordered with white, larger than the calyx.

(7/tfwc0MS-leaved Speedwell. PI. prostrate.

y(59 V. ARVE'NSIS (Lin. spec. p. 18.) erect, hairy; lower leaves petiolate, cordate-ovate, serrated ; cauline ones crenated ; floral ones lanceolate, sessile, entire, longer than the peduncles ; flowers nearly sessile ; calyx 4-cleft, unequal; capsule obcordate, compressed. 0. H. Native of Europe and North America, in cultivated fields. Vahl, enum. 1. p. 81. Fl. dan. t. 515. Curt. fl. lond. 2. t. 2. Smith, engl. bot. t. 734. Drev. et Heyne, 2. t. 11. V. acinacifolia, Willd. enum. no. 41. V. Romana, Schmidt, fl. boh. no. 45. V. polyanthos, Thuill. par. ed. 2. p. 9. Alyssum, Column, phyt. p. 28. with a good figure. Corolla smaller than the calyx, pale blue.

Corn-field Speedwell. Fl. April, July. Britain. PI. \ to J foot.

160 V. PULCHE'LLA (Bernh. ex Rcem. et Schultes, syst. 1. p. 126.) procumbent, pilose; leaves petiolate, broad-cordate, deeply crenated; peduncles filiform, hardly shorter than the leaves ; calyx 4-cleft, unequal. ©. H. Native country unknown. Habit *of V. Persica,* but smaller and less pilose ; the leaves more oblong and firmer. Corolla shorter than the calyx, white, except the upper segment, which is rose-coloured.

Pretty Speedwell. Fl. April, May. Clt. 1819. PL procumbent.

161 V. CERATOCA'RPA (Meyer, verz. pflanz. p. 106.) puberulous ; stems branched, diffuse; leaves ovate, acutish, serrated; peduncles longer than the leaves; calyx 4-parted, with lanceolate, acute, nearly equal segments ; capsule compressed, broadly obcordate: lobes lanceolate. ©. H. Native of Caucasus, in meadows, between Sallian and Leukoran. Allied to *V. fillformis.*

Horned-capsuled Speedwell. PL diffuse.

•462 V. DI'DYMA (Tenore, prod. fl. neap. p. 6.) procumbent? downy; leaves deeply crenated ; peduncles reflexed in the fructiferous state; capsule didymous, roundish. ©. H. Native of Naples.

Didymous-fruited Speedwell. PL procumbent.

163 V. AMŒNA (Stev. in Bieb. fl. cauc. 1. p. 12.) spreading,

hairy ? leaves ovate, crenated ; floral leaves oblong, quite entire, shorter than the peduncles; calyx 4-cleft, with linear segments. ©. H. Native of Iberia, in fields. Size of *V. arvensis;* but the floral leaves are dissimilar to the cauline ones, minute and quite entire. Corollas large, blue, with a white bottom. This is said to be the prettiest species of the genus.

Pleasant Speedwell. Fl. April, May. Clt. 1824. PI. procumbent.

164 V. ACINACIFOLIA (Lin. spec. p. 19.) erectish, glabrous; lower leaves petiolate, ovate, serrated or crenated: floral ones nearly sessile, about equal in length to the peduncles ; calyx 4-cleft, unequal. ©. H. Native of Germany, France, and Italy, in muddy fields ; and of Chili, about Conception. Vahl, enum. 1. p. 85. Willd. spec. 1. p. *75.* exclusive of *V, prcecox,* V. Romana, All. pedem. t. 85. Poit. et Turp. fl. par. 1. p. 22. t. *33.* f. 3. V. Burdigalensis, Laterr. fl. bord. ed. p. 87.—Bocc. mus. p. 19. t. 102.—Vaill. par. t. *33,* f. 3. Stem drooping at top, usually branched. Leaves sessile, connate, usually glabrous : floral ones smaller and narrower. Corolla pale blue, marked by more obscure veins. Capsule obcordate, rather turgid, compressed.

Acinus-leaved Speedwell. Fl. April, May. Clt. 1788. PI. \ to 1 foot.

165 V. PR/E'COX (Allioni, auct. p. 5. t. 1. f. 1.) the whole plant clothed with glandular and simple hairs; stem erectish ; lower leaves petiolate, cordate-ovate, serrated : floral ones nearly sessile, shorter than the peduncles, which are incurved in the fructiferous state; calyx 4-cleft; capsule obovate, emarginate, turgid. ©. H. Native of France, Germany, and Italy, in fields. Vahl, enum. 1. p. 40. D. C. fl. fr. 2402. Willd. spec. 1- p. 76. under *V, acinacifolia.* V. ocymifdlia, Thuil. fl. par. p. 10. no. 18. V. segetalis, Pers. in Ust. ann. 14. p. *37,* V. acinacifolia, Schleich. cat. p. *53,* V. viscida, Waldst. mss. Stem branched at the base. Leaves purplish beneath. Flowers small, blue. Capsule downy. There is a variety of this species almost glabrous ; and another with more or less deeply cut leaves. Habit of *V. triphylla.*

Early Speedwell. Fl. March, May. Clt. 1775. PI. A foot.

166 V. CYMBALA'RIA (Bertol. soc. med. d em. di gen. 1. p. 74. pi. gen. p. 3. giorn. de litt. 2. p. 2. 1805.) procumbent, glabrous; leaves petiolate, reniformly subcordate, with 5-9, but usually 7 obtuse crenae or teeth, rather fleshy ; peduncles longer than the leaves ; calyx 4-cleft, equal, with ovate obtuse segments, spreading in the fructiferous state; capsule hairy, depressed, obcordate. ©. H. Native about Genoa, on garden walls; Island of Chio; Constantinople; Tunis, in fields. Sibjh. et Smith, fl. grace, t. 9. Viv. fragm. 1. t. 16. f. 1. V. cymbalariaefdlia, Vahl, enum. 1. p. 81. Gmel. tubing, p. 6. V. hedersefolia, /3, Lin. spec. p. 19.—Buxb. cent. 1. p. 25. t. 39. f. 2. bad. Corolla larger than the calyx, with a white limb and greenish-yellow throat. Cells of capsule 2-seeded.

C^&a/arm-leaved Speedwell. Fl. April, May. Clt. 1821. PI. procumbent.

167 V. HEDER^FOUA (Lin. spec. p. 19.) procumbent, downy; leaves petiolate, roundish-cordate, 5-lobed : upper ones 3-lobed; peduncles shorter than the leaves; calyx 4-lobed, tetraquetrous, and conniving in the fructiferous state; calycine segments cordate, acute; capsule obcordate, turgid, few-seeded. ©. H. Native throughout Europe, among rubbish, in gardens and fields; plentiful in Britain. Vahl, enum. 1. p. 82. Smith, engl. bot. t. 784. Curt. fl. lond. 2. t. 1. Poit. et Turp. fl. par. 1. p. *23.* t. 26. Fl. dan. 428. Leaves reniformly cordate, rather fleshy. Corolla pale blue, sometimes white.

Far. /J, *Lappago* (Schmidt, fl. boh. no. 39.) leaves alternate, cordate, acutish, 3-4-lobed, petiolate ; stem erectish, much branched; peduncles axillary, shorter than the petioles. 0, H. Native of Bohemia. Calycine segments hastate. Flowers small, red. This variety remains constant in cultivation.

Ivy-leaved Speedwell. Fl. March, June. Britain, rl. Procumbent.

168 V. TRIPHY'LLOS (Lin. spec. p. 19.) clothed with clammy down; stem erect, spreading ; lower leaves undivided : rm ones digitately parted : superior ones trifid; peduncles K> than the calyx, length of leaves; calyx 4-cleft. ©. H. of Europe, in fields ; plentiful in some parts of Britain. enum. 1. p. *83.* D.C . fl. fr. no. 2405. Curt. lond. 4. t. Fl. dan. 627. Smith, engl. bot. 26. Sibth. et Smith, fl. gr 1. p. 8. t. 10. V. digitata, Lam. fl. fr. ed. 2d. vol. 2. p. but not of Vahl.—Lob. icon. 464. f. 1. Lower leaves late: upper ones sessile. Corolla small, blue, veiny; white. Capsule didymous, subciliated, turgid, obcordate. convex on one side and flat on the other.

Three-leaved Speedwell. Fl. April, May. Britain. to \ foot.

169 V. DIGITATA (Vahl, symb. 1. p. 84.) stem branched; leaves all digitately parted; flowers sessile; 4-cleft, length of capsule. ©. H. Native of Spain, and Montpelier. Willd. spec. 1. p. *75.* exclusive of V. succuien Schmidt, which is referrible to *V, verna.* V. chamsepithyoia Lam. ill. 1. p. 47. Branches height of stem. Leaves late : lower ones trifid, with ovate segments; the latera ments narrower and shorter : lower floral ones 5-parteu, 3-parted, with linear segments. Capsule obcordate.

Digitate-leaved Speedwell. Fl. May, July. Clt. A PI. *I* foot.

170 V. VE'RNA (Lin. spec. p. 19.) erect, downy; leaves pinnatifidly 3-5-parted : upper floral ones undivided; pedicels than the calyx ; calyx 4-cleft, unequal, with acute ©. H. Native throughout Europe, in exposed P tiful in some parts of Britain. Vahl, enum. 1. p. *S3.* t. 252. Smith, engl. bot. t. 25. Poit. et Turp. fl. P 21. t. 22. V. Dillenii, Crantz, austr. p. 352.— Dill, geiss. pend. p. *38.* V. pinnatifida, Lam. ill. t. *22.* f. 4. V. suelenta, Schmidt, et All. fl. ped. t. 22. f. 4. Peduncles shorter than the bracteas. Corolla small, blue, with a ring. Capsule obcordate, compressed, ciliated. Seeds mini scrobiculate.

Far. /3 ; leaves almost quite entire. ©. H. V. polygonoid Lam. ill. 1. p. 47. V. Bellardi, All. pedem. 1. p. *77,* t. 1. Hairy. Flowers solitary, nearly sessile. Leaves oblong, lanceolate, or linear. Stem simple, bearing flowers bottom to top. Corolla smaller than the calyx.

Spring Speedwell. Fl. April, May. Britain. PL

171 V. DEPRE'SSA (Kit. in Schultes, fl. austr. ed. #d. P branches procumbent; leaves ovate, nearly sessile; sessile, aggregate. ©. H. Native of Hungary, in dry P tures.

Depressed Speedwell. PI. procumbent.

172 V. RENIFORMIS (Rafin. journ. de bot. 1808. 228.) procumbent, hispid ; leaves sessile, reniform, crenate lous; flowers nearly sessile; calyx 4-cleft, with ovate segments. ©. H. Native of New Jersey, in sandy Leaves alternate, nearly sessile. Corolla whitish blue, glabrous, compressed.

Reniform-leaved Speedwell. PL- procumbent.

173 V. REVENS (Clar. in D. C. syn. fl. gall, *nov* 3. p. 727.) creeping, glabrous ; leaves ovate, rounded about equal in length to the peduncles. ©• Corsica, on the mountains. Lois. fl. gall. t. 1. fl. cors. and perhaps All. ped. t. *22,* f. 1.? Leaves nearly sessile. Calyx 4-cleft, equal; lanceolate, obtuse. Corolla pale purple, twice

calyx. Capsule obcordate, ciliated, longer than the calyx, Seeds many, smooth) rather flat> »

\U\g Speedwell. Pl. creeping.

subserr PEREGRINA (Win. spec. p. 28.) erect, glabrous; leaves cleft, wi[illegible]; flowers sessile, shorter than the leaves; calyx 4-capsule [illegible]ments, which are a little longer than the North A[illegible]. Native of Europe, in gardens and fields; Fl. dan. t. [illegible] (Ca> and Buenos Ayres, Vahl> enum. p. 85, 3. y p[illegible]. V. Marylandica, Murr. comm. gött. 1782. t. car. n' fli[illegible]a> Lin. mant. p. 317. V. Caroliniana, Walt. fl. fl. f[illegible]. V. carnosula, Lam. ill. 1. p. 47. V. lsexvis, Lam. p. 27[illegible]. 2d. v? L. 5. p. 44. V. pallescens, Gater. fl. montaub. [illegible]ne "int[illegible] Stem Simple or branched. Radical leaves obovate, run-obcorrl,? [illegible]the Peduncles. Corollas small, blue or white. Capsule r> at.e, compressed.

©• H. 9. a. Pens*s; stems downy; calycine segments broader. ar nhar V[illegible]. 6 of Mexico» near Xalapa, in forests of *Liquid-*P-389. Xalapensis, H. B. et Kunth, nov. gen. amer. 2. For

I footT Speedwell. H. March, June. Clt. 16S0. PL \ to 175

stem crle' ^HILLENSIS (H. B. et Kunth, nov. gen. 2. p. 390.) ^ous • fl *>In^' downy; leaves oblong-spatulate, serrated, glain the Vur[illegible] 0U as nearly sessile, shorter than the leaves, reflexed Segments, Ctl(r^us state; calyx 4-parted, with lanceolate-acute of Quito, bear[illegible] ajre l0nger than the capsule. ©• H. Native Sessile, otn l0j at the altitude of 1340 hexapods. Leaves ^l[illegible] USG ora ones alternate, narrow. Corolla white. Chilla Speedwell. PL creeping.

t *Species not sufficiently known.*

176 V. E.°ELEXRI (Roem. etSchultes, syst. 1. p. 127.) stem erect> downy cauline leaves quite entire, opposite, or 3 in a [illegible] Nativ[illegible] oneS alternate> shorter than the peduncles. ©. recuil- d' n? COUntry unknown. V. nova, Koeler de veron. in foefer'J[illegible] Mayence, p. 184. Rcem. coll. 1. p. 306.

177 V Speedwel!' M-erect. •

en>. *l/^o^*FbLlA (Ruiz. et Pav. fl. per. 1. p. 6. Vahl, orkiculari[illegible]') P*ant bairy; stems slender, creeping; leaves cWice as Inn[illegible]rm> crenated> petiolate, subpeltate; peduncles [illegible]ertls Purv[illegible] the Petioles. % • G. Native of Peru, in bogs, fmts. Corolla Leaves 2 or s> but usually solitary at the tube* Ther[illegible] ar o Sy Purple colo«r- Stamens 3, length of 8tai*ens. d[illegible] a vane ty of this having a 5-cleft corolla, and 4 Rou*d~leni[illegible] not a species of *Veronica.*

«ved Speedwell. PL creeping.

† † The following names occur in the gardens, but they are pr/b[illegible] r abty synonymous with those described above.

8. *V. AVeronic[illegible]lia, Moench. 2. V. melancolica, Hort. par. natifida, Willd. Lejeune. 4. V. Pannonica, Mill. 5. V. pinjana, Schor[illegible] 6*V. Padana, Lejeune. 7. V. Waldstein-Call. Th[illegible] V> Pr8ealta» Hort.

ore gener[illegible] e nai"dy> herbaceous, perennial species of *Veronica* Gfied .. % [illegible]un a ^rown ln flower borders, for which they are well Th tUre> anf? oUnt o^ ^eir beauty; they are of the most easy 0[illegible]le annual -^ rea^y increased by division at the root, ^ groun in'nds, having rather a weed-like appearance, are N[illegible] be subotanical gardens; the seeds of them only re-[illegible] Al oiJ[illegible] in ^le °Pen ground. The species natives of si er tende[illegible] • Piemen's Land, and New Zealand, being [illegible]kind' re^uire t0 be treated as greenhouse plants; the / div;.. as of these are propagated by cuttings; the others °i the root.

LXVII. DIPLOPHY'LLUM (from *hirXoog, diploos,* double; and *(pvWov, phyllon,* a leaf; in reference to the two-leaved calyx.) Lehm. in berl. mag. an. 4. p. 2.—Veronica species, Stev.

LIN. SYST. *Didndria, Monogynia.* Calyx of 2 sepals, compressedly closed; sepals cordate, serrated, 2-lobed. Corolla subrotate, 4-cleft; the 2 opposite lobes the smallest. Stamens 2, shorter than the corolla, without any rudiments of sterile ones; anthers didymous. Stigma simple. Capsule roundish, compressed, obcordate, 2-celled, 4-valved, 4-seeded.—An annual plant, with the habit of the species of *Veronica* belonging to section *Cochlidiosperma.* Stems many, subdichotomously branched, decumbent, nearly terete, furnished with 2 rows of spreading hairs. Leaves cordate-ovate, bluntly serrated, pale green, hairy. Pedicels solitary, axillary, declinate while bearing the fruit, about equal in length to the leaves, or exceeding them a little. Calyx downy, finely ciliated. Corolla pale blue, much shorter than the calyx. Capsule inclosed, ex Bieb.; glabrous, ex Lehm. Seeds large, wrinkled, black. Navicular.

1 D. VERONICIFORME (Lehm. 1. c.) 0. H. Native of shady woods about the Cuban. Veronica, Cristagalli. Stev. in mem. soc. gorenki, icon. ined. Lin. trans. 11. p, 408. t. 31. Bieb. suppl. p. 19. Link, enum. 1. p. 27.

Speedwell-formed Diplophyllum. FL April, May. Clt. 1813. PL trailing.

Cult. The seeds of this plant only require to be sown in early spring, in the open ground. A dry light soil suits it best.

LXVIII. LEPTA'NDRA (from *XETTTOG, leptos,* slender; and *avnp avSpog, aner andros,* a male; in reference to the slender stamens.) Nutt. gen. amer. 1. p. 7. Veronica species, Lin. and others. Veronicastrum species, Heist, helmst. 205. Moench.

LIN. SYST. *Bidndria^ Monogynia.* Calyx 5-parted, bibracteate; segments acuminated. Corolla tubularly campanulate; limb 4-lobed, sub-ringent: lower segment the narrowest. Genitals exserted; filaments and base of the tube of the corolla downy. Capsule ovate, acuminated, 2-celled, many-seeded.—Robust plants, with broad, rather wrinkled, verticillate, serrated leaves, and terminal, solitary spikes of flowers, and sometimes there are short spikes from the axils of the upper leaves.

1 L. VIRGINICUS (Nutt. 1. c.) leaves 4-5 in a whorl, ovate-lanceolate, petiolate, acuminated. 1/. H. Native of Virginia and Japan. ? Veronica Virginica, Lin. spec. p. 13. Vahl, enum. 1. p. *56.* Hoffm. in comm. gott. 15. p. 112. t. 1. phyt. bl. p. *89.f t.* 9. f. 1. Thunb. jap. p. 20.? Veronicastrum album, Mtench.—Knip. cent. 10. p. 97.—Plukn. phyt. t. *70.* f. 2. Stem beset with rufous hairs. Lower leaves 5 in a whorl: upper ones 4, rarely 3, dirty green, downy. Corollas white. Capsule tetragonal, 4-valved. Seeds wrinkled.

Var. /3, incarnatus; flowers purple, or flesh-coloured. %, H. Veronica Virginica, /3, Pursh. fl. amer. sept. 1. p. 10.

Virginian Leptandra. Fl. July, Aug. Clt. 1714. PL, 4 to 5 feet.

2 L. SIBI'RICUS (Nutt. 1. c.) leaves 5-6-9 in a whorl, lanceolate, sessile, acuminated. %. H. Native of Dauria. Veronica Sibirica, Lin. spec. p. 12. Vahl, enum. 1. p. *55.—Amm.* ruth. p. 20. t. 4. Veronicastrum rubellum, Moench. *Stem* hairy. Leaves *2-3* inches long, much broader than those *of L. Virginicus.* Corollas blue.

Siberian Leptandra. Fl. July, Aug. Clt. 1779. PL 4 feet.

3 L. MEYE'RI, glabrous; leaves scattered, nearly linear acute, sharply serrulated; raceme terminal, dense; corolla tubular. %. H. Native of Dahuria, in humid meadows. Veronica tubiflora, Fisch et Meyer, rem. hort. petrop. 1836. p. *53.* Calyx unequal. Corolla blue; segments oblong, bluntish. Capsule small oblong. Seeds minute, elliptic.

Meyer's Leptandra. Fl. ? Clt. 1836. PI. 1 to 2 feet.

Cult. The species grow well in common garden soil, but prefer peat or vegetable mould. They are readily increased by division.

LXIX. P#:DERO^NTA (a name applied by the ancients to a species *of Acanthus.)* Lin. gen. no. 26. Schreb. gen. no. S3. Juss. gen. p. 120. ed. Usteri. p. 135. Bonarota, Michel, gen. 15. Verónica, Spec. Lin. spec. ed. 1st.

LIN. SYST. *Didndria, Monogynia.* Calyx 5-parted: segments linear. Corolla tubular, sub-ringent; limb bilabiate: upper lip entire, or emarginate : lower one trifid. Genitals exserted ; filaments filiform. Capsule ovate, 4-valved, 2-celled, opening at top. Seeds roundish.—Dwarf alpine herbs with opposite leaves, and axillary, or terminal spicate flowers.

1 P. AGE'RIA (Lin. syst. p. 61. mant. 171.) stem leafy; leaves nearly sessile, unequally and sharply serrated : superior leaves long-acuminated ; calyxes length of corolla ; capsule ovate-oblong, acuminated. %. H. Native of Carinthia, Carniola, and Italy, among rocks. Willd. spec. 1. p. *77.* P. lutea, Lin. suppl. p. 84. P. Bonarota, Jacq. hort. vind. 2. t. 121. P. urticaefblia, Brign. fasc. pi. forog. p. 8. Wulfenia Agèria, Smith, in Lin. trans. 6. p. 96. Bonarota chamaedrifolia, Scop, cam. ed. 2. vol. 1. p. 22. Lower leaves the smallest, roundish : the upper ones lanceolate, acuminated : the middle ones longer than the others, ovate-lanceolate. Raceme spicate, terminal. Bracteas twice as long as the pedicels. Corolla sulphur coloured ; throat tomentose; superior lip bifid, or emarginate (fig. *55).*

FIG. *55.*



Ageria Psederota. Fl. May, June. Clt. 1824. PI. 1 to lj foot.

2 P. ZANICHE'LLI (Brign. fasc. pi. forog. p. 9.) stem leafy ; leaves nearly sessile, subcordate, serrated : lower ones roundish obtuse: superior ones ovate, acuminated ; calyx glabrous, one half shorter than the corolla; capsule ovate, obtuse. 1/. H. Native of Carnia, on the Alps near the limits of perpetual snow. Bonarota montana Italica chamaeMrys folio, minus crenato, spica lutea, ex Monte Cavallo, Michel, gen. p. 19. no. 3. Leaves less deeply and irregularly serrated than *P. Ageria,* pilose. Raceme | to 1 inch long, dense. Bracteas hardly longer than the pedicels. Corolla yellow ; throat glabrous; upper lip entire.

Zanichell's Paederota. PI. 1 to 3 inches.

3 P. BONARO'TA (Lin. spec. p. 20. syst. p. 61.) stem leafy; leaves petiolate, roundish-ovate, serrated; calyx shorter than the corolla ; capsule acuminated. 1£. H. Native of Austria and Carniola, on the alps. Jacq. austr. 5. p. 49. t. *39.* Brign. fasc. pi. forog. p. 6. Wulfenia Bonarota, Smith, in Lin. trans. 6. p. *96.* P. caerulea, Lin. suppl. p. 84. Paederota, no. 1, Michel, gen. p. 19. t. 15. f. 1. Verónica Bonarota, Lin. spec. ed. 1st. p. 11. Bonarota chamaedrifolia, Scop. earn. ed. 2. vol 1. p. 22. Racemes 1 to 1| inch long. Calyx hairy. Corolla violaceous; throat glabrous ; upper lip undivided.

Bonarota! s Peederota. Fl. May, June. Clt. 1818. **FLj** foot.

4 P. CHAIVLEDRIFO'LIA (Brign. fasc. pi. forog. p. 9.) stem leafy; leaves nearly sessile, roundish, obtuse, serrated; calyx tomentose, two of the segments shorter than the rest. *U 'f',* Native of Carnia. P. Bonarota, Vittm. suinm. 1. p« 36. &*0,* narota, no. 2. Michel, gen. p. 19. t. 15. f. 2. Leaves downy. Bracteas length of pedicels. Corolla violaceous ; upper lip undivided, and sometimes emarginate.

Germander-leaved Paederota. PI. 2 to 3 inches.

Cult. The species of *Pcederota* are pretty little alpine o rock plants. They should be grown in pots, and placed among other alpine plants. They are increased by division and seeds.

LXX. CALORHA'BDOS (from fcaXoe, *kalos,* beautiful; and *pafiSog, rhabdos,* a twig, in reference to the beauty of the plan.; Benth. scroph. ind. p. 44.

LIN. SYST. *Didndria, Monogynia.* Calyx 5-parted. Corolla (r-tubular, incurved ; limb erect, obliquely 2-3-cleft: lower segment the smallest. Stamens 2, inserted at the sides of upper corolline segment, without any vestiges *of* lower ones anthers 2-celled ; cells parallel, confluent at top. Stigma hardly thickened. Valves of capsule bipartite. Seeds numerous, girded by a curled membrane.

1 C. BRUNONIA'NA (Benth. 1. c.)—Native of Nipaul. Verónica ? Brunoniana, Wall. cat. no. 405. An erect, glabro«s» nearly simple herb, 1 to *2* feet high. Leaves oblong-lanceolate, deeply and acutely serrated, narrowed into the short petioles the base. Spikes half a foot long. Flowers sessile, glomera

Brown's Calorhabdos. P. 1| to 2 feet.

Cult. For culture and propagation see *Leptandra.*

LXXI. WULFE'NIA (so named in honour of the Rev. Francis Xavier Wulfen, author of " Plantaa Rariores Carinthiac in Jacquin's Miscellanea.) Jacq. misc. 2. p. 62. t. 8. & gen. no 34. Smith, in Lin. trans. 6. p. 96. Benth. in scrop • ind. p. 46, but not of Wall. *Q0**

LIN. SYST. *Didndria, Monogynia.* Calyx 4-5-parted. rolla tubular, declinate ; limb 4-5-cleft; segments straign hardly spreading : upper one emarginate, or bifid: lateral entire : lower one entire, or broadly crenated. Stamens placed at the sides of the upper corolline segment, destitu e any vestiges of lower ones. Anthers 2-celled; cells at d confluent at apex. Style simple ; stigma truncate, or thj f and 2-lobed. Valves of capsule septiferous in the middle, at apex.—Almost stemless herbs. Radical leaves p Scapes naked, many-flowered, erect. Flowers unilateral, p dulous, on short pedicels, solitary in the axils of the bracteas.

1 W. AMHERSTIA'NA (Benth. scroph. ind. p. 46.) leaves long, narrowed at the base, doubly and deeply crenated; of corolla straight; segments of the limb all acute. Native of Kamaon, Wall.; Kanaour, Royle. Psederota herstiana, Wall. cat. no. 410. Habit of *W. Carinthiaca.* ers blue.

Lady AmhersVs Wulfenia. PI. lj foot.

2 W. CARINTHI^ACA (Jacq. misc. 2. p. 62. t. 8. f. 1- 1. t. 2.) leaves oblong, narrowed at the base, doubly cren tube of corolla gibbous above the base; segments roundish: lower one crenated. 1^. H. Native of on the alps. Lin. syst. p. 865. Reiner, et Wolffe 1. p. *73. t.* 1. Sweet, fl. gard. vol. 3. icone. Paederota Lam. ill. t. 13. f. 2. Flowers blue.

Carinthian Wulfenia. Fl. July, Aug. Clt. 1817. foot.

3 W. RENIFORMIS (Dougl. mss. ex Benth. scroph. leaves reniform, doubly crenated: tube of corolla segments of the limb roundish: lower one crenatea. Native of North-west America, on mountains near Columbia. Flowers blue. ?

Reniform-leaved Wulfenia. PL 1 foot.

Cult. The species of *Wulfenia* are very showy while in flower, and are well fitted for decorating borders. They grow in many light rich soil, and are readily increased by seeds. A duplicate plant, or two of each kind should be sown in pots, so that they may be placed under shelter with more ease in winter, as they are liable to rot at that season, if they are allowed to remain in the open air.

LXXII. GYMNA'NDRA (from *yvfxvos, gymnos,* naked; and *aner andros*, a male.) Pall. itin. 3. p. 712. t. A. f. 1. Appendix no. 60. Willd. in mag. gess. naturf. freund. berol. 3. p. 396. t. 9. f. 1. Willd. herb. no. 258. Benth. scroph. ind. p. 46.—Lagotis, Gaertn. nov. comm. petrop. 14. p. 533. t. 18. f. 2. Veronica species, Gmel. Bar. Asia species, Lin. fil.

SYST. *Diandria Monogynia.* Calyx spathaceous, cleft or bipartite; segments entire, or toothed. Corolla bilabiate; upper lip entire, emarginate, or bifid; under one sub 2-4-cleft; segments all flat. Stamens 2, placed at the sides of the upper lip, without any vestiges of lower ones. Anthers 2-celled. Ovarium 2-celled. Stigma thickened and capitate. Capsule 2-celled; cells 1-seeded or sub-confluent at apex. Seeds attached to the dissepiment by a little curved, excavated, dry, membranaceous wing.—Erect, glabrous herbs, becoming black on drying. Stems many, simple, rising from the neck. Radical leaves petiolate: cauline ones smaller: the uppermost ones usually scale-formed. Flowers sessile in the axils of the bracteas, crowded into terminal spikes.

1. G. UNAWURE'NSIS (Royle, mss. ex Benth, scroph. ind. p. 47.) radical leaves ovate, rather deeply toothed, rounded, or narrowed at the base; stamens very short at the base of the upper lip of corolla; style equal in length to the stamens; lower one of the corolla is probably always 4-cleft. Said to be an: f... of the coro^a. Native of Kanaour (Kunawur), Royle. more of G. *Gmetini,* Cham, et Schlecht, but the spike is *Kal...* Corollas blue.

£a£«our Gymnandra. PI. 1 foot.

2. G. KASHMERIANA (Royle fill. bot. himal. t. *73.* f. 3.) radical leaves long wavy, coarsely crenated, and quite entire, narrowed at the base; spike short, ovate; corolla incurved at the top, rather exceeding the superior lip; style shorter than the stamens. V. H. Native of Cashmere, Royle. Corolla blue. Cashmere, of corolla usually bifid.

3. G. Gmelini (Gymnandra, Cham, et Schlecht, in Linnsea, 2. p. 561.) radical leaves oblong, obtuse at the base, roundish, or elongately-ovate, rather attenuated at the base, coarsely and unequally crenated; stamens not above half the length of the superior lip; style shorter than the stamens, if. H. Native of Kamtschatka, Bhering's Island, and most of the Aleutian Islands. G. renifolia, Willd. herb. no. 258. G. dentata, Willd. 1. c. p. 394. t. 9. f. 4. herb. no. 260. G. gracilis, Willd. 1. c. p. 394. t. 9. f. 5. G. elong&ta, Willd. 1. c. Gymnandra borealis var. inter Lenam et Oceanum lecta, Pall. itin. 3. p. 712. Plant slender, quite glabrous. Spikes slender. Corolla blue; lower lip 2-3-parted.

Steller's Gymnandra. PL J to 1 foot.

5 G. PALLA'SII (Cham, et Schlecht, 1. c. p. 564.) radical leaves roundish, or elongately ovate, acutish, attenuated at the base, quite entire, or obsoletely crenated; stamens not above half the length of the superior lip; style longer than the stamens, if. H. Native of Davuria, on the tops of the alps; and of arctic Siberia. C. integrifblia, Willd. 1. c. p. 392. t. 9. f. 1. herb. no. *255.* G. Altaica, Willd. 1. c. p. 395. t. 10. f. 7. herb, no. *257.* Gymnandra borealis ex arcto et alpibus Davuriae, Pall. itin. 3. p. 712. t. A. f. 1. Bartsia Gymnandra, Lin. fil. Flowers blue. Lower lip of corolla constantly 2-lobed. All the segments of the corolla are narrow.

Pallas's Gymnandra. PI. \ to 1 foot.

Cult. For culture and propagation see *Wulfenia,* p. 580. Pretty alpine plants.

§ *2. Stamens* 4, *didynamous.*

LXXIII. PICRORHi^ZA (from *irucpog, picros,* bitter; and /oi£a, *rhiza,* a root; in reference to the bitterness of the root.) Royle, ill. bot. himal. t. 71. Benth. scroph. ind. p. 47.

LIN. SYST. *Didynamia, Angiospermia.* Calyx campanulate, about equally 5-cleft. Corolla campanulate, shorter than the calyx, about equally 4-cleft; segments quite entire. Stamens 4, inserted at the throat of the corolla, nearly equal, diverging, much exserted; anthers 2-celled: cells confluent at top. Stigma hardly thickened. Valves of capsule septiferous in the middle, bipartite; dissepiment duplicate. Seeds nearly inclosed in an aril-formed vesiculose membrane.

1 P. KURRO'A (Royle, ill. bot. himal. t. 71.)—Native of Gosainsthan and Kamaon, Wall.; Kidarconta, Royle. Veronica Lindleyana, Wall. cat. no. 404. Herb almost stemless. Radical leaves oblong, narrowed into the petioles at the base, serrately crenated at top, or beset with a few short scattered hairs. Scapes naked, erect. Flowers sessile, densely spicate.

Kurroa Picrorhiza. PL \ foot.

Cult. For culture and propagation see *Wxdfenia^* p. 580.

LXXIV. GEOCHO'RDA (from y*, *ge,* the earth; and *XopSrj, chorde,* a cord; in reference to the whip-like, creeping stems.) Cham, et Schlecht, in Linnaea, 3. p. 11. Herpestis species, Spreng.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, equal. Corolla funnel-shaped; limb nearly equal, 4-parted. Stamens 4, nearly equal, a little exserted; anthers oblong, 2-celled; cells opposite, fixed by the middle. Capsule oblong, inclosed in the calyx, which is permanent, 2-celled, with a loculicidal dehiscence; dissepiment from the involute margin of the valves; placenta central, stipitate.—Root rather woody. Stems articulated, terete, prostrate, rooting at the joints. Leaves opposite or 3-4 in a whorl, furnished with young branches in the axils, hence the leaves appear fascicled; from obovate to roundish, cuneated, and tapering into the petioles, lobed; lobes crenated, or irregularly and sometimes doubly crenated, quite entire in the cuneated part. Young stems, nodi, petioles, peduncles, and calyxes covered with long, curled, articulated hairs. Pedicels axillary, twin from the 4-leaved nodi, and shorter than the leaves; the rest very variable in length, usually very short, filiform, terete, 1-flowered. Calyx bractless.

1 G. CUNE/TA (Cham, et Schlecht, 1. c.) F. Native of the South of Brazil, in the provinces of Rio Grande do

2 G. ... -jtiumnara. PL \ to *2 feet.*

leaves ... HELLEVRI (Cham, et Schlecht, 1. c. p. *563.)* radical ... acuminate, attenuated at both ends, but most so at the ... of the unequally and bluntly serrated; stamens almost the ... of the upper lip; style longer than the stamens. %. H. ... of Siberia, between the river Lena and the ocean, Steller; ... Lawrence, Cham.; and probably in the Island of St. ... G. minor, Willd. 1. c. p. *393.* t. 9. f. 3. herb. no.

Sul and Montevideo, Sello. Herpéstis glechomoides, Spreng. syst. 4. p. 234.

CuneatedAesLved Geochorda. PI. creeping.

Cult. For culture and propagation see *Wulfenia,* p. 581.

Tribe VI.

BUCHNE'RE^E (this tribe contains plants agreeing with Buchnera in the characters given below.) D. Don, in edinb. phil. journ. vol. 19. July 1835. Benth. in Hook, comp. 1. p. 356. Calyx tubular, striated, 5-cleft, or 5-toothed. Corolla salver-shaped ; limb 5-cleft, or unequally 4-cleft, sometimes bilabiate ; segments all flat. Stamens 4, didynamous, ascending, rarely only 2, approximate ; anthers usually 1-lobed from the cells being continuous, with a thick, elevated connective. Stigma undivided. Capsule 2-valved; valves entire, or bifid, rarely fleshy and indehiscent; dissepiment simple. Placenta narrow, columnar, adnate, longitudinally, or at length free. Seeds minute, smooth, or scrobiculate ; testa membranous. Albumen fleshy. Embryo much shorter than the seeds. —Herbs or sub-shrubs mostly native of the Cape. Leaves opposite, or alternate. Flowers terminal, spicately racemose, white or red.

LXXV. STRFGA (so named from the strigose habit of some species.) Lour. coch. p. 22. Benth. in Hook, comp. 1. p. 361. Buchnera species, Lin. and other authors.—Campanulèia, Pet. nov. gen. mad. p. 23.

LIN. SYST. *Didynamia, Angiospermia.* Calyx short, tubular, with 5-15 elevated ribs, and membranous between the ribs, 5-toothed, or semiquinquefid at apex, rarely 4-toothed by abortion ; teeth generally subulately acuminated. Corolla salver-shaped, with a slender tube, which is abruptly incurved in the middle, or above the middle ; limb bilabiate, the upper lip usually shorter, entire, emarginate or bifid : lower lip trifid. Stamens didynamous, inclosed. Capsule straight; valves somewhat coriaceous, entire, dehiscing elastically at maturity, septiferous in the middle.—Scabrous, Asiatic, and African herbs, becoming blackish on drying, sometimes parasitical in the manner of *Orobdnche.* Lower leaves opposite: superior ones alternate, sometimes scale-formed, usually linear, quite entire, rarely few-toothed : floral ones conform to the others, but becoming gradually smaller as they ascend. Flowers axillary, solitary, sessile, disposed in terminal spikes, generally minutely bibracteate. Corolla white, purplish, or red.

* *Leaves scale-formal.*

1 S. OROBANCHIOIDES (Benth, 1. c. p. 361. t. 19.) glabrous, branched ; leaves minute, scale-formed: floral ones lanceolate, shorter than the calyx. %. S. Native of Senegambia, Endlicher; Abyssinia, Brown ; south-east Africa, in the district of Uitenhage, Ecklon; to Delagoa Bay, Forbes ; East Indian Peninsula, Wight, and plains as far as Saharumpur, Royle. Buchnera orobanchioides, R. Br. Endl. in bot. zeit. 1832. 2. p. 388. t. 2. Benth. scroph. ind. p. 40. Buchnera Hydrabadensis, Roth, nov. pi. 292, Buchnera gesnerioides, Willd. spec. 3. p. 338. Orobanche I'ndica, Spreng. syst. 2. p. 816, but not of Roxb. Plant parasitic. Root tuberous. Scales and bracteas lanceolate. Calyx 4-5-cleft. Corollas white, or pale yellow. Stem none, unless the unbranched portion of the scape may be considered as such ; it is covered by scales. The whole plant is covered with short stiff hairs. Flowers sessile, surrounded by *3* bracteas.

Orobanche-like Striga. PI. f foot.

* * *Leaves elongated. Calyx with 5 elevated stripes. Corolla incurved towards the apex.*

2 S. HUMIFUSA (Benth. 1. c. p. 362.) prostrate, scabrous; leaves obovate-oblong, obtuse; spikes short, few-towered. calyx 5-striped ; ? tube of corolla glabrous. %. G. Native of Ara- bia, on the mountains of Hadge, Forsk. Browallia humifusa, Vam, Forsk. pi. a>gypt. arab. p. 12. Buchnera humifusa, Ben- 3. p. 81. The form of the leaves and procumben t stem, Wrich- tham says, will distinguish this from all other spec es, n standing he has not been able to ascertain whether the ca- 5-ribbed or not, from the specimens he has examined 8 imperfect.

Trailing Striga. PI. trailing.

3 S. PARVIFWRA (Benth. 1. c.) small, very * with b linear, quite entire, strict; calyx 5-striped ; coro a do an entire upper lip, which is hardly half the length ot U lip. 1/. G Native of New Holland, on the east c Keppel Bay. Buchnera parvifldra, R. Br. prod. p. £ other but little branched. Flowers smaller than those species.

Small-flowered Striga. PL small.

4 S. A'SPERA (Benth. 1. c.) leaves linear; quite e and are, as well as the branches, covered with cani and ciliated with rigid spreading hairs ; calyx 5-strip glabrous, with an elongated, slender tube, and an upper lip, which is about half the length of the S. Native of Guinea. Euphrasia aspera, 197. Buchnera aspera, Schum. pi. guin. p. 2» from *S. pusilla* in the flowers being twice the size, more regular and greater hispidity of the plant.

Bough Striga. Pf. \ foot.

5 sfcuRViFLO^A (Benth. 1. c.) very scabrous ; linear, quite entire, spreading a little ; calyx corolla pubescent; upper lip retuse, thrice as sno lip, which is tripartite. V. S. Native of New Holla north coast, within the tropic, and of Java, *exBlum.* Buchnera curviflora, R. Br. prod. P-«?*• . first by the S. *euphrasioides* and S. cocanea, and differs from calyx, and from the last by both calyx and corolla.

Curved-flowered Striga. PI. *I* to 1 foot.

6 S. MULTIFLORA (Benth. 1. c.) much branched; leaves long-linear, spreading, a little calyx 5-ribbed; corolla glabrous ; upper lip shorter than the lower one, which is tripartite, of New Holland, of the Islands west of G decumbent the north coast, Cunningham. Distinct in the habit, and in the form of the flowers, which are tne **of *S. coccinea.***

Many-flowered Striga. PI. decumbent.

7 S. DENSIFLO^RA (Benth. 1. c.) humble, rather gia scabrous ; leaves lanceolate-linear, somewhat squam dense, approximate ; calyx ovate, 5-striped ; coro upper lip emarginate, 2 or 3 times shorter than %. S. Native of the Indian Peninsula, Heyne; an of India as far as Saharampur, Royle. Buchnera dens'- Vahl, symb. 3. p. 81. ? Lin. spec. 879. part. Hort flora, Benth. scroph. ind. p. 41. Plant small, rigid, branched, in some respects resembling *S. Thunberg*- smaller; the lobes of the limb shorter and differs from that species in the remarkably spre recurved leaves.

Dense-florvered Striga. PI. \ to \ foot.

8 S. THUNBE'EGII (Benth. 1. c.) hispid, scabrous; simple; leaves lanceolate-linear, erect: floral adpressed, the middle nerve beneath, and margins pid; spike dense; calyx 5-striped; tube recurved and inflated at top ; lips of limb oblong. 1/. G. Native of the Cape of Good district of Uitenhage, and in Caffreland, and Tambf

lon, and Drege, &c. Guinea, in the valley of Friderikoberg, Thunberg. Buchnera Asiatica > ^in. spec. p. 879. partly, Buchnoro ui i.-* folia si bllabiata > Thunb. fl. cap. p. 465. Buchnera linearifolia, other spec.- m,]' gwin, 279t ? Easlly distinguished from the dilated ape 6S by the imbricate floral leaves, and the remarkably lines lon X of the tube of the corolla. Flowers from 6 to 8 Corollas g'd p tant ta^er and more erect tban ^' *densiflbra.*

Var. B, grandiflora (Benth. l c 0 flowers larSer, Native of U and Thunberg f ^, Drege and Ecklon.

. Striga. Pl.&f to 1 foot.

* * * *Leaves elongated. Calyx* **10-15-***striped. Corolla incurved towards the top.*

9 S. LEGATS ^Benth> *• c>) hairy> very scabrous, strict, hispid • fli' leaves lanceolate-linear, erect, rather adpressed, Calyx 10 Or- ones similar> abo«t equal in length to the calyxes; W un"81n ?^'» tube of corolla downy; lobes of limb obative n? V Cape of Good Hope in CafTreland, Drege. Stature anli\ almost of s- *ThunbSrgii, /*3, but less rigid ; the flowers r. ller ger> and like *S. liltea.* The whole Plant is very hair , carcely turns black on drying.

Stelga T. Striga. Pl. * to 1 foot.

10 S. CUTEA (Lour. coch. p. 22. ? Benth. l. c.) hairy, very scabrous f l leaves lanceolate, ^on a"^near» spreading : lower ones spikes elon 6aveS ; Cal? x 10-15-striped; corolla glabrous : lobes of the li u length of ti? 1 oVate : upper Up emarginate, about half the Sula» WiU lower lip* *V* G. Native of the Indian Peninherb. Banlr Ben Sal> Wall« 5 Saharampur, Royle ; Macao, ex croph ind ; Canton» Lo»r- Buchnera hirsuta, Wall. Benth. Habit ioos P '/1# Bucbnera Asiatica, Lin. spec. 879. partly. seldom tn e* an knmchy, or when young more stiff and simple, *Yell<J,G* black on dry in S- Corolla yellow.

11 S. fl 0We red Striga. PL \ to 1 foot"

leaves Ian l ICEA ^Benth -L c 0 humble, villous, very scabrous ; f.riped; Ceolate» obtuse, spreading; spikes dense; calyx 10- cei^ar»i ro al)r ous: lobes of the limb obovate : upper Jfative of T V bout h*K the length of the lower lip. If. S. t - scr t an Peninsula. Buchnera phcenicea, Wall, ex the flowe are said to be red.

Red-flowered Striga. PI- \ to 1 foot.

12 S. coccinEA (Benth. I.e. p. 364.) smoothish, scabrous; leaves long-linear l oalyX oblong 10-striped; spikes loose; corolla glabrous; lobes ^ ie im b obovate : upper lip emargin- ate, ^bout h IP ies ^ ^ the length of the lower lip. *if.*. S. Native of Tropical A e V d Southern Asia ; Sierra Leone; Caffreland; Mauritius, Telfair ; Indian Peninsula, Heyne; Macao, herb Banks. Cam PUbia coccinea > Hook. exot. fl. 3. t. 203. Buchnera coccin ft B Bentb . scoph. ind. p. 40. Corollas scarlet. b abito f *S.* Th a> ^Ut much more glabrous, and usually dries a til T hon ^ IS su PP ose d by Hooker to be the one described by ^Rear ancp as Parasitical; but Bentham says it has less that flowd *Thuntergii,* which latter has also Scarlet.

13 S. p?0Vv^red Striga. PL i to 1 foot.

leaves lon ^ -li ^r 5 (A'TA (Benth. 1. c.) nearly glabrous, scabrous; ?rolla gl at DOus. lobes of limb oblong : upper lip emargin^, boi ib P ^e length of the lower one. 'U. S. Native of the Penin iUll es^ T !P a^» and mountains of Ava, Wall.; also in the Lin. spec. Buchnera Asiatica, Benth. scroph. ind. 40. partly. This species evidently comes near the following, but is distinguished by the glabrous corolla. The flowers are said to be bluish.

Glabrous Striga. PL \ to 1 foot.

14 S. EUPHRASIOIDES (Benth. 1. c.) smoothish, scabrous; leaves long-linear, quite entire, and few-toothed; calyx oblong, somewhat 15-striped ; tube of corolla downy. %. G. Native of the East Indies, from the Peninsula to the mountains of the north; and of Java, ex Blum, bijdr. p. 740. Buchnera euphrasioides, Vahl, symb. 3. p. 81. Buchnera angustifolia, D. Don, prod. fl. nep. p. 91. Buchnera Asiatica, Lin. spec. 879, partly. Distinguished from all other species of the present section by the pubescent corolla, and long striated calyx.

Euphrasia-like Striga. PL \ to 1 foot.

15 S. MASURIA (Benth. 1. c.) tall, very scabrous ; leaves quite entire, linear, adpressed, strict; calyx somewhat 15-striped, elongated ; tube of corolla elongated, finely downy; limb ample, *if.*. S. Native of the East Indies, on the mountains of Morang, Hamilt. Prome, Wall. Buchnera Masuria, Hamilt. ex Benth. scroph. ind. p. 41. Flowers twice the size of those of AS. *euphrasioides.*

Masuria Striga. PL 1 to *2* feet.

16 S. FORBESII (Benth. 1. c.) tall, very scabrous, downy ; leaves linear-lanceolate, toothed; calyx deeply cleft, 10-striped, with linear, foliaceous segments; tube of corolla elongated, clothed with fine down, incurved towards the apex. 2/. S. Native of Madagascar and Mosambique, Forbes. Nearly allied to the preceding, but less rigid, and leaves broader ; calyx *7-8* lines long; but the corolla is about the same size ; and in the **var.** *(3.* **nearly as large as in** *Rkamphicdrpa tubijlbra.*

Far. [3, grandijldra (Benth. 1. c.) flowers larger.

Forbes's Striga. PL 1 to *2* feet.

* * * * ***Corolla abruptly incurved at the middle.***

17 S. HERMONTHICA (Benth. 1. c. p. *365.)* rather pilose, scabrous : leaves linear : floral ones lanceolate, ciliated ; calyx 5-striped; tube of corolla smoothish, incurved at the middle: limb ample. %. G. Native of Western Africa ; Upper Egypt, near Silsileh, Jordan; Mosambique, Forbes. Buchnera hermonthica, Delile, fl. aegypt. t. *25.* f. 1. A handsome species, a foot high, with a long spike of large red flowers.

Hermonthic Striga. PL I foot.

Cult. For culture and propagation see *Buchnera,* p. 585.

LXXVI. BUCHNERA (in honour of Jean Godefroy Buchner, who in 1743 gave observations of many plants of Voigtland, in Saxony.) Lin. gen. no. *772.* Schreb. gen. no. 1035. Juss. gen. p. 100. ed. Usteri, p. 112. Gsertn. fruct. t. *55.* Benth. in Hook. comp. 1. p. 364. Peripea, Aubl. **guian.** *2.* **p.** *628. t. 253.*

LIN. SYST. *Didynamia, Angiospermia..* Calyx short, tubular, obscurely 10-nerved, with 5 short teeth at apex. Corolla salver-shaped; with a slender exserted tube, which is straight or a little incurved; limb spreading, nearly equal, 5-cleft; segments oblong or obovate. Stamens didynamous, inclosed. Capsule straight, with rather coriaceous, entire valves, which dehisce elastically at maturity, septiferous in the middle.—African, Asiatic, or American herbs, usually scabrous, becoming black on drying. Lower leaves opposite : upper ones alternate : lower ones the broadest: upper ones narrower, remote, and, for the most part, quite entire: floral ones bractea-formed, usually shorter than the calyx. Flowers solitary, sessile, bibracteate, disposed in a terminal spike.

Spikes loose or dense, but not imbricated. **With the exception** of *the B.juncea,* distinguished by its peculiar habit; *B.hispida* by its long hairs ; and *B. macrdntha* by its flowers ; the other

species contained in this section are aH so much alike, and run into each other by such minute or vague characters, that Mr. Bentham would have been disposed to consider them as only varieties of each other, had he been better acquainted with the American species, or had he been possessed of more numerous specimens.

1 B. JU'NCEA (Cham, et Schlecht, in Linnaea, 2. p. 590.) stem simple, rushy, clothed with 4 rows of adpressed leaves; panicle short, contracted, terminal. *11.* S. Native of tropical Brazil. Leaves inflexed at apex, with scabrous margins.

Rushy Buchnera. PL *2* to *3* feet.

2 B. PALU'STRIS (Spreng. syst. *2.* p. 805.) scabrous, nearly glabrous ; stem slender, a little branched ; leaves narrow-linear, quite entire, or the lower ones are small and obovate; spike loose, few-flowered, with lanceolate-linear bracteas ; tube of corolla about twice as long as the calyx ; fructiferous calyx erect. *V-.* S. Native of Guiana. Peripea palustris, Aubl. guian. 2. p. 628. t. 258. Flowers purplish.

Marsh Buchnera PI. 1 foot.

3 B. ELONGATA (Swartz, fl. ind. occ. 2. p. 1061.) scabrous from strigse; stem nearly simple, leafy at base ; leaves oblong, quite entire: superior ones linear ; spike loose, few-flowered ; tube of corolla about twice the length of the calyx ; fructiferous calyx erect. *%.* S. Native of America, from Carolina on the north, to Rio Grande do Sul on the south ; and the West India Islands.—Plum. icon. 19. t. 17. Erinus Americ&nus, Mill, diet. ? Corolla violaceous, or purplish blue.

Elongated Buchnera. PI. 1 to 2 feet.

4 B. TENE'LLA (R. Br. prod. 437.) scabrous, rather glabrous; stem slender, a little branched; leaves narrow-linear, quite entire ; spikes rather loose ; bracteas ovate-lanceolate, ciliated; corolla small, with a slender tube, which is about twice as long as the calyx; fructiferous calyx hardly incurved. *%.* S. Native of New Holland, on the north coast. Calyx glabrous or downy.

Slender Buchnera. PI.

5 B. LINEA'RIS (R. Br. prod. 437.) scabrous ; leaves oblong : superior ones linear, obtuse, quite entire ; spike loose; lower bracteas linear: superior ones ovate-lanceolate ; calyx downy, hardly incurved ; tube of corolla a little exserted. 1/. S. Native of New Holland, within the tropic, Carpentaria.

Linear-leaved Buchnera. PI.

6 B. PUBE'SCENS (Benth. in Hook. comp. 1. p. *365.)* scabrous ; lower leaves oblong : superior ones linear, all quite entire, obtuse ; spikes many-flowered; bracteas ovate-lanceo>,ate, subciliated ; calyxes downy, a little incurved: fructiferous ones with an oblique mouth ; tube of corolla a little exserted. *%.* G. Native of New Holland, in marshy lands on the Endeavour River, north coast, Cunningham.

Downy Buchnera. PL

7 B. RAMOSI'SSIMA (R. Br. prod. 438.) scabrous, much branched ; rameal leaves quite entire, linear-lanceolate ; spikes elongated, many-flowered ; bracteas ovate-lanceolate, subciliated ; tube of corolla more than one half longer than the calyx, which is incurved in the floriferous state, pilosely hispid at top, straightish in the fructiferous state. l£. S. Native of New Holland, on the east and north coast, within the tropic.

***Much-branched* Buchnera. PL**

8 B. DURA (Benth. L c. p. *366.)* glabrous, or a little hispid at the base ; stem a little branched ; lower leaves obovate : superior ones oblong, quite entire: upper ones linear; spike dense at apex, many-flowered ; bracteas ovate-lanceolate, subciliated • tube of corolla exserted ; capsule equal in height to the calyx/which is straight in the fructiferous state. •. *%* *G* Native of the Cape *of* Good Hope, as in Uitenhage and CafTreland, Ecklon and Drege.

Hard Buchnera. PL

9 B. GLABRVTA (Benth. 1. c.) glabrous, or hardly n the base; stems erect, nearly simple ; lower bracteas superior ones linear or oblong; spikes dense, short, ovate-lanceolate ; tube of corolla exserted ; capsule longer than the straight calyx. %. G. Native ot the Good Hope, near Rondebosch, Ecklon ; Katberg l

Glabrous Buchnera. PL | to 1 foot.

10 B. GRA^CILIS **(R. Br. prod. 437.) stem simple** g lower leaves obovate : superior ones oblong, all entire ; spike loose ; bracteas ciliated, one half short calyx; top of capsule exserted. %. G. Native o Wales, near Port Jackson.

Slender Buchnera. PL

11 B. ASPERATA (R. Br. prod. p. 438.) very leaves lanceolate-oblong, few-toothed : superior ones lanceolate, quite entire ; bracteas lanceolate-ovate, one than the calyx ; fructiferous calyx oblique at top; closed. 1/. S. Native of New Holland, on the norm within the tropic.

Far. /3, angustifblia (Benth. 1. c.) leaves narrower. Native of Goulburn Island, Cunningham.

Var. y, *tomentosa;* plant rather tomentose ; lower leaves obtuse, coarsely toothed : superior ones linear, quite entire ; stem much branched.—Native *of* Java, inundated places. Buchnera tomentosa, Blum, bijdr. *y>*

Rough Buchnera. PL I to *2* feet.

12 B. URTICEFOLIA (R. Br. prod. 437.) scabrous or pubescent; lower leaves approximate, oblong, obtuse, coarsely toothed, as well as the middle ones, which are lanceolate and distant; spike loose ; bracteas lanceolate, ciliated, one half shorter than the calyx; tube of corolla about twice as long as the calyx; top of capsule exserted. 1f. S. Native of New Holland, east coast, about Port Curtis, within the tropic.

Nettle-leaved Buchnera. FL July, Aug. Wt. to *2* feet.

13 B. HI'SPIDA (Hamilt. ex D. Don, prod. fl. *Nepalensis*, p. 91-) hispid from long hairs, nearly simple, leafy at the base; leaves oblong, toothed a little : superior ones linear ; spikes few-flowered ; tube of corolla hardly exserted. Hamilt., Gambia, ex herb. Hook.; mountains of the East inu Royle, &c. PI. 1 foot.

Hispid Buchnera. FL July, Oct. Clt. 1818. ri.

14 B. AMERICANA (Lin. spec. 879.) pilosely scabrous, or at length glabrous ; stem nearly simple, base; leaves oblong or lanceolate, a little ones linear ; spike rather loose ; tube of corolla about length of the calyx ; fructiferous calyx straight. U-i tive of North America ; Southern States, to St. Domingo; Mexico and Panama. Plant very variable.

American Buchnera. FL June, Aug. Clt

15 B. MACRANTHA (Benth. 1. c. p. *S66.)* K brous ; leaves lanceolate, subdentate, remote; the calyx, loose; tube of corolla hairy, *5* times longer than *Jmericana.* 0. S. Native of Sierra Leone. inch long; Calyx covered with clammy hairs. Corolla about an lobes of the limb large and broad.

Long^flowered Buchnera. PL 1 to 1 i foot.

16 &WLLA (H. B. et Kunth nov. gc«u ame leaves hispidly scabrous ; stem nearly simple, and nearly opposite: lower ones obovatcob ong. *Jlx* shorter linear, JJL entire, than the tube of the corolla, H. "Native of New Granada. Flowers

Least Buchnera. PL 1 to 4 inches.

17 B. ADGU'TA (Juss. in nov. ann. du. mus. 3. p. 374.) hispidly scabrous; stem branched, terete; radical leaves lanceolate-oblong, obtuse, subserrate; cauline ones subdecurrent: rameal ones linear, entire, sessile, alternate and nearly opposite; spikes solitary, terminal, bracteate; calyx equalling the tube of the corolla, cut into 5 acute, one half shorter than the cylindrical, Commu ? calyx. O. H. Native of the island of Timor. Corolla glabrous, bluish-purple. Said to be nearly allied to *B. tomentosa*, Blume.

Sharp Buchnera. PI. 2 to 3 feet.?

18 B. ASPERA (Hamilt. ex D. Don, prod. fl. nep. p. 91. B. et Kunth, l. c.) hispidly scabrous, stem branched, subtetragonal; leaves nearly opposite, linear, entire, subserrate; spikes solitary, distich; calyx equalling the tube of the corolla. O. S. Native near Santa Fe de Bogota. Corolla blue.

Rough-stemmed Buchnera. PI. 2 to 3 feet.

19 B. TENUIFOLIA (H. B. et Kunth, l. c. p. 340.) smoothish; stem branched, terete, rather scabrous; lower leaves opposite, linear, elongated, quite entire, 3-nerved, rough from callosities; cauline ones alternate; calyx shorter than the tube of the corolla. Leaves 4 lines long, narrowly linear along with the preceding. Corolla blue. *Inner* lobes 3 inches long.

Thin-leaved Buchnera. PI. 2 to 3 feet.

20 B. HISPIDULA (H. B. et Kunth, l. c. p. 340.) hispidly scabrous; stem simple, terete, rather scabrous; lower leaves opposite, linear, 3-nerved; upper ones alternate, nearly opposite, linear, almost quite entire, rolled back and downy; spikes solitary; calyx 3 times shorter than the corolla, equal in length to the capsule. ©. S. Native on the dry plains of the river Magdalena, near Melgar and Picala; also on the plains of Santa Fe de Bogota. Corolla blue or violaceous.

Hispid Buchnera. PL 1J foot.

21 *mum-leaved* Buchnera. PL 1J foot.

21 B. PULCHELLA (H. B. et Kunth, l. c. p. 341.) hispidly scabrous; stem simple, lanceolate, terete, trigonal; lower leaves 3 in a whorl, linear, remotely serrated towards the apex, 3-nerved; spike solitary, terminal. Native of Mexico. Tube of corolla exceeding the calyx a little. ©. S. With the Preceding. Corolla violaceous.

22 B. STERNA'TA (H. B. et Kunth, l. c. p. 342.) hispidly scabrous; stem tetragonal; branched at the base; branches twiggy, somewhat nerved; leaves opposite, lanceolate-linear, quite entire, 3-nerved; spikes solitary, terminal; calyx one half shorter than the tube of the corolla. Native of Mexico, about Panicled; calyx one half as long as the capsule. *%.* Near Real del Monte and Tasco, at the altitude of 6 hexapods. New Andalusia, on the mountains of Cocuy. Meriquiri, at the altitude of 540 hexapods. Corolla violet.

23 B. HISPIDA (H. B. et Kunth, l. c.) hispidly scabrous; stems somewhat diffuse, simple, nearly terete; lower leaves opposite, lanceolate, hirsute; upper ones alternate, linear, simple, numerous; spikes crowded, terminal, at length elongated. Native of Caracas, at the altitude of 430 hexapods. Corolla rose-coloured.

Rose.

24 B. CHAMISSONIS (H. B. et Kunth, l. c. p. 340.) hispidly scabrous; stem simple, terete; radical leaves lanceolate, narrowed at the base, remotely toothed towards the apex; cauline ones solitary, linear, entire; calyx shorter than the tube of the corolla and blue. Native of New Andalusia. Leaves 3-nerved.

Long-fruited Buchnera. PL 2 feet.

25 B. AMETHYSTINA (Cham, et Schlecht, in Linnaea, 2. p. 588.) hispidly scabrous; stem simple, leafy at bottom: spike loose, many-flowered; outer bractea ovate, acute; teeth of calyx short, nearly equal. Native of tropical Brazil, Sello. Bracteas lanceolate, acute: lateral ones lanceolate. Stem nearly naked at top, leafy at bottom. Corollas blue.

Amethyst-flowered Buchnera. PL J to Hfoot.

26 B. LOBELIOIDES (Cham, et Schlecht, 1. c. p. 589.) hispidly scabrous; stem simple, leafy at bottom; spike loose, many-flowered; outer bractea lanceolate, very acute; teeth of calyx unequal: the two front ones the largest. %. H. Native of tropical Brazil, Sello. Upper part of stem naked. Leaves in some specimens toothed, and in others quite entire.

Lobelia-like Buchnera. PI. f to»l| foot.

27 B. LAVANDULA'CEA (Cham, et Schlecht, 1. c.) stem simple, leafy at bottom; leaves quite entire, somewhat plicately nerved; spike dense-flowered. %. H. Native of tropical Brazil, Sello.

Lavender-\ea.Ye& Buchnera. PI. 1 to 3 feet.

* * *Spike dense, imbricate, tetragonal.*

28 B. STRI'CTA (Benth. in Hook. comp. p. *367.)* smoothish; leaves linear, erect, strict; spike tetragonal, imbricated, nearly glabrous; bracteas ovate-lanceolate, acute, naked, about equal in length to the calyx. 1/. G. Native of China, Lord Mulgrave, in herb. Banks. This species has not the large lower leaves of the 3 following; the stem is simple, ex Benth.

Strict Buchnera. PI. f foot.

29 B. CRUCIATA (Hamilt. ex D. Don, prod. fl. nep. p. 91.) downy; radical leaves obovate: lower cauline ones oblong: superior cauline ones linear; spike tetragonal, imbricated, downy; bracteas ovate, ciliated, shorter than the calyx. %, G. Native of the mountains of Nipaul and Prome, Wall. Stem and leaves of *B. hispida.* Calyx nearly cylindrical. Spike about an inch long. Radical leaves toothed: cauline ones entire.

Cruciate Buchnera. PL \ to f foot.

30 B. TETRA'STICHA (Wall, ex Benth. scroph. ind. p. 41.) pubescent or smoothish, tall; leaves oblong or lanceolate, obtuse, quite entire; spike tetragonal, imbricated; bracteas broad-ovate, about equal in length to the calyx. %. S. Native of Burma, at Moalmyne, on the banks of the Salian, Wall. Calyx much depressed. Leaves numerous. Spikes *2* inches long.

Four-rowed-spiked Buchnera. PL 2 feet.

31 B. TETRAGONA (R. Br. prod. p. 437.) glabrous, tall; leaves oblong or lanceolate, few-toothed; spike tetragonal, imbricate, glabrous; bracteas broad-ovate, exceeding the calyx. %. G. Native of New Holland, on the north coast, within the tropic, R. Br.; Goulburn Island, Cunningh. This differs from *B. tetrdsticha* besides its smoothness, in the spike being much less densely imbricate, and the leaves more distant on the stem, ex Benth.

"Tetragonal-spiked Buchnera. PL 1 to *2 feet.*

Cult. All the species grow freely in any light rich soil, and are readily increased by cuttings and seeds.

LXXVII. RHAMPHICA'RPA (from *pafi<f>og, rhamphos,* a beak; and *Kaprrog, carpos,* a fruit; in reference to the mucronate or beaked capsule.) Benth. in Hook. comp. 1. p. *368.* Buchnera species, Wall.—Gerardia species, Lin. suppl. 279.

LIN. SYST. *Didynamia, Angiospermia.* Calyx campanulate, 5-cleft. Corolla with a long, exserted, slender tube; limb spreading, 5-parted; segments obovate, nearly equal. Stamens didynamous, inclosed. Capsule obliquely mucronate or beaked; valves coriaceous, entire.—Erect, branched, glabrous herbs, becoming black on drying. Lower leaves opposite: superior ones alternate, narrow, entire, or pinnate. Flowers on short pedicels, racemose, usually bractless.

1 R. LONGIFLORA (Benth. 1. c.) leaves pinnate, narrow, linear; tube of corolla straight, much longer than the limb; beak of capsule a little recurved. 0. S. Native of Senegal, in the Isle of St. Louis; Indian Peninsula, Jacquemont. Buchnera longiflora, Wight, mss. A small, erect, branching annual.

Segments of leaves few and distant. Peduncles usually shorter than the calyx, and naked, sometimes longer, with a pair of bracteas. Corolla white, drying bluish ; tube 1 \ inch long ; lobes of limb short, broad, truncate or emarginate.

Long-flowered Rhamphicarpa. PI. \ foot ?

2 R. TUBULOSA (Benth. 1. c.) leaves lanceolate-linear, entire; limb of corolla a little shorter than the tube, which is a little incurved ; capsule truncate, with a short beak. ©.? G. Native of the Cape of Good Hope, in the eastern portion of the Uitenhage district, Ecklon, Drege, &c. Plant glabrous, erect, a little branched. Peduncles rather longer than the calyx. Corolla white, drying bluish ; tube an inch long, slightly curved about the middle ; lobes of limb obovate, entire, ex Benth.

Tubular-flowered Rhamphicarpa. PI. 1 foot.

3 R. CURVIFLORA (Benth. 1. c.) leaves lanceolate-linear, entire ; limb of corolla rather shorter than the tube, which is incurved ; capsule acinaciform. ©. ? S. Native of Madagascar and Mosambique, Forbes. Habit of *R. tubulosa.* Leaves narrower. Divisions of the calyx longer; tube of corolla more curved, with a larger limb. Capsule very oblique.

Curved-flowered Rhamphicarpa. PI. 1 foot. ?

Cult. For culture and propagation see *Polycarena,* p. 588.

LXXVIII. CY'CNIUM (probably from *KVKVOQ, cycnos,* a swan ; but the application is not evident.) E. Meyer, mss. ex Benth. in Hook. comp. I. p. *368.*

LIN. SYST. *Didyndmia, Angiospermia.* Calyx bibracteate at the base, long-tubular, 5-cleft at apex. Corolla with a cylindrical, straight tube, and a deeply 5-cleft spreading limb ; segments ovate, entire. Stamens didynamous, inclosed. Capsule fleshy, indehiscent. ?—Rigid scabrous herbs, natives of South Africa, becoming blackish on drying. Leaves opposite, or the superior ones are alternate, coarsely toothed. Flowers axillary, or racemose.

1 C. ADDONE'NSE (E. Meyer, mss. ex Benth. 1. c.) stem procumbent ; leaves ovate, or oblong ; flowers sessile, axillary; tube of corolla more than twice as long as the calyx. ©. ? G. Native of the Cape of Good Hope, in the Addo country, in the Uitenhage district, Drege and Ecklon. The whole plant covered with stiff short hairs. Leaves sessile, cuneated at the base. Calyx more than an inch long, opening at the base as the capsule swells ; divisions foliaceous. Corolla white, tube %\ inches long ; limb flat, 1 \ inch in diameter. Capsule oval, half an inch long, ex Bentham.

Addo Cycnium. PI. 1 foot. *?*

2 C. RACEMOSUM (Benth. 1. c.) stem erect; leaves lanceolate; flowers pedicellate, racemose; tube of corolla hardly equal in length to the calyx. ©. ? G. Native of the Cape of Good Ho\\e> ueax Siloh, on the Kl\p\>l&at i'vra, on tht easton s\de o? the Witsenberg, in Tambukiland. Habit resembling *Meldsma scabra,* or *Rhamphicarpa tubulosa.* Stem nearly simple, scabrous. Leaves lj to *2* inches long, with a few teeth, contracted at the base, nearly all alternate. Pedicels short. Bracteas linear. Tube of calyx 9-10 inches long, striated ; lobes lanceolate-subulate. Limb of corolla 1| inch in diameter, ex Benth.

Racemose-flowered Cycnium. PI. 1 foot.

Cult. For culture and propagation see *Polycarena,* p. *588.*

LXXIX. NYCTERI'NIA (from *vvKTepivog, nycterinos,* of, or belonging to the night; the flowers expand, and are very fragrant in the evening.) D. Don, in Sweet, fl. gard. n. s. vol. *3, u 239** Benth. in Hook, comp. 1. p. 369.—Erinus species of Lin. and other authors.

LIN SYST. *Didyndmia, Angiospermia.* Calyx ovate-tubular, shortly 5-toothed, bilabiate, or bipartite. Corolla permanent; tube Lngated, at length cleft at the base; throat equal, often hispid; limb spreading, almost equally 5-parted ; segments bifid, or entire. Stamens didynamous : superior ones inserted in the tube, with oblong, erect anthers : lower ones inserted on the throat, with smaller, transverse, usually sterile anthers : are sometimes altogether abortive. Capsule coriaceous, or membranous ; valves bifid at apex.—Herbs or under shrubs natives of South Africa, more or less clammy, and often becoming blackish on drying. Lower leaves opposite : upper ones alternate, usually few-toothed : floral ones often smaller : flowers adpressed to the calyx, or sometimes adnate to it. sessile, interruptedly or densely spicate.

§ 1. *Segments of corolla bifid; tube clothed with fine dotvn. Leaves oblong, linear, or lanceolate.*

1 N. CORIACEA (Benth. 1. c.) suffruticose; floral leaves broad-lanceolate, obtuse, toothed, thick, coriaceous, about twice as long as the calyx, which is coriaceous and villous; spike elongated. \?. G. Native on mountains about Cape Town. In habit it comes near to *N. divaricata,* but much larger and more rigid, and has the flowers of *N. spathacea.* Capsule larger than in any other species, and almost woody.

Coriaceous~ca\yxed Nycterinia. Shrub \ to 1 foot.

2 N. SPATHACEA (Benth. 1. c.) suffruticose, erect; leaves obovate, or oblong-spatulate : lower ones 3-nerved : floral ones clasping, broad-lanceolate, or oblong, obtuse, almost quite entire, 1-nerved, all coriaceous, pubescent on the margins and nerves, the rest glabrous ; spike elongated ; calyx elongated, a little shorter than the floral leaves. J? . G. Native of the Cape of Hope, in Tambukiland, near Siloh, east of the Winterberg, on the Katriviersberg, Ecklon. At the top *of* the Drege. Floral leaves spathe-formed, near an inch long, apparently coloured. Spike much lengthened after flowering. Tube of corolla \\ inch long.

Spathaceous-leawed Nycterinia. Shrub 1 foot.

3 N. MARITIMA (Benth. 1. c.) suffruticose, erect, near glabrous ; leaves lanceolate, or oblong, obtuse, almost quite entire, *floral* ones broad-lanceolate, exceeding the calyxes and rather coriaceous, glabrous ; spike elongated, dense, many flowered. T? . G. Native of the Cape of Good Hope, in the Uitenhage district; and on the sea-coast near the Zeeko and Thunberg ; near Kachu, Drege. Erinus maritimus, Lm. *281.* syst. 571. Thunb. fl. cap. 474. Flowers colour of *N. lychnidea.* This species comes near *N. spathacea,* but taller. Perhaps a variety of *N. lychnidea.*

Sea-side Nycterinia. Shrub J to 1 foot.

4 N. LYCHNI'DEA (D. Don, in Sweet, fl. gard. n. ?'vo. leaves *239.)* suffruticose : branches clothed with adpressed, smooth, oblong-linear, few-toothed, and quite entire, 1-nerved; owes ... -pg, ... tuse, few-toothed, and quite entire, having the nerves ciliated ; spike elongated ; calyxes shorter than the floral leaves. \. G. Native of the Cape of Good Hope, eetl the along the sea-coast; in the Amaponda country? f chnW river Uintenda and Umzimcoolu, Drege. Erinus V_ ^O^ Lin. suppl. 287. Ker. bot. reg. 748. Sims, A>ot. «» oothed« Leaves more or less fleshy, the larger ones j a1^^ Corolla yellowish, white inside, but purplish outside. S^rU^ ^

Lychnidea Nycterinia. Fl. May, July. Clt\ \7^b, to 1 foot. (,ard; stffljj

5 N. CAPE'NSIS (Benth. I.e. p. 370.) herbaceous, sUperi erect, adpressedly villous; lower leaves lanccolate ones or all linear, few-toothed, or quite entire,), gins and nerves usually ciliated : floral leaves quite entire, hardly exceeding the calyxes; spikes G. Native of the Cape of Good Hope, on hills to Fort Beaufort, in the neutral territory, Eckloi

&c.; also northward, in Namaqualand and New Hantam, Drège.

Erinus Capensis, Lin. mant. *252.* Erinus ^Ethiopicus, Thunb. fl. cap. 478. This apparently very common species, distinct from *N. lychnidea* by its herbaceous, probably annual and few-flowered stem and smaller leaves. Spikes usually short, durable, occasionally the central one acquires a considerable length. Corolla slender, hardly an inch and a quarter long, ex Benth.

Var. a, hirsuta (Benth. 1. c.) branches more villous; leaves hairy on both surfaces. O. ? G.

Var. β, [illegible] (Benth. 1. c.) leaves smoothish. ©. ? H.

Var. γ, [illegible] (Benth. 1. c.) leaves smaller, more numerous; spike few-flowered.

Var. δ, [illegible] (Benth. 1. c.) leaves narrow-linear, and more glabrous.

Cape Nycterinia. PL \ to 1 foot.

N. [illegible] (Benth. l. c.) herbaceous; stem adpressedly pilose; leaves [illegible] toothed: floral ones lanceolate, near, pinnatifidly toothed: floral ones lanceolate, clothed with rather clammy down; spike short, in the mountains of the Cape of Good Hope, in the Kamiesbergen, Cape Pensis, Cranwilliam district, Drège. This differs from *N.* [illegible] their narrow, deeply toothed leaves, and from *N. dentata* by long[illegible]ness, from both by the corolla being 18-20 lines long.

[illegible]flowered Nycterinia. PL \ to 1 foot.

[illegible] (Benth. l. c.) herbaceous, erect; stem adpressedly pilose; leaves [illegible] oblong-lanceolate, or elliptic, narrowed [illegible] coarsely toothed, or half pinnatifid, clothed with clammy [illegible] lanceolate, [illegible] as well as the floral ones, which are broader, short, dense, ? ? G. Native on the mountains near Paarl, Ecklon and Drège. Habit of *N. Capensis*, but is distinguished from it by its broad, deeply toothed [illegible] often narrowed into the petioles at the base.

[illegible] (Benth. l. c.) Plant more humble. V. ? G. Native on [illegible] warteberg, Ecklon; and Nieuweveld mountains, Drège.

Red-leaved Nycterinia. PI. | to 1 foot. ?

[illegible] (Benth. 1. c.) suffruticose, ? divaricate, or procumbent, villous with clammy villi; leaves ovate, coarsely toothed, Which are oblong, on both surfaces, as well as the floral ones; spike short. ^ • G. Native of Caffreland, at Witbergen. Leaves very blunt, narrowed at the base. Spike apparently interrupted. Corolla \\ inch long.

Scale-leaved Nycterinia. Shrub procumbent.

[illegible] (Benth. l. c.) humble, much branched; leaves linear, 8-linear, ? (Benth. l. c.) humble, much branched; leaves linear or thrice deeply and remotely toothed: floral ones similar, but smaller; flowers axillary, hardly spicate; tube of corolla hardly longer than the corolla, somewhat dilated at the throat; lobes ovate, coriaceous.—Native of the Cape of Good Hope, in the Nieuweveld or Kowp, Drège. A remarkable species, somewhat the appearance of *Castilleja fissifolia*, scarcely [illegible] inches high, ex Benth.

Dwarf Nycterinia. Shrub i foot.

§ 2. *Segments of corolla bifid; tube glabrous. Leaves spatulate.*

10 N. [illegible] (Benth. l. c.) humble, branched at the base of leaves spatulate: floral ones dilated at the base; throat of corolla crowned by rigid hairs; lower stamens abortive. ©. Native of the Cape of Good Hope, on the sandy plains on the west coast [illegible] Cape flats northward, Ecklon. Erinus [illegible] Thunb. fl. cap. p. 475. Erinus Africanus, Herb, [illegible] not of Lin. A low annual, generally *3-5* inches high, usually covered with spreading, clammy hairs, and leaves obovate: upper ones oblong, or linear-spatulate, entire, or with a very few teeth: floral ones adhering at the base to the calyx, spreading at top. Flowers rather distinct, especially at the base of the spike. Calyx and capsules membranous. Corolla 9-11 lines long, ex Benth.

Var. a, *villbsa* (Benth. 1. c.) villous.

Var. ft, glabra (Benth. 1. c.) glabrous. ©. G. On the Olifants and Zwartdoorn rivers, Drège.

Var. B, parviflora (Benth. 1. c.) corolla scarcely 5 lines long, concealed under the floral leaves. ©. G. Native of the Cape of Good Hope, but the locality is not mentioned.

Selago-like Nycterinia. PI. \ to 1 foot.

U N. AFRICA'NA (D. Don, in Sweet, fl. gard. n. s. vol. *3.* p. *239.)* humble, branched at the base; leaves opposite: floral ones oblong-spatulate; throat of corolla scarcely pilose; stamens 4, all antheriferous. ©.? G. Native of the Cape of Good Hope, in the Carro and Carroid districts; Hexriver; Winterbergen and Sneeuwebergen, Ecklon, Drège; Hermanns Kraal, in Albany, Ecklon. Erinus Africanus, Lin. spec. *S78.* Thunb. fl. cap. 474.—Burm. afr. p. 139. t. 50. f. 1. Habit of *N. selaginoides.* Leaves rather more collected at the base of the stem. Spike more dense, with the floral leaves more prominent, and readily distinguished by the % lower anthers slightly projecting from the mouth of the tube.

African Nycterinia. PI. \ to 1 foot.

§ *3. Segments of the limb of the corolla entire; tube glabrous.*

12 N. DIVARICA'TA (Benth. 1. c.) humble, stiff, branched at the base, pubescently hairy; lower leaves on long petioles, obovate: upper floral leaves lanceolate, toothed; spikes elongated. I? . ? G. Native of the Cape of Good Hope, on sandy hills and plains near Cape Town. Manulea divaricata, Thunb. fl. cap. 468. A common plant in collections, drying black. Corolla slender, about 10 lines long. Capsule rather coriaceous.

Divaricate Nycterinia. PI. dwarf.

13 N. PEDUNCULA'RIS (Benth. 1. c.) humble, leafy at the base, branched; lower leaves petiolate, ovate: cauline leaves few, lanceolate, a little toothed; spikes on long peduncles, head formed, few-flowered.—Native of the Cape of Good Hope; Theopolis, in Albany, Ecklon. Leaves almost all collected at the base *of* the stem, which is scape-formed. Branches 4-6 inches long. Flowers like those of *N. divaricata.* Capsule somewhat coriaceous.

Var. a, *hirsuta* (Benth. 1. c.) plant hairy.

Var. /3, glabriuscula (Benth. 1. c.) plant nearly glabrous. Native at Haazenkraalsrivier, Drège.

Peduncled Nycterinia. PI. dwarf.

14 N. PUSI'LLA (Benth. 1. c.) erect, nearly simple; leaves almost all radical, petiolate, broadly ovate: floral ones oblong-linear, or spatulate; flowers few, distant, or rather approximate. —Native of the Cape of Good Hope, between Hoi river and Micrencasteel, in the North Cianwilliam district. More slender than *N. peduncular is,* and the branches are not scape-formed. Buchnera divaricata, Lin. soc. herb. ?

Small Nycterinia. PI. \\ to \\ foot. ?

15 N. [illegible] (Benth. l. c.) stem erect, branched, leafy; leaves oblong-linear, obtuse, almost quite entire; spikes interrupted at the base, dense at apex.—Native of the Cape *of Good* Hope; Haazenkraalsrivier, Drège. Erinus villosus," Thunb. fl. cap. 474. ? Taller than the three last, and scarcely blackens on drying. Capsule almost membranous. Stamens all antheriferous and inclosed, as in the three last species, ex Benth.

Villous Nycterinia. PI. \ to \ *foot.* ?

Cult. All the species of *Nycterinia* are worth cultivating for the sake of the beauty and sweet scent *of* their flowers. They grow well in a mixture of peat and sand, or vegetable mould;

and cuttings will strike root readily in the same kind of earth under a hand glass ; or they may be increased by seeds.

LXXX. POLYCARE'NA (from *ttoxvq, polys,* many ; and *Kaprjvoy, karenon,* a head, in reference to the heads of flowers.) Benth. in Hook. comp. 1. p. 371. Buchnera and Manulea species, Lin. and Thunb.

LIN. SYST. *Didynamia, Angiospermia.* Calyx membranous, bilabiate, bipartite in the fructiferous state. Corolla permanent; tube at length cleft; throat broader; limb spreading, nearly equally 5-cleft. Stamens didynamous, inserted towards the top of the tube ; anthers all similar, exserted. Capsule membranous.—Small annual herbs, natives of South Africa, usually much branched, more or less clammy, hardly becoming blackish on drying. Spikes terminal, usually capitate in the floriferous state, but generally elongated in the fructiferous state. Flowers almost sessile. Floral leaves adnate to the very short pedicels.

* *Tube of corolla 2 or 3 times longer than the calyx.*

1 P. CAPE'NSIS (Benth. 1. c.) clothed with clammy down; leaves linear, or oblong, entire, and few-toothed ; spikes rather loose, numerous, corymbosely panicled ; tube of corolla *3* times as long as the calyx. O. G. Native of Cape District, Ecklon, Drege, &c. Buchnera Capensis, Lin. mant. 88. Manulea Capensis, Thunb. fl. cap. 467. Flowers yellow. Tube of corolla J an inch long ; limb larger than in any of the other species. Generally all 4 anthers are exserted.

Cape Polycarena. PI. \ foot.

2 P. GILIOIDES (Benth. 1. c. p. *372.)* clothed with clammy pubescence ; leaves linear, a little toothed : floral ones about equal in length to the calyxes ; spikes downy, few-flowered ; tube of corolla twice as long as the calyx. ©. G. Native of the Cape of Good Hope, in sands near Paarl, Drege. Habit of *Gilia laciniata,* more slender than *P. Capensis,* with the flowers hardly half the size, Benth.

Gilia-like Polycarena. PI. \ to \ foot.

* * *Tube of corolla rather shorter than the calyx.*

3 P. AU'REA (Benth. 1. c.) clothed with clammy pubescence; leaves linear, quite entire, or a little toothed: floral ones linear-lanceolate, about equal in length to the calyxes ; spikes short, dense, pubescent; limb of corolla longer than its tube. ©. G. Native of the Cape of Good Hope. Buchnera aurea, Herb. Banks, mss. Manulea iEthidpica, Thunb. fl. cap. 467,? exclusive of the syn. of Lin. Flowers golden yellow, above twice the size of those of P. *pubescens,* by which it differs from that species, as well as in its narrow, erect leaves.

Golden-howered Polycarena. PI. \ foot.

4 P. PUBE'SCENS (Benth. 1. c.) erect, small, clothed with clammy pubescence ; lower leaves subovate : superior ones oblong, or linear, quite entire, and toothed : floral ones ovate, or lanceolate, about equal in length to the flowers ; bracteas and capsules downy ; limb of corolla about equal in length to its tube. ©. G. Native of the Cape of Good Hope, at Rodesand, Haazenkraalsrivier, and Zilverfontein, in Namaqualand. Varies m the leaves being entire and toothed. Spikes short, and dense.

Downy Polycarena. PL \ foot. ?

5 P. CAPILLA'RIS (Benth. 1. c.) smoothish ; lower leaves obovate, or oblong : rameal ones linear : floral ones linear, obtuse, equalling the calyxes in length, and capsules, glabrous ; fructiferous spikes loose. ©. G. Native *of* the Cape Flats and Zwarteland. Manulea capillaris, Lin. syst. *569.* suppl. *285.* Thunb. fl. cap. p. 468. Branches slightly pubescent. Calyx about a line long. Flowers small, yellow.

Capillary Polycarena. PI. \ foot.

6 P. RARIFLORA (Benth. 1. c.) clothed with fine pubescence; leaves narrow-linear, almost quite entire, or the lower ones are oblong : floral ones exceeding the flowers ; spikes few, flowered, nearly glabrous ; limb of corolla shorter than its tube. ©. G. Native of the Cape of Good Hope. Habit of the preceding, but the leaves are narrower, and the flowers smaller.

Few-flowered Polycarena. PI. \ to \ foot.

7 P. PLANTAGI'NEA (Benth. 1. c.) erect, small, clothed with clammy pubescence ; lower leaves obovate : superior ones long, quite entire, and few toothed: floral ones lance obtuse, exceeding the calyxes ; corolla small, having the limb shorter than its tube. ©. G. Native of the Cape of Good Hope, on rocks at Modderfontein and Zilverfontein, in Namaqualand, Drege. Spikes forming small leafy heads, with the lowermost detached, axillary flowers, lower down in the series smaller than in any other plant belonging to tribe *Bucnn*

Plaintain-like Polycarena. PI. \ foot.

8 P. INTERTE'XTA (Benth. 1. c.) procumbent, clothed with clammy pubescence ; leaves petiolate, small, ovate-lanceolate, downy : floral ones ovate-oblong, obtuse, scarcely exceeding the calyx ; spikes globosely capitate, somewhat fastigiate. Native of the Cape of Good Hope. Manulea *intertexta* Banks, herb. Flowers very small. Leaves more deeply toothed than any other species.

Interwoven Polycarena. PI. procumbent.

Cult. The species are all beautiful tender annuals. The seeds of them should be reared on a hot-bed in early spring, and about the middle or end of May some of the young plants may be set out in the open border, in a warm, sheltered situation, others may be grown in pots, and placed in the green

LXXXI. PHYLLOPODIUM (from *<f>v\\ov, phyllon,* a leaf; and *rrovQ KoSog, pous podos,* a foot; in reference to the floral leaves being adnate to the pedicels or flower stalks, either. Thunb. in Hook. comp. 1. p. *372.*—Manulea species, Lin. and Thunb.

LIN. SYST. *Didynamia, Angiospermia.* Calyx membranous 5-parted ; segments sub-connate at the base, with membranous margins. Corolla funnel-shaped; tube shorter than the limb 5-parted ; segments entire, nearly equal. Stamens didynamous, exserted ; anthers all similar. Capsule membranous.—Harsh annual herbs, natives of South Africa, generally branching on the ground at the base, rarely erect, usually becoming procumbent, very drying. Floral leaves adnate to the pedicels, usually short. Flowers small, sessile, orange-coloured, or reddish or purplish.? Spikes terminal, usually capitate, rarely elongated in the fructiferous state.

1 P. CUNEIFOLIUM (Benth. 1. c. p. *373.)* stem procumbent, hairy ; lower leaves petiolate, ovate, or obovate, deeply cuneated : superior ones oblong, cuneated : floral ones hardly exceeding the calyxes ; fructiferous spikes capitate: **long-cylindrical, dense, many-flowered.** ©. G. Native of the Uitenhage district, about Algoa Bay. Stem annual. Leaves thickish, glabrous. Divisions of the calyx to the middle by a membrane. Habit of *Selago,* Benth.

Wedge-leaved Phyllopodium. PL *i toot.*

2 P. CAPITAW (Benth. 1. c.) stem hairy; floral leaves ovate-lanceolate, linear, hairy : outer ones exceeding the calyxes; ones ovate-lanceolate, hairy : outer ones exceeding the calyxes; spikes capitate, nearly globose, or at length oblong, dense, many-flowered. ©. G. Native of the Cape of *GoodJ* Hope, in the western districts, from Cape Town to Ohfan ts n The preceding-liam. Manulea capitata, Lin. syst. *56J.* &u]F- fl. cap. 469. More hairy and less dense, and Leaves narrower, and less toothed.

a kind of g?er l ban a large Pea< External floral leaves forming of the cal ° lucrum t0 the young heads of flowers. Divisions *Canhrffi* SQi dee V l y cleft, Corolta minute, reddish ? Pi. ^J a/ o fl owered Phyllopodium. Fl. July, Aug. Clt. 1820.

ed at the b T£R0P K YLLUM (Benth - 1 - c) plant small, hairy, branch- little tootl T 2, anc h es erect; lower leaves petiolate, ovate, a c eolato', qt : SUperior ones few> linear : floral ones linear-lan- tate, becom" on ^ S exceedin g the ciliated calyxes ; spikes capi- fer ous stit e at gth *ohlon S* and rather loose in the fructi- G « Nativ ; Stamens Sorter than the limb of the corolla. ©. ni *lea hetp? *T?n* tbe Ca ^ e, from Zwartland to Caledon. Ma- 469. p erh °phylla> Lin - syst. 569. suppl. *285.* Thunb. fl. cap. sle nder, wit^f a variet y of th e preceding; but much more lovv> Benth r heads of flowers - Corolla apparently yel-

l^ kaved Phyllopodium. PI. i foot.

late> ovate. (Benth. 1. c.) erect, smoothish ; leaves petio- blun t, down SUper lor ones oblong: floral ones ovate, very few -flowerp, l 6q m len ^ th to ^e calyxes; spikes capitate, G - Native f i St amenS e(* uallin g th e limb of the corolla. ©. Cj anwillj in Cape of Good Hope, at Groen river, in ^ r l n e slende r than the last, with smaller heads,

fECjfcM*-.

]Uch branch l T* I (Benth - 1 - c.) smoothish, or scarcely hairy, °n g wav into eaves ovat e or oblong, toothed, narrowed a <he calyxes petioles : floral ones linear, hardly exceeding Ca Pe of G Sp kes e ongated, loose. 0. G. Native of the CUt *bent. ° F pe> in the Uit enhage district. Branches pro- ^*iffuse* Ph n CrS nOt so small as in the ot her species.

6 p y ll opodium. PI. procumbent, a foot long.

ranches j TEAXTUM (Benth. 1. c.) much branched, diffuse ; L °ral ones ° ^ ' leaves P etiola e, ovate, toothed, glabrous: arcll y lono- ets l n ; Spikes lon © 5 flowers all remote ; calyxes live of th e r the P etiole s of the floral leaves. ©. G. lear Addo f Good Ho P e» in ^e Uitenhage district, r ecie s is re i J D r ^ e 5 Olifant's river, Ecklon. This th * broarn e for its lon S loose branches, and especially *Br «cteatr <* ex P anded hmb of the floral leaves, Benth. °*ult.* T J 0 ^ Phyllopodium. PI. diffuse.

culture and propagation see *Polycarena,* p. 588.

LXXXII. !> Qp^oc f PHENA/NDRA (from **4>t,r, sphen,* a wedge ; and na Ped anther *T" *mdros* > a ma le; in allusion to the wedge- P cie s, ThunK r Benth - in Hook - com P - !• P - 373.—Manulea C 11K - SYST ^ ^ '"--Buchnera species of Ait.

°roll a decidn y *d n mia* > *Angiospermia.* Calyx 5-parted. r Un^ish, near] OUS ; tube very short; limb rotate ;, segments 5, n near e Ual St 4 , d h g d, w anthers. 4 l» Stamens 4, exserted, somewhat ascend- ok! cla mmy CU neated » al l similar.—An erect shrub, clothed on R-lanceof a U SCence * Lea ves for the most part opposite, b • he ped ? few -toothed : floral ones free, much shorter Pair * > nearly e qual S. Ovate » *c i uite* entire, very acute. Stamens by ?v ood *Holf* * (Benth . 1. c) T2. G. Native of the Cape of *7th* vi sc6sa' r V he Carro dese rt and Carroid districts. Buch- *t* p $57, c stir P « 2 - t - 34. Ait. hort. kew. ed. 1st. vol. m - 65g, u * bot - ma g - 7. t. 217. Manulea viscosa, Willd. ?? » bluu l *red St^ esent

J ^ l - to feet * ° Phenandra. Fl. June, Nov. Clt. 1774. Shrub 1 For

culture and propagation see *Nycterinia,* p. 587.

LXXXIII. CHiENO'STOMA (from *x <"™, chaino,* to gape ; and *OTOJACL, stoma,* a mouth ; in reference to the wide throat of the corolla.) Benth. in Hook. comp. 1. p. 374.—Manulea species of Thunb. and Vent.—Buchnera species, Andr. aivl Pers.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted. Corolla deciduous, funnel-shaped or salver-shaped, rarely with a short subcampanulate tube ; throat dilated ; limb almost equally 5-cleft; segments obovate or roundish. Stamens didynamous ; anthers all similar, equal in height to the throat, or exserted.—Herbs or under-shrubs, natives of South Africa, not becoming blackish on drying. Leaves nearly all opposite, toothed, rarely quite entire : floral ones similar, or bractea-formed, free from the pedicels. Flowers axillary or racemose, on longish pedicels. Capsule glabrous.

* *Tube of corolla hardly exserted, or shorter than the calyx.*

1 C. ROTUNDIFOLIUM (Benth. 1. c.) suffruticose, smoothish ; leaves small, petiolate, roundish-obovate, deeply toothed, thickish, green on both surfaces; pedicels axillary, a little longer than the glabrous calyx ; corolla funnel-shaped; tube shorter than the calyx. 1?. G. Native of the Cape of Good Hope. Branches apparently procumbent. Flowers few, small, towards the summits of the branches.

Round-leaved Chaenostoma. Shrub procumbent.

2 C. PAUCIPLORUM (Benth. 1. c.) suffruticose, pubescent ; leaves petiolate, obovate-roundish, toothed, downy on both surfaces ; pedicels axillary, rather longer than the calyx, which is hispid ; corolla funnel-shaped : tube shorter than the calyx. *2 . G. Native of South Africa, at Nieuweveldsbergen, in Beaufort, Drege ; Krakakamma, in Uitenhage, Ecklon.—Nearly allied to *C. rotundifolia,* but the flowers are nearly twice the size. Drege's specimens are more hairy than Ecklon's, Benth.

Few-flowered Chaenostoma. Shrub procumbent ?

3 C. CAMPANULA'TUM (Benth. 1. c.) suffruticose, villous ; leaves ovate, toothed ; racemes loose, many-flowered ; calyx hispid, with linear-lanceolate segments ; corolla subcampanulate, with a very short tube, about twice as long as the calyx. *h c* . G. Native of South Africa, at Zuurebergen and Zwartehoogden, in Uitenhage and Albany, Ecklon and Drege ; on the Key river, in Tambukiland, Ecklon. Leaves about half an inch long, generally irregularly toothed, and contracted at the base. Stamens very unequal in length; the longer pair rather shorter than the corolla, which appears to be blue.

Campanulate-ftowered Chaenostoma. Shrub.

4 C. CALYCI'NUM (Benth. 1. c.) suffruticose, smoothish ; leaves oblong-lanceolate, toothed, glabrous or canescent beneath ; calyx smoothish, with subulate segments, hardly one half shorter than the subcampanulate corolla. ^ • G. Native of South Africa, in the Amakosa country, between the rivers Gehau and Bashe, Drege.—Habit almost of *Sphenandra viscbsa,* but more slender, and flowers more numerous. Corolla like that of *C. campanulàtum,* but smaller.

Far. /3, laxiflorum (Benth. 1. c.) flowers more loose ; calyx much smaller. *h c* . G. Native on the rivers Bashe and Windvogelberg. Perhaps a distinct species.

Large-calyxed Chaenostoma. Shrub.

5 C. PROCU'MBENS (Benth. 1. c.) suffruticose, humble, much branched ; leaves oval-oblong, a little toothed, obtuse, green on both surfaces, thickish; racemes few-flowered ; pedicels longer than the calyxes ; corolla funnel-shaped : tube equal in length to the calyx, or hardly exceeding it. *? . G. Native of the Cape of Good Hope, on the Fish river, Drege. Branches

apparently prostrate, slightly pubescent towards the extremity ; the calyx has also a few hairs, but the rest of the plant is quite glabrous.

Procumbent Chaenostoma. Shrub prostrate.

6 C. LAXIFLORUM (Benth. 1. c.) suffruticose, procumbent, subcanescent; branches ascending, fastigiate; leaves oblong-ovate, a little toothed, narrowed a long way at the base, flat; racemes loose; flowers on long pedicels; calyxes glabrous or canescent; corolla funnel-shaped : tube equalling the calyx, or hardly exceeding it. I? . G. Native of the Cape of Good Hope, near the Keiskamma, Drège. Probably a mere variety of the preceding ; but the flowers are larger.

Loose-flowered Chaenostoma. Shrub procumbent.

7 C. HALIMIFOLIUM (Benth. 1. c. p. *375.)* suffruticose, humble ; branches numerous, erect, white; leaves oval-oblong or lanceolate, a little toothed, hoary on both surfaces, flat; racemes loose; flowers on long pedicels ; corolla funnel-shaped: tube equalling the calyx in length, or hardly exceeding it. ^ • G. Native of the Cape of Good Hope, in the Karroo desert, near Graafreynet, Ecklon ; Steelkloof, Hamerkuil, and plains near Aasvogelberg, Drège. Habit of *Manulea incana.* Branches densely leafy at the base. Racemes almost leafless ; the floral leaves being very small and entire.

Halimum-leaved Chaenostoma. Shrub.

8 C. POLYANTHUM (Benth. 1. c.) herbaceous or suffruticose, much branched at the base ; branches downy at top, panicled ; leaves ovate, toothed, cuneated at the base : upper ones oblong, glabrous or canescent beneath; racemes loose ; calyx hispid ; corolla funnel-shaped : tube hardly exceeding the calyx. T? . G. Native of South Africa, on the Zwartkops river, in Uitenhage, Ecklon ; Algoa Bay, Hook. herb. Habit and corolla of ***C. laxiflorum.*** **Leaves and calyx of *C. campanulalum.***

Many flowered Chaenostoma. Shrub.

9 C. PI/MILUM (Benth. 1. c.) plant suffruticose, of many stems, glabrous ; leaves oblong : superior ones linear, quite entire, or few-toothed ; flowers racemose ; corolla funnel-shaped : tube hardly longer than the calyx. T? • ^« Native of South Africa, in Uitenhage district, Ecklon ; and probably from Algoa Bay. Branches many, erect. Leaves slightly revolute on the margins. Pedicels longer than the calyxes, which are nearly glabrous. Corolla very open, as in all the species of this section.

Dwarf Chaenostoma. Shrub \ to \ foot.

10 C. DENUDATUM (Benth. 1. c.) suffruticose; branches glabrous, ascending; leaves distant, linear, quite entire, with revolute edges, glabrous ; racemes few-flowered ; calyx hispid, hardly shorter than the tube of the corolla, which is funnel-shaped. *2 • G. Native of South Africa, at Langekloof, in George district, Ecklon and Drège. Habit almost of *Asperula cyndnchica.* **Calyx of *C. campanuldtum.* Corolla of *C. pumiturn.*** Capsule oblong, longer than the calyx.

Naked Chaenostoma. Shrub ascending.

* * *Tube of corolla twice or thrice the length of the calyx,*

11 C. REVOLUTUM (Benth. 1. c.) suffruticose, greyish or pubescent; leaves linear, quite entire, with revolute edges; flowers racemose ; pedicels hardly longer than the calyx; segments of calyx linear or subulate, about equal in length to the capsule, which is ovate, but *2* or *3* times shorter than the tube of the corolla. *? . G. Native of South Africa, under the Zwartebergen, from the river Zondereinde to Gaurite river, Ecklon and Drège ; and on the Fish river, Dr. Gill. Manulea revoluta, Thunb. fl. cap. 467. Much branched.

Far. a, *glabriusculum* (Benth. 1. c.) plant smoothish.

Var. j3, *pubescens* (Benth. 1. c.) plant pubescent. Native on the Cedarbergen, and near Boschkloof, Drege.

Revolute-leaved Chafnostoma. Shrub 1 foot.

12 C. GLABRA^TUM (Benth. 1. c.) suffruticose, glabrous; leaves linear, quite entire, with revolute margins; flowers ra pedicels more than twice as long as the calyx ; seg calyx lanceolate-subulate, rather downy, shorter than t capsule ; tube of corolla twice or thrice as long as tn *h.* G. Native of South Africa, at Kerg river, in land; and Kannaland, in Zwellendam, Ecklon; and else Drège. This differs from *C. linifolium* in its narrower longer capsules, and is almost always perfectly glabrous.

Glabrous Choenostoma. Shrub.

13 C. LINIFOLIUM (Benth. 1. c.) suffruticose; at top ; leaves oblong-lanceolate, or linear, quite en few-toothed, with subrevolute edges, hairy or ers racemose; pedicels more than twice as long as calycine segments glabrous, or scarcely hairy, linear, e the capsule a little, but *3* times shorter than the tube o rolla. t. G. Native of the Cape of Good Hope, tains in the Cape district, near Worcester, and near tein, in Clanwilliam, Ecklon and Drege. Manulea nu Thunb. fl. cap. 466. ? An intermediate species between *bratum* and *C. Mthiopicum;* and probably only a variety latter.

Flax-leaved Chaenostoma. Fl. July, Aug. Clt. 1^u, J to 1 foot.

14 C. MTHIOPICUM (Benth. 1. c.) suffruticose; merous, floriferous, fastigiate; leaves oblong or toothed, smoothish ; racemes short, loose, subcorymbos hispid, *2-3* times shorter than the tube of the corolla. Native of South Africa, in the Cape district. Buchne pica, Lin. mant. 251. but not of Thunb. Intermediate ***C. linifolium* and *C.fastigidtum.***

^*Ethiopian* Chaenostoma. Shrub.

15 C. FASTIGIVTUM (Benth. 1. c. p. 376.) branches numerous, erectish ; leaves linear, or deeply few-toothed at apex ; flowers capitately racemos tops of the branches ; pedicels usually shorter than tn calyx hispid, *2* or *3* times shorter than the tube of tn *hc* . G. Native of the Cape of Good Hope, in Caleaon nulea cephalotis, Thunb. fl. cap. 470. ? A low for leaves very much like tfcose of *Sdlvia dentata,* reniariy the compact racemes, consisting of from *3* to 7 no very hispid calyxes.

Var. a, *hirsutum;* branches and leaves hairy.

Var. /5, *glabratum* (Benth. 1. c.) plant glabrous.

Fastigiate-branched Chaenostoma. Shrub.

16 C. SUBSPICVTUM (Benth. 1. c.) suffruticose, q branches numerous, erectish ; leaves half stenfl-claspin deeply few-toothed ; flowers spicately racemose; brous, or very shortly ciliated, *2-3* times shorter t of the corolla. T?. G. Native of the Cape of Good Hope, but the precise locality is unknown. Spikes *ot* about an inch long. All the pedicels very much the calyx.

Subspicate-flowered Chaenostoma. Shrub.

17 C. MARIFOLIUM (Benth. 1. c.) suffruticose, branches clothed with hoary pubescence ; leaves ova with subrevolute edges, clothed with hoary tomen or on both surfaces ; flowers on very short pedicels, subracemose ; tube of corolla twice as long as the G. Native of South Africa, in the Uitenhage a lea virgata, Thunb. fl. cap. 470.? Branches Leaves almost sessile, and very white, which does n Thunberg's description, Benth.

Cat-Thyme-leaved Chaenostoma. Shrub procumbent.

18 C. THYMIFOLIUM (Benth. l. c.) suffruticose, loosely much branched, quite entire, glabrous; leaves ovate, with subrevolute, Pedicellate^ or toothed margins, glabrous; flowers axillary, lender Superior ones loosely racemose; tube of corolla South Ar es longer than the cal y x. *? • G. Native of syst. p. ff y. a m the Ca P e dist ct. Manulea integrifolia, Lin. most of C his SUppL 285 *? Thunb. fl. cap. 467. ? Habit al- and the w i i P ; but the leaves are smaller, less toothed, *Vat. a* P s ls nearl y or q^'te glabrous.

Native of ^ar *I:folium* (Benth. 1. c.) leaves smaller. *hc*. G. *E*tire-leaf& of Good Hope, On the Tygerberg Drae,

19 G. « Chaenostoma. Shrub i loot? inches h U*NEA T UM ^Benth. L c0 suffruticose, procumbent; ated, deenl^^\ eaves nearl y sessile, obovate-roundish, cune- illar y at th tops of the branches or subracemose; tube of co- rolla 2 or \ tGS as lon S as the cal y x. *2 • G. Native of South Afri uGS as lon S as the cal y x. *2 • G. Native of In Stellenbrf L" ^ottentots> Holland and Palmietriver mountains, diffe rent i n I ckIon* Habital most of *C. marifblium,* but very ^Presents r ^ S and infloi"escence; in the latter character it 3*5 ^een tPP.V W ^ > Benth. Leaves as broad as long, with

Cuneatl] eav **enth,**

20 C. H e d Chaenosto TM a. Shrub procumbent.

bent or' div LDUM (Ben th. L c<) suffruticose; branches procum- too thed, nar ariCate> ^airy > leaves ovate or oblong, coarsely ?xil Wy, p w d F cuneated at the base> pubescent; flowers r v> 3 tiVn l : su P erior on es loosely racemose; calyx u ativ e of t^ es short er than the tube of the corolla, f? . G. ho od of c Pe of Good Ho P e 5 Pl entifu l in the neighbour- flifli lea on Manulea **hispida, Thunb. fl. cap. 473.** Va «-iabl e Dl ppositIflo ra, Vent. jard. malm. 155. t. *155.* A very leave s. ^"^^^ecially in the degree of hairiness and size of

Hispid Chaenostoma. Th June» Aug. Clt, 1816, Shrub

Cent; leave s L oRIBU NDUM (Benth. 1. c.) branches erect? pubes- pub escent • oVat6) coarse ly toothed, cuneated at the base, finely ed) 06 m 1668 subcor ymbose, disposed in a many-flow- l termina? ered Panicle; cal yxes on short pedicels, hairy, 3 times Ar orter than ti y tube of the corolla. *h* • ? G. Native of South h Ca at Por? e tU r al, Dl ge* Leaves almost like those of *C. 'Sidur n,* but l ar er; tbe flow ers are also almost the same. I pla rp o f Plant is *und le-fin* *J TM hle ^ for ^s size and inflorescence.

%% C Cba ProJ * co ^x ATUM enostoma. Shrub & * • somewhat r ^ . C. P 377) berbaCeOUS ! ^ " ^ Ca ps ^s usually exserted, ovoid, or oblong, more or lets ^S^^^oot^T^lr7^^f y, leaves petiolate, ovate W ers axillarf truncate at the base or cordate, pubescent; Af? th of th J P icellate; calyxes hispid, hardly half the Tric a, at Kr L V of the corolla, *V-* G, Native of South Tl^evalei n e§e# Manulea cordata, Thunb. fl. cap. 473. le plant is rent k able for its l on g trailing stems, and form of r* ComH ^ rter than that of *C. hispida.*

n *\Cc (Benth. l c) P lant more hairy. %. G. p, ^flfcleo Good Hope, on the Witbergen, Drege. V raili ng. Chaenostoma. Fl. June, Aug. Clt. 1816.

(Benth. 1. c.) herbaceous? branches erect, petiolate, broad-ovate, toothed, finely pubes- ^Oral ones SITla flowers on long pedicels, racemose; in ci fPe of Go as lon as the cal y x. ^ •? G. Native of s h un 8» roun H PGj On Zu urebergen, Drege. Leaves \ an Ulat Calyx or wed ge-shaped at the base: floral ones 6 at e nds. nearly glabrous, unequally cleft; segments sub-

Racemose-flowered Chaenostoma. PL J to 1 foot. ?

24 C. FCETIDUM (Benth. 1. c.) annual? erect, branched, nearly glabrous; leaves on long petioles, ovate, deeply toothed; peduncles axillary, 1-3-flowered: superior ones subracemose; tube of corolla slender, *2-3* times longer than the calyx. ©. G. Native of the Cape of Good Hope, in the eastern portion of Worcester and Clanwilliam districts, &c. Buchnèra fce'tida, Andr. bot. rep. t. 80. Manulea foe'tida, Pers. ench. *2.* p. 148. Manulea alternifolia, Hort. par. Pers. ench. *2.* p. 148. Leaves \ to 1 inch long. Lower pedicels almost always bearing a small corymb of about 3 nearly sessile flowers: the upper ones usually simple, forming an irregular leafy raceme. Corollas white.

Stinking Chaenostoma. FL June, Sept. Clt. 1794. PL 1 to lj foot.

25 C. PEDUNCULOSUM (Benth. 1. c.) herbaceous, much branched, procumbent, clothed with clammy pubescence; leaves petiolate, ovate, deeply toothed or pinnatifid: superior ones small; peduncles axillary, very long, filiform; tube of corolla slender, one half longer or almost twice as long as the calyx; limb ample. 1/. G. Native of South Africa, at Zilverfontein, in Namaqualand. This species is remarkable for its intricate leafy stems; its numerous peduncles, often *2* inches long; and for the form of the flowers, which appear like those of *Lyperia.* The corolla dries yellowish; with a dark-coloured throat.

Peduncled Chsenostoma. PL procumbent.

Cult. For culture and propagation see *Nycterinia,* p. .587.

LXXXIV. LYPEXRIA *(XvirripoQ, hjperos,* sad or sorrowful; from the dull heavy colour of the flowers; and also from their expanding and becoming sweet-scented at night; but are closed and scentless throughout the day-time.) Benth. in Hook, comp, 1. p. *377.*—Erinus species, Lin., Ait., and Thunb. Manulea species, Lin., Pers., and Link. Buchnèra species, Andr. Lychnidea species, Burm.

LIN. SYST. ***Didyna??iia, Angiospermia.*** **Calyx 5-parted;** segments linear, subfoliaceous. Corolla deciduous, with an elongated tube, which is clammy outside, and gibbous or incurved on the upper side at the apex; limb spreading, 5-cleft; segments approximating into *2* lips. Stamens didynamous, inclosed.—Herbs, subshrubs, or shrubs, natives of South Africa. Lower leaves opposite: superior ones alternate, entire, toothed, or deeply pinnatifid, or multifid, usually with the young leases in fascicles, in the axils of the old ones. Flowers sessile, or generally pedicellate, axillary, racemose, or spicate. The corollas, and sometimes the whole plant, becomes black on drying. ***id Me w kte*** dammy. *

**** Flowers nearly sessile, spicate.***

1 L, FRUTICOSUM (Benth. 1. c.) clothed with clammy pubescence; leaves ovate, oblong, or subcordate, quite entire, and few-toothed: floral ones similar, exceeding the calyxes; capsule oblong, about equal in height to the calyx. T? • 6. Native of the Cape of Good Hope, on the Zwartdoorn river, in Clanwilliam and Modderfontein, and the Gariep plains, in Namaqualand, &c. More of a shrub than any of the other species. Leaves sessile, from 4 lines to an inch in length, always drying black, as well as the flower spikes.

Shrubby Lyperia. Shrub.

2 L. AMPLEXICAI/LIS (Benth. 1. c.) herbaceous? erect, clothed with clammy pubescence, or villous; leaves broad-ovate, toothed, cordately stem-clasping at the base: floral ones similar, exceeding the calyxes; spikes elongated, many-flowered; tube of corolla hardly exceeding the calyx: limb small. *%A* G. Native of South Africa, in Namaqualand, Ecklon; Given river, in Clanwillian, Drège. Flowering branches about a foot long,

of which the greater part is occupied by the leafy spike. Capsule nearly glabrous, hardly as long as the calyx.

S(em-clasping-\eaved Lyperia. PI. 1 foot.

S L. TRI'STIS (Benth. 1. c. p. 378.) herbaceous, erect, very clammy ; lower leaves petiolate, ovate or oblong, toothed and cut: superior ones oblong-lanceolate: floral ones lanceolate, quite entire : upper ones shorter than the capsules ; floriferous spikes dense: fructiferous ones elongated; capsule twice as long as the calyx. %. G. Native of the Cape of Good Hope. Erinus tristis, Lin. syst. 571. suppl. 287. Thunb. fl. cap. 476. Stems thick, rigid, branched. Tube of corolla about an inch long ; segments of the limb emarginate. Capsule 4-5 lines long. The flowers of a dull dirty purple colour.

A$M-flowered Lyperia. Fl. May, June. Clt. 1825. PI. 1 to 1| foot.

4 L. FRA'GRANS (Benth. 1. c.) suffruticose, erectish, clammy ^ leaves oblong-lanceolate, toothed at top, narrowed at the base, quite entire : superior ones narrower, and nearly entire : floral ones rather shorter than the calyx; floriferous spike dense: fructiferous one elongated ; capsule hardly twice as long as the calyx. T? . G. Native of the Cape of Good Hope ; plentiful. Erinus frâgrans, Ait. hort. kew. ed. 1. vol. 2. p. *357.* Erinus lychnideus, Thunb. fl. cap. 474.? exclusive of many synonymes. Ker. bot. reg. 748. Sel&go lycnidea, Lin. spec. 877. amcen. 6. p. 89. Lychnidea villdsa, &c, Burm. pi. afr. 13. t. 49. f. 4. Leaves very numerous at the base of the stem ; and the whole plant is slightly pubescent, and dries very black. Capsule 4-5 lines long.

Far. a ; limb of corolla dirty lurid purple.

Far. /3 ; limb of corolla dirty yellow.

Fragrant Lyperia. Fl. May, June. Clt. 1776. Shrub \ to 1 foot.

5 L. MACROCA'RPA (Benth. 1. c.) suffruticose ? stem smoothish ; leaves oblong, linear, obtuse, quite entire, narrowed at the base, finely pubescent: floral ones equal in length to the calyxes ; spikes elongated ; capsule about 3 times longer than the calyx. \. G. Native of South Africa, probably of the Cape district. Habit of *L. frâgrans;* but the leaves are entire, and the capsules about an inch long.

Long -fruited Lyperia. Shrub.

6 L, SI'MPLEX (Benth. 1. c.) herbaceous, erect, nearly simple; lower leaves petiolate, ovate, a little toothed: superior and floral ones oblong or lanceolate, quite entire ; spikes elongated ; capsule clothed with clammy pubescence, hardly exceeding the calyx. %. G. Native of South Africa, in the Cape district; Karroo desert, and False Bay, &c. Erinus simplex, Thunb. fl. cap. 474. ? Differing from the three preceding species by the short thick capsule; and in the flowers, and especially the capsules, being more distant from each other. Mr. Bentham is doubtful whether this be the same as Thunberg's plant.

Simple-stemmed. Lyperia. PI. \ foot ?

* * *Herbs. Leaves not fascicled. Flowers pedicellate, racemose,*

7 L. TENUIFLÒRA (Benth. 1. c.) small, erect, clothed with fine clammy pubescence; leaves oblong or lanceolate, quite entire, and few-toothed ; pedicels a little longer than the calyxes. *If..* ? G. Native of the Cape of Good Hope; but the particular station is unknown. Flowers 8-10 lines long.

Thin-flowered Lyperia. PI. \ to \ foot.

8 L. RACEMÒSA (Benth. 1. c.) erect, very clammy; leaves petiolate, ovate, sharply toothed, narrowed a long way at the base; flowers pedunculate, racemose; limb of corolla ample, longer than the half of the tube. 1/. G. Native of South Africa, in the north of Clanwilliam district; and at the mouth of the Gariep, in Namaqualand, Ecklon and Drège. Tube of corolla about 9 lines long; lobes of the limb broad, shortly bifid.

Racemose-fiowered Lyperia. PI. 1 foot.

9 L.GLUTINÒSA (Benth. I.e.) herbaceous, erect, very clam ^ leaves petiolate, ovate, sharply toothed, roundly trunca ^^ base ; flowers pedicellate, racemose ; limb ot coro of than the half of the tube. %. G. Native of the t> Good Hope, near the Gariep. Not so tall, and than the preceding. Leaves shorter. Corolla with a much smaller limb. Calyx very clammy, ratner than the capsule.

Clammy Lyperia. PI. \ to 1 foot.

10 L. VIOLAW (Benth? 1. c. p. 379.) decumbent; smoothish ; leaves petiolate, oblong, toothed; racemose; limb of corolla much shorter than the tube; capsule ovate, villous, twice as long as the c G. Native of the Cape of Good Hope. Manulea Link, enum. *2.* p. 142. Manulea crystallina, Weinm. soc. rat. 1. p. 221.? Erinus patens, Thunb. Branches smooth. Leaves \ inch long. Corolla of a purplish-violet colour ; segments of the limb cording to Link, the plant is beset with short curled

Fiolaceous-fiowered Lyperia. Fl. June, Nov. PL 2 feet.

* * * *Subshrubs or shrubs. Leaves usually fascicled in axils. Pedicels axillary and subracemose.*

11 L. INCI'SA (Benth. 1. c.) suffruticose, branched ; leaves petiolate, obovate or ovate, villous on both surfaces, as well as the branches ; subracemose ; tube of corolla about 6 times longer calyx: limb short. 1?. G. Native of the Cape Hope. Erinus incisus, Thunb. fl. cap. 476. Coroi an inch long.

CuMeaved Lyperia. Shrub dwarf.

12 L. CANE'SCENS (Benth. 1. c.) suffruticose; much branched ; leaves petiolate, subfasciculate, obo toothed, hoary beneath or on both surfaces; mose ; racemes panicled; pedicels short, still; short; capsule one half longer than the calyx. of South Africa, in inundated land, on the Nearly allied to *L. argtntea,* but the branches cate, and more rigid ; pedicels shorter. Flower* rous and smaller.

Canescent Lyperia. Shrub decumbent.

13 L. ARGE'NTEA (Benth. 1. c.) suffruticose, branched; leaves petiolate, subfasciculate, ovate deeply toothed, rather hoary from scabrous pubesce or on both surfaces ; pedicels axillary, ones are subracemose ; limb of corolla *one* halt s tube. *hc* . G. Native of South Africa, in and in the Amakosa country, Ecklo" trict; and, nulea argentea, Lin. syst. p. 570. suppl. 286. 472. Lower leaves J inch long : upper ones very variable in pubescence, and generally ary ish, seldom deserving the name *of argentea,* bent

Far. a ; leaves white beneath.

Far. (3; leaves greenish on both surfaces.

Far. y ; more scabrous, and leaves blunter

Silvery Lyperia. El. June, Nov.

14 L. PEDUNCULVTA (Benth. 1. branched, finely pubescent; leaves petiolate; sub vate-cuneated, deeply toothed; pedicel- donga form ; calyx 3-4 times Sorter than the tube o^ of corolla a little shorter than the tube Cape of Good Hope ; but the locality is not nera pedunculata, Andr. bot. rep. t. 84. Man

Pers. ench. 2. p. 184. Habit of *L. argéntea.* Resembles also *L. cuneàta*; but the leaves arc several times larger, and stalked; and the pedicels above an inch long. Corollas white.

Long-peduncled Lyperia. Fl. June, Nov. CH. 1790. Shrub 1½ foot.

15 L. "'"clibra'TTV'611,1 (Benth- *' c0 suffruticose, decumbent, edor nin -n leaves fascicled, petiolate, oblong, deeply tooth- •'"icd l M, finel-v Pubescent or glabrous; racemes loose, emarei„V Clanlmy Plbescence ; limb of corolla ample, with G- Nmi Se|^ents, abo»t equal in length to the tube. ^. fe« from 7 oUth Africa, on the K<-""skamma, Drege. Dif- ai"i more I* "f *Enea* cri>'e% by the leaves, which are smaller tlle corolla Py tootlled 5 a«d by the large expanded limb of

Phlox-flowered Lyperia. Shrub decumbent.

16 L. CRASSICAU fits (Benth. 1. c.) suffruticose, decumbent at the branched; branches strict, stiff, scabrous ; leaves ***mS*-''''*** ture, or 2-3-cleft, scabrous; racemes strict; pedicels a little shorter than the calyx; limb of corolla short, with acuminate segments; j> u p 'vr ; lvc of> Soiltl1 Afrnica t °n Wildshutsberg j^ Withers n • Dnes dots. n.J.^i. f black, and is covered with glandular become white on drying.

^ Lyperia. SStubj to 1 foot.

soft viJli. ? LUs C cnth. J. c. p. 380.) suffritticose, clothed with te> peti'olat anC elong at^i procumbent; leaves subfasciculate, oVate> enti P, Ovate, ^ee p'y pinnatifid or pinnate : segments har% t«u o or oiIU; Pcdiecrs axillary, filiform; tube of corolla £fric a, at G f .'.? aS tlle ca y x* "J *G- Native of SolIth ^, EekJ ^ r?'8 TowB, in Aibany; and Zaureberg, in Uiten- S*1 Oltn^i ; Ulesbe rg, Dr^ge. Branches slender. Pedicels Soft t > Corolla 4"5 ^ 8 long.

3 I, " ^Shrub procumbent.

s'e] IUCAU,LIs (Kentll- 1. c.) suffruticose, pubescent; petiolate o?nnated i slenfler, procumbent; leaves subfasciculate, vate, Verv ovate-o»ndish, deeply pinnatifid : segments obo- South Afj U; Pe(l>cels axillary, filiform, I?. G. Native of preceding ir on the Witbergen. Allied, but distinct from the

19 L. P,r"me ? Lyperia. Shrub procumbent.

b T branch 1" FIDA (Benttl- l c0 suffruticose, decumbent, toother/ ' ves Pinnate : segments oblong-cimeated, Lt tim ?r P'nnatifitl: flowers subracemose ; tube of co- , in,]IP v nger than the cal yt- *h • G.* Native of South W Fish River, Eklon. Karroo desert and Karroid places ; from Beaufort f s")i't'l 2fii ^ »«u61ea pinnatifida, Lin. syst. p. fro otns t a y lath - fl- ca P- 473- Plant very variable. Is few, 6 lilles long, usually convolute or conduplicate. o nes l0n,7 er stiff; Tube of corolla 4-5 lineaflong ; limb of t) ie frtii se>ments obtuse, or very slightly emarginate. t), yar- « eo»-'WWIDC varieties may prove to be species.

I the calvv (Btmth* L c") ca Psule hard] y one li«If longer than the calyx.

"M (Benth. 1. c.) capsule about twice the »*!«"•• >i *vise;,'" i,*

} "S as the °*Tptibhcens* (Benth. I. c.) capsule about twice *i?'-S* > *u66m-yX, cf Tollas smaller.

• *ta* (Benth. 1. c.) corolla larger.

Pinnatifid-leaved Lyperia. Shrub decumbent.

20 L. MULTI'FIDA (Benth. I. c.) suffruticose, procumbent, much branched ; lea T su),,masc,culate, bipinnate ; segments for the most part peti racemes fcw-fl C^e> ob,on g-eimeated, entire, cut or pinnatifid ; hardly a half .t"* red ' calycine segments linear-spatulate, Vo L. iv. ' S n« er than the tube of the corolla. % . G !

Native of South Africa, at Sternbergspruit and Stormliergen, Drege. Leaves much more divided ; and the flowers much **smaller** than in *L. pinnatifida,* ex Benth,

Multijitl-teaveii Lyperia. Shrub procumbent.

21 L. FOLIOLOSA (Benth. 1. c.) shrubby, divaricately much branched ; leaves small, fascicled, linear-cuneate, toothed or pinnatifid, canescent on both surfaces ; flowers subracemose ; tube of corolla about thrice as long as the calyx. 1j . G. Native of South Africa, in karroid places. Zartehopf and Langeklqof, Ecklon; between the little Fish river and Brak river, **Drdge.** Leaves 1 to 3 lines long, much narrower, less cut, and whiter than in *L. pinnatifida,* var. e, which it much resembles.

Leafy Lyperia. Shrub.

22 L. CUNEA'TA (Benth. 1. c.) shrubby, much branched; leaves minute, fascicled, bi-tridentate at apex, rarely quite emire, smoothish, or finely pubescent; flowers subracemose; '"*"" of corolla 3-4 times longer than the calyx. ½ . G. Native of South Africa, on the Gauritz river, Drege. Leaves intermediate between those of *L. foliolòsa* and *L. atropurpùrea.* Differs from *L. pedunculàta* by the smaller leaves, and in the '"'»' *-" jjt«ttm,'(i«tit *uy* Lüe minute sessile le peduncles, which are seldom half an inch long,

CW«Je-ieaved Lyperia. Slirub

23 L. ATROPURPU'REA (Benth. 1. c.) shrubby, much **branched**; leaves minute, fascicled, linear, quite entire, or rarely unidentate ; flowers subracemose; tube of corolla 6-T times longer than the calyx. fj . G. Native of the Cape of Good Hope, in the Karroo and Karroid districts, Ecklon and Drege. Man^lea atropurpurea, Banks, herb. Leaves glabrous or downy, *1-2* lines long. Coroila near an inch long. Capsule larger than in the neighbouring species. Leaves longer in the cultivated plant.

Z)«r£-pw)-p/e-flowered Lyperia. Shrub.

24 L. ASPALATHOI'DES (Benth. 1. c. p. 381.) shrubby, much branched ; leaves minute, fascicled, obiong or linear, quite entire ; flowers racemose ; tube of corolla 2-3 times longer than the calyx, b - Gr. Native of South Africa, at Grassrugg and Krakakamma, in the Uitenhage district, Ecklon. Leaves smaller than in the preceding, and narrower than those of the following, and not imbricated. Corolla i an inch long. Branches downy. Leaves glabrous.

Aspalathus-likc Lyperia. Shrub.

25 L. MICROPHY'LLA (Benth. 1. c.) shrubby, much branched; leaves minute, ovate, quite entire, fascicled in the axils: those of the younger branches imbricating in 4 rows ; flowers few, towards the tops of the branches. f;. *G.* Native of South Africa, in Karroid districts ; Zwartkops river, Ecklon ; near Garip, and between Addo and Zoudag river, Drege. Manulf* microphylla, Lin. syst. 569. suppl. 285. Thunb. fl. cap. *A* Leaves scarcely *h* a line long. Flowers about half an inch Segments of the limb broad, obovate. •) stem

Small-leaved Lyperia. Shrub. *i broad-

Cult. For culture and propagation see *Nijeterh^en<^eT>* **few-**.iients of calyx

LXXXV. MANITLEA (from *manus,* the *»e of the corolla, to the divisions of the corolla.) Benth. in P* anc I Clanwilliam 381.—-Nemia, Berg.—Maniilea species, L: Berg-valei, Ecklon. authors. Selago species of authors. • I-3-flowered, remote.

LJN. SYST. *Didynamia, Angiosper^ta,* segments linear or subulate. Coro1- gated, glabrous or tomentose outsi • 88, ^st. 569. **Benth. I.** c.) parted, equal, or the 4 superior s'ovate, or obJo^; P« TM « « Stamens didynamous, inclosec"acenies «mip°»"f.! »«««* °f motives **S t a S** Afric;. "W g ^ o f l u t h AfrLTS aS **bM Of the Stema** ***»*£&££?.£*** the Cape to Gariep racemose; racemes sorr *l *J'r/ hiaih^ Link, enurn. 2. p bracteate; sometimes

peduncles. Corolla usually orange-coloured or yellow, not becoming black on drying. Capsule glabrous.

RACEMOSE. *Pedicels \-Jlowered. Segments of corolla bifid, obcordate, obovate, or rarely oblong, obtuse. Leaves almost radical. Peduncles scape-formed, simple, naked, or minutely bracteate, racemose at apex.*

1 M.? NERVOSA (E. Meyer, mss. Benth. 1. c. p. 381.) leaves petiolate, obovate-oblong or ovate, quite entire, glabrous; calycine segments broad-lanceolate; segments of corolla broad, emarginate : the *2* upper ones combined beyond the middle, quite entire. \/ . ? G. Native of South Africa, at Zilverfontein, in Namaqualand, Drège. The calycine segments are broader and thicker ; tube of corolla shorter; limb larger, and less deeply cleft than in any other species. Perhaps a separate genus, ex Benth.

Nerved Manulea. PI. \ to | foot.

2 M. SILENOI'DES (E. Meyer, mss. ex Benth. 1. c.) annual; leaves petiolate, ovate, quite entire, or obscurely toothed ; calycine segments linear, while young connected by a membrane, and exceeding the capsule in the fructiferous state ; segments of corolla emarginately bifid. 0. G. Native of South Africa, at Karakuis. More slender than *M. nervosa.* Tube of corolla longer; limb smaller, with narrow segments.

Var. j3, minor (E. Meyer, 1. c.) ©. G. Native of South Africa, between Micrenkasteel and Zwartdoorn river, in Clanwilliam ; and Modderfontein, in Namaqualand.

CatcJifly-like Manulea. PI. *S* to 4 inches.

3 M. ANDROSA'CEA (E. Meyer, mss. ex Benth. 1. c.) leaves obovate-oblong, glabrous, quite entire, or subcrenated; peduncles glabrous ; racemes subcapitate ; calycine segments oblong-linear, glabrous, equalling the capsule in length ; tube of corolla 3 or 4 times longer than the calyx; segments of the limb obovate, retuse. ©. ? G. Native of South Africa, in sands near Noagas, Drège. Rather taller than *M. silenoides.* Leaves rather longer and narrower. Flowers nearly sessile, mostly forming a compact head, which is sometimes elongated in the manner termed proliferous, Benth.

Androsace-like Manulea. PL \ to J foot.

4 M. CORYMB6SA (Thunb. fl. cap. 472. Benth. 1. c.) leaves ovate-oblong, obovate, quite entire and toothed, glabrous, or finely downy ; peduncles scape-formed, sometimes furnished with 1-2 leaves ; fructiferous racemes elongated ; calycine segments linear, longer than the capsule, membranously ciliated at the base ; segments of corolla broad, obovate.—Native of South .Africa, in the Cape district. Flowers often reflexed. Tube of corolla 3 lines long ; orifice hairy.

farymbose-flowered Manulea. PI. \ *to* 1 foot.

5 $. ALTI'SSIMA (Lin. syst. *569.* suppl. 286. Thunb. fl. cap. 472.) Ie2^ves oblong-elliptic, lanceolate, or toothed, finely pubescent; pedu1?^8 very l°ng, sometimes furnished with 1-2 leaves; fructiferous i^cemes oblong, dense ; calycine segments longer than the capsule, clothed with scabrous pubescence.—Native of South Africa, in the Cape district. Peduncles or flowering stems often a foot a?^ a na tf ni gn> sometimes with one or two branches.

Very-tall Manulea. *V.:*feet.

6 M. LONGIFOLIA (Bent?--1; c' P- *I*2-)* le*ves oblong-lanceolate, quite entire, or obscu^Y toothed, smoothish; floriferous branches elongated, branche^arly»aked; or few-leaved at the base fruit-bearin- racemes elo?gated 5 cdy*es Jn short pediba»e; tiuit Deann»r . ., seffnients, which rather exceed the eels, with lanceolate, hispid segn-fib cuezer, Dr. ège. Percapsules.-Nativeof ^ut.^fr^Kpsides the branched stems, haps a variety of *M. altu»n*,_' ^ < \to be much smaller. narrow racemes, &c. the corolla appeals-

Long-leaved Manulea. PI. 2 feet ?

7 M. BELLIDIFOLIA (Benth. 1. c.) leaves °\oyfJtf°ro°us rabesat. * egnica ts 1**£ little crenated, glabrous, or finely P^cen* cemes elongated; capsules remote ; calyx late, nearly glabrous ; segments of corolla oblong-spate.—t.- tive of Soutli Africa, in the Uitenhage c.--- ; river, ,,,,,ge, Addo, and Quaggsvlakte, Ecklon; K h p p l d by It comes near *M. corymbose,* but is read.ly distingu calyx. Leaves of *Bellis sylvhtris.*

Daisy-leaved Manulea. PI. 2 feet. *1*

• • THYRSIFLORJE. *Racemes ^P^'Jf^mg, lately many-flowered. Segments of corolla entire,*

Stems usually leafy, Benth.

8 M. INCVNA (Thunb. fl. cap. 468. Ben*.1- ^ base cose, humble, much branched ; leaves «PP''*V''''i at apex, »ar, of the branches, petiolate, oblong, obtuse, t o o, f n e a run ches rowed at the base, hoary on both surfaces ; &°TM° i-S-flo''' erect, nearly naked, racemose ; peduncles very s rf fh c o- ered; calyxes hoary, scarcely shorter than the tu o f H<if rolla. 12. G. Native of South Africa, near the^ ^ ,0 t be of *Chcenostoma halimifblium.* Calyx 3-4 lines long enthi middle only. Divisions of corolla narrow-oblong,

Hoary Manulea. Shrub dwarf. u-ves nearly

9 M. CRASSIFOLIA (Benth. 1. c.) perennial; leav subdentate, dical, oblong-elliptic or spatulate, obtuse, or biun j race n,es quite glabrous on both surfaces ; stems nearly nak rf « elongated, interrupted; flowers fascicled; Begmen- abo j connected by a membrane, lanceolate-linear at ^ ,00e equal in length to the calyx; tube of corolla^- at lylogpl» than the calyx. 2/ . G. Native of South Africa, and Witbergen, Drège. Very smooth, and almost g

Thick-leaved Manulea. PI. £ to 1 foot. olabr0us, g

10 M. JU'NCEA (Benth. 1. c.) perennial, quite g cous; branches strict, erect, rushy, few-leaved, pai linear, remotely toothed or pinnatifid : supe floWered.; quite entire ; racemes compound, short, tewments of the calyx subulate, exceeding the cap j^a tube of corolla 4-5 times longer than the caP^lle, g 2-7 inC long. Calyx slightly downy. Tube of corolla a long.

Bushy Manulea. PI. *2* feet. , , -fa $c*b

11 M. RIGIDA (Benth. 1. c.) erect, clothed *n pubescence ; branches divaricate ; leaves lanC^g sUbfas toothed or pinnatifid ; racemes elongated ; n°W j ^te at ap^ late, on very short pedicels; calycine segments sU scarcely t*1 twice the height of the capsule; tube *aff* corolla ^r\cBt the length of the calyx. *%A G.* Native of t>°»\ %cti Clanwilliamdistrict; Olifant's river and Brackontel Wupperthal, Drège. Stature of *M.juncea,* but^ ^ upper part. Leaves sessile, or embracing the with the midrib very prominent. Pedicels rolla of *M.juncea,* ex Benth.

Stiff Manulea. PI. *2 feet.* . , branched; \2 M. DENSIFLORA (Benth. 1. c.) Perennial, toOthed; line leaves oblong-linear, almost quite ent,re> cemes dense, subspicate ; calycine segments SUD the capsule a little ; tube of corolla thick is^,ifant's of North Africa, in Glanwilliam district, un but dftd Brackfontein, Ecklon. Inflorescence of *M.3* in habit and foliage.

Dense-flowered Manulea. PL 2 fee. ? perennial

13 M. PARVIFLORA (Benth. 1. c. p. leaves erect, a little branched, few-leaved, P« a; quite cn«r, with oblong-spatul^te or obovate: cauline ones line few-toothed ; racemes elongated, slender, n

...minute, with linear segments, shorter ... capsule, which is truncate. 1£. G. Native of South Africa, ... the Omtata, in the Amaponda country, Drège. Nearly ... to *M. rubra* and *M. leiostachys,* but much more slender, ... and tube of the corolla scarcely *2* lines long,

... Manulea. PL 1 to *2* feet. ?

... (Benth. l. c.) perennial; stem erect, pubescent at the base; leaves pubescent: lower ones on long petioles, oblong, toothed: superior ones oblong-spatulate or linear, few-toothed; racemes many-flowered, elongated, and as well as the ... glabrous; segments of calyx linear, nearly as long as the ... Native of South Africa, at Cedarbergen, in Clanwilliam and Gnamore neighbourhood. Taller and more erect than *M. rubra,* with ... flowers, and readily distinguished by the ... Raucous surface of the upper part of the plant. Benth.

PL 1 to 2 feet.

... Lin. syst. ... *286,* Thunb. fl. cap. 472.) Perennial; stem erect, decumbent at the base, ... oblong-lanceolate, dentate, narrowed at the base, ... villous; raceme interrupted, a little ... segments linear-oblong, obtuse, about a half ... Native of South Africa, in the Cape flats and ... Hottentotsholland; very common in Cape collections. Manulea rubra, Berg. fl. cap. 160. Manulea angustifolia, ... PL sel. hort. berol. 7. t. *20.* This species is very variable in the number of flowers and degree of hairiness. Flowers half an inch long, or rather shorter, at first golden yellow, but at length ... of a reddish orange-colour.

Red-flowered Manulea. FL April, Sept. Clt. 1790. PL 1 to 2 feet.

16 M. ROTUNDIFOLIA (Benth. l. c.) perennial; stem decumbent at the base, ... Descent; radical leaves ovate: cauline ones obovate or oblong, coarsely crenated or somewhat cut, pubescent on both surfaces; racemes elongated, many-flowered, a little branched; calycine segments linear, obtuse, rather shorter than the capsule; tube of corolla *2-3* times longer than the calyx. %. G. Native of South Africa, in Algoa Bay, Forbes and Ecklon. This plant varies in the breadth *of* the leaves. Flowers much ... than in *M. tomentosa;* the corollas and capsules not ... the size.

Obtuse-leaved Manulea. Pl. decumbent.

M. TOMENTOSA (Lin. syst. p. 569. mant. 420. Thunb. fl. cap. 470.) stem decumbent, humble, branched, tomentosely villous; leaves obovate or oblong, toothed, thick, densely tomentose on both surfaces; racemes short, dense; segments of calyx lanceolate-linear, villously tomentose, about equal in length to the capsule. %. G. Native of the Cape of Good Hope. Curt. bot. mag. t. 822. Link et Otto, in sel. hort. berol. 45. t. 10. good. Selago tomentosa, Lin. spec. 877.—Plukn. phyt. t. 319. f. 2. Branches short and stiff. Racemes 2-3 inches long. Flowers at first greenish-yellow; but at length becoming orange-coloured (fig. *56).*

Tomentose Manulea. FL May, Nov. Clt. 1744. PL 1 foot.

FIG. *56,*



18 M. THYRSIFLORA (Lin. syst. p. 569. suppl. 285. Thunb. fl. cap. 471.) stem erect, flexuous, branched, finely pubescent; leaves obovate, coarsely toothed, smoothish; raceme panicle-formed, many-flowered; peduncles loosely cymose; calycine segments linear; tube of corolla slender, 3-4 times longer than the calyx; segments of the limb oblong-linear, obtuse. %. ? G. Native of South Africa, in the Cape district. Raceme or panicle above half a foot long. Lower cymes opposite: upper ones alternate, all loosely dichotomous. Corolla slender; tube about 3 lines long.

Thyrse-flowered Manulea. PL 1 foot.

19 M. PANICULATA (Benth. l. c.) erect, tall, branched, clothed with hoary pubescence; leaves ovate or obovate, coarsely crenated; panicle large; racemes numerous, leafy at base, many-flowered; peduncles cymose; calycine segments oblong-linear, obtuse; tube of corolla 3 times longer than the calyx; segments of the limb ovate. %. ? G. Native of South Africa, at Stormbergen, and near the Krai river. Stem thick and hard. Panicle a foot long; branches erect; cymes much denser than in *M. thyrsiflora,* ex Benth.

/W'c/ed-flowered Manulea. PL tall.

20 M. TURRITIS (Banks, herb. mss. ex Benth. l. c.) stem and branches erect, hairy; leaves petiolate, ovate or oblong, deeply toothed, narrowed at the base, hairy on both surfaces; racemes elongated, slender; flowers fascicled; segments of calyx linear, obtuse; tube of corolla slender, 5-6 times longer than the calyx; segments linear-oblong, obtuse. %. ? G. Native of South Africa, on rocks, of Nieuwekloof, Drège; and in the Cape district. This species is remarkable for the white hairs of the stem. Racemes and flowers almost like those of *M. leiostachys,* but the foliage and habit are very different. It has the appearance of being occasionally shrubby at the base, ex Benth.

Tower Manulea. PL 1 to 2 feet.

* * * ACUTIFLORI (from *acutus,* acute; and ^os, a flower; in reference to the segments of the corolla being acute.) Benth. **1. c.** ***Racemes compound, or almost simple. Segments of the corolla all, or the upper ones are subulately acuminated,*** ex Benth.

21 M. STELLATA (Benth. l. c. p. 384.) stem ascending, pubescent, sparingly branched; leaves petiolate, broad-ovate, deeply serrated, pubescent; raceme elongated, compound, loose, many-flowered; calycine segments linear-subulate; tube of corolla 3 times longer than the calyx. F?. ? G. Native of South Africa, on the mountains of the Cape and South Worcester districts, Ecklon. An elegant species, with slender, orange-coloured flowers, 3 to 7 on each peduncle.

Stellate Manulea. PL 1 to *2* feet. ?

22 M. EXALTATA (Banks, herb. mss. ex Benth. l. c.) stem erect, divaricately branched, pubescent; leaves petiolate, broad-ovate, deeply toothed, pubescent; racemes very slender, few-flowered, interrupted, leafy at the base; segments of calyx linear-subulate, but one half shorter than the tube of the corolla. %. ? G. Native of South Africa, in the Cape and Clanwilliam districts, Olifant's river, Brackfontein, and Berg-valei, Ecklon. Branches slender. Peduncles very short, 1-3-flowered, remote. Flowers half as large as those of *M. stelldta.*

Exalted Manulea. PL *2* to 3 feet ?

23 M. CHEIRANTHUS (Lin. mant. 88. syst. *569.* Benth. l. c.) leaves nearly radical, ovate, obovate, or oblong; peduncles scape-formed, erect, simple; racemes compound; tube of corolla hardly exserted: upper segments *of* the limb very long and subulate, ©.or $. G. Native of South Africa, in various places in the western districts from the Cape to Gariep river in Namaqualand. M. rhynchantha, Link, enum. *2.* p.

142. Nemia cheiranthus, Berg. cap. 160. Lobelia cheiranthus, Lin. spec. 1319. Cheiranthus Africanus, flore luteo, Comm. hort. 2. p. 83. t. 42. Corolla deep yellow. It is the great disproportion in length of the *5* divisions of the corolla of this species that was the origin of the generic name.

Hand-flower Manulea. Fl. June, Aug. Clt. 1795. PL 1 foot.

24 M. PUSILLA (E. Meyer, mss. ex Benth. 1. c.) leaves nearly radical, obovate, or oblong, a little toothed; peduncles numerous, scape-formed, erectish ; racemes nearly simple ; tube of corolla hardly exserted ; segments of the limb scarcely unequal, rather shorter than the tube. £. G. Native of South Africa, at Zilverfontein in Namaqualand. Very nearly allied to *M, cheirdnthus,* but much smaller, and with very much smaller flowers.

Small Manulea. PI. £ to \ foot. ?

25 M. GARIEPI'NA (Benth. 1. c.) leaves nearly radical, ovate, obovate, or oblong; peduncles scape-formed, erect, a little branched; racemes compound, many-flowered ; tube of corolla more than twice the length of the calyx ; segments of the limb unequal. £ . ? G. Native of South Africa, on the plains of the Gariep, in Namaqualand. This species also comes near *M. cheiranthus*^ but differs in the flowers. In both this and the preceding species the lower segments of the corolla are frequently, and sometimes perhaps all of them, obtuse, so as to connect the present section with the two first, ex Benth.

Gariep Manulea. PI. 1 foot. ?

"j~ *Species described by Thunberg, which Mr, Bentham, who has written a monograph on the present tribe9 has not been able to refer to any of the above.*

26 M. ANTIRRHINOIDES (Lin. syst. 569. suppl. 286. Thunb. fl. cap. 469.) leaves ovate-lanceolate, serrated, villous ; heads globose; stem erect. *$* . ? G. Native of the Cape of Good Hope-

Snap-dragon-like Manulea. PL 1 foot. ?

27 M. VIRGATA (Thunb. fl. cap. 470.) leaves obovate, serrated, villous ; branches panicled ; flowers alternate, remote. *$* . G. Native of the Cape of Good Hope. Said to be nearly allied to *M. turrltis.*

Twiggy Manulea. PL 1 foot. ?

28 M. CEPHALOTES (Thunb. 1. c.) leaves oblong, erosely serrated, glabrous; flowers subumbellate. *$* . ? G. Native of the Cape of Good Hope.

Headed Manulfea. PL 1 foot. ?

29 M. HI'RTA (Thunb. 1. c. 471.) leaves obovate, doubly serrated, hairy ; flowers axillary. *$* . ? G. Native of the Cape of Good Hope.

Hairy Manulea. PL 1 foot. ?

30 M. THUNBE'RGII ; leaves oblong, serrated, tomentose ; stem erect, hairy. *$* . G. Native of the Cape of Good Hope. Erinus tomentosus, Thunb. fl. cap. p. 478.

Thunberg's Manulea. PL 1 foot. ?

Cult. For culture and propagation see *Nycterinia,* p. 587.

LXXXVI. ERPNUS *(eptvog, erinos,* of Dioscorides, and *Erineon* of Pliny; derivation unknown.) Lin. gen. no. 771. Schreb. gen. no. 1034. Juss. gen. 100. ed. Usteri. p. 112. Gsertn. fruct. 1. p. 261. t. 55.-~Ageratum, Tourn. inst. 422.

LIN. SYST. *Didyndmia, Angiospermia.* Calyx campanulate, 5-parted, permanent. Corolla funnel-shaped ; liml? equal, 5-parted • segments obcordate. Stamens 4, didynamous; anthers small, ' Stigma *of 2* roundish lobes. Capsule small, grooved on one side halved, 2-celled; valves bifid; dissepiment double, formed by~the vent in edges of the valves. Seeds ovate, rugged from crowded tubercles.-Small, alpine, tufted plants. Radical leaves rosulate : cauline ones alternate. Stems simple ; lower ones barren or surculose. Flowers alternate, each in the axil of a bractea, disposed in terminal simple racemes. Corollas purple or red.

1 E. ALP/NUS (Lin. spec. 878.) leaves tufted, spatulate, deeply serrated, hairy; racemes sub-corymbose. Native of the alps of Europe; as of Germany, Switzerland, Pyrenees, South of France. Curt. bot. mag. *3.* t. 310. Corollas purple.

Far. /3, albiflbra ; plant smaller ; flowers white Barrel, icon. 1192.

Alpine Erinus. Fl. March, June. Clt. 17^.

2 E. HISPA'NICUS (Pers. ench. 2. p. **147.)** plant smaller than the preceding, branched, and glabrous ; leaves tuw, serrated; racemes elongated. H. Native of Spain, Pancorvo, Clemente. Corollas purple. pj 1 foot.

Spanish Erinus. Fl. March, June. **Clt.** 17^-

Cult. These are pretty little alpine plants, and are very desirable for the decoration of rockwork or on which purposes no plants can be better fitted, as t close tufts, and produce their numerous purple blosso by most of the summer months. They are either P^ro^1fowed to division or by seeds ; but they succeed best when scatter their seeds.

Tribe **VII.**

BUDDLIEXJE **(this tribe only contains the ge** *dlea.))* **D. Don. in edinb. phil. journ. vol.** 1835. Calyx campanulate, 5-toothed. Corolla tu 4-5-cleft, equal, spreading. Stamens 4-5, closed; anthers composed of *2* parallel, distinct eel clavate, 2-lobed. Capsule crustaceous ; dissepiment from the inflexed edges of the valves, inserted spongy placenta. Seeds angular, scobiform ; test branous. Albumen fleshy. Embryo almost the i seeds ; cotyledons oblong, compressed ; radical Shrubs with usually quadrangular branches. reticulately-veined. Flowers terminal, capitate, spi cled, usually orange-coloured. This tribe is analog to many *Verbendcece.*

LXXXVII. BUDDLEA (named by Houston a Buddie, who is often mentioned in Ray's synopsis. collection of British plants is preserved in the Houst. phil. trans, et reliq. houst. t. *3.* Schred. gen. no. **184.** Juss. gen. 118. ed. Gaertn. fruct. 1. p. *226.* t. 49. H. B. et Kunth, amer. *2.* p. 345.

LIN. SYST. *Tetrdndria, Monogynia.* Character that of the tribe.

§ 1. *Flowers axillary, verticiUate.*

1 B. SESSILIFLORA (H. B. et Kunth, nov. gen. t. 182.) branches terete, glabrous ; branchlets and with hoary tomentum ; leaves lanceolate, acuminated, quite entire, nearly sessile ; flowers rate, *h* . G. Native near the town of Mexico, at of 1160 hexapods. Leaves *2-3* inches long, Glomerules 3-5-flowered, on short peduncles. vate, pilose at top. Corolla twice as long as th

Sessile-flowered Buddlea. Tree. t. 183.)

2 B. SCORDIOIDES (H. B. et Kunth, 1, c. terete, and are, as well as the leaves, clothed turn; leaves sessile, oblong, obtuse, crenate beneath; flowers axillary, verticillate. with the preceding. Habit of *Teuenum* greenish above, nearly an inch long. Whorls of flowers globose, size of a large y panulate, yellow.

Scrofulariæ. #*e Buddlea. Shrub 3 to 4 feet. ?

S. R. VARIEGATA (H. B. et Kunth, 1. c. t. 846. t. 184.) branches terete, glabrous; branchlets and leaves clothed with hoary tomentum; leaves oblong, acute, narrowed at the base, verticillat[e] [short petioles] rusty beneath, quite entire; flowers axillary, and Chil[e]* ... Native of Mexico, between Acaguisotla clothed [pa]... at the altitude of 680 hexapods. Branches of flower[s] [yell]ow. [Red]dish dense, size of a sloe. Corolla campanulate,

f^{f flowered Buddlea. Shrub, ex st[em], [syst]. 1. p. 430. Graham, bot. mag. 2718.) branches tetragonal, clothed With white [to]mentum as well as the leaves; leaves deleaves; the Deri[v]ing down ... crowdpri[v]e ... powers axillary, ... te; spicaie ... Brazil. B. enum. 1. ... lured (fig^T"*8 ora»ge-co- ... Buddlea. Fl.Oct. feet/ Ut[u] 18^ Shrub 10 ... on h[e]aves broad-ovate, entire, or repand, glaucous beneath; the younger ones are clothed with ... ; glomerules axillary, 3-5-flowered, shorter ... Native of Java. Wall. cat. no. 6416. ... I'ndica, Lam. diet. 1. p. 508. Clt. 1823. Shrub.

FIG. 57.



capitate; heads usually disposed in terminal panicles.

... diet. 1. p. 507. ill. t. 69. f. *2.)* branches ... clothed with hoary tomentum, as well as the under ... lanceolate, acuminated, petiolate, crenate; heads ... globose, pedunculate, f? . H. Native of ... Ruiz. ^ Pav. fl. per. 1. p. *52.* t. 83. ... Hope^ad. harl. 20. p. 417. t. 11. B. ... 2> P, 332 icon. rar. e* 307.—Palquin, Feuill. ... are con... leaves 6 inches long, on short petioles, ... HeadTG at the base> wrinkled> glabrous, and green ... ; corolla as of an orange, or honey colour. ... 15 to9W n% ed Buddlea. FL May, June. Clt. 1774. 7fi. PK ...

f^{tan*es al? A>TA (H. B. ^ Kunth, 1. c.) stem herbaceous; l°Se> leave" u ran^ular» and are> as well as the leav^s» tomen- ... above, and rusty beneath, oblong-lanceolate, ... crenated, connate at the base; heads terminal, globose. ... Native between lake Chalco and the city of Mexico, ... altitude of 1170 hexapods. Leaves nearly 3 inches ... Heads of flowers ... Corolla ... feet.

B - CS;r /5 uddlea pi 2 to 3 feet

... (Ruiz* et Pav. fl. per. *1.* P. 52, L 8L f. B<) ... clothed with white tomentum, as well as the ... leaves; leaves lanceolate, connate at the ... Pedun\acute» scabrous, and green above; heads ter- ... y. 1? Ulate, globose. *J?* . G. Native of Peru, about ... ght. 3^ook in bot. mag. t. *2853.* Stems numerous, ... villOlls a^eas t ^near-subulate. Corollas copper-coloured, ... outh.

Connate-leaved Buddlea. Fl. May. Clt. 1826. Shrub 5 to 6 feet.

9 B. SFHJERA'NTHA (Schlecht. et Cham, in Linnaea, 5. p. 104.) branches compressedly tetragonal, clothed with soft velvety tomentum, as well as the leaves; leaves connate at the base, sessile, lanceolate, acuminated, crenated, wrinkled, especially beneath; heads of flowers bibracteate, pedunculate, axillary. J?. G. Native of Mexico, in Llanos de Perote. Leaves like those of sage, *2* or *2*\ inches long. Heads clothed with golden tomentum, as well as outsides of corolla. Corollas glabrous inside.

Round-flowered Buddlea. Shrub.

10 B. POLYCE'PHALA (H. B. et Kunth, 1. c.) stem herbaceous, ? twining, tetragonal, and is, as well as the under sides of the leaves, clothed with rusty tomentum; leaves ovate, lyrate, acuminated, crenated, connate at the base; heads terminal, panicled, globose. %. ? G. Native of Peru, in woody places near Ayavaca, at the altitude of 1400 hexapods. Leaves lyrate and connate at the base, beset with rusty hairs above, *7-8* inches long. Heads size of a cherry. Corolla hardly longer than the calyx, clothed with rusty tomentum. Capsule obovate. Panicle simple. Said to be nearly allied to *B. connata,* Ruiz, et Pav.

Many-headed Buddlea. PL twining.

11 B. PICHINCHE'NSIS (H. B. et Kunth, 1. c. p. 347.) branches terete, glabrous; branchlets tetragonal, and under sides of leaves clothed with rusty tomentum; leaves lanceolate, acuminated, crenated, on short petioles; heads terminal, panicled, globose. I? . G. Native on the eastern declivity of Mount Pichincha, between the cataract of Cantuna and the plains of Verdecuchu, at the altitude of 1780 hexapods. Leaves glabrous above, *2* inches or more long. Heads size of small cherries, disposed in a simple panicle. Corolla campanulate, a little longer than the calyx, with reflexed segments. Very like ***B. globosa.***

Pichincha Buddlea. Shrub.

12 B. DIFFU^XSA (Ruiz. et. Pav. fl. per. 1. p. 52. t. 80. f. A.) subscandent; branches terete, clothed with yellowish tomentum, as well as the under sides of the leaves; leaves sub-petiolate, ovate, and subcordate, acute, pubescent above; peduncles axillary and terminal; flowers capitate, *fy* . G. Native of Peru, on the margins of fields, where it is always in flower. Stems diffuse, much branched, yellowish. Leaves deflexed, quite entire, or furnished with one or two teeth, running into the petioles. Common peduncles solitary, twin, or tern, sessile. Stipulas reniform, reflexed. Corolla yellow, with a villous throat.

Diffuse Buddlea. Shrub diffuse.

13 B. RUGOSA (H. B. et Kunth, 1. c.) branches terete, and are, as well as the leaves, clothed with rusty tomentum, glabrous above, wrinkled, lanceolate, acute, crenated, on short petioles; heads terminal. Tj . G. Native of New Grenada, in rugged, frigid places in Parama de Saraguru, near Ona, at the altitude of 1500 hexapods. Branchlets tetragonal. Leaves 8 inches long, and J an inch broad. Heads size of a sloe, disposed in a branched panicle. Corolla campanulate, a little longer than the calyx; segments roundish, reflexed.

JVrink/^-leaved Buddlea. Shrub.

14 B. INCA^VNA (Ruiz, et Pav. fl. per. 1. p. *52.* t. *80.* f. B.) branches bluntly tetragonal, and are, as well as under sides of leaves, clothed with white tomentum; leaves oblong and lanceolate, crenated, petiolate; peduncles terminal, panicled; flowers capitate. Jj . G. Native of Peru, on the banks of rivers. Peduncles trichotomously divided. Corollas yellow. Stipulas semicircular.

Hoary Buddlea. Tree 30 to 40 feet.

15 B. E'LEGANS (Cham, et Schlecht, in Linnaea, 2. p. 594.) branches terete, tomentose; leaves lanceolate, acute, bluntly

toothed, wrinkled and glabrous above, but tomentose beneath ; panicle terminal, leafy ; heads hemispherical, terminal. *1?* . G. Native of the South of Brazil, Sello. Branches obsoletely and bluntly tetragonal. Leaves running into the short petioles at the base : largest ones 5\ inches long. Panicle simple. Heads loose, about the size of cherries. Tube of corolla equal in height to the calycine segments ; limb obtuse, expanded. Capsule cylindrical. The tomentum of the whole plant is rusty in the dried state.

Elegant Buddlea. Shrub.

§ 3. *Panicle terminal. Flowers spicate, racemose, glomerate, or solitary.*

16 B. INTERRU'PTA (H. B. et Kunth, 1. c. p. 348.) branches terete, and are, as well as the under sides of the leaves, clothed with rusty tomentum, the upper surfaces being hoary ; leaves oblong-lanceolate, acuminated, quite entire; spikes panicled, verticillate, spreading. ^ . G. Native of the Andes of Quito. Leaves 3 inches, or longer. Petioles 2 lines long. Panicle simple, half a foot long, clothed with rusty tomentum. Whorles of flowers globose, distant, size of large peas. Capsule nearly globose, glabrous, equal in length to the calyx.

***Interrupteds'piked* Buddlea. Shrub.**

17 B. BETONIC^FOLIA (Lam. ilL 1. p. 291. no. 1488.) branches obscurely tetragonal ; leaves petiolate, ovate-oblong, crenulated, much wrinkled ; spikes panicled, interrupted, verticillate. T? • G. Native of Peru. Stems tubercled. Leaves tomentose beneath. Branches of panicle opposite ; glomerules verticillate. Flowers sessile, pubescent.

Betony-leaved Buddlea. Shrub.

18 B. BULLATA (H. B. et Kunth, 1. c.) branches tetragonal, smoothish ; leaves lanceolate-oblong, acute, rounded at the base, crenated, wrinkled, glabrous, and shining above, but clothed with hoary tomentum beneath ; panicle terminal, branched; flowers glomerate. J? • G. Native along with the preceding. Leaves 4-5 inches long; petioles J an inch. Panicle trichotomous, sessile, 4 inches long, spreading; flowers glomerate at the tops of the branches, on short pedicels. Corolla a little longer than the calyx; segments roundish, spreading. Nearly allied to *B. incana,* Ruiz, et Pav.

Blistered-leaved Buddlea. Shrub.

19 B. CORDATA (H. B. et Kunth, 1. c. t. 185.) branches quadrangular, smoothish ; branchlets and under surfaces of leaves clothed with rusty tomentum ; leaves ovate, acute, cordate, crenulated, glabrous above ; panicle terminal, spreading; flowers glomerate. T? . G. Native of Mexico, in the valley of Guanaxato, near Marfil, at the altitude of 1050 hexapods. Leaves quite entire at the base, 3-4 inches long; petioles 1 inch long. Panicle sessile, trichotomous. Flowers glomerate at the tops of the branches.

Cordate-leaved Buddlea. Shrub, or small tree.

20 B. LONGIFOLIA (H. B. et Kunth, 1. c. p. 349. t. 186.) branches quadrangular, smoothish; branchlets and under sides of leaves clothed with rusty tomentum ; leaves oblong-lanceolate, acuminated at both ends, serrately crenulated, glabrous above ; panicle terminal; flowers glomerate. >? • G. Native of the Andes of Peru, between Villa Montan and Santa Cruz, at the altitude of 1400 hexapods. Leaves 7-8 inches long, on short petioles, quite entire towards the base and apex. Panicle sessile, trichotomous. Flowers sweet-scented. Corolla a little lonoer than the calyx. Ovarium and stigma pilose.

Eons-leaved Buddlea. Shrub 18 to 20 feet.

21 B. MOLLIS (H. B. et Kunth, 1. c.) branchlets tetragonal, clothed with hoary tomentum ; leaves oblong-lanceolate, acute at both ends, undulately crenulated, glabrous above, but clothed with fuscescent tomentum beneath; panicle terminal, much branched, spreading; flowers glomerate. \ . G. Native? the province of Quito, in exposed places near Hambato, at ii altitude of 1390 hexapods. Leaves 6-7 inches long, on ve i short petioles. Panicle sessile, trichotomously branched; g merules 6-10-flowered, on short peduncles. Corolla yellow, little longer than the calyx.

Soft Buddlea. Tree 12 to 18 feet. ranches

22 B. ACUMINATA (H. B. et Kunth, 1. c. t. 187.) brand* tetragonal, clothed with hoary tomentum ; leaves ovate-ow ^ acuminated, acute at the base, serrated, glabrous clothed with rusty tomentum beneath ; panicle terminal, SP ing; flowers glomerate. T?. G. Native of Mexico, near ban Rosa de la Sierra, at the altitude of 1340 hexapods. L 3-4 inches long, on short petioles. Panicle sessile, trie mous. Flowers on short pedicels. Very nearly allied preceding, and differs from it principally in the leaves shorter, acuminated, and serrated.

***Acuminated-\e&\ed* Buddlea. Shrub. „ \Q5.)**

23 B. DECU'RRENS (Schlecht, et Cham, in Linnsea, *a.* p branches tetragonal, clothed with golden tomentum ; lea liptic, acuminated, running a long way into the petio base, somewhat crenately serrated, glabrous above, bu with golden yellow tomentum beneath ; panicles terminal, p ing; flowers glomerate. ^ . G. Native of it Andres. Allied to *B. acuminata,* and is distinguished in the leaves running into the petioles at the base, m t turn being more loose, and as if it were furfuraceous or yellow in the young state.

Decurrent-leaved Buddlea. Shrub. branches

24 B. INTERMEDIA (H. B. et Kunth, 1. c. p. 35 % ends, tetragonal, pubescent; leaves oblong, acuminated at serrated, rather pilose above, but clothed with rusty t beneath; panicle terminal, branched; branches 5'th{j pre ing ; flowers glomerate. 1?. G. Native along and beset ceding. Leaves narrowed into the petioles, green, sessile, with stellate hairs above, 2 or 2\ inches long, as the 2-3 inches long. Flowers sessile. Corolla twice as K calyx. An intermediate plant between *B. acuminata* ***occidentalis.***

Intermediate Buddlea. Shrub. tetra*

25 B. OCCIDENTALS (Lin. spec. 162.) branches gonal; branchlets and under sides of leaves cescent tomentum ; leaves oblong-lanceolate, both ends, entire; spikes panicled; flowers glomer G. Native of Peru, near Guamcabamba, in Humb. et Bonpl.; about Carthagena, Houston gullies and other sheltered places. Gaertn. fr 49. Ruiz, et Pav. fl. per. fl. p. *53.* t. 82. a. H nov. gen. 2. p. 350. Lam. ill. t. 69. f. 1. Ophioxyion aim. 270. t. 210. f. 1. Branches twiggy. Leaves long. Corolla white, ex Lin. et Bonpl., but to Ruiz, et Pav. ; but the plant of Lin. and most probably the same, notwithstanding the dine colour of the flowers. Spikes disposed in a terminal

***Western* Buddlea. Shrub.** ranches a little

26 B. CALLICARPOIDES (H. B. et Kunth, 1. c. branches compressed ; branches and leaves clothed with leaves ovate-oblong, acuminated, sharply serrated, cled, sub-fastigiate ; flowers glomerate. Mexico, between Xalapa and the river Chachalacas, at the altitude of 700 hexapods. Leaves 3-4 inches long, stellate pili above. Spikes disposed in termina merules opposite, on short peduncles, than the calyx. This species is very nearly allied by *dentalis* and *B. Americana,* but is distinguished i the size of the leaves, thinner, hoary tomentum ,

being 3 times S*lorter, and in tbe spikes being approximate and subfasciculate.

Callicarpa-like Buddlea. Shrub.

27 B. AMERICAVNA (Lin. spec. 162. amcen. 5. p. 394.) branchlets rather ovate, a little compressed, clothed with hoary tomentum; leaves rather [illegible] narrowed at the base, serrately crenated, neath [illegible] above, but clothed with yellowish tomentum beofpen, [illegible] panicled 5 flowers glomerate. T?. G. Native Houston [illegible] mountains> Humb. et Bonpl.; West Indies, H. B [illegible] Browne« Ruiz« et Pav. fl. per. 1. p. 53. t. 82. [illegible] p. 29 [illegible] 351. Sloane, jam. 139. hist. tetragonal [illegible] —Browne, jam. p. 144. Branches subbroad [illegible] above, 4-8 inches long, and nearly panicle [illegible] petioles an inch long. Spikes disposed in a termioff [illegible] foot longg; glomerules nearly globose, Says, that [illegible] Pelluhcfe s. Corollas yellow. Browne tior>s, and [illegible] emollient baths and fomentaJnieriir [illegible] all the properties of *Mullien.*
fce [illegible] Buddlea. Fl. Aug. Cl. 1826. Shrub 8 to 12

28 B. tetraffonal VERBASCIF5LIA (H. B* et Kunth> l c. P. 351.) branches Sides of [illegible] pressed at the nodi, and are, as well as the under Skhrous [illegible] clothed with yellow tomentum; leaves rated; [illegible] ovate-elliptic, acute at both ends, doubly sertive at th[illegible] panicled 5 flowers glomerate, dense. ^. G. Na- Of 7 50 hJ[illegible] of Mount Quindiu, near Ibaque, at the altitude short peti[illegible] Leaves 7-8 inches long, and 4-5 broad, on liltle fin[illegible] Spikes about 3 inches long> thickness of the and ^ifius^ [illegible] terminal panicle, which is a span long, ments ovat^ [illegible] yellow, twice as long as the calyx; segto the nr^ [illegible] acute. Capsule ovate, obtuse. Very nearly allied *Mufti*[illegible] but differs in the form of the leaves.

29 [illegible]*eaved* Buddlea. Shrub.

tetragonal, BUNDA (H>* B, et Kunth> l c. P. 352^ branches Clothed wit[illegible] branchlets and under sides of leaves ?CUr*iinated ^ [illegible] tor nentum; leaves smoothish above, ovate, inched d* narrowed at the base, serrated; panicles terminal, tlVe of M[illegible] ancate; flowers densely glomerate. T?. G. Native 920 hexapods. Leaves green above, 3 inches long; petioles 1-2 lines long. Nearly allied to *B. callicarpoides* and *B. Amoricana.*

Burnt-flowered Buddlea. Shrub.

30 B. [illegible] (H. B. et Kunth, 1. c.) branches terete; branchlets and [illegible] leaves [illegible] of leaves clothed with rusty tomenrrow at t? [illegible] above, ovate-oblong, acuminated, very fi^erate. [illegible] P[illegible]y toothed; spikes panicled; flowers [illegible] Native of humid places, on the banks of [illegible] Pods, [illegible] the town of Caraccas, at the altitude of 416 [illegible] 6.7 [illegible] called *Oja de Quesco* by the natives, [illegible] Petioles half an inch long. Spikes [illegible] This [illegible]. Corolla longer than the calyx. Capsule *Mother!* [illegible] differs from all others in the toothed leaves.

31 B. [illegible] Buddlea. Shrub 3 to 4 feet.

[illegible] (H. B. et Kunth, 1. c. p. 353.) branches [illegible] ovate-oh[illegible] striated, glabrous; branchlets pubescent; [illegible] smooth^ [illegible] acute, narrow at the base, crenately ser[illegible] above, but clothed with fuscescent tomentum to[illegible] flowers [illegible] trichotomously much branched, divaricate. [illegible] Me[illegible] solitary, on short pedicels. *?. G. [illegible] mountains near the town of Guernavaca. [illegible] young-[illegible] very short petioles, pubescent above [illegible] branch?[illegible] [illegible] sessile, *6-8* inches long, with oppo[illegible] than the [illegible] branchlets. Flowers small. Corolla white, [illegible] calyx.

Small-flowered Buddlea. Shrub or Tree.

32 B. HETEROPHY'LLA (Lindl. bot. reg. 1259.) branches terete, woolly; leaves woolly beneath: lower ones cordate-oblong, acuminated, denticulated: superior ones ovate-lanceolate, almost quite entire; racemes terminal, panicled, thyrsoid, composed of few-flowered peduncles* J?. G. Native of South America. Flowers yellow. Flowering shoots pendulous.

Variable-leaved Buddlea. Fl. May. Clt. ? Shrub 10 to 12 feet.

33 B. MICROPHY'LLA (H. B. et Kunth, 1. c.) branches terete, glabrous; branchlets and under sides of leaves clothed with rusty tomentum; leaves rather scabrous above, ovate-oblong, acute at both ends, serrated towards the apex; panicles terminal, coarctate; flowers glomerate. T?. G. Native of Mexico, in arid places on the burning mount Jorullo, at the altitude of 430 hexapods. B. parvifolia, Willd. herb. no. 2918. Leaves hardly an inch long, on very short petioles. Glomerules size of peas. Corollas white.

Small-leaved Buddlea. Shrub.

34 B. ABBREVIA'TA (H. B. et Kunth, 1. c.) branches terete, glabrous; branchlets tomentose: floriferous ones short; leaves oblong-lanceolate, acute at both ends, serrated, rather scabrous above, and clothed with rusty tomentum beneath; panicles terminal, spreading; flowers crowded. T?. G. Native of Mexico, in grassy places between Pachuca and Real del Moran, at the altitude of 1340 hexapods; and between San Miguel del Soldado, and La Joya. Cham, et Schlecht, in Linnaea, 8. p. 246. B. brevifolia, Willd. herb. no. 2918. Branchlets downy, or clothed with rusty tomentum. Leaves green above, 1 to 1\ inch long; petioles *2-3* lines long. Panicle sessile, sub-trichotomously branched, oblong, 1\ inch long. Flowers on short pe^dicels, sweet-scented. Corolla white, twice as long as the calyx. Very nearly allied to the preceding.

Short-panicled Buddlea. Shrub 5 to 6 *feet.*

35 B. SUNDA'ICA (Blum, bijdr. p. 743.) leaves petiolate, lanceolate, acuminated at both ends, serrulated: upper ones quite entire, clothed with white tomentum beneath; spikes panicled, interrupted, terminal, elongated; flowers on short pedicels; glomerules generally 3-flowered. ^. G. Native of Java, in woods, on the mountains in the province of Tjanjor. Said to **be allied to *B. occidentalism***

Sunda Buddlea. Shrub.

36 B. ACUMINATÍSSIMA (Blum, bijdr. p. 743.) leaves on short petioles, lanceolate, acuminated, acute at the base, finely denticulated, clothed with white tomentum beneath: upper ones quite entire; spikes terminal, interruptedly glomerate; glomerules approximate, usually 3-flowered; flowers on short pedicels. J?. S. Native *of* Java, on the mountains. Allied to *B. Sundaica,* and only differs from it in the leaves being more acuminated, and in the pedicels being shorter.

***Fery-acuminated-leaved* Buddlea. Shrub.**

37 B. MISSIONIS (Wall. cat. no. 640.5. Benth. scroph.) branches pubescent;, leaves oblong, narrowed at both ends, quite entire, coriaceous, glabrous and smooth above, and pubescent beneath; panicle ovate-pyramidal, many-flowered; racemules opposite; glomerules nearly sessile; corollas slender, glabrous. F?. G. Native of the Peninsula of India, at Wynad.

Mission Buddlea. Shrub.

38 B. PANICULA^TA (Wall, in Roxb. fl. ind. ed. Car. 1. p. 412.) arboreous; branches terete, divaricate, densely tomentose; leaves lanceolate-oblong, quite entire, rounded or cuneated at the base, thick, wrinkled, clothed with rusty tomentum beneath, or on both surfaces while young; racemes short, dense, a little branched; flowers sessile; glomerules dense, sub-pedicellate. *2. G. Native of Nipaul. Leaves 4-5 inches long. Petioles

connected by an elevated line running across the branch. Racemes short and stout, the lowermost ones from the terminal axils, about 2-3 inches long, the others shorter and more simple, until they become a terminal, elongated raceme ; the whole forming an elegant, crowded, attenuated, sessile panicle or thyrse. Flowers fragrant, white, each glomerule furnished with a pair of elongated, subulate bracteas, besides some smaller ones under the exterior calyxes. Tube of corolla 3 times longer than the calyx.

Panicled-flowered Buddlea. Fl. Feb. April. Shrub or Tree.

39 B. ACUMINA'TA (Poir. suppl. 1. p. 745.) branches subquadrangular, downy; leaves ovate, acuminated, loosely toothed, downy beneath ; racemes terminal, very short, tomentose, panicled. J?. G. Native of India, ex herb. Juss. Leaves sub-petiolate : lower ones dilated at the base, glabrous above, almost quite entire. Racemes panicled, clothed with rusty tomentum. Corolla downy, with an elongated tube, and short segments. Capsule small, ovate.

***Acuminated-\e3L\ed* Buddlea. Shrub.**

§ 4. *Racemes or spikes simple, or a little branched at the base, interrupted.*

40 B. THYRSOI'DEA (Lam. ill. 1. p. 291. no. 1489. encyc. bot. 9. p. 744.) branches terete, yellowish, downy at top ; leaves lanceolate-linear, acuminated, serrated, sessile, attenuated at the base, woolly beneath and shining above ; raceme thyrsoid, spicate, terminal, tomentose. I?. G. Native of the South of Brazil; Rio Grande do Sul; Monte Video plentiful. Cham, et Schlecht, in Linnaea, *2.* p. 594. B. salicifdlia, Vahl, symb. 3. p. 14.—A very elegant shrub. Leaves 4-5 inches long. Capsules ovate, pedicellate. Floral leaves quite entire. Corolla twice as long as the calyx. Flowers glomerate, nutant.

Thyrsoid-fiovtered Buddlea. Fl.? Clt. 1823. Shrub 5 to 6 feet.

41 B. SPICA^X^TA (Ruiz. et. Pav. fl. per. 1. p. 53. t. 81. f. A.) leaves ovate, acute at both ends, serrated; spikes very long, simple. *2. G. Native of Peru, in arid places of Munna. Branches bluntly tetragonal, clothed with white tomentum. Leaves petiolate. Flowers verticillate. Bracteas subulate. Corolla yellow, tomentose outside ; throat hispid.

***Spicate-ftow ered* Buddlea. Shrub.**

42 B. GRANDIFLORA (Cham, et Schlecht, in Linnaea, 2. p. 596.) branches bluntly tetragonal, tomentose ; leaves narrow-lanceolate, bluntly toothed, wrinkled and tomentose on both surfaces ; raceme terminal, leafy; peduncles 3-flowered. T2 . G. Native of the South of Brazil, in the provinces of Monte Video and Rio Grande do Sul, in many places, Sello. Habit of *B. ĉlegans.* Leaves 5| inches long, and 9 lines broad. Peduncles rising from the axils of the leaves of the raceme ; flowers sessile on the tops of the peduncles. Corolla tomentose, with lanceolate, obtuse, erect segments ; tube length of calyx.

Great-flowered Buddlea. Shrub.

43 B. STACHYOI'DES (Cham, et Schlecht, in Linnaea, 2. p. *597.)* branches tetragonal: angles a little winged, tomentose ; leaves sessile, cuneated at the base, quite entire, coarsely toothed, tomentose beneath, downy above ; raceme terminal; floral leaves reflexed. J? . G. Native of the South of Brazil, Sello. Leaves 6 inches long, and 2j inches broad, clothed with stellate down above, sessile, and rather connate at the" base. Inflorescence exactly of *Stachys Germdnica,* 2-3 inches long, reflexed. Lower flowers subverticillate. Corolla twice* as long as the calyx; with oval-obtuse segments. Capsule elliptic.

***Stachys-like-racemed* Buddlea. Shrub erect.**

44 B. BRACHIVTA (Cham, et Schlecht, in Linnaea, 2. p. 599.) scandent • branches brachiate, almost terete, smoothish ; leaves ovate, obsoletely and unequally toothed, glabrous above, but clothed with fine tomentum beneath; racemes or spikes slender, terminal and axillary ; glomerules distinct. H. G. Native of tropical Brazil, Sello. Branches compressed at the nodi, weaves *o* inciies iuiig, aim 1 iu ig uiw«v», oles at base, acute or subacuminated. Spikes slenae long, falsely verticillate, sessile; peduncles S-flowered, site, propped by reflexed bracteas. Corolla a littleonfc the calyx, with ovate-acute segments. Tomentum rusty, rium glabrous.

Armed Buddlea. Shrub climbing.

45 B. MACROSTA'CHYA (Benth. in Wall. cat. no. ind. p. 42.) branches acutely tetragonal, rated at apex, glabrous above, but clothed with beneath ; spikes interrupted, simple, tomentose; lower ones glomerate : superior ones scattered, tive of Silhet.

Long-spiked Buddlea. Shrub.

46 B. CUNEA^V^TA (Cham, et Schlecht, in branches obsoletely angular, tomentose, densely leaves opposite, rarely 3 in a whorl, erect, sessile, vate, acutely acuminated, coarsely toothed or rather wrinkled, glabrous and shining above, but white tomentum beneath ; heads of flowers disposed raceme, which is terminal, continuous, and simple at the base ; bracteas equal in length to the heads rolla glabrous. f?. G. Native of Brazil, leaves 2 inches long, and 1 broad. Heads *4-M~* drous, short peduncles, or nearly sessile. Flowers usually but in luxuriant plants pentandrous and hexandrous.

Cuneate-\ea\ed Buddlea. Shrub 2 to 3 feet.

47 B. VE'TULA (Cham, et Schlecht, in branches bluntly tetragonal, loose, densely leafy, to wards ; leaves sessile, loose, lanceolate, narrowed at the base: lower ones of the obovate, very blunt, finely and obsoletely serrate, glabrous, and shining above, and tomentose beneath flowers racemose ; raceme leafy, terminal; limb mentose outside. J? . G. Native of Brazil, dense-flowered, nearly globose. Tube of corolla ceeding the calycine teeth.

Old Buddlea. Shrub.

48 B. CESTRIFLORA (Cham, et Schlecht, in branches tetragonal, tomentose ; leaves dilated in funnel-shaped base, lanceolate-acute, crenated obsoletely wrinkled, tomentose beneath, at length heads racemose; flowers loose, pedicellate ; raceleafy ; teeth of calyx acuminated, elongated ; coro the calyx, tomentose outside and glabrous inside, tive of Brazil, Sello. Leaves 7 inches long. branched at the base; heads 6-10-flowered, pedunc

***Cestrum-flowered* Buddlea. Shrub.**

49 B. DI'SCOLOR (Roth, nov. spec. 83.) almost terete, compressed at the nodi, tomen ceolate, acuminated, subserrated, glabrous abov or clothed with white tomentum ; spikes inter simple or panicled; bracteas lanceolate-linear , sessile, subglomerate; capsules reflexed. Nipaul; Oude ; Rungpur, &c. Wall. cat. no. Lam. ill. 1. p. 291.? Blum, bijdr. p. Benth. in Wall. cat. no. 6401. H. O. Leaves g Capsule glabrous. ?

***Two-coloured Aeaved* Buddlea. Shrub.**

50 B. NEEMDA (Hamilt. in Roxb. fl. arboreous; branches almost terete, compresse mentose ; leaves lanceolate, subserrated, ci above and white tomentum beneath ; spikes

bracteas ovat*r.lanceo}ate; flowers sessile, glomerate; capsules
Oi X, p preadln g« *h* S. Native of the Peninsula of India,
Roth, nov ng, WalK De ra Dhoun >> Ro le B serrulata,
p. 92. T Spec* P# 82t B s «bserrata, D. Don, prod. fl. nep.
joined by a Connectin g membrane. Spike long, with generally
Mup one On each side at tne base. Flowers small, pure
name i general y 3nfold, Ca P*ule ovateoblong. The specific
Plant i'!?m. alteratio n of the vernacular name, *Nimda,* of the
r "t in Lhittagong.

feet. *€mda* Buddlea. Fl. June, July. Clt. 1824. Shrub 15

51 B.

Ranches MADAGASCARIE,NSIS (Vahl, symb. 3. p. 14.) arboreous; ovate-lan "^ arly te rete, densely tomentose; leaves petiolate, Wrinkled ce I-B K t6j almost (l uite entire, rounded at the base, thick, beneath g-l rous above, but densely clothed with tomentum ere<l *h* i Cei^ S almost simple; peduncles scattered, 3-5-flow- Lam*. in' i Nativeof Ma<lagascar. Hook. bot. mag. t. 2824. inches lon * **. 69* £ 3. Tomentum ferruginous. Leaves 2 ones at th\^etlo^ate# ^acemes famished with one or two small ments. G ase. Corolla orange-coloured, with roundish seg-

Madagascar
feet. Buddlea. Fl. ? Clt. 1824. Shrub 10 to 12

59 B. cu
480\ranch ISPA (The h # in WalL cat, no_ 6494* scro P h_ ind_
Ce olate, c° 6S d *var*cate> densely tomentose; leaves ovate-lan-
r*Or onpe Fenate v curled: lower ones cordate at the base: supe-
tor*entu m ro Unded, all thick and wrinkled, clothed with soft
Ranched • T ^°^ ssurwaccess 5 racemes short, dense, a little
h • G r wers sessile; glomerules dense, subpedicellate.
Uuyle] atlve of Oude and Silhet, Wall.; mountains of Syen,

Curled-leaved
53 B. Buddlea. Shrub.
Wrinkled A IA*ICA (Lour. coch. p. 72.) leaves lanceolate-linear,
Native sub s errated; spikes long, terminal, full. T?.
rate d. Fl O. ^ocn^ncnina. Branches ascending. Leaves subser-
^e8^ents °^Ver s Wnte> disposed in a long uninterrupted spike.
e ?m ents ° cRi^X SUDU^ate. Corolla campanulate, with rounded
*4*iatin* P ?, ma lon «ish» bifid. Capsule oblong.
^ « c Buddlea. Shrub 3 feet.

olea. B. DENSIFLORA (Blum. bijdr. 743.) leaves on short peti-
ated, upri acu minated, acute at the base, acutely serru-
Clothed w u J ^es ^uite entire, with revolute edges, canescent,
y> or bv tl? omen tum beneath; racemes terminal, soli-
atiy e of J ees; P edicels rnany-flowered, drooping. T? . G.
}J8 called sZA^n the ni S ner P arts of Mount Tjeremai, where
Allied to *B. salicifblia* and *B. serru-*

Dense-flowered Buddlea. Shrub.

* * *

Species natives of the Cape of Good Hope.

56 B. SALVIFOLIA (Ait. hort. kew. 1. p. J50.) stem tetra S°-
nal, hornent
r*nkled, u °Se, *eaves ov ate-lanceolate, acute, cordate, crenated,
ra ern es. ' l 111^086 beneath; panicle composed of interrupted
hort t. schoanb i Native of the Ca P e of Good Ho P e* Jac^'
875 • Mill ri ^' 12# t# 28, ^antana salvifolia, Lin. spec.
bin: al. p aict no. 12. Stipulas 2, roundish. Thyrse ter-
li & pale limvf S rascicled. Corolla tomentose, with a red tube
ur s. mb; throat bearded. Ovarium beset with stellate
J S(tf 2^
feet ~ e<tVed B uddlea. Fl. Aug. Sept. Clt. 1760. Shrub
b F
50 B. SA CRA (Wild enum. !' P. 159.) leaves linear-lan-
ceolate, qui ^ en lre wit» revolute edges, tomentose beneath;
corv^bs ter ina > branched, coarctate; flowers fascicled. F?.
VOL. IVt

G. Native of the Cape of Good Hope. B. salicifolia, Jacq. hort. schcenbr. 1. p. 12. t. 29. Schultes, obs. bot. p. 23. Leaves on short petioles, sinuately undulated, with scabrous margins. Flowers on short pedicels. Corolla white, with a square red spot at the base, sometimes purplish. Stamens exserted. Scent of plant heavy.

Willowy-haved Buddlea. Shrub.

57 B. VIRGVTA (Thunb. prod. 1. p. 30. fl. cap. 1. p. 542.) leaves linear-oblong, obtuse, entire; racemes terminal. T? . G. Native of the Cape of Good Hope, in Carro, beneath Roggeveld, about river banks. Willd. spec. 1. p. *6SS.* Habit of *Hyssbpus.* Branches filiform, and are, as well as the leaves, clothed with white tomentum. Leaves from a nail to an inch long.

Twiggy Buddlea. Shrub 4 to 6 feet.

58 B. INCÓMPTA (Lin. supp. 123. Thunb. 1. c.) leaves in fascicles, ovate, hoary; racemes terminal; branches flexuous, stiff. *2 • G. Native of the Cape of Good Hope, on the top of Roggeveld. Leaves silky, entire, minute.

Undecked Buddlea. Shrub 1 foot.

f *Species hardly known.*

59 B. TERNA^TA (Lour. coch. p. 72.) leaves ternate, acuminated; peduncles 1-flowered. J? . G. Native of Cochinchina. Poir. suppl. 1. p. 746. Leaves lanceolate, serrated. Flowers white, on axillary, solitary peduncles. Segments of corolla ovate. Stigma bifid. Nectarium pilose. Capsule 2-celled, many-seeded.

7erwate-leaved Buddlea. Shrub 2 feet.

60 B. VOLU'BILIS (Lam. ill. 1. p. 291. no. 1492.) leaves linear, acute, quite entire; cymes axillary, clothed with rusty tomentum; stem twining. Tj . ^\ S. Native of the Island of Bourbon. Poir. suppl. 1. p. 745. Corolla with a very short tube, and deep 4-parted limb. • 4 ^

Twining Buddlea. Shrub twining.

Cult. The species of *Buddlga* are all showy wlien in blossom; they are, therefore, worth cultivating for ornament. The *B. globbsa* and *B. salvifolia* are the only species ascertained to be almost hardy; they requiring only a little protection in severe frosts. A light rich soil answers them best; and cuttings of all strike root readily in mould, under a hand-glass; those of the stove species in heat. All the species are abundant flowerers; and the flowers of all are sweet-scented.

Tribe VIII.

CALCEOLARIE'iE. Calyx 4-parted, valvate in aestivation. Corolla irregular, bilabiate. Stamens 2-4, inserted in the throat. Cells of anthers diverging at the base, and confluent at apex. Stigma undivided, capitate. Capsule membranous; dissepiment constituted from the inflexed margins of the valves; placentas 2, stipitate, or adnate to the dissepiment. Seeds minute, with a mucrone-formed umbilicus; testa membranous. Albumen fleshy. Embryo terete, about half the length of the albumen.—Herbs or subshrubs, natives of South America and the Cape of Good Hope, usually clothed with glandular pubescence. Leaves opposite, generally undivided, but sometimes pinnate and pinnatifid. Flowers terminal, usually corymbosely panicled or racemose, generally yellow, rarely purple. This very natural tribe forms an osculant group between the *Scrophulariiece* and the *Gesneriacece,* in the aestivation of the calyx being valvate; in the valves of the capsule being revolute and placentiferous; in the very minute seeds, furnished with a longer umbilical funicle; in habit, inflorescence, and opposite, usually wrinkled, crenated leaves, and albuminous seeds. The *Calceolaria petio-*

laris, and some others, have sometimes irregular tubular corollas.

LXXXVIII. CALCEOLA^VRIA (from *calceolus,* a little slipper ; in allusion to the form of the corolla.) Feuill. per. 3. p. 12. t. 7\ Lin. syst. p. 61. Schreb. gen. no. 39. Gaertn* fruct. 1. p. 290. t. *62.* Juss. gen. p. 120. ed. Usteri, p. 135. H. B. et Kunth, nov. gen. amer. 2. 378. Lam. ill. t. 15.

LIN. SYST. *Didndria, Monogynia.* Calyx 4-parted, nearly equal; upper segment generally a little broader than the rest. Corolla with a very short tube ; limb bilabiate ; upper lip short, truncately rounded, entire: lower lip large, concave, slipper-shaped. Stamens 2, inserted in the base of the tube, short; cells of anthers divaricate (one of which is sometimes sterile.) Stigma simple. Capsule ovate-conical, propped by the permanent calyx, 2-celled, septicidally 2-valved; valves bifid ; placentas adnate to the dissepiment. Seeds sulcately angular.— Shrubs, subshrubs, or herbs, rarely stemless. Leaves opposite, sometimes 3 in a whorl, rarely alternate. Peduncles 1 or many-flowered, alar, axillary or terminal, corymbose. Corolla generally yellow, rarely purple.

§ 1. *Leaves opposite, pinnate or pinnatifid. Stems leafy. One of the cells of the anthers separated from the transverse connective : the other sterile or wanting. Herbaceous plants.*

1 C. PINNA'TA (Lin. syst. *65.* mant. 171. act. holm. 1770. p. 286. t. 8.) herbaceous, clothed with clammy hairs; leaves pinnate ; leaflets or segments toothed : lower ones pinnatifidly toothed; peduncles twin or tern, panicled. ©. H. Native of Peru, in humid places. Curt. bot. mag. t. 41. Vahl, enum. 1. p. 189. exclusive of the synonymes. Plant much branched. Leaves petiolate. Calycine segments ovate-cordate, much spreading. Corolla sulphur-coloured. Ovarium hairy.

Pinnate-leaved Slipperwort. Fl. July, Sept. Clt. 1773. PI. 2 to 3 feet.

2 C. CUELIDONIOI^NDES (H. B. et Kunth. nov. gen. 2. p. 379.) herbaceous, hairy ; leaves pinnate at base and pinnatifid at top, rather hispid above, and glabrous beneath ; leaflets pinnatifidly cut, sharply serrated, glandularly ciliated ; lateral flowers twin, and terminal ones subumbellate. ©. H. Native at the foot of Mount Javirac, near Quito, at the altitude of 1500 hexapods. C. concinna, Willd. herb. Erect, dichotomously branching; branches tetragonal. Leaves subpetiolate. Corolla yellow, glabrous, size of those of *C. pinnata.* Ovarium glabrous.

Swallow-wort-like Slipperwort. PL 2 to 3 feet.

3 C. GRA'CILIS (H. B. et Kunth. 1. c. p. 379.) herbaceous, clothed with clammy hairs; lower leaves pinnate or ternate: superior ones nearly simple, serrated, hispid above, but beset with white hairs beneath ; lateral flowers axillary, twin: terminal ones subcorymbose. ©. H. Native of Quito, on the banks of the river San Pedro, near Chillo, at the altitude of 1340 hexapods. Herb slender, dichotomously branched; young branches red. Leaves petiolate. Corolla pale yellow. Ovarium glabrous.

Slender Slipperwort. PL 1 foot.

4 C. TRiPARTiTA (Ruiz, et Pav. fl. per. 1. p. 14. t. *22.* f. a.) herbaceous, hairy ; leaves tripartite : lobes ovate, serrated ; peduncles terminal, corymbose ; pedicels *5-6.* ©. H. Native in the groves of Panatahua. Stem terete, branched. Leaves petiolate ; the middle lobe the largest. Corolla pale yellow.

Tripartite-leaved Slipperwort. PL 1 to *2 feet.*

5 C. SCABIOSVEFOLIA (Roem. et Schultes, syst. 1. p. 185.) prostrate; lower leaves pinnate: superior ones pinnatifid, 3-lobed or simple : the terminating segment always the largest ; peduncjes terminal, corymbose. %. F. Native of Peru. Sims, bot. mag. 2405. C. heterophyJla, Willd. enum. 1. p. 29. C. pinnata, Ruiz, et Pav. fl. per. 1. p. 14. t. 19. Calceolaria foliis scabiosse vulgkis, Feuill. per. 3. t. 12. f. 1. C. pi[illegible] Willd. spec. 1. p. 106. Plant rather hairy. Corollas yellow: lower lip large, ventricose. 1822.

Scabious-leaved Slipperwort. Fl. May, Oct. Clt. PL trailing.

§ 2. *Leaves entire or toothed, radical, usually rosulate. P*[illegible]* cles scape-formed. Herbaceous plants.*

6 C. PLANTAGINEA (Smith, icon. ined. 1. t. 2. J a h 1, enuj- 1. p. 172. exclusive of the syn. of Jovellana scapiflora) sterri[illegible] pubescent; leaves radical, ovate, rhomboid, rosulate, ser[illegible] nerved ; scapes generally 2-3-flowered, pilose ; lower lip oi [illegible] rolla large, hemispherical : upper one small, bifid, *ll-* [illegible] tive of the Straits of Magellan ; and of Chili, on the Cord[illegible] &c. Hook. bot. mag. 2805. C. biflora, Lam. ill. p. ^' rollas yellow. pi \

Plantain-like Slipperwort. FL Aug. Clt. 1826. n. foot.

7 C. NANA (Smith, icon. ined. 1. t. 1.) nearly leaves oblong-ovate, almost quite entire ; peduncles formed, 1-flowered; upper lip of corolla large, pendulous. F. Native of the Straits of Magellan. C. uniflora, Lam. 15. f. 3. Plant decumbent. Leaves hardly \ an [illegible] Peduncles solitary or numerous, 2 inches high. Corolla yellow. 2£.

Far. ft ; leaves larger, a little toothed; flowers larger. H. Native along with the species.

Dwarf Slipperwort. PL decumbent.

8 C. FOTHERGI'LLII (Ait. hort. kew. 1. p. *SO.* t. [illegible] spatulate, quite entire, pilose above; peduncles scape- 1-flowered. 1/. F. Native of the Falkland Islands. ill. t. 15. f. 1. Curt. bot. mag. t. 348. Cav. icon. 5. f. 1. Tratt. tab. t. 405. C. Neeana, Spreng. syst. Stem a little divided near the root. Leaves hardly long, connate at the base. Peduncles solitary or clammy. Segments of calyx ovate-acute. Upper lip yellowish : lower lip 4 times the size of the upper coloured, having the margins spotted with red. plant is said to have the leaves crenated.

FothergilVs Slipperwort. FL May, Aug. Clt. *17 n-* to J foot.

9 C. POLYRRHI'ZA (Cav. icon. 5. p. 25. t. 441.) [illegible] stemless; leaves cuneiform, serrated a little, acute ; [illegible] scape-formed ; pedicels umbellate. }/.. F. Native ot n land Islands, in humid places. Under each umbel [illegible] there are 2 small leaves. Segments of the calyx [illegible] furnished with 3 stripes. Corolla yellow, dotted lower lip almost an inch long, incurved at top.

Many-rooted Slipperwort. PL -I to 1 foot.

10 C. MONTANA (Cav. icon. 5. p. 27. t. 443. [illegible] almost stemless ; leaves obovate, unequally toothe [illegible] hoary ; scape dichotomous. %. F. Native of the Chili. Scapes /\ foot high, reddish, twice bifid, [illegible] 1-flowered pedicel in the second, fork ; [illegible] flowered. There are 2 opposite small leaves unae sion. Calycine segments 3-nerved.

Mountain Slipperwort. PL lj foot.

11 C. PINIFOLIA (Cav. icon. 5. p. *26.* t. 44xJ. almost stemless; leaves linear, with r[illegible] scape-formed, dichotomous ; pedicels umbellate. on the Cordillera of Chili. Root thick. [illegible] divided near the base. Leaves approximate, am[illegible] duncles 2 inches long, twice bifid, furnished with[illegible] each division ; middle pedicels 1-flowered: la[illegible] ered. Corolla yellow ; lower lip narrowed to tne

Pine-leaved Slipperwort. PL \ foot.

Leaves entire or toothed : radical ones broad, usually rosulate. Sterns few-leaved, cymbosely many-flowered. Herbaceous plants.

C. RACEMOSA (Cav. icon. 5. p. 29. t. 448.) leaves oblong, toothed, wrinkled, tomentose; peduncles terminal, bifid; pedicels racemose, %. F. Native of the Falkland Islands. Stems ornamentose, few-leaved. Radical leaves numerous, rosulate. Lateral peduncles bifid, 2-flowered, with the middle pedicel 1-flowered. Lower lip of corolla ovate.

Racemose-flowered Slipperwort. PL J to 1 foot.

C. CANA (Cav. icon. 5. p. 27. t. 413. f. 2.) leaves cuneiform, hoary, tomentose, quite entire; stems ascending; peduncles dichotomous. %. F. Native of Peru. Root thick, densely tomentose, 2 a little above the others. Corollas yellow: lower lip narrowed to the base.

Hoary Slipperwort. PL J to \ foot,

C. CRENATIFLORA (Cav. icon. 5. p. 28. t. 446.) leaves oblong, unequally serrated, rather tomentose; lower pedicels dichotomous. Corolla crenated. 1/. F. Native of Chili, in humid woods, near Lindl. bot. reg. 1609. C. ano- pendula, Sweet, brit. fl. gard. t. 215. Stem bifid at top. Radical leaves many: cauline ones few, on short petioles. Calyx hairy. Corolla yellow, dotted with red inside; lower lip large, tricrenate at the top.

Drooping-flowered Slipperwort. PL 1 foot.

C. PARALIA (Cav. icon. 5. p. 29. t. 447.) leaves unequally toothed and ar: o1^0^Ones cuneated: superior ones oblong, connate, Chili. Wr» ttS well as tlie capsules, tomentose. 1/. F. Native of *nd \ .mara lensis, Spreng. syst. 1. p. 45. Peduncles axillary coroH erminal, ^ichotomous. Corolla yellow: lower lip of *Par ?.ar^wed towards the throat.

16 p1aSllPPerwort. PL 2 feet.

radical l' CORYMBOSA (Ruiz. et Pav. fl. per. 1. p. 14. t. 20. f. b.) Hne le^r0Vate and cordate, petiolate, doubly crenated: cau- Chili ink l cordate» half stem-clasping. %. F. Native of 2418 ly Places. Ker. bot. re£. 723. Hook, bot. mag. ^ant hairy. Radical leaves broad, rosulate, white beneath. Stems leafless at bot- to^but di cnotomous and leafy at 4o t. Flowers corymbose, yellow, marked with purple dots and lines. There are several garden hybrids reared, between this and several other species. 1. C. Gellaniana, Penny, with dusty copper coloured fl owers. This is a hybrid between C. *corymbosa* and C. *pinna*. 2. C. hians, C. with yellow flowers. 3. yellow flowers, a hybrid between C. *corymbosa* and C. *plantaginea*. 4. C. With yellow Solydntha> Penny, *patioliris* flowers; a hybrid between *C. corymbosa* and *C. racemosus* a / rC* Yoiing»» Penny, in bot. reg. 1448, with ochroleuc and r curty Pulple flowers; a hybrid between *C. corymbosa* and *C. Corymbarchsendea.* (fig. 58.)



FIG. 58.

Pl. 1 tCnr flowered SliPPerwort. Fl. May, Oct. Clt. 1822. Ty p 2 lOOt.

PETIOLARIS (Graham, in edinb. phil. journ. 1827. bot. mag. 2775.) herbaceous; stems numerous, erect, branched; leaves wrinkled, hispid: radical ones cuneate-spatulate, serrated, quite entire V>ehnOi, pet\o\ate, acut\s*. cauYme \eaves cordate, decussate: superior ones smaller, and quite entire; corymbs terminal, many-flowered. 1/. F. Native of Chili, on the Cordilleras. Lindl. bot. reg. 1621. Stems many from the same root, downy. Leaves with a few long scattered hairs on their surfaces. Calyx downy. Corolla rather small, of an uniform reddish violet colour. Habit of *C. corymbosa.* There are several hybrids between this and other species. See Sweet, fl. gard, n. s. t. 244.

Pwr^/e-flowered Slipperwort. Fl. July, Sept. Clt. 1827, PI. 1 foot.

18 C. OBLONGA (Ruiz. et. Pav. fl. per. 1. p. 15. t. 24. f. b.) leaves oblong, serrated, petiolate; peduncles trifid, with *3-6*-flowered branches; stem simple. *Q.* F. Native of the groves of Panatahua. Root fascicled. Radical leaves numerous: cauline ones few, on short petioles. Calyx hairy. Corolla yellow, dotted with red inside; lower lip large, tricrenate at the top.

06/owg-leaved Slipperwort. PL lj foot.

19 C. PUNI'CEA (Ruiz, et Pav. fl. per. 1. p. 15. t. 24. f. a.) hairy; stems creeping; leaves oval, serrated; peduncles, terminal, bifid, 7-8-flowered; pedicels umbellate. 1/. F. Native of the groves of Panatahua. Root fascicled. Leaves glabrous above, on short petioles. Corollas scarlet, glabrous, form of those of *C. oblonga.*

Scdrlet-fiowered Slipperwort. PL 1 to 2 *feet.*

§ 4. *Leaves toothed, crenated, or serrated, petiolate; petioles naked. Stems leafy.*

* *Herbaceous plants. Leaves opposite.*

20 C. SERRA'TA (Lam. ill. 1. p. 51.) erect; branches clothed with tomentose pubescence; leaves petiolate, ovate, acute, acutish at the base, sharply serrated, finely downy, canescent beneath; corymbs terminal, sub-trichotomous; pedicels pubescent. If.. F. Native of Quito, near Chillo, Humb. et Bonpl. Peru in Canta, Ruiz, et Pav. H. B. et Kunth, nov. gen. 2. p. 381. C. inflexa, Ruiz, et Pav. fl. per. 1. p. 16. t. 25. f. a. ? Herb erect, branched. Leaves 1J inch long, and 9 lines broad. Calycine segments ovate, acute. Corolla glabrous, yellow; lower lip reflexed, narrowed at the base.

A Serra/ed-leaved Slipperwort. PL *2* to *3* feet.

21 C. DIVARICA'TA (H. B. et Kunth, nov. gen. *2.* p. 381.) twining; branches divaricate, glabrous; leaves petiolate, ovate, acute, cordate, coarsely and crenately-serrated, ciliated, glabrous, downy on the veins beneath; panicles terminal, leafy; flowers corymbose; pedicels clothed with glandular pili. %. F. Native of Peru, in temperate places near Succhubamba and Ayavaca, at the altitude of 1400 hexapods. Leaves \\ inches. Calyx clothed with glandular hairs, with ovate, acute segments. Corolla yellow. Ovarium clothed with glandular hairs.

Divaricate Slipperwort. PL twining.

22 C. ROTUNDIFOLIA (H. B. et Kunth, 1. c. p. *382.)* stems simple, 1-2-3-flowered, and are, as well as the leaves, pubescent; leaves petiolate, roundish, obtuse, coarsely crenated, convex, thick. ©. H. Native of Peru, in cold places between Chulucana and Guamcabamba. Stems simple, fleshy. Leaves \ inch long. Calyx downy. Corolla yellow; throat hairy.

Round-leaved Slipperwort. PL -J to f foot.

23 C. SIBTHORPIOIDES (H. B. efKunth, 1. c.) stems procumbent; branches hispidly pilose; leaves petiolate, ovate-roundish, acutish, cordate, crenately cut, hairy on both surfaces; flowers terminal, corymbose; peduncles clothed with glandular hairs. %. F. Native of Peru, in icy places on mount Gual-

gayoc, near the mines of Micuipampa, at the altitude of 1840 hexapods. Leaves membranous. Calyx clothed with glandular hairs ; segments ovate-oblong, bluntish. Corolla yellow.

Sibthorpia-like Slipperwort. PI. procumbent.

24 C. SA*A'TILIS (H. B. et Kunth, 1. c.) erect; branches villous ; leaves on short petioles, ovate, bluntish, rounded at the base, subcordate, deeply crenated, hairy above, but clothed with hoary tomentum beneath ; corymbs terminal; pedicels pilose. 1/ . F. Native in stony places on Mount Chimborazo, at the altitude of 1750 hexapods. Leaves 9-10 lines long. Flowers about the size of those of *C. pinndta,* copper-coloured. Calycine segments ovate, acute.

Stone Slipperwort. PI. 1 foot.

25 C. LAMIIFOLIA (H. B. et Kunth, 1. c. p. 383.) stem erectish, and is, as well as the branches, pilose; leaves petiolate, ovate, acute, truncately rounded at the base, coarsely serrate-crenated, beset with adpressed hairs on both surfaces, white beneath ; peduncles terminal, generally twin, pilose. %. F. Native near the town of Quito, at the altitude of 1490 hexapods. Leaves 1 to 1^ inch long. Calyx pilose, with roundish-ovate, acute segments. Corollas large, yellow, glabrous. This species is said hardly to differ from *C. bicolor.*

Dead-nettle-leaved Slipperwort. PI. 1^ to 2 feet.

26 C. OVATA (Smith, icon. ined. 1. t. 3. Vahl, enum. 1. p. 182.) erect, branched, beset with long, white hairs ; leaves ovate, obsoletely crenated, or serrated, on short petioles; peduncles twin, filiform, longer than the leaves. ©. F. Native of Peru. C. integrifdlia, Lin. suppl. 86, but not of his systema. C. dichotoma, Lam. ill. p. 52. C. biflora, Ruiz, et Pav. fl. per. 1. p. 16. t. 20. f. a. Pers. ench. 1. p. 16. Lower branches opposite : superior ones alternate, dichotomous. Leaves 1 inch long, obscurely crenated, or quite entire. Peduncles usually by twos, filiform, longer than the leaves. Corollas small.

Ovate-leaved Slipperwort. PI. \ to 1 foot,

27 C. BICRENATA (Ruiz, et Pav. fl. per. 1. p. 15. t. 23. f. b.) erect, branched ; leaves on short petioles, ovate, doubly serrated, or crenated, tomentose beneath ; peduncles axillary and terminal, furnished with 2 leaves at top ; pedicels umbellate, hairy, unequal. It. ? F. Native of Peru, on the mountains of Cuchero. Leaves wrinkled. Calyx villous. Corolla large. Upper lip inflexed: lower one large, both tricrenate at top.

Twice-crenated-lesLved Calceolaria. PL 2 to 3 feet.

28 C. HETEROPHY'LLA (Ruiz, et Pav. fl. per. 1. p. 16. t. 21. f. b.) very hairy, erect; leaves petiolate, ovate-elliptic and subcordate, serrated ; peduncles very long, dichotomous. %. G. Native of Peru, in groves. Hairs rusty, some of them long and bristle like, and others shorter and glandular. Stems quadrangular ; branches purplish. Leaves roundish, or oblong, often doubly serrated. Peduncles from the superior axils, clammy at top; pedicels 1-flowered, 2 from each fork. Corolla half open: lower lip large, ventricose.

Various-leaved Slipperwort. PI. 1 to 1| foot.

29 C. LOBATA (Cav. icon. 5. p. 26. t. 443. f. 1.) erect; leaves cordate, lobate, serrated, clothed with hoary tomentum beneath ; stem dichotomous, reddish, pilose ; peduncles terminal, 4 in number, 2 centre ones 1-flowered, and the 2 lateral ones 3-flowered. % . F. Native of Peru, in dry places. Leaves petiolate, 5-lobed, villous above; lobes short. Petioles very hairy, a little longer than the leaves. Calycine segments ovate, 3-furrowed. Corolla yellow ; lower lip lined lengthwise, large.

Lobed-lewed Slipperwort. PL 2 feet.

*** * *Shrubby plants. Leaves opposite.***

30 C. LANATA (H. B. et Kunth, nov. gen. 2. p. 383.) suffruticose, densely clothed with white tomentum ; leaves petiolate, ovate-deltoid, acute, cordate, doubly crenated; corymbs terminal, fastigiate. T?. G. Native of Quito, in tenipenite places between Alausi and Pomallacta, at the altitude of *130V* nexpods. Leaves 2-3 inches long. Corolla large, yellow, smootnisii.

Woolly Slipperwort. Shrub. u^.Vihv

31 C. SJCIA (H. B. et Kunth, 1. c. p. 380.) shrubby, branchlets rather clammy, erect; leaves petiolate, anceoi la- oblong, acuminated, narrowed at the base, **denticulatec^g** brous; corymbs terminal, sub-dichotomous; pedicels^ clam^ ^ *h . G.* Native of New Granada, in temperate places Det the river Vinajacu and the city of Loxa, at the aftltu ,^Ot voung. hexapods. Branches smooth, reddish, clammy while , yeu^ Leaves glabrous, paler, and rather clammy beneath, 4 i Ova- long. Calyx rather clammy. Corolla yellow, glabrous, rium glabrous.

Strict Slipperwort. Shrub.

32 C. PADIFOLIA (H. B. et Kunth, 1. c.) shrubby i branchlets rather clammy ; leaves petiolate, oblong, or ovate bblong, acu- minated, acute at the base, toothed, glabrous; rlo«ers terminal, corymbose ; pedicels rather clammy, *h* <J- ^ Peru, Branches near Ayavaca, at the altitude of 1400 hexapods tetragonal, smooth, glabrous. Leaves about 2 ^ beneath. Calycine segments ovate, acute. glabrous. Capsule glabrous.

Bird-cherry-leaved Slipperwort. Shrub.

33 C. DEFLE'XA (Ruiz, et Pav. fl. per.. 1. P- shrubby ; branchlets clammy, purplish; leaveb ceolate? serrated, canescent beneath; terminal ; pedicels umbellate, villous. *2 . O. in Caxatamba, near water falls. Leaves deflexed, petioles, shining above: floral ones quite entire. twin. Corolla of a coppery yellow colour ; lower Up incurved.

Deflexed-lewed Slipperwort. Shrub 3 to 4 teet.

34 C. VISCOSA (Ruiz, et Pav. fl. per. 1. P- the whole plant Linous and ^ ^ 3 ^ 2 * and acute, serrated, canescent benea h ;

Clammy Slipperwort. Shrub « J **« 26. f. a.)

35 C. FLEXUOSA (Ruiz, et Pav. a. per. i F flexuous i shrubby, rough, Jeaves cordate, unequally »^h.ntly rough above; peduncles axillary and

S t t t ^ i Corolla yellow. lower 1*

lar<*e, ventricose.

***Flexuous* Slipperwort. Shrub**

36 C. NIVA^LIS (H. B. et K™th, nov. g flo- ate, ovate, by; branches and leaves g«>hrous, lea- Pher coriaceous, Jute, acutish at the base, crena^J « umbellately fas- yellowish beneath; corymbs terminal cicled ; pedicels hairy, *h* G- ^fgfp at the altitude near Los Paredones, and the ph^n o f hnes long ^S T V ^ $, e ovat acute segen, glabrous. feet.

37 C.SCA'BRA (Ruiz, et Pav. fl. per. 1. p. 19. t. 29. f. a.) shrubby, hispid, of a rusty colour; leaves nearly sessile, oblong, lined, toothed, hispid ; peduncles axillary and terminal, solitary, 1-flowered, length of leaves. h. G. Native of Peru, among broken rocks. Stem rough, gay. Leaves approximate, with revolute edges, Corolla yellow ; both lips incurved: lower one large.

Scabrous Slipperwort. Shrub 3 feet, much branched; leaves oblong, wrinkled, crenated, pubescent, coarctate, same colour on both surfaces; peduncles terminal, lower ones ovate-oblong, obtuse, petiolate: upper ones sessile, inside lower lip of corolla very large. Corolla yellow, spotted. Herbert's Slipperwort. Fl. June, Sept. Clt. ? Shrub ½ to 3 feet.

scabrous Slipperwort. Shrub 3 feet, much branched; branches clothed with rough canescent powder; leaves on short petioles, ovate-lanceolate, dentately serrated; peduncles terminal, generally 4-flowered. *h*. G. Native of Peru, in Canta, among broken rocks.

rorydery Slipperwort. Shrub 6 feet.

40 C. FUSCIFOLIA (Ruiz et Pav. fl. per. 1. p. 18. t. 29. f. b.) shrubby; branches fuscous; leaves ovate-lanceolate, serrated, scabrous above, clammy above, but wrinkled and grey beneath; peduncles axillary and terminal, twin; pedicels 4: middle ones 1-flowered, and two others 3-flowered. *h*. G. Native of Peru, in boggy ground. Branches clammy and resinous. Leaves large, clothed with glandular villi: lower lip crenated at top.

Yellow-leaved Slipperwort. Shrub 6 feet.

41 C. CHRYSOPHYLLA (Ruiz et Pav. fl. per. 1. p. 18. t. 29. f. c.) shrubby; branches scabrous, rusty; leaves approximate, ovate, deeply serrated, lined above, and clothed with golden pubescence beneath; corymbs terminal. *h*. G. Native of Canta, Tarma, &c. Calyx yellowish. By chewing the leaves the saliva becomes yellow.

Sharp-leaved Slipperwort. Shrub 2 feet.

42 C. INVOLUTA (Ruiz et Pav. fl. per. 1. p. 15. t. 23. f. a.) shrubby; leaves on short petioles, ovate, acute, serrated, glabrous; involute; peduncles axillary and terminal, 1-flowered; corolla glabrous. P. G. Native of Panatahua, in forests. Plant glabrous. Leaves 2-3 together from the axils of the superior ones. Calyx reflexed. Corolla yellow, large, covering the calyx.

Tube-flowered Slipperwort. Shrub 3 feet.

Shrubby plants. Leaves opposite, and 3 in a whorl.

43 C. CORDATA (Ruiz et Pav. fl. per. 1. p. 16. t. 25. f. b.) shrubby; branches dichotomous, glabrous; leaves petiolate, opposite, and 3 in a whorl, ovate, cordate, serrated; peduncles axillary and terminal, subdichotomous. *h*. G. Native of Peru, in the valley of Canta. Branches dependent, bluntly tetragonal, of a purple colour. There are *2-3* sessile leaves under the pedicels, which are clothed with glandular hairs. Corolla with a white base, and yellow apex: tube narrowed at the base.

Wood-flowered Slipperwort. Fl. Aug. Sept. Clt. 1829. Shrub 2 feet.

44 C. DIFFUSA (Lindl. bot. reg. 1374.) suffruticose, procumbent; leaves ovate-cordate-ovate, coarsely and doubly serrated, petiolate; terminal and axillary corymbose, *fy*. Native of Peru, at Canta, 1830. Graham, in edinb. phil. journ. oct. rather doubtful whether not Ruiz, et Pav. Branchlets and leaves white with pubescence. Pedicels pilose. Corolla having the lower lip probably paler, with a white base and yellow apex. This differs from the *C. bicolor* of Ruiz, et Pav.

45 C. MUCILAGINOSA (Ruiz et Pav. fl. per. 1. p. 16. t. 20. f. c.) branched; leaves on short petioles, opposite, and 3 in a whorl, ovate, serrated, downy; peduncles axillary, solitary, 1-flowered, each furnished with 2 quite entire leaves in the middle. 1?. G. Native of Peru, in Tarma, at Cura. C. monánthos, Poir. suppl. 1. One side of branches purplish. Leaves generally 3 in a whorl. Flowers small.

One-flowered Slipperwort. Shrub.

46 C. DENTATA (Ruiz, et Pav. fl. per. 1. p. 18. t. 29. f. b.) shrubby; branchlets hairy; leaves opposite, and 3 in a whorl, ovate, sharply and doubly toothed, glabrous in the adult state; peduncles terminal, twin, bifid, with a 1-flowered pedicel in the fork; pedicels racemose, secund. *h*. G. Native of Chili, in woods. Corollas yellow, form of those of C. *scabra.* Shrub much branched, clammy, with the taste of Peruvian bark.

Toothed-leaved Slipperwort. Shrub.

47 C. VIRGATA (Ruiz, et Pav. fl. per. 1. p. 20. t. 31. f. a.) shrubby; branches twiggy, purplish; leaves on short petioles, opposite, and 3 in a whorl, ovate, bluntly serrated, pubescent; peduncles axillary and terminal, many-flowered. ^. Cl. Native of Peru, on the route to Canta. Stem purple. Branches opposite, or 3 in a whorl, twiggy, brittle, purplish. Leaves spreading, obtuse. Corolla small, villous at the base.

Twiggy Slipperwort. Shrub 2 feet.

48 C. ANGUSTIFLORA (Ruiz, et Pav. fl. per. 1. p. 17. t. 28. f. a.) shrubby; leaves on short petioles, opposite, or 3 in a whorl, ovate-lanceolate, sharply-serrated, pubescent; peduncles axillary and terminal, opposite, or 3 in a whorl, generally 4-flowered, shorter than the leaves; upper lip of corolla very narrow at the base, f?. G. Native of Peru, in the valley of Canta, towards Obrasillo. Hook. bot. mag. 3094. Much branched; branches opposite, or 3 in a whorl. Peduncles collected into a terminal panicle. Corolla small, dotted with purple inside.

Narrow-flowered Slipperwort. Fl. July. Clt. 1830. Shrub 1 to 2 feet.

49 C. VERTICILLATA (Ruiz, et Pav. fl. per. 1. p. 17.) shrubby, glabrous; leaves 3 in a whorl, cordate, acute, serrated, on short petioles; peduncles 4-flowered, axillary. I?. G. Native of Peru, among broken rocks in the valley of Canta. Branches chaff-coloured. Peduncles furnished with a single leaf under each twin pedicel.

Jf/iorfecMeaved Slipperwort. Shrub 4 to 6 feet.

50 C. TERNIFLORA (Cav. icon. 5. p. 30. t. 450. f. 2.) shrubby; leaves petiolate, 3 in a whorl, ovate-lanceolate, serrated; peduncles axillary and terminal, 3-flowered. \/. G. Native of Peru. Stem brownish-violet; branches 3 in a whorl. Leaves glaucous: superior ones sessile; 2 at the base of the pedicels. Calyx larger than in the preceding. Lower lip of corolla narrowed to the base Perhaps not distinct from *C.glauca.*

Tern-flowered Slipperwort. Shrub 3 feet.

51 C. GEMELLIFLORA (Cav. icon. 5. p. 30. t. 450. f. 1.) shrubby; leaves petiolate, 3 in a whorl, ovate-serrated, nearly sessile; peduncles axillary and terminal, 2-flowered, shorter than the leaves. P?. G. Native of Peru, among stones. Stem branched. Leaves acute, glaucous, 2 at the base of the pedicels. Lower lip of corolla narrowed towards the throat. Perhaps not distinct from *C. angustiflora.*

Twin-flowered Slipperwort. Shrub 2 feet.

52 C. MULTIFLORA (Cav. icon 5. p. 29. t. 449.) shrubby villous; leaves *3* in a whorl, ovate, serrated, nearly sessile; peduncles branched, terminal, panicled. ^. G. Native of Peru, in dry places towards Lima. Branches obscure, purple. Leaves subcordate. Panicle a foot long. Segments of calyx 3-nerved. Lower lip of corolla narrowed towards the throat.

Many-flowered Slipperwort. Shrub 4 to 6 feet.

53 C. GLAUCA (Ruiz, et Pav. fl. per. 1. p. 17. t. 27. f. c.) shrubby; leaves opposite, and 3 in a whorl, lanceolate, unequally serrated; peduncles 3-4, umbellate, 3-flowered, furnished

with narrow-lanceolate leaves at the base. J?. G. Native of Peru, on the route to Canta. Branches opposite, and 3 in a whorl, purplish. Leaves on short petioles, glaucous above. Corolla yellow, spotted with purple inside. Filaments broad at the base.

Glaucous-leaved Slipperwort. Shrub *2* to 3 feet.

54 C. TRIFIDA (Ruiz, et Pav. fl. per. 1. p. 17. t. *26.* f. b.) shrubby ; leaves cordate-ovate, bluntly serrated, canescent beneath : lower ones opposite, petiolate : upper ones 3 in a whorl, sessile, and beset with glandular villi; peduncles axillary and terminal; 3-8-flowered. T? . G. Native of Peru, in shady places near the waters of Cheuchin. Stem almost glabrous. Petioles connate.

Trifid Slipperwort. Shrub *2* to 3 feet.

§ *5. Leaves serrated^ or toothed, petiolate; petioles membranaceously winged. Stem leafy.*

55 C. PERFOLIATA (Lin. suppl. 86. Smith, icon. ined. 1. p. 4. t. 4.) herbaceous ; branches pilose ; leaves triangularly sagittate, acute, doubly serrated, cut, hairy above, but clothed with tomentose pubescence beneath, and hoary ; petioles membranously winged, connate ; corymbs terminal, sub-dichotomous; pedicels pilose. %. or £ . G. Native of New Granada and Peru. Ruiz, et Pav. fl. per. 1. p. 15. t. 21. f. a. Mutis amer. J. t. *3.* H. B. et Kunth, nov. gen. amer. 2. p. 384. Leaves 1{ to 2 inches long. Corollas yellow, glabrous. Ovarium pilose. The plant of Ruiz, et Pav. is said by them to be clothed with clammy villi; and the leaves are said to be spatulately sagittate.

Perfoliate-leaved* Slipperwort. PL *2 to 3 feet.

56 C. TOMENTOSA (Ruiz, et Pav. fl. per. 1. p. 15. t. 22. f. b.) herbaceous ; branches downy ; leaves spatulately cordate, unequally serrated, tomentose beneath ; petioles membranously winged, connate ; corymbs terminal, downy. %. ? *$* G. Native of Tarma and Cuchero, in Peru. Stem glabrous, branched. Leaves pubescent above. Pedicels umbellate. Corolla large, yellow.

Tomentose Slipperwort. PI. 3 to 4 feet.

57 C. PETIOLA'RIS (Cav. icon. 5. p. 30. t. 445.) plant herbaceous, branched, downy ; lower leaves tapering into the winged petioles, doubly toothed : superior ones ovate, subcordate, sessile, connate, dentately serrated : floral ones quite entire; racemes solitary and axillary, or terminal and twin, or by threes; pedicels, calyxes, and ovarium, clothed with glandular villi; both lips of corolla nearly equal. *$* . or 1/. G. Native of South America, in Guayaquil. C. connata, Hook. bot. mag. 2876. C. floribunda, Lindl. bot. reg. 1214. but not of Kunth, C. paniculata, Herbert. Bee'a al&ta, Pers. ench. 1. p. 15. Plant more downy at top than bottom, clammy. Leaves 7 inches long, and 4 broad, ovate, acutish. Common peduncles bifid below the middle, and each branch is again cleft. Corolla pale yellow, downy.

Petiolar Slipperwort. Fl. July, Aug. Clt. 1824. PI. 2 to 4 feet.

58 C. RUGOSA (Ruiz, et Pav. fl. per. 1. p. 19. t. *28. f.* b.) shrubby; leaves lanceolate, unequally serrated, wrinkled, downy; petioles winged, connate; corymbs terminal. f?. G. Native of Chili. C. scabiosaefdlia, Nee. Plant downy at top. Leaves attenuated at both ends. Corolla yellow. Habit of *Sdlvia qfficinalis.* Lower lip of corolla narrowed at the base.

WrinkledAe^ved Slipperwort. Fl. July, Aug. Clt. 1822. Shrub 2 feet.

59 C. ARACHNoifiEA (Graham, in edind. **pliil.** journ. sept. 1828.) stem herbaceous, branched, spreading, clothed with white cobwebbed wool, as well as the leaves and other parts, except the corolla; leaves lingulately-oblong, a little toothed, narrowing downwards into long winged petioles, which are connate at the base; peduncles terminal, twin, elongated, dichoto. *Ti.* G. Native of Chili. Hook. bot. mag. 2874. £ reg. 1454. C. tinctoria, Gillies, mss. Leaves with the 5 inches long, wrinkled ; the 2 uppermost leaves smaller the others, sessile, cordate-ovate, placed at the origin peduncles. Corolla of a uniform dull purple. There are hybrids between this and other species. See Sweet, n. g s. t. 227.

Cobwebbed Slipperwort. Fl. June, Sept. Clt. 1 foot.

60 C. INTEGRIFOLIA (Lin. in act. holm. 1770. syst. p. 61.) shrubby; leaves ovate-lanceolate, or lanceolate, lated, wrinkled, opaque, rusty beneath ; petioles nate ; stem and calyxes downy ; panicles terminal, *cory* pedunculate. *b . G.* Native of Chili. Corolla yellow.

Far. fa integrifolia (Hook, et Arn. in Beech, voy. pt. 39.) leaves ovate-lanceolate, sharply denticulated. *n.* tive of Chili. C. integrifolia, Lindl. bot. reg. 744. Hook. bot. mag. 2523. exot. bot. 99, but not of Ruiz. C. salvisefolia, Pers. ench. 1. p. 15. Cham, et bcniec Linnaea, 2. p. *565.* Chacaul, Feuill. per. 13. t. 7.

Far. y, *angustifdlia* (Lindl. bot. reg. 1083.) nuated at both ends, coarsely denticulated ; panicles peduncles. T? . G. Native of Chili, about Valparaiso

Far. $, viscosissima (Hook. bot. mag. t. 8214.) plant clothed with viscid pubescence; leaves larger an *2 . G. Native of Chili. C. viscosissima, Lindl. bot. reg.

Entire-leaved Slipperwort. Fl. Aug. Sept. Clt. \w- *2* to 3 *feet.*

61 C. ASCE'NDENS (Lindl. bot. reg. 1215.) suffruticending; leaves ovate, petiolate, wrinkled, denticuia, connate ; cent: lower ones acute at the base; petioles winge corymbs umbellate, few-flowered, branched a Jj Stem peduncles. T?. G. Native of Chili, on the Cordilleras, pilose. Upper leaves sessile. Flowers large, oi yellow colour. Calyxes roundish, tomentose. ©aia **allied to *C. integrifolia* and *C. rugosa.***

Ascending Slipperwort. Fl. June, Sept. Clt. *i*** •

1 ^^CHILOE'NSIS (Lindl. bot. *reg.* 1476.)^shrubbyj calyxes, and bracteas beset with glandular hairs ;j oblong-lanceolate, undulated, sharply toothed, downy surfaces, tapering into the petioles, which are wing nate at the base : superior leaves quite entire, sessile ; inflorescence cymose, many-flowered, axil minal. T?. F. Native of the Island of Chiloe, on coast of Chili. Corollas yellow.

Chiloe Slipperwort. Fl. July, Sept. Clt. 1831. *MTV'*

63 ,C. POLIFOLIA (Hook. bot. mag. 2897.) suffruti with white wool in every part; leaves ovate, or nated, tapering into the petioles, which are peduncles elongated, terminal, dichotomous ; Howe h . G. Native of Chili, on the Cordilleras, ana the same country. Upper lip of corolla small, p under one deep yellow. Calyxes 3-nerved.

Polium-leaved Slipperwort. Fl. July, &P Shrub 1 foot.

§ *6. Leaves sessile. Stems leafy -*

64 C. SESSILIS (Ruiz, et Pav. fl. per. 1. P beneath; corymbs panicled, terminal, rolla nearly equal, ventricose. T? . *G.* places. Lindl. bot. reg. 1628. Sweet, fl. gard. Stem branched. Pedicels elongated. Corolla ye

Sessile-leaved Slipperwort. Shrub 2 feet.

65 C. CRENA'TA (Lam. dict. 1. p. *556*) shrubby ; branches villous ; leaves cordate-lanceolate, sessile, crenated, hoary beneath, and villous above ; peduncles axillary and terminal, longer than the leaves and calyxes clothed with clammy villi, like the pedicels of Per V pedicels scattered, subcymose. T? . G. Native *thus crenata,&c.*

Crenated-leaved klipperwort. Shrub.

66 C. AMPLEXICAU'LIS (H. B. et Kunth, nov. gen. amer. 2. p. 384. t. 171.) suffruticose branches ; leaves stem-clasping, ovate oblong, acuminated, cordate, crenately-serrated, and are, as well as the pedicels, pilose ; corymbs terminal ; flowers umbellately between Chili and Native on the banks of the river San Pedro, Leaves rule 2 and Cocnocato, at the altitude of 1340 hexapods. Corollas ve.no eneath, about 3 belies long, at length reflexed. *Stem If* -WJ glabrous, °TMTMm glancfular.

C7 C. *pm°le*TM*ed* (H. B. et Kunth, l. c. p. 385.) suffruti- Cose ; brLTbU n/A Slipperwort. Shrub 3 to 4 feet. leaves stem-clasping, lanceolate, acuminated, cordate, denticulated, hairy beneath ; racemes bifid, panicled, or corymbose ; flowers u«Li . . . at the alVit i tWm* *h*, G* Native near the town of Quito, Sreen ab*TM* *J 149(* bexapods. Leaves smoothish, and Flowers small, and pale beneath, and clammy, 2 inches long, °rang(? yellow, sub-secund. Calyx villous. Corolla glabrous, nuile-it Ovarium pilose.

C. Tiny ^^Slipperwort. Shrub.

bot. mag. 9 ? ^LoRA (Graham, in edinb. phil. journ. sept. 1828. linear, attenuated at both ends, lined, shrubby, branched, clammy, glabrous ; leaves thyrse terminal, crowded ? peduncles compound, umbellate. T? . G. Nativef p^ded and obscure Chili about Mendoza. Branches rather rough, broad, disposed, glandular. Leaves 2 inches long, and 2 lines Crowded oil Jaggedly serrate^ ; teeth reflexed. Flowers yellow, n[illegible] glabrous outside, and downy within. Shrub 1 to 2 feet. Slipperwort. Fl. June, Sept. Clt. 1827.

69 *Q* *Leaves entire, or quite entire. Stem leafy.*

(Lam. dict. L P. 356 0 suffruticose ; leaves sessile» connate at the base, linear, [illegible] at apex, with quite entire and revolute edges, rather ceous, glabrous above, and clothed with golden tomentum beneath. 5 flowers Umbellately corymbose, paniculately disposed; pedicels beset with Mutinous hairs. \. G. Native at the foot of Mount Chimborazo, at the altitude of 18°0 hpv. (Z O) near the Lake Ganacoche, at the altitude of 12000 nov 2 S ; and of Chili on the Cordilleras. H. B. et t-4 2. P> *285,* C» ferruginea, Cav. icon. 5. p. *27.* 1- Branches terete, violaceous. Calyx pilose, clammy. [illegible] yellow, glabrous ; lower lip large.

Rosemary-leaved Slipperwort. Shrub 2 to *3 feet.*

11 C. GRAMINIFÒLIA (H. B. et Kunth, nov. gen. 2. p. 386.) suffruticose, [illegible] narrow, erect, branches nearly glabrous; leaves sessile, linear-lanceolate, acuminated, with quite entire and revolute edges, paler beneath, clammy above, but clothed with hoary pubescent hairs at the corymbs terminal, trifidly sub-dichotomous ; [illegible] Native of Quito, in the valley of [illegible] terete, compressed at the nodi. Leaves 4-6 lines long, and 2\ lines broad. Calyx hairy. Corolla glabrous, yellow. Very like the preceding.

Grass-leaved Slipperwort. Shrub 4 to 6 feet.

71 C. LAVANDULAEFÒLIA (H. B. et. Kunth, 1. c.) suffruticose ; branchlets hairy ; leaves sessile, linear, bluntish, with quite entire and revolute Margins, smoothish above, but clothed with hoary tomentum beneath, clammy, [illegible] 5 flowers terminal, corymbose; pedicels v. CJ. Native in hollows or valleys on Mount Pichincha, and Paramo de Assuay, at the altitude of 1560 hexapods. Branches terete. Leaves 9-10 lines long, and 1 to 1£ lines broad. Corolla yellow, glabrous. Only to be distinguished from the preceding by the size of the leaves.

Lavender-leaved Slipperwort. Shrub.

72 C. HYSSOPIFÒLIA (H. B. et Kunth, l. c.) shrubby; branchlets and pedicels beset with clammy hairs; leaves almost sessile, narrow-linear, bluntish, with entire and revolute edges, glabrous on both surfaces, clammy above ; flowers terminal, corymbose, J? . G. Native at the foot of Mount Chimborazo, near Calpi and in the plains of Luisa, at the altitude of 1640 hexapods. Much branched; branches terete. Leaves pale beneath, 9-10 lines long. Distinguished from the preceding by the leaves being glabrous on both surfaces.

Hyssop-leaved Slipperwort. Shrub 4 to 5 feet.

73 C. HELIANTHOI'DES (H. B. et Kunth, 1. c. p. 387.) shrubby; branches and pedicels clothed with canescent down ; leaves nearly sessile, and nearly oblong, acute at both ends, quite entire, glabrous ; flowers terminal, subcorymbose. T? . G. Native of Paramo de Saraguru, in cold places between the river Uduchapa and the city of Loxa. Leaves oblong or lanceolate-oblong, *6-9* lines long, and *2*\ to 4 lines broad, pale beneath. Pedicels puberulous. Corolla yellow, glabrous.

Sunflower-like Slipperwort. Shrub 1 to 1\ foot.

74 C. ERICOI^DÈS (Juss. ex Vahl, enum. 1. p. 190.) shruhby, much branched; branches crowded, and are, as well as the leaves, hairy on both surfaces ; leaves small, sessile, linear, with entire and revolute edges; peduncles axillary and terminal, 1-3-flowered, hairy. Tj . G. Native of Quito, in stony places on Mount Pichincha, at the altitude of 1780 hexapods. Leaves 4-5 lines long. Corollas small, yellow, downy. Ovarium hairy.

Heath-like Slipperwort. Shrub 2 to 3 feet.

75 C. LINEA'RIS (Ruiz, et Pav. fl. per. 1. p. 19.) shrubby, much branched; leaves linear, with quite entire and revolute edges, sessile ; peduncles axillary, 1-flowered, pubescent. f? . G. Native of Peru, on the declivities of the hills of Xauxa. Leaves shining above. Calyx rather tomentose. Corolla yellow.

Linear-leaved Slipperwort. Shrub.

76 C. ARGE'NTEA (H. B. et Kunth, nov. gen. 2. p. 387. t. 170.) shrubby, and clothed with white tomentum ; leaves petiolate, nearly oblong, acute at both ends, quite entire; flowers terminal and axillary, usually solitary. F? . G. Native of Peru, in Paramo de Guamami, between Gualcaquillo and Guamcabamba, in shady places. Branches purple. Leaves 4-6 lines long. Corolla large, yellow, glabrous.

Silvery Slipperwort. Shrub 1 foot.

77 C. LANCEOLA'TA (Cav. icon. *5.* p. 27. t. 444. f. 1.) branched a little; leaves linear-lanceolate, quite entire: radical ones petiolate: cauline ones sessile, acute at both ends; peduncles terminal, solitary, 1-flowered. %. F. Native of the Maclove Islands. Corolla yellow; upper lip very short: lower one long, and narrowed to the base.

Lanceolate-leaved Slipperwort. PI. j foot.

78 C. A'LBA (Ruiz, et Pav. fl. per. 1. p. 19. t. *27.* f. b.) suffruticose, clammy and resinous, simple; leaves linear, remotely serrated; peduncles racemose, dichotomous. ^. G. Native *of* Chili, on arid hiils. Leaves frequently very narrow and sessile, scabrous on the margins, with fascicles of leaves in the axils. Peduncles elongated : partial ones opposite, twice or thrice divided. Pedicels solitary in the first division, twin in the second, and three in the third. Corollas white. Odour of rosemary.

White-Lowered Slipperwort. Shrub.

79 C. ALTERNIFÒLIA (Cav. icon. *5.* p. *28.* t. 445. f. 2.) stem and under sides of leaves "tomentose; leaves linear, alternate,

with entire, revolute edges; peduncles axillary, 3-flowered. 2£. ? G. Native of Peru. Leaves sessile, hardly an inch Jong. Peduncles towards the tops of the branches ; with 2 leaves at the base of the pedicels. Lower lip of corolla gradually narrowing towards the base.

Alternate-leaved Slipper wort. PL 2 feet.

Cult. Calceolaria is a genus of very showy plants, and great favourites at present with gardeners and others. Some of them are annual, others perennial, but the greater mass are shrubby. All of them thrive well in light rich soil, or a mixture of loam, sand, and peat; giving them the treatment of other greenhouse plants. They readily increase by young cuttings, under a hand-glass ; and also by seed, which ripens plentifully in this country. By impregnating the stigma of one sort with the pollen of another, many very beautiful hybrids have been reared in the gardens. The seeds of the annual kinds should be reared in a hot-bed, in spring ; and when the plants are of sufficient size, they should be set separately in pots ; and others may be planted out in the open ground, in a warm, sheltered situation.

LXXXIX. JOVELLA^XNA (named after D. Casparo Melchiori de Jovellanos, a promoter of the Flora Peruviana.) Ruiz, et Pav. fl. per. 1. p. 13. t. 18. f. b.—Bae'a species, Pers. ench. 1. p. 15. Calceolaria species of authors.

LIN. SYST. *Didndria, Monogynia.* Calyx 4-parted. Both lips, of corolla nearly equal : upper one concave : lower one inflated. Stamens 2, inserted at the base of the tube, short; cells of anthers confluent. Stigma capitate, emarginate. Capsule ovate-conical, 2-furrowed, 2-celled, 2-valved at apex; valves bifid ; placentas adnate to the dissepiment. Seeds angular.—Plants with the habit of *Calceolaria.*

1 J. SCAPIFLORA (Ruiz, et Pav. fl. per. 1. p. 13. t. 18. f. b.) leaves ovate, serrated, downy ; scapes downy, unequal, 1-flowered. %. F. Native of the Andes of Peru. Baea plantaginea, Pers. ench. 1. p. 15.? Leaves an inch long. Corolla yellow: lower lip spotted with purple.

Scape-Jlowered Jovellana. Fl. Aug. Clt. 1827. PI. 1 foot.

'2 J. PUNCTA'TA (Ruiz, et Pav. fl. per. 1. p. 13. t. 18. f. a.) shrubby; branches slender, glanduliferous; leaves petiolate, oblong-ovate, biserrated, glabrous ; peduncles axillary and terminal, cymose ; pedicels umbellate. *1?*. G. Native of Peru and Chili, in woods. Calceolaria punctata, Vahl, enum. 1. p. 177. Boe'a punctata, Pers. ench. 1. p. 15.—Feuill. per. 3. p. *21.* t. 16. Leaves white beneath : floral ones quite entire, all dotted with purple on both surfaces. Corolla of a whitish-violet colour, variegated with a pale mark and yellow spots. Stigma emarginate.

Dot ted-flowered Jovellana. Shrub 3 feet.

3 J. VIOLA'CEA ; shrubby ; branches violaceous ; leaves petiolate, ovate, coarsely serrated, white beneath ; peduncles terminal by threes, corymbose ; pedicels 1-2-flowered. T?. G. Native of Talcahuana, on the sea shore ; and of Chili, about Conception. Baea violacea, Pers. ench. 1. p. 15. Calceolaria violacea, Cav. icon. 5. p. 31. t. 452. Leaves length of petioles. Corolla pale violet, spotted with deeper violet beneath. Lips of corolla spreading in a campanulate manner ; limb villous.

Violaceous-flowered Jovellana. Shrub 4 to 6 feet.

4 J. ? TRIA'NDRA (Cav. icon. 5. p. *32.* t. 453.) shrubby; branches, peduncles, and edges of calyx beset with glandular villi; leaves deeply pinnatifid, glaucous beneath, petiolate ; peduncles dichotomous ; flowers triandrous. ^ • &• Native of Peru. Bsea triandra, Pers. ench. 1. p. 15. Bark of branches dark purple. Petioles shorter than the leaves, clasping the stem by a membrane at the base. Filaments 3, very short. Ovarium tomentose. This will probably form a distinct genus, which we would propose calling *Porodittia tridndra, from* the triandrous flowers ; and in the cells of the anthers being confluent, and opening by a pore at the apex.

Triandrous-flowered Jovellana. Shrub 3 to 4 leet.

Cult. Singular and beautiful plants, with the habit oi *ceoldria ;* the culture of them is also similar.

XC. BAE'A (meaning not explained by the author.) ex Lam. diet. 1. p. 401. ill. t. 15. Juss. gen. p. 121. ca. p. 135.

LIN. SYST. *Didndria, Monogynia.* Calyx o rolla with a short tube and a spreading bilabiate lip3-lobed: lower one 2-parted ; lips not inflated. thick, arched, in the middle of the corolla; anther* 2-cells ca **Capsule long, corniculate, twisted,** 2-celled, 4-valveherb, with twisting **of the valves throwing out the seeds.** A- **the habit of the stemless species of** *Calceolaria,* cal. Scapes 1 or many-flowered. Flowers submn

1 B. MAGELLA'NICA (Lam. 1. c.) V- F, 2* ana, ». Straits of Magellan, among humid rocks, r>- * obtuse, Hil. Leaves petiolate, 2-3 inches long, subserrated, quite entire at the base, soft, greenisn, Scapes erect, shorter than the leaves. Calyx villous blue. Capsule acuminated, longer than the calyx.

Magellan Bsea. PI. \ foot.

Cult. This singular and pretty plant *Calceolaria,* treatment as the perennial, herbaceous species oi p. 607.

XCI. HEMI'MERIS (from fyn, femi, half; *nd Jn earl y ob- a part; in reference to the upper lip of corolla D^ei\^hunb. nov-solete.) Lin. fil. suppl. 45. Schreb. gen. 1010. gen. 74. Juss. gen 120. ed. Usteri, 134. but no; oi o ^^

LIN. SYST. *Didndria, Monogynia;* or Z,M y ^ N very »^r»ifa. Calyx 5-parted. Corolla rotate, nngent, short, intruded, white tube, and a bilabiate lip cloven, with a kind of bag at the b..-e, composed o reous pits : lower lip concave, blunt. Stamens / > serted in the base of the lower lip; anthers very sn cohering, yellow. Ovarium acute, smooth, acutish. Capsule ovate, acute, didymous, gibbou on one side, 2-celled, 2-valved. Seeds many, ? axillary, with opposite or alternate leaves. Flowers terminal usually solitary.

§ 1. DISTE^MON (from *8IQ, dis, twice;* and <rn^> pikers stamens; in reference to the stamens only being tw -) diandrous.

1 H. MONTANA (Lin. suppl. 280.) leaves opposi serrated ; stem erect. 1/. G. Native of the ^V Hope. Lam. ill. t. 532. f. 1.—Plukn. aim. 9. t. rota racemdsa, Houtt. pflanz. syst. 5. p. 89. t. J • •

Mountain Hemimeris. PI. \ to \ foot. ?

2 H. SABULOSA (Lin. suppl. 280.) leaves opposite stem prostrate. %. G. Native of the Cape oi Lam. ill. t. 532. f. 2.

Sand Hemimeris. PI. prostrate.

h 2. **TETRASTEW (from *rerpa, tetra, f**}J§* Flo*ers** *stemon, SL* stamen ; in reference to the 4 sta tetrandrous ; stamens didynamous.

3 H. DIFFU'SA (Lin. suppl. 280.) leaves alternate, pinnatifid; stems spreading. % - v. •. spec P' Cape of Good Hope. P^ederota Bona Spe«, amcen. acad. 6. afr. 1.—Plukn. phyt. t. *3M-* i-

Duffuse Hemimeris. PI. diffuse.

UNILABIAXTA (Thunb. prod. 105.) leaves opposite, pinnatifid; Hone ... panicled. V-1 G. Native of the Cape of Good Li ... y not distinct from the preceding.

Cull ... Hemimeris ... pl.

SDeoil ... culture and propagation see perennial, herbaceous ... es ot *Calceolaria,* p. 608.

XC J. THYLACA'NTHA (from *OVXCLKOQ, thylacos,* a sack; ... flower; base of lower lip of corolla.) Mart.* ... act.bonn. 11.p.45.

short, ... YST ii *Didynamia Angiospermia.* Calyx 5-parted, ... labiate; upper lip very short, bifid: lower ... saccate at the base, large. Stamens 4, didyna- ... ments dilated 5 cells of anthers placed one above the ... exceeding the truncate apex of the filament. ... accumbent hooked ... longer than the stamens. Cap- ... -celled, rather resinous, roundish; dissepiment ... separating from the placenta, which is central. ... erect ... angular, with a thick ... spongy ... bullate testa.— ... opposite, ovate-oblong leaves; but the ... Flowers axillary, solitary, viola- ... with deep purple, on slender pedicels.

... TPE STRIS (Mart. ... 0 V- S. Native of Brazil, ... and Velos ... in fields ... Angelonia campestris, ... aCt. l)onn. 1]. P. 44. Stem tetragonal; angles ob- ... fees, trM ... on S ... Olt Pet ... es unequally serrated, with hispid ... enth ... nerved nerves pilose; floral leaves narrower, ses- ... Sf J ylacantha. PL 3 to 4 feet.

... or Cl ... ture and propagation see *Angelonia,* below.

XCII. the first ... A ... GEL ... NIA (Angelon is the vernacular name of H. B. et ... ecie*) H"mb. et Bonpl. pi. sequin. 2. p. 92. t. 108. Lix. ... Unthj nov. gen. amer. 2. p. *377.*

parted] ... eq, ST i ... *idynamia, Angiospermia.* Calyx deeply 5- ... rn» and ... oro ... a with a very short tube, a concave bot- ... P larger ... biate spreading limb: superior lip bifid: lower ... taft iens ... Saccate ... y excavated, trifid; segments nearly equal. ... ple" Can ... namo US; cells of others diverging. Stigma sim- ... JXX]QX* com ... celled 2-valved; valves bifid at apex; disse- ... ? § * free ... adnate to the valves; placentas central, at ... hia and /ii ... ds with opposite leaves, with the habit of Or violet, ... a, Flowers axillary, racemose. Corollas blue, ... m and branches quadrangular.

... ARI ... FOLI A (Humb. et Bonpl. l. c.) stems erect, ... es lanceol ... 6r pilose and clammy J leaves sessile: lower ... ent on both ... cute serrated towards the apex, finely pubes- ... ive near C ... surfaces: floral ones ovate, shorter. %. S. Na- ... xillar ... y 5 so ... accas on arid hills. Ker. bot. re. S. 415. Flow ... rs ... al ... y ... Vx pilose £' Pedicellate, disposed in terminal racemes, ... ceeds ob ... ng, cuneated, covered by a reticulated ... ane. Wha ... species ... one nearly allied, has been collected ... Una; it ... De ... PPe in Mexico, near the Hacienda de La ... bov ... Xh ... u ... eaves usually 4 in a whorl, and very scabrous ? dirty ... f ... rs ... the stem are somewhat adpressed, and of hairy/' ... lv escent colour, not purplish. Corolla purplish,

... 3 *rlT ... Ua ... leave ... d* Angelonia. Fl. Aug. Clt. 1818. PI. lj

... ste ... m tet ... aT ... A ... Cham* et Schlecht. in Linnsea, 8. p. *27.)* hairy; ... aulin ... e o ... r ... e ... Grect; leaves somewhat auriculate, sessile: ... Ute sharn ... SUbcordate, narrowed at the base, oblong, very ... d a ... uri ... cu ... f ... and obsolete ly serrulated: floral ones dilately ... ted quitp ... dte ... cor(ia ... te at the base, short, very acutely acumi- ... B ... Sen ... 1111,6, sborter than the peduncles. %. S. Native ... This differs from *A. salkaricefolia* in hairiness and shape of leaves; the habit and inflorescence is the same, but the flowers are a little larger.

Hairy Angelonia. PI. 1| to *2* feet.

3 A. PROCI/MBENS (Mart. nov. act. bonn. 11. p. 45.) stems weak, procumbent, tetragonal; leaves elliptic, lanceolate, sharply serrated. 2£. S. Native of Brazil, at Villa dos llheos. Physidium procumbens, Schrad. gott. gel. anz. 1821. vol. *72.* p. 714. t. 30. Schelveria arguta, Bot. zeit. 4. jahrj. 1821. p. *299.* and 328. Stems articulated, trichotomous, glabrous; angles winged. Leaves glabrous, spiny-serrated; petioles connate, with the projection ciliated. Flowers axillary, solitary or twin, very like those of a species of *Calceolaria,* on pedicels which are shorter than the leaves. Corolla violaceous: upper lip of corolla short, 3-lobed; lobes crenulated: lower lip large, inflated, entire. Seeds, angular.

Procumbent Angelonia. PI. procumbent.

4 A. INTEGE'RRIMA (Spreng. syst. append, p. *235.)* leaves scattered, lanceolate, quite entire; peduncles racemose; stem erect. %. S. Native of Rio Grande, Sello.

*Quite entire.*leaved Angelonia. PI. erect.

Cult. These are very pretty plants when in blossom, and are, therefore, well worth cultivating. A mixture of light turfy loam and peat is a good soil for them; and cuttings strike root readily in the same kind of mould under a hand glass, but as they are liable to rot, air should be frequently given.

Tribe IX.

EUPHRASIES (this tribe agrees with the genus *Euphrasia* in the characters given below.) D. Don, in edinb. phil. journ. vol. 19. p. 113. July, 1835. Benth. scroph.

Calyx tubular, 5-toothed. Corolla bilabiate. Stamens 4, didynamous. Cells of anthers parallel, usually spurred at the base. Stigma undivided. Capsule crustaceous; dissepiment placentiferous on both sides. Seeds with a membranous testa. Albumen fleshy. Embryo terete, slender, straight, almost the length of the albumen.—Herbs, with opposite leaves, and terminal, subspicate, bracteate flowers.

SUBTRIBE I. BARTSIE\E. Cells of anthers spurred at the base.

XCIV. EUPHRA'SIA (from *ivtypaivu, euphraino,* to delight; from the supposition of the plants curing blindness.) Tourn. inst. *78.* Lin. gen. no. 741. Schreb. no. 998. Juss. gen. 100. edit. Usteri, p. 112. Gaertn. fruct. 1. p. *257. t. 54.* Lam. ill. 518. f. 1. H. B. et Kunth, nov. gen. amer. 2. p. *333.* Benth. scroph. ind. p. 51.

LIN. SYST. *Bidynamia, Angiospermia.* Calyx campanulate, 4-cleft, somewhat bilabiate. Corolla bilabiate; upper lip galeate, emarginate: lower lip large, spreading; segments emarginate, retuse, denticulated, or entire. Stamens 4, fertile; cells of upper anthers usually with longer spurs than the lower ones. Stigma thickened, oblique, emarginate. Capsule ovate or oblong-ovate, compressed, usually emarginate; valves entire. Seeds few, wrapped in a membranous, striated testa.—Dwarf herbs. Leaves opposite or alternate: the upper or floral ones generally the broadest. Flowers sessile, solitary, subspicate at the tops of the branches, white, yellow, or purple.

§ 1. *Species natives of Europe and Asia. Anthers ciliated at the base; cells of the 2 lower anthers elongated into bristly spurs.*

1 E. OFFICINAXLIS (Lin. spec. 841.) glabrous or downy, never scabrous; leaves naarly sessile, ovate: lower ones bluntly serrated; floral leaves ovate or roundish, acutely toothed, equal in length or exceeding the calyxes; calycine teeth acute, about equal in length to the tube of the corolla, which is glabrous;

segments of corolla emarginate ; capsule equal in length or exceeding the calyx. 0. H. Native of Europe, Siberia, Aleutian Islands, on heaths and other dry places, especially on a chalky or sandy soil; plentiful in Britain, in like situations. Curt. lond. 5. t. 42. Fl. dan. 1037. Woodv. med. bot. 2. p. 220. Sabb. hort. rom. 3. t. 9. Blackw. 427. Smith, engl. bot. t, 1416.__Riv. mon. t. 90. f. 1. The plant varies much in size, branched or quite simple. Flowers varying much in colour from white to yellow ; limb tinged with blue or streaked with purple. It seems to have been unnoticed by^the ancients. The Arabians mention it under the name of Adhil. Mathseus Sylvaticus, a physician of Mantua, who lived about the year 1320, recommended this plant in disorders of the eyes. It is still in use, particularly as an ingredient in British herb tobacco ; and Mr. Lightfoot says that the highlanders of Scotland make an infusion of it in milk, and anoint the patient's eyes with a feather dipped in it. It is, however, neglected by the faculty; and even thought by some to be injurious, at least in inflammation of the eyes. It is a weak astringent, but there seems to be no foundation for the old notion of its being useful in disorders of the eyes.

Var, /3, elatlor (Benth. scroph. ind. p. 51.) taller, pubescent, simple or branched. ©. H. Native of the Himalaya, Kamaon, Cashmere, and at Kidarkonta. E. depauperata, Benth. in. Wall. cat. no. 3886. E. simplex, D. Don, prod. fl. nep. p95.

Var. y, *nemorbsa* (Bull. herb, ex Led. fl. alt. 2. p. 422.) erect, nearly simple ; serratures of leaves setaceous. ©. H. Native in dry places. Pers. ench. 2. p. 149. Bess. enum. pi. volh. p. 25.

Var. h, intermedia (Led. 1. c.) erectish, nearly simple ; leaves serrated : lower ones distant; serratures of the upper ones subsetaceous. ©. H. Native of the sandy banks of rivers and lakes. E. officinalis, Lin. spec. 841. Bieb. fl. taur. 2. p. 69.— Gmel. sib. 3. p. 212. no. 25.

Var, e, *imbricdta* (Pers. ench. 2. p. 149.) plant minute, branched ; leaves of stem adpressed, cuneate, toothed at apex. ©, H. Native of France, in sandy places near Dax. Leaves quite entire towards the base.

Var. £, *alpestris* (Wimmer et Crabowsky, fl. siles. 2. p. 218. Le3. 1. c.) stem short erect, simple, few-leaved ; leaves bluntish, serrated; corolla large, of a purplish-violet colour. ©. H. Native of alpine places.

Var. ??, *alpina* (Duby, bot. gall. 1. p. 354.) leaves setaceously toothed ; calyx glabrous, with linear-setaceous segments. Q. H. Native of the alps of Salisburgh, Switzerland, and the Pyrenees. E. Salisburgensis, Funk, in Rocm. arch. 1. p. 43. Hoppe, taschenb. 1794. p. 190. E. alpina, Lam. ill. t. 518. f. *2.*

Var. 0, *minima* (Duby, 1. c.) stem nearly simple, small; leaves obtuse ; calycine segments lanceolate. ©. H. Native of the alps of France, in arid pastures ; and of the Pyrenees. E. minima, Jacq. ex Pers. ench. 2. p. 149. A. officinalis, /3, Lam. diet. 2. p. 400. Upper leaves acutely toothed. Corolla yellow, with bluish veins.

Officinal Eyebright. Fl. July, Sept. Britain. PI. J to \ foot.

2 E. TARTA'RICA (Fisch. ex Spreng. syst. 2. p. 777.) clothed with subglandular villi; leaves sessile, broad-ovate, serrated; calyx clothed with glandular pubescence ; segments of corolla emarginate; capsule exceeding the calyx. ©. H. Native of Altaia, in dry open places at the rivers Siba and Kerlyx, (Led,) Tcharysch, (Bunge.) Led. fl. ross. alt. ill. t. 435. Very like *E. officinalis;* but differs in being clothed with glandular villi; the villi in *E. officinalis* being simple and retrograde.

Tartarian Eyebright. PI. J to 1 foot.

3 E. TRICUSPIDA'TA (Lin. spec. 841.) leaves cuneiform-linear, tricuspidate; segments of the lower lip of corolla emarginate. O. H. Native of Italy; Carniola, on the *fP*s-~ H2. t. 177. f. 1.-Zanich. hist. 110. t. 76. Leaves, linea one tooth on each side. Corollas similar to those ot z~ *M cinalis.*

Tricuspidate Ae^ed Eyebright. PL 1 to 5 toot.

4 E. A'SPERA (Brot. fl. lus. 1. p. 185.) stem teiete, sti leaves ovate, bluntly serrated, scabrous, rugosely Jinea. .Native of Portugal. Plant apparently suffruticose.

Rough Eyebright. PL \ foot. ?

§ 2. *Species natives of Australia. Anthers usually*

5 E. ALPfNA (R. Br. prod. p. 436.) leaves ci and crenated, glabrous; those of the fertile branches ^^ those of the sterile ones decussate; calyxes nearly ^^ pubescent,'a little shorter than the capsule; segments all emarginate. ©. H. Native of Van Diemen s Lana.

Alpine Eyebright. PL J foot. ?

6 E. TETRAGONA (R. Br. 1. c.) stem tetragonal nearly oval, 3-5-toothed, obtuse, glabrous; calyxes obtuse, nearly sessile, equalling the capsule in leng segments of corolla emarginate. ©. H. Native ot coast of New Holland.

Tetragonal-Stemmed Eyebright. PL \ foot. ?

7 E. COLLI*NA (R. Br. *1. c.) leaves linear-cuneate, tridentate, glabrous ; spikes many-flowered, the lowe tant; calyxes glabrous, about one half shorter than tn segments of corolla all emarginate. ©. H. N Diemen's Land.

Hill Eyebright. PL J'foot. ?

8 E. STRIA^TA (R. Br. 1. c.) stems ascending; bracteas somewhat palmately 5-lobed, glabrous; sp vate; flowers all imbricate; calyxes acutish, glat ments of corolla striated, retuse. ©. H. Native o men's Land.

Striated Eyebright. PL \ foot. *?*

9 E. PALUDOSA (R. Br. 1. c.) leaves linear, acuu toothed, glabrous ; those of the branches distant; flowered, with the lower pairs distinct; calyxes acu ments of corolla nearly entire. ©. H. Native *ot i>e* Wales, about Port Jackson.

Marsh Eyebright. PL £ to | *foot. 1*

10 E. SPECIOSA (R. Br. 1. c. p. 437.) leaves decussate crenately cut, and are, as well as the stem, which is brous ; calyxes acutish ; segments *of* corolla ret us middle one emarginate. ©. H. Native *of* New *bouu* along with the preceding.

Showy Eyebright. PL \ foot. ?

11 E. SCA^BRA (R. Br. 1. c.) plant scabrous from g pubescence ; leaves lanceolate, dentately cut; corolla downy, with entire segments. 0. H. Diemen's Land, and the south coast of New Holland.

Scabrous Eyebright. PL \ to J foot. ?

12 E. ARGUTA (R. Br. 1. c.) stem erect; plant pu leaves lanceolate, pinnatifidly cut, scabrous ; teas setaceously acuminated; segments of corolla e H. Native of New South Wales, about Port Jackson.

Sharp-toothed-leaved Eyebright. PL \ to \ foot..

13 E. CUNEA^TA (Forst. prod. no. 234.) leaves ci ovate, toothed at apex ; segments of the lower up sitbemarginate. ©. H. Native of New Zealand.

tt dge-leaved Eyebright. PL \ foot. ?

§ 3. Species natives of South America.

glabrous, mucronate at the base, exse

14 E. SANTOLIN^F6LIA (H. B. et Kunth, nov. gen-

stem branched, clammy, and clothed with glandular villi; leaves sessile, linear, obtuse, crenated; flowers terete, erect; leaves sessile, linear, obtuse, crenated; flowers downy; segments of corolla obtuse; calyxes of New Granada, on high plains between Suacha and Santa Fe de Bogota, at the altitude of 1370 hexapods. Leaves 4-5 lines long. Corolla concave, emarginate. Capsule oblong, obtuse, compressed a little, revolute.

Sonbna-Rke Eyebright. PL J to 1 foot.

2 O. STRICTA (H. B. et Kunth, 1. c) hispid; stem nearly simple, somewhat tetragonal, strict; leaves linear-lanceolate, Nuntish, Crenated; segments of lower lip of corolla rounded: throus, Ovate, obtuse, concave; filaments and anthers glaucous, and capsule pilose. *H.* G. Native of Quito, frigid ecclivities of Mount Antisana, and in temperate and cool places near the town of Chillo, at the altitude of 1350-1800 hexapods. Leaves *7-8* lines long. Corolla yellow, subobtuse. Stamens hidden under the upper lip of corolla. Capsule oblong, compressed. Very nearly allied to the preceding.

Pridedmpyroid Eyebright. PL J to 1 foot.

3 O. PYROLIFOLIA (H. B. et Kunth, 1. c. p. 334.) stem leaves blunt, glutinous, terete, hispid from reflexed bristles or hairs; glandular-hispid at apex, hispid; calyxes clothed with obtuse, erect, linear; segments of the lower lip of corolla anthers, upper lip sub-emarginate; filaments glabrous; in the upper half, and capsules pilose. *H.* G. Native of Quito, mountains of Cachabamba, and near Pintac, at the foot of pods, x, at the altitude of from 1350 to 1600 hexapods. Leaves long, compressed. yellow. Capsule oblong, compressed.

Mutic Pyrum-rike Eyebright.. PL J to f foot,

and is *Mutica* (H. B. et Kunth, 1. c.) stem panicled, terete, coarsely as well as the leaves, hispid; leaves linear-lanceolate, Crenated, Serrate, crenated; calyxes hispid, linear, sometimes upper lip, tooth; segments of the lower lip of corolla obtuse: anthers bearded, sinate; corolla, style, and filaments pilose; Passed. ovate, obtuse, muticous. 5 capsule hairy, oblong, obtuse, compressed. Native of Peru, in dry places between Lanchinch Inn, Yavaca, at the altitude of 1300 hexapods. Leaves *Mutic 31* Corolla flesh coloured.

Cul-de-sac Eyebright. PL twining.

Seeds of these plants may be sown on rockwork, one of Cultivation. species as yet have been found to grow in

XCV. ODONTITES.

(from *odovg oEoyrog, odous odontos,* a tooth. The plant is said to be good against the toothache. Juss. gen. 107. Lam. ill. t. 518. Stev. mon. Pall. fl. alt. 2. p. 150. Schkuhr, handb. t. 169. Scrophulariae sp. Linn. *%3.* Euphrasia species, Lin. and other Auct.

Calyx 4-cleft. Upper lip of Corolla galeate: lower lip trifid, with linear, equal Straight Anthers all mucronate, and a little exserted. Style Ovary, subobtuse, emarginate. Seeds angular.—Branchless annuals, erect herbs. Leaves opposite, or the upper alternate. Flowers red or yellow, disposed in unilateral racemes.

Stem branched, leaves lanceolate, serrated Eyebright. PL 1 to 1| foot.

1 O. SERRATA: upper ones alternate, of parts of the lower lip of corolla truncate. ©. H. Native; pient. Europe and Siberia, in meadows and moist pastures. Britain, like situations. O. vulgaris, Odontites Tenuifolia, mem. soc. nat. mosc. 6. p. 4. Euphrasia serotina, Lin. spec. 841. Curt. fl. lond. 1. t. 44. Martyn, fl. rust. t. 42. Smith, engl. bot. 1415. Bieb. fl. taur. 2. p. *70.* Bartsia odontites, Huds. angl. 268.—Hall. helv. no. 304.—Riv. mon. irr. t. 90. f. 2. Crataeogonum Euphrasine, Ger. *85.* emac. 91-3.—Gmel. sib. 3. p. 213. no. 26. Stem hispid, tetragonal. Corolla dusky red or purple, sometimes varying to white, hairy. Seeds elegantly latticed.

Far. (3, vérna (Pers. ench. 2. p. 150.) leaves ovate-lanceolate, toothed; bracteas longer than the flowers. ©. H. Native of Piedmont, in pastures. Euphrasia vérna, Bell, append, fl. ped. p. *33.* Willd. spec. *S.* p. 194. Perhaps a distinct species. Euphrasia sylvestris major purpurea latifolia, Column, ecphr. 1 p. 201. t. 202. f. 1.

Red Eyebright. Fl. July, Sept. Britain. PI. i to 1 foot.

2 O. LUTEA; leaves linear, serrated: superior ones quite entire; segments of the lower lip of corolla emarginate. ©. H. Native of the South of Europe, on arid mountains; and of Barbary. Euphrasia lutea, Lin. spec. 841. Jacq. fl. austr. t. 398. Desf. fl. atl. 2. p. 35. E. Coris, Crantz, austr. p. 298. Hall. helv. no. 305. Odontites flore luteo, Riv. mon. t. 91.—Mor. hist. 3. p. 432. sect. 11. t. 24. f. 16.—Column. 1. p. 204. t. 203. This resembles- *Odontites rubra;* but the flowers are yellow; the upper lip bearded and emarginate. Stem and leaves rough. Capsule villous, shorter than the calyx. Calyx pubescent.

reWow-flowered Eyebright. Fl. July, Sept. CIt. 1816. PI. 1 foot.

3 O. LINIFOLIA; leaves linear, all quite entire; calyx glabrous or pubescent. ©. H. Native of France and Italy. Euphrasia linifolia, Column, ecphr. *2.* p. *68.* t. *69.* Lin. spec. p. 842. Flowers yellow. Capsule hairy, exceeding the calyx.

Flax-leaved Eyebright. Fl. July, Aug. Clt. 1826. PL \ to | foot.

4 O. VISCOSA; leaves linear-lanceolate, 3-nerved, almost quite entire; calyxes clammy; lateral lobes of lower lip of corolla emarginate. ©. H. Native of Provence and Switzerland, in sterile, gravelly places. Euphrasia viscosa, Lin. mant. 86. Gouan. ill. *37.* Desf. fl. atl. 2. p. 36. Lam. ill. t. 518. f. 3.—Hall. helv. no. 306. Garid. aix. 351. t. 78. Plant pilose, clammy. Flowers yellow. This differs from *E. lutea* in the leaves being linear-lanceolate, not strictly linear; and in the calyxes being villous and clammy, not glabrous. Corolla closed, and not shorter than the stamens. Capsule hairy, equal in length to the calyx. It is also to be distinguished from *E. linifolia.*

Clammy Eyebright. PL 1 foot. ?

5 O. TENUIFOLIA; leaves subsetaceously linear, caducous, all entire; calyxes nearly glabrous; stem branched, twiggy, nearly naked, terete. ©. H. Native of Portugal. Euphrasia tenuifolia, Pers. ench. 2. p. 150. E. linifolia, Brot. fl. lus. 1. p. 185, but not *o£* Lin. Corollas yellow. Anthers woolly, not exserted beyond the lips of the corolla.

Thin-leaved Eyebright. PL \ to f foot. ?

6 O. CORSICA; stem prostrate at the base, branched; leaves linear, quite entire; flowers axillary, subspicate; calyx equal in length to the corolla. Q. H. Native of Corsica, on the mountains. Euphrasia Corsica, Low. fl. gall. 2. p. 367. Flowers yellow.

Corsican Eyebright. PL prostrate.

7 O. PURPUREA; leaves linear, quite entire, glabrous; racemes secund; stamens about equal in length to the corolla; capsules oblong, villous. ©. H. Native of Barbary, in sandy places. Euphrasia purpurea, Desf. fl. atl. 2. p. *36.* Stem dark purple, stiffish, bluntly tetragonal; branches terete, panicled. Calyx 5-toothed. Corollas violaceous, size *of* those of *E. viscosa;* segments of the lower lip roundish, usually denticulated. The purple stems and flowers readily distinguish this from *E. viscosa* and *E. lutea.*

Pwrp/e-flowered Eyebright. PL 1 to 1| foot.

8 O. LONGIFLÒRA ; clothed with clammy pubescence ; leaves linear, quite entire; tube of corolla filiform, 3 times as long as the calyx. ©. H. Native of Spain, on arid gypsose hills. Euphrâsia longiflòra, Vahl, symb. 3. p. *78.* Cav. icon. 1. p. 45. t. *62.* Barrel, icon. 1204. Leaves blunt: rameal ones imbricate. Upper lip of corolla undivided: lobes of the lower one rounded. Stem purple. Branches quadrangular. Flowers axillary, in spikes, yellow. Seeds striated longitudinally. Cells of anthers awned at the base. Perhaps a new genus.

Long-flowered Eyebright. PI. ^ to 1 foot.

Cult. For culture and propagation see *Euphrâsia* above. A light soil answers the plant best.

XCVI. BA'RTSIA (named by Linnaeus in memory of his particular friend John Bartsch, M.D., of whom he gives an interesting melancholy account in his Flora Suecica.) Lin. gen. no. 739. Schreb. gen. no. 996. Juss. gen. p. 100. ed. Usteri, p. 113. Nutt. gen. amer. 2. p. *55.* Trixâgo, Stev. ped. p. 4.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 4-cleft. Corolla bilabiate: upper lip concave, entire: the lower-lip trifid and reflexed. Stamens 4, didynamous. Anthers tomentose, equally lobed, free. Capsule 2-celled, 2-valved ; dissepiment contrary to the valves. Seeds angular.—Herbaceous plants. Leaves entire, alternate, and opposite. Flowers alternate, braeteate, in terminal racemes. Corollas bluish purple, or yellow.

SECT. I. EUBA'RTSIA (this section is supposed to contain the true species of the genus.) Corolla shortly bilabiate. Seeds with membranous striated angles.

1 B. ALPI'NA (Lin. spec. 839.) leaves opposite, ovate-subcordate, bluntly serrated; anthers hairy ; capsule pilose, exceeding the calyx. ©. H. Native of the mountains of Lapland, Switzerland, Savoy, Mount Baldo ; and near Orton, in Westmoreland; Labrador, Colmaster. Smith, engl. bot. 361. Pedicularis, fl. dan. t. 43. Schkuhr, handb. 168. Hall. helv. no. 312. Staechellna alpina, Crantz, fl. austr. p. 294. Euphrasia, &c. Lin. fl. lapp. 246.—Plukn. aim. 110. t. 163. f. 5. Clinopddium alpinum, Pon. bald. 343. Stem villous, bluntly quadrangular. Leaves sessile, dry, rather hairy: floral ones purple. Flowers solitary from the axils of the upper leaves, forming an interrupted, leafy spike. Corolla reddish, blue, or deep purple, villous.

Alpine Bartsia. Fl. July, Aug. Britain. PI. \ foot.

2 B. SPICA'TA (Pers. 1. c.) leaves opposite, ovate-cordate, bluntly toothed : superior ones lanceolate, with remote teeth ; flowers imbricately spicate; spike branched; stamens equal in length to the galea ; anthers hairy ; capsule pilose, exceeding the calyx. ©. H. Native of the Pyrenees. Ramond. in bull, di. sc. nat. no. 42. p. 141. f. 4. B. Fagônii, Lapeyr. Spike elongated. Bracteas shorter than the calyxes. Flowers yellow. ? /Spcate-flowered Bartsia. PI. 1 to \\ foot.

SECT. II. TRIXA^VGO. Galea of corolla semi-cylindrical, short. Seeds minute, not winged.

3 B. PURPU'REA (Duby, bot. gall. p. 354.) stem nearly simple, or branched from the base; leaves ovate dentately palmate; spike interrupted at the base, leafy ; calyx villous, with lanceolate, obtuse segments ; anthers nearly glabrous, about equal in length to the calyx. ©. H. Native of the South of France, in pastures, and on the banks of rivers ; and other parts of the South of Europe, and North of Africa. Euphrâsia latifôlia, Lin. spec. 841. B. latifôlia, Smith, fl. graec. 6. p. 69. t. 568. Trixâgo purpûrea, Stev. mon. ped. p. 4.—Sabb. hort. rom. 3. t. 7.—Magn. monsp. 95. t. 94.—Mor. hist. 3. p. 330. sect. 11. t. 24. f. 8. Column, ecphr. t. 202. f. 2. Leaves opposite. Corolla with a white tube, and a blood-coloured villous hm upper lip short straight.

Purple-flowered Bartsia. Fl. July, Sept.

4 B. VISCÒSA (Lin. spec. 830.) hairy ; leaves lanceolate, acuminated, coarsely serrated : superior ones alternate, serrated ; flowers distant, lateral; stamens shorter than the galea ; anthers hairy; calycine segments linear-lanceolate, acutish. ©.H. Native of France, Italy, and Britain ; in the marshes of Cornwall, Devonshire, Lancashire, and Staffordshire ; and of Argyleshire, in Scotland. The same plant has been found in Brazil, in the province of Monte Video, by Sello. Rhinânthus viscosus, Smith, fl. brit. p. 648. Brot. fl. lus. 1. p. 187. Smith, engl. bot. t. 1045. Light**, fl. scot- p. 321. t. 14.—Plukn. aim. 142. t. 27. f. 5.- Mo* *»,' - p. 432.no. 15. Alectorolophos, Barrel, icon. t. oO ^. Stem te- rete, simple, villous towards the top. Calyx large, 5 lanceolate segments. Corolla yellow. Capsu e shorter than the calyx. The whole plant clammy-

FIG. 59.



Clammy Bartsia. Fl. July, Aug. Britain. ^ Root.

5 B. BICOLOR<D. C. icon. rar. t. 10. Duby, 354.) pubescent; stem simple, or a little posite, lanceolate-linear, serrated ; flowers bracteas ovate, or ovate-roundish; calyx obtuse segments; anthers hairy ; capsule the calyx. ©. H. Native of Brittany. 391. Seeds striated, not winged.

Two-coloured-flowered Bartsia. PL 1 f

6 B. ACUMINATA (Pursh, fl. amer. sept. alternate, long, linear: floral ones ovate, nerved, all undivided ; flowers shorter than the of calyx acute. ©. H. Native on the nortn-* America, and in the Island of Unalaschka.

Acuminated-leaved Bartsia. PI.

7 B. TRIXA'GO (Lin. spec. ed. 1. p. 602.) quite simple ; leaves opposite, lanceolate, bluntly ers densely spicate; bracteas ovate-roundish; small, obtuse teeth ; anthers hairy ; capsule villous, 4 calyx; middle segment of the lower lip obtuse, the lateral ones. ©. H. Native of Palestine and Caucasus, in humid places by the sea- Smith, fl. graec. t. *585.* Rhinanthus Trixago Alectorolophus Trixago, Bieb. cauc. 2. P- Trixago All. ped. no. 2220 Bartsia Lin. spec. Trixago Apula unicaulis, Column, ecphr. Mor. hist. 3. p. 427. sect. 11. t. 84. rather woolly. Leaves pale, and so deeply jagged. Spikes of flowers heaped at the quadrangular, woolly, and even rather angular. Corolla large, yellow ; upper palate prominent, 2-lobed. Seeds stnaiec.

Trixago Bartsia. PI. 1| foot.

8 B. VERSICOLOR (Pers. ench. 2. p. leaves opposite : lower ones linear-lanceolate ones linear, deeply serrated ; spikes cordate, acuminated, longer than the flow lower lip obtuse: the niddie segment Native of Italy and- the North of Africa. Desf. fl. atl. «. p. 33. Brot. fl. lus. 1- P-

icon. *Tr* spicata, Tourn. inst. p. 172.—Barrel, obtuse t. I. flowers white, and purple- Calyx woolly, with outsid stamens shorter than the galea, which is hairy plant differs from *B. maxima* in the stem being leaves being narrow-lanceolate, and in the upper

«gy-coloured Bartsia. PL 1 to 1| foot.

PPosit MAXIMA. ers# stem branched ; lower leaves toothed ones alternate, oblong, bluntly and coarsely ttents f lower P of corolla longer than the upper one ; seg- of Canr- lower P obtuse, equal in size. ©. H. Native Aanth Rhinanthus maximus, Willd. spec. 3. p. 189. Rhi- axim Versicolor» Lam- diet. *2.* p. *62.* Pedicularis Cretica Pubesc amp oribus fo liis et floribus, Tourn. cor. p. 9. Plant the bra flowers yellow, ? disposed in spikes at the tops of and stem, Calyx, stamens, and anthers as in pre-

Largest Bartsia. PL 1| to 2 feet,
Cult. For culture and propagation see *Euphrasia,* p. 611.

XCVII.

a NGEA (named after Al. a Bunge, one of the Ledebour's Flora Altaica." 1829-1832.) Meyer. Pflanz. p. 108.

War. *Didynamia, Angiospermia.* Calyx bracteate, trifid Corolla personate : upper lip tridentate : lower what ers bicalcarate at the base. Stigma some- lved Capsule sub-indehiscent, ovate, acuminated, 2- p] celled, many-seeded. Seeds compressed, wrinkled.— Pubesc Mut a s*mple> rather tomentose stem, trifid, linear, 1 B nt leaves and axillary, sessile flowers.

Minor; TRIFIDA (Meyer, 1. c.) ©. ? H. Native of Asia S^ant and Caucasus> in stony places on Mount Talusch, near Spren at the altitude of 670 to 800 feet. Bartsia trifida, 44. Pedicula ns orientalis supina, folio trifido, flore magno flaves foll yel Tourn. cor. p. 9.—Buxb. cent. 1. p. 5. t. 8. Co-

Trifid ratt viHous outside. Calyx pubescent, inflated.

Cult. For d Bungea. PL to I foot.
culture and propagation *see Euphrasia,* p. 611.

XCVIII.

SIPHONOSTEXGIA (from *cn^v, siphon,* a tube ; *stegos,* a covering.) Benth. scroph. ind. p. 51.

Didynamia, Angiospermia. Corolla funnel- curved elong ated ; limb 4-5 parted. Upper lip of corolla dynamo WGr one s lorter> with entire segments. Stamens 4, ^gma cal S ant lers parallel, acute at the base, mutic. entire, ^P'tately thickened. Capsule oblong, straight; valves leaves opr erect berb, with twiggy, downy branches. Lower Cut) lancel G su P erior ones alternate, pinnatifid, with acute, nearly Ses ate se g«ents. Flowers scattered, rather distant, cumbs e, disposed in terminal, interrupted spikes or ra-

1 R n .
(Benth. 1. c.)—Native of China, at Macao,
Cult. ^phonostegia. PL ? •
or culture and propagation see *Euphrasia,* p. 611.

XCI

LAMOURO/XIA (named by Kunth) after J. V.

alveeds written some works on zoophytes and Lin% s ^; H. B. et Kunth, nov. gen. amer. *2.* p. *336.* t. 167. neai Venn *Pld V^ia, Angiospermia.* Calyx campanulate, on & ventr- ^labiate, 4-cleft. Corolla with a short tube, a so mewl com Pressed throat, and bilabiate limb ; upper ate lon ga eate» entire: lower one narrower and 3-lobed, ous, f ne arly equal, oblong, obtu y ntin ginZ u PPer ones very short, and generally sterile, se; cell- Vtsc osa- Anthers of the fertile stamens reniform. s usually mucronate at the base. Stigma clavate, undivided. Capsule ovate, compressed, 2-celled, 2-valved ; placentas adnate to the dissepiment. Seeds covered by a reticulately cellular membrane.—Erect, branched herbs. Leaves opposite, sessile, serrated, or pinnatifid. Flowers axillary, solitary, opposite, subspicate, scarlet.

§ 1. *Stamens* 4 : *2 upper ones short and sterile.*

1 L. VIRGATA (H. B. et Kunth, nov. gen. *2.* p. *356.* t. 167.) branches nearly terete; calyxes and leaves glabrous; leaves linear-lanceolate, obsoletely crenulated ; calycine segments lanceolate, quite entire. T? . ? S. Native near the town of Quito, at the altitude of 1500 hexapods. Herb suffruticose, branched. Leaves about an inch long, and *2* lines broad. Corolla flesh-coloured.

Twiggy Lamourouxia. Shrub li foot.

2 L. SERRATIFOLIA (H. B. et Kunth, 1. c. t. 168.) branches tetragonal, bifariously pilose; leaves linear-lanceolate, deeply serrated, and are, as well as the calyxes, glabrous; calycine segments oblong-lanceolate, quite entire. 1L. S. Native of New Granada, near Santa Fe de Bogota, and at the Cataract of Tequendama. Leaves nearly sessile, 14-15 lines long, and %\ lines broad. Corollas like those of the preceding.

Serrate-leaved Lamourouxia. PI. 1 to 1^ foot.

3 L. RHINANTHIFOLIA (H. B. et Kunth, 1. c. p. *337.* t. 169.) stem and branches sub-tetragonal, pubescently pilose ; leaves oblong, acute, rounded at the base, half stem-clasping, crenately serrated, finely hairy ; calyx pilose, with ovate-lanceolate, serrated segments. "2/. S. Native of New Spain, in temperate places near Magdalena, Actopan, and Santa Rosa de La Sierra, at the altitude of from 1040 to 1300 hexapods. Leaves about an inch long. Corolla as in the two preceding. In the Magdalena plant the stem is said to be nearly terete.

Yellow-rattle-leaved Lamourouxia. PI. 1 to *2* feet.

4 L. SYLVATICA (H. B. et Kunth, 1. c.) plant twining a little; branches terete, rather pilose ; leaves lanceolate-oblong, acute, narrowed at the base, somewhat doubly serrated, and are, as well as the calyxes, hairy ; segments of calyx oblong, acute, serrulated. *1].* S. -Native of Peru, near Ayavaca, in woods, at the altitude of 1400 hexapods. Leaves nearly sessile, one inch and more long. Corolla rose-coloured, hairy.

Wood Lamourouxia. PL twining.

5 L. CORDATA (Cham, et Schlecht, in Linnaea, 5. p. 103.) this is an intermediate plant between L. *visebsa* and *L. rhinanthbides,* it differs from the' first in the broader leaves, and from the second in the inflorescence being clammy ; calycine segments quite entire. %. S. Native of Mexico. Habit of the plant peculiar. Stem strict, twiggy, densely leafy. Leaves decreasing in size from the top of the stem ; largest only \\ inch long. Corolla scarlet.

Cordate-leaved Lamourouxia. PL 1 to *2* feet. ?

6 L. VISCOSA (H. B. et Kunth, 1. c. p. 338.) stem sub-tetragonal, and is, as well as the calyxes and leaves, pilosely tomentose, clammy ; leaves lanceolate, acuminated, serrated ; calycine sregments lanceolate, quite entire. %. S. Native of Mexico, on the sea-shore near Acapulco. Habit of *Lobelia.* Leaves hoary, about *2* inches long, and *6-7* lines broad : floral leaves ovate-lanceolate, an inch long, beset with glandular hairs. Corolla flesh-coloured, tomentose outside.

Clammy Lamourouxia. PL 1 to *2* feet.

§ *2. Stamens* 4, *all fertile.*

7 L. XALAPE'NSIS (H. B. et Kunth, 1. c.) stem and branches nearly terete, hairy; leaves lanceolate, acuminated, sharply serrated, and are, as well as the calyxes, glabrous ; stamens all fertile; calycine segments.oblong-linear, quite entire. 1/. S. Native of Mexico, on the eastern declivities of mountains near the town of Xalapa, at the altitude of 680 hexapods. Leaves

nearly sessile, 1| inch long, and 3 lines broad. Corolla scarlet, hairy outside. Cells of all the anthers mutic. This is, probably, a distinct genus, from the stamens being all fertile, and from the cells of the anthers being mutic at the base.

Xalapa Lamourouxia. PI. 1 to *2* feet. ?

8 L. MULTÍFIDA (H. B. et Kunth, 1. c. p. *S39.)* stem sub-tetragonal, ' and is, as well as the leaves, nearly glabrous ; leaves pinnatifid ; stamens all fertile ; calyx clothed with mealy down, with lanceolate, quite entire segments. 1/ . S. Native of Mexico, between Guanaxuato and Santa Rosa de La Sierra, at the altitude of 1200 hexapods ; and among bushes near Jalapa, &c. Stenochilus élegans, Willd. herb. no. 11694. Stem rather pilose, reddish. Leaves petiolate, 9-12 lines long. Corolla scarlet, downy outside. Cells of anthers all awned at the base.

Midtifid-leaved Lamourouxia. PL 1 to *2* feet.

f *A species not sufficiently known.*

9 L. BARTSIOI'DES (Hook. bot. misc. 1. p, 234.) pubescent, branched; leaves linear-oblong, obtuse, crenately pinnatifid, scabrous ; bracteas lanceolate, shorter than the corolla ; flowers crowded into an oblong spike. 7/ . ? S. Native of Peru, in the valley of Canta. Habit of *Bártsia viscbsa,* or *Rhinó'nthus cristagálli;* but the calyx is cylindrical, and the corolla, as far as c:in be judged by dried specimens, of *Lamourouxia,*

Barfsia-like Lamourouxia. PL 1 to 2 feet. ?

Cult. For cuUure and propagation see *Angelónia,* p. 609.

SUBTRIBE II. CASTILLEGIE\E. Cells of anthers mutic at the base.

C. CASTILLEJA (named by Linnaeus after D. Castillejo, a botanist of Cadiz.) Lin. suppl. 47. no. 1408. Schreb. gen. no. 1059. Lam. ill. 519. Smith, icon. ined. t. 40. Juss. gen. p. 100. ed. Usteri, p. 112. H. B. et Kunth, nov. gen. amer. 2. p. 329.—Bártsia species of authors.

LIN. SYST. *Didynamia, Angiospermia.* Calyx tubular, compressed, cleft on one side, rarely regular. Corolla tubular, compressed, bilabiate : upper lip linear, canaliculate, entire : lower lip very short, tridentate, or tripartite, ventricose at the base. Stamens 4, didynamous. Stigma capitate. Capsule ovate, compressed, 2-celled, 2-valved. Seeds covered by a loose, reticulated membrane.—Herbs, sub-shrubs, or shrubs. Leaves alternate, entire, or trifid or multifid : floral ones of two forms, bractea-formed and coloured. Flowers axillary, solitary, or terminal and spicate. Corolla white, or greenish.

SECT. I. EUCASTILLE'JA (from *ev, eu₉* well; and *Castilleja.* This section is supposed to contain the true species of the genus.) Calyx cleft on one side, and toothed or lobed on the other. Anthers distinct, narrow, with equal lobes. Herbs or subshrubs.

1 C. PA'LLIDA (Kunth, ex Cham, in Linnaea, 2. p. 580. Spreng. syst. 2. p. 232.) tomentose ; radical leaves linear, acuminated, entire : superior ones alternate, ovate-lanceolate, 3-nerved, toothed ; spike simple; calyx villous. %. H. Native of Siberia, in shady places on the banks of rivers; also of Hudson's Bay and Labrador, &c, ; Canada and New Hampshire, on the white hills. C. septentrionàlis and C. Sibirica, Lindl. bot. reg. 925. Bártsia pállida, Lin. spec. 839. Michx. fl. bor. amer.—Gmel. sib. 3. p. 201. no. 11. t. 42. Corollas pale purple.

Far. fi₉ Unalaschénsis (Cham, et Schlecht, 2. p. 584.) stem simple, thickness of a hen's quill; upper leaves ovate-lanceolate, 3, rarely 5-nerved, more hairy than in the species, and the bracteas less jagged. 2/. H. Native of the Aleutian Islands.

Pale Castilleja. Fl. June, Sept. Clt. 1782. PL \ to 1 foot.

2 C. AFFI'NIS (Hook, et Arn- in Beech, voy. pt. bot. p. 154.) stem herbaceous, nearly simple, pilosely hispid; leaves lin car- lanceolate, 3-nerved, pubescent, entire: floral ones linear^ n- tire, rarely dentately lobed at apex ; lower ^wers peduncAat be floriferous calyx tubular, cleft both in front and behind ,, the bifid: segments linear-lanceolate, acute; corolla exceeai y C. calyx. V- H. Native of California. Nearly alhed to *pállida,* the *Bártsia pállida,* Michx. It differs ^ t ^ and *spermoides* of Kunth, in the floral leaves not ^ from *C. integrifblia,* Lin. in the calyx being tubular, not cose.

Allied Castilleja. PL I foot. 329#)

3 C. TOLUCE'NSIS (H. B. et Kunth, nov. gen. ^ P ^ stems branched, procumbent, glabrous; leaves lanceol^ved; tuse, hispid, nearly entire : superior ones trifid at apex, flowers axillary, sessile ; calyx about equal in lengi. corolla. h_c . G. Native of. Mexico, on the moununs the town of Toluca, at the altitude of 1380 hexapods, tufted. Branches quadrangular, densely leaty. brous. Calyx bifid ; lobes rounded.

Toluca Castilleja. Shrub procumbent. fFmticose,

4 C. MORANE'NSIS (H. B. et Kuuth, 1. c.) stem sunt simple, prostrate, pubescently hispid; leaves lanceola hispid, entire : superior ones trifid ; flowers axilla corolla exceeding the calyx a little. *?. G. Native co, in temperate places between Pachuca and M^ altitude of 1320 hexapods. Calyx bifid ; lobes emaipnat

Moran Castilleja. Clt. 1825. Shrub prostrate.

5 C. NUBI'GENA (H. B. et Kunth, 1. c. p. 330.) stew branched, erect, hispid ; leaves linear, trifid at ^ P y hairy, the middle segment also somewhat trifid ; now on short peduncles; floriferous calyx ventricose, length to the corolla. Cleft on one side, and *loot* other. J?. G. Native on Mount Pichinca, in near the plains of Verde Cuchu, at the altitude ol pods. Branches tetragonal. Floral leaves red.

Nubigenous Castilleja. Shrub J to \ foot.

6 C. LACINIAVTA (Hook, et Am. in Beech. ^v0/', bot# p. 40.) plant beset with a few stiff hairs ; stem erect, leaves linear, trifidly pinnatifid, with elongated ments ; flowers axillary, almost sessile ; calyx equa the corolla. ' %. ? G. Native of Chili, about con ^ ^ Very closely allied to *C. nubigena,* but that ^PP^ents of the fruticose, and has an inflated calyx, and the seg leaves are much broader and shorter.

Jagged-leaved Castilleja. PL 1 foot. ? branch^'

7 C. FISSIFÒLIA (Lin. suppl. 293.) stem ^ hairy erect, hispid ; leaves linear, trifid at the apex, middle segment 3-lobed; flowers spicate, pedicel tubular, one half shorter than the corolla. *h/* gant a Fe New Granada, in frigid places between Zipaqurra an de Bogota, at the altitude of 1360 hexapods. g.nerved, ined. t. 40. H. B. et Kunth, 1. c. p. 330. ^ an inch long. Rudiments of branches from the leaves.

Cleft-leaved Castilleja. Shrub *2* to 3 feet.

8 C. ARVE'NSIS (Cham, et Schlecht, in & ^ g; leaves stem herbaceous, simple, or branched, hispid iro ^ spatulate-lanceolate, or oblong-lanceolate, obtuse, the base, 3-nerved, entire, hairy ; flowers ^ scarcely exceeding the calyx. %. G. Native Jalapa, among corn, between San Andres and.= ^ Nearly allied to *C. lithospermoides,* but is (listin^ by the form of the leaves. Seeds cuneated,

Corn-field Castilleja. PL 1 foot.

9 C. IHTEORIFOLIA (Lin. suppl. *293.)* ^ p hispid from white hairs ; leaves ^ cently hispid ; flowers spicate, nearly sessile ,

...at the base shorter than the corolla. *h. c.* G. Native ...as Cuev... m temperate Places near Tasco, San Augustin de ...ined. t 3Q R... 6 altitude of H00 hexapods. Smith, icon, ...nerved" *RV*... ^' et Kunth, nov. gen. 2. p. *33.* Leaves 3-*Entir* /e S long> and *i* line broad- Calyx bidentate.

^ire-leaved Castilleja. Clt. 1825. Shrub 1 to 1* foot. *l*4). ...LIT"OSPER...MofDEs (H. B. et Kunth, 1. c. p. 331. t. knceolausT baceous> nearly simple, pilosely hispid; leaves pili... flow" linear> narrowed at top, obtuse, entire, beset with calyx. iT.* p... Ubs Picate» sessile ; corolla hardly exceeding the and Mor... Native of New Spain, near Real del Monte altl'tude n./Y*^1 of the Province of Quito, near Chillo, at the C- hvssn...ff... lexa Pods ; and of the South of Brazil, Sello. to 2 inch ... d< herb, no, 11697, Leaves 3-nerved, U· ape... c... ... and *3* lines broad: floral ones red> dilated ai roll... X ft on one side, and 2-lobed on the other. Co-a white. 11 C. ...f Castilleja. PI. 1 foot.

...aceous^mn^1 ... (To Te^ in ann* ly Q, 2, P' 2 3 ... stem at a Pex mini f ... Pl... 5 leaves linear-lanceolate, attenuated Cate> sessil... ; ... y P ... Scent> quite entire> acutish ; flowers spi-trifid» with ... ; COrolla hardly exceeding the calyx; bracteas amon... g the ere... h Segments, V • H- Native of North America, sirnple> oblo... y mountains. Leaves sessile, 3-nerved. Spike tr>ifid. * r ...on^' Middle segments of the bracteas sometimes ... Jn ... Fx... little cleft on one side, 4-toothed.

1% (J- ... ... P... Mo... 1001.

Ster» herb... Zo NERIFOLIA (H- B, et Kunth, 1. c. p. 331. t. 165.) at the baseh ??' Simple,? Pilosely h^pid ; leaves linear, dilated k^ctea-fbr'... stem... clas... Ping» entire, rather hispid : floral ones exce... edino> ... co... loured; flowers spicate, sessile ; corolla hardly near Pas^c... Calyx* ^* G, Native of New Spain, on rocks Stettl anaui... ar0 and Ario> at the altitude of 1100 hexapods. an<* *2-3* jj... redd... ish. Leaves 3-nerved, about 3 inches long, 8ides 5 secT... broa... d: floral ones purp... lisb- Calyx cleft on both nearly all... yTf... i... emar^inate... y Edentate. Corolla pilose. Very Ak... ea to the preceding.

^-leaved Castilleja. PI. 1 foot.

... (from *ev, eu,* well; and *^u)fxa, chroma,* ... On t0 tbe common name of the species in North ... wica «p... ractEas.\ ... ainted cup," from the brilliant colouring of the ... the ^nied... fi7... a> Nutt* Sen, amer, 2, P- 54, Calyx ... ulate. Amk... , or emargina... te, or quadrifid; segments ^6 form of Kl... ear> with une... al lobes, all cohering in ... rhis ... an ob... on o disk.—-Herbaceous plants with simple ... l in ,?... ctl... pn differs from the first in the anthers being ... and m... their cells being unequal.

a yx spathe-formed, 2-lohed, or quadrifid, inclined to one side.

13 c... ... red ... NEA? annua^> or biennial; leaves, as well as the ... the corn... divaricatel... y trifid ; calyx bifid, nearly equal ... ative of th... A... i... segments retuse and emarginate. $. H. ... rka^sas te... at6S, from New York to Virginia, and of the f...ine... a, Nm!... ory, Bartsia coccinea, Lin. spec. 839. Euchroma ... —Mor V.* ge... n. amer. 2. p. 55.—Pluck, aim. 283. t. 102. ... Brac... hlSt... -P. 395. sect. 11. t. 13. f. 28. Corollas yel-... p) ... rkt h... scarlet.

... J to f... fni... Ctead Painted Cup. Fl. July, Aug. Clt. 1787.

14 C. ... (Hook. et Arn. in Beech, voy. pt. bot. p. ... at botto... V... haceous> branched, beset with hairy pubes-... se. p... ^m, ... out rather villous at top ; leaves ovate-oblong, » densely pubescent; floral leaves dilated, cuneated, trifid at apex: lobes short, obtuse, the middle one broadest ; flowers nearly sessile; floriferous calyx sessile, equally cleft both in front and back: lobes short, bluntly bidentate; tube of corolla equal in length to the calyx. %. H. Native of California. Castilleja Tolnccensis, Cham, in Linnaea, 2. p. *579* but not of Kunth. "This and *C.foliolbsa* belong to the same sub-genus or section of *Castilleja,* with *Euchrbma coccinea* of Nutt. having the same kind of calyx, while *Castilleja offmis* has the same kind of calyx as *Euchrbma grandiflora."* Arnott.

Broad-leaved Painted Cup. PI. 1 foot. ?

15 C. FOLIOLOSA (Hook, et Arn. in Beech, voy. pt. bot. p. 154.) plant clothed with snowy tomentum ; stem shrubby, branched ; leaves crowded : lower ones linear, obtuse: upper and floral ones divaricately tripartite, or rarely entire ; flowers nearly sessile ; floriferous calyx tubular, equally cleft in front and back : lobes emarginate ; tube of corolla shorter than the calyx. 1/. H. Native of California. In some points this plant agrees with *Castillèja fissifblia,* Lin. The axils of the leaves are furnished with a tuft of small leaves, or short abortive branches.

Leafy Painted Cup. PI. 2 to 3 feet.

16 C. GRANDIFLORA ; perennial; leaves and uncoloured bracteas shortly trifid ; segments divaricate ; calyx 4-cleft, partly oblique; corolla longer than the calyx, with the segments of the lower lip acuminated. %. H. Native on the plains *of* the Missouri, from the confluence of the river Platte to the Mountains ; also near the Prairie du Chien, Mississippi. Euchroma grandiflora, Nutt. gen. amer. 2. p. *55.* Castilleja sessiliflora, Pursh, fl. amer. sept. 2. p. *738.* ? Bartsia tenuifolia, Pursh, fl. *2.* p. *738.1* Plant downy in every part. Corolla downy, 2-3 inches long, greenish white, a little rosaceous : upper lip almost green.

Great-flowered Painted Cup. Fl. April, June. Clt. 1811. PI. ^ foot. ?

17 C. PURPUREA ; leaves cuneated, trifid, or a little jagged; bracteas red ; calyx and corollas coloured, quadrifid, unilateral; segments of corolla acute. 1/. H. Native of the Arkansas, on rocks in the hilly prairies of Red river. Euchroma purpurea, Nutt. in amer. phil. trans, n. s. vol. 5. p. 180. Stem tomentose, the leaves more slightly so. Calyx and corolla of a brilliant reddish purple. Segments of calyx linear, all inclined to one side, and nearly the length of the corolla : apex *of* the upper lip of the corolla greenish. Nearly related to *E. grandiflora,* but differs in the proportion of the corolla, and the dilation and brilliant colour of the bracteas.

Pwrp/e-flowered Painted Cup. PI. 1 foot. ?

§ 2. *Calyx quadrifid, equal.*

18 C. AMBIGUA (Hook, et Arn. in Beech, voy. pt. bot. p. 154.) annual; stems many, branched a little ; leaves scattered : lower ones lanceolate, obtuse : superior and floral leaves gradually increasing in size, dilated, and deeply multifid ; floriferous calyx tubular, equally 4-cleft to the middle, with subulate segments ; tube of corolla exceeding the calyx : upper lip short : lower one 3-lobed : lateral lobes rounded, very concave : middle* one straight, mucrone-formed. % . ? H. Native of California. Said to be nearly allied to *Bartsia tenuifolia,* Pursh. The lower lip of the corolla is quite at variance with the character of the genus, yet the upper lip and-habit are the same. At each side of the central lobe of the lower lip is a small gland, as in several other species.

Ambiguous Painted Cup. PI. 1 foot. ?

19 C. PARVIFLORA (Bougard, in mem. acad. petersb. *2.* p. 157.) stem simple, ascending, clothed with ovate, entire, or cut, acute scales at the base, villous at top; leaves scattered,

sessile, ovate-lanceolate, regularly jagged, with usually 3 segments on each side, opposite, divaricate : lower ones lanceolate, acuminated : upper ones linear, acute : lower ones downy on the nerves : uppermost ones more villous, an inch long ; flowers densely racemose at the tops of the branches, sessile, red ; bracteas conforming to the leaves, villous ; calyx tubular, 4-cleft, with linear lobes ; corolla with a tricrenated upper lip, and a tridentate lower one ; anthers sagittate, yellow. %. ? H. Native of the Island of Sitcha. Said to be nearly allied to *C coccinea,* but the flowers are one half smaller.

Small-flowered Painted Cup. PI. J to § foot.

2O C. ANGUSTIFOLIA ; dwarf, hairy; leaves divaricately trifid ; radical ones simple, with linear, bluntish segments ; bracteas trifid ; middle segment generally 3-lobed; calyx quadrifid, segments equal. %. H. Native in dry prairies, on the borders of little Goddin river, near the source of the Columbia. Euchroma angustifdlia, Nutt. in journ. acad. nat. sc. phil. 7. p. 46. Many stems from the same root, about 3-4 inches high, and hairy ; the leaves covered with shorter pubescence, rather hoary ; the segments divaricate, bifid, trifid, and simple. Bracteas apparently of a lake colour. Corollas small, hardly longer than the equal calyx.

Narrow-leaved Painted Cup. PL J to \ foot.

2 C. BRADBU'RII ; rather pilose ; leaves palmately somewhat twice trifid, with linear segments ; bracteas divided like the leaves ; calyx quadrifid, with equal segments. *If.*. H. Native along with the preceding. Euchroma Bradburii, Nutt. 1. c. p. 47. Stem simple. Leaves pubescent, trifidly divaricate from the middle ; the central segment trifid. Bracteas apparently scarlet, the central segment 3-lobed.

Bradbury's Painted Cup. PI. \ foot.

Cult, The species are very difficult to cultivate. Peat is the best soil for them. They may be grown in shady peat borders ; but are best in pots, being more easily sheltered during winter, by placing them under a frame.

CI. ORTHOCxVRPUS (from *opQoQ, orlhos,* straight; and kap7roc, *karpos,* a fruit; the straightness of the fruit readily distinguishes it from *Me lawpyrum.)* ^Jutt. gen. amer *2.* p. *56.*

LIN. SYST. *Didynamia, Angiosfermia.* Calyx tubular, semiquadrifid. Corolla bilabiate, closed ; upper lip smaller, compressed, with inflexed margins : lower lip concave, obsoletely 3-toothed, unexpanded. Anthers free ; cells unequal, divaricate. Capsule straight, elliptic-ovate, 2-celled, 2-valved, many-seeded, opening on both sides ; dissepiment transverse. Seeds small, with a winged lunate margin.—Annual. Stem simple. Leaves alternate, entire. Flowers axillary, alternate, sessile, and bracteate ; bracteas divaricately trifid. Corollas yellow.

1 O. LUTEUS (Nutt. 1. c.) ©. H. Native in humid situations on the plains of the Missouri, near Fort Mandan, very local. Flowers size and form of those of *Melampyrum* at first sight. Leaves lanceolate, linear, sessile, acute, opaque, and are, as well as the bracteas and calyx, viscidly pubescent. Margins scabrous. Bracteas 3-nervecL Corolla yellow, smooth. Stigma simple, minute.

IW/ow-flowered Orthocarpus. PI. 1 foot.

Cult. For culture and propagation see *Euphrasia,* p. 611.

CII. SCHWAXBEA (named by Christian George Schwalbe, who has written a Botanical and Medical History of the Quina of the shops). Grov. virg. 92. Schreb.gen.no. 1001. Lam. ill. t. 520. Nutt. gen. amer. *2.* p. 54.

LIN. SYST. *Didynamia, Angiospermia.* Calyx ventricose, tubular, obliquely 4-cleft: upper segment shortest* the lower large and emarginate, or bidentate. Corolla bilabiate : upper lip entire, arched, the lower 3-lobed. Capsule ovate, nearly terete, 2-celled, 2-valved ; dissepiment produced by the inflexed margins of the valves, and parallel with the longitudinal receptacle. Seeds numerous, imbricate, linear, ana[illegible] A perennial, herbaceous plant. Leaves alternate, entire. [illegible]alyxers axillary, racemose, alternate, on short P[illegible]icuous ly mostly marked with 10-12 angular stripes, and co[illegible] bibracteate at the base. Said by Nuttall to belong to t[illegible] *iirrhmece.* Capsule without any transverse dissepimen[illegible], longitudinally always below the adhering summit[illegible]froir)

1 S. AMERICANA (Lin. spec. p. 844.) %• «[illegible]jers *o(* New York to Florida, generally occurring on[illegible] spagnose swamps, not far from the sea coast, [illegible] t. 348. *f. 2.2* Corollas of a dull yellowish coloui. crescent-shaped.

American Schwalbea. PL *2 feet. ririrt* above.

Cult. For culture and propagation see *CastiUeja* <x

CHI. LAFUE'NTEA (evidently named [illegible] botanist of the name of La Fuente, of whom we kno[illegible] Lag. ex Spreng. syst. *2,* p. 680. [illegible]parted.

LIN. SYST. *Didynamia, Jngiospermia.* Calyx a-P[illegible] rolla bilabiate : upper lip 2-cleft: lower one 3-cl[illegible]gcented, 2-celled, many-seeded ; \lissepiment equal.—A str[illegible] suffruticose plant, clothed with glandular, clammy [illegible] solitary. [illegible]

1 L. ROTUNDIFOLIA (Lag. 1. c.) *?. F. Native of of Spain.

Round-leaved Lafuentea. Shrub small. [illegible] above.

Cult. For culture and propagation see *Castiuej* ,

TRIBE X. *j*eyia*

TEEDIE^ (this tribe contains plants [illegible] in the nearly equal corolla and baccate fruit.; [illegible] Limb of corolla nearly equal. Fruit baccate.[illegible] author.;

CIV. TEE[N]DIA (meaning not explained [illegible] and Rudolf, in Schrad. journ. *2.* p. *289.* Ker. bot. *rey-* [illegible] 214. [illegible]5-parted, [illegible]

LIN. SYST. *Didynamia, Angiospermia.* [illegible] subulate segments. Corolla salver-shaped ; [illegible] little longer than the calyx, thrust in near the base [illegible] consequently gibbous behind; throat pilose ; [illegible] Stamlar, 5-cleft, with ovate, obtuse, equal segments. [illegible] didynamous; anthers didymous, roundish. [illegible] the stamens. Stigma subcapitate, convex, [illegible] calyx, Berry globose, black, size of a large pea, [illegible] 2-celled, many-seeded. Seeds inserted in P.[illegible] oval, scrobiculate, ex Burch.—Suffruticose, [illegible] tives of the Cape of Good Hope. Stems [illegible] opposite, oblong-ovate, about *2* inches long, [illegible] oles winged, half stem-clasping. Peduncles [illegible] flowered, forming terminal, leafy panicles, [illegible] loured, with dark purple spots near the throat. [illegible]

1 T.LU'CIDA (Rudolf. 1. c. Pers. ench. - [illegible] both surs hort. kew. ed. *2.* vol. 4. p. 47.) leaves [illegible] faces, like the rest of the plant. [illegible] of Good Hope. Ker. bot. reg. [illegible] hort. kew. ed. 1st. vol. *2,* p. *353.* [illegible] Borckhausenia lucida, Roth, catalect. bot. ~. *v* suJbulate, length of peduncles. [illegible]

Shining-leaved Teedia. Fl. April, July. Ut. to *2 feet,* [illegible] *OIA)* leaves downy on

2 T. PUBB'SCENS (Burch. in bot. reg. [illegible] both surfaces. *t . G.* Native of the Cape Very like the preceding species in nabic [illegible]

Downy Teedia. Fl. May, Oct. Clt. [illegible]

thriv" A Vest Both species are vei7 pretty when in blossom. They tings^r seeds. l" ricll light Soil> and are readily increased by cut"

CV. PR J^^rNIA (meaning not explained by the author.) Thunb. -reyf. WItli a fiSure- Capraria species of Lin, and L IN, SYST- *Didynamia, Angiospermia.* Calyx 5-parted. Corudime U^n^"shaPed- Stamens 4, unequal, perfect, with the with o • a ^ ^ ' ^ruPe containing 4 2-seeded nuts. Shrubs

1 pPPosite, entire leaves, and terminal panicles of flowers, entire ' C£ STR0*DES (Coll. 1. c.) leaves linear-lanceolate, quite seeme'm of ous; Panicle terminal, composed of short racemes ; Good R COrolla revolute- *2 • F. Native of the Cape of kew. Pl °Fe' Capraria lanceolata, Lin. suppl. 284. Ait. hort. U. t 4 V0h 2, P* 35 f Link> et Otto> icon- PL hort- beroh gWrrj p"lla oppositifolia, Spin. seb. not. 13. Buddlea striated m!fr at hort* taur# IS, Leaves ~s inches long» acute» Cec/ Coroll a copper-coloured.

2 *£um-Me* Freylinia. Fl. ? Clt. 1774. Shrub 3 to 6 feet, lated • u NDULAVTA; leaves ovate-oblong, quite entire, undu- eG> sirnnl PPer ones subcor^ate, verticillate ; racemes spike-form- pri,ia f e*. J? • G- Native of the Cape of Good Hope. Ca- 354. T "ndulata» Lin. suppl. 284. Ait. hort. kew. ed. 1st. p. mag. 1556. aert, an g- P- 21- Lani. ill. t. 534. f. 1. Sims, bot. Corollas purple, *5* times longer than the calyx,

Undulated-leaved Freylinia. Fl. Mar. July. Clt. 1774. Shrub 2 to 8 feet.

3 F leaves' X)E^SI ^L6RA (Benth. in Hook. comp. 2. p. *55.)* lower tis^' glah UC : su Periorones scattered, oblong-elliptic, flat- ^0n 2er ti ^oU;S; racerne dense, subpanicled; corolla 3-4 times Litenlioge district. the calyx. b . G. Native of North Africa, in the

Dense-flowered Freylinia. Shrub.

4 F. oblong-ellipt JJlic, nar(% undulated, glabrous; raceme elongated, simple, ""* s 5 times lon S^r than the calyx. ^ • G- Native Of North T r *A (Benth. 1. c.) leaves opposite or scattered, *Zone «* Cit, in Zwai teberg, Ecklon.

5 *ff°^red* Freylinia. Shrub.

cleid. t ^ O ^ A ; leaves ovate, entire, glabrous ; flowers pani- r%ida Ti* -/ Nativ e of the Cape of Good Hope. Caprária Stiff *hlml>. prod. p. 103.

Freylinia. Shrub.

Cult. Some of the species of this genus will survive in the n ground against a wall with a south or west aspect, with a little protecti on in winter. **They will grow freely in any light** soil, o r a mixtu re of turfy loam and peat; and cuttings strike roof l rea <% under a hand-glass.'

Tribe XI. Genus *Hall-* *^A^kERIE^jE (this tribe only contains the ingent. Q Ea) kink. Calyx small, 3-4-lobed, unequal, per- reet» °bliq ord a ^ar Se 5 funnel-shaped ; throat ventricose ; limb °Lt Use> a nd 4 c left> unequal: upper segment the largest, S£ar Per: u emar ginate : the side ones shorter, broader, and Sua rP* St G lowest one ver y short, very slender, and very ler^inated a/ riens 4» didynamous. Fruit baccate, roundish, roundish, winged by the style, 2-celled, many-seeded. Seeds flat, leaves. A shrub with opposite, serrated, shining f °Vl- HAT Tfe axillar y» *Segregate.*

artlo us AH ^IA (so named by Linnaeus in honour of the ^? other ert Haller> M D -> author of "Stirpes Helveticae," reb« sen erable works on botany.) Lin. gen. no. 761. LIST- SYST n^ 1020- Juss. gen. p. 118. ed. Usteri. p. 133. genus the «ol ld ynamia, Angiospermia. The character of the VOL. IV. a« that of the tribe.

1 H. LU'CIDA (Lin. spec. 872.) leaves ovate, acuminated, serrated ; corollas bilabiate; calyx 3-lobed; stamens exserted. J? . G. Native of the Cape of Good Hope, in woods. Thunb. nov. act. ups. 6. p. 39. Sims, bot. mag. 1744.—Burm. afr, 244. t. 89. f. 2.—Duh. arb. ed. nov. fasc. 20. p. 239. t. 69. Branches and leaves green. Leaves size of those of the *Privet.* Corolla reddish, large, drooping. Fruit roundish.

Shining-leaved Halleria. Fl. June, Aug. Clt. 1752. Shrub 4 to 6 feet.

2 H. ELLI'PTICA (Thunb. nov. act. ups. 6. p. 39.) leaves oblong, acute, toothed, cuneiform at the base, and quite entire; corollas equal; calyx 4-lobed ; stamens inclosed. ^ . G. Native of the Cape of Good Hope. H. lucida, /2, Lin. spec. 872.—Burm. afr. 243. t. 89. f. 1 Corolla red, drooping. Fruit oblong. "Leaves elliptic. Corollas truncate. Calyx 5-leaved." ex Thunb. 1. c.

Elliptic-leaved Halleria. Fl. ? Clt. 1816. Shrub 4 to 6 feet.

Cult. These shrubs may be treated like other hardy greenhouse plants, by being housed with myrtles in the winter. A light rich earth is the best for them ; and cuttings root readily under a hand glass. They require to be exposed as much as possible to the air, and to have plenty of water given to them during summer.

f *Genera probably belonging to the order, but are not sufficiently known.*

CVII. PI'KRIA (from *TTLKoOQ, pikros,* bitter; from the bitterness of the plant.) Lour. coch. p. *393.* Pers. ench. 2. p. 165.

LIN. SYST. *Didynamia, Angiosfermia.* Calyx 4-leaved, deciduous, longer than the corolla; alternate leaves linear, and shorter. Corolla tubular, ringent, bilabiate; tube constricted in the middle : upper lip spatulate, emarginate : lower lip larger and trifid, with equal, roundish segments. Stamens 4, didynamous ; the 2 longer filaments streaked by a papillose tube, and bearing 1-celled anthers, and the two shorter ones bearing 2-celled, connected anthers. Berry ovate, 2-celled, many-seeded. —A very bitter, medicinal plant, with ovate serrated leaves, and crowded flowers.

1 P. FE'L-TE'RRJE (Lour. 1. c.) 1/. ? G. Native of China and Cochinchina. Stem tetragonal.

Earth-gall Pikria. PI. \\ foot.

Cult. For culture and propagation see *Castillēja,* p. 616.

CVIII. DIPLANTHE^XRA (from *SLTTXOOQ, diploos,* double ; and *avOripa, anther a,* an anther ; in reference to the cells of the anthers being distinct and diverging, therefore they appear double.) R. Br. prod. p. 548.

LIN. SYST. *Didynamia, Angiospermia.* Calyx trifid; upper segment entire : lateral ones bifid. Corolla bilabiate ; throat compressed; upper lip obcordate : lower one tripartite, with roundish lobes. Stamens 4, inserted in the bottom of the corolla, exserted, nearly equal, ascending; cells of anthers distinct, diverging, reflexed to the sides of the filaments in aestivation. Ovarium 2-celled, many-seeded ; placentas 2, adnate in each cell. Stigma bilamellate. Pericarp unknown.—A middle-sized tree, with a diffuse, irregular tufted top. Branches terete, tomentose. Leaves 4 in a whorl, large, petiolate, *entire,* biglandular above the base. Thyrse terminal, roundish, depressed. Partial peduncles verticillate; pedicels trichotomous. Flowers showy. Calyx half coloured. Corolla yellow. This genus is probably nearer allied to *Hallēria* than to any other.

1 D. TETRAPHY'LLA (R. Br. 1. c. p. 449.) *?. S. Native of New Holland, within the tropic.

Four-leaved Diplanthera. Tree.

Cult. For culture and propagation see *Halleria* above.

CIX, GOMA^XRA (Lopez de Gomara, a Spanish botanist, mentioned by Tournefort in his Isagoge Flore du Perou.) Ruiz. et Pav. fl. per. syst. 168.

LIN. SYST. ***Didynamia, Angiospermia.*** **Calyx 4-cleft.** Corolla irregular ; tube curved, coarctate in the middle; nectary cup-shaped, membranous. Stigma capitate. Capsule 2-celled, 2-valved, many-seeded.

1 C. RACEMOSA (Ruiz, et Pav. l. c.) leaves oblong-lanceolate, denticulated at apex ; flowers racemose.—Native of Peru, in woods ; flowering in the autumn.

Racemose-Cowered Gomara. PI. 1 to *2* feet.

Cult. For culture and propagation see *Angelonia,* p. 609.

CX. RHYNCHOGLOSSUM (from *pvyxoQ, rhynchos,* a beak; and *yXijjcraa, glossa,* a tongue.) Blum, bijdr. p. 741.

LIN. SYST. *Didynamia, Angiospermia.* Calyx bilabiate : upper lip trifid : lower one bifid. Corolla ringent: upper lip bifid, reflexed : lower lip larger and semi-trifid : middle segment the largest ; throat bicallous. Stamens 4, almost inclosed, *2* of these sterile, and very small; anthers connected. Stigma obtuse. Capsule beaked, 1-celled, 2-valved ; dissepiment double, incomplete, contrary to the valves ; valves inflexed on both sides, and placentiferous.—A much branched, rather downy herb. Leaves alternate, (one being supra-axillary, and stipule-formed,) oblong, very oblique. Raceme terminal, drooping; pedicels secund. Said by Blum, to be nearly allied to *Gerdrdia.*

I R. OBLI^VQUUM (Blum. 1. c.) *!(..* S. Native of Java, on the Seribu mountains.—Rheed. mal. 9. t. 80.

O&^we-leaved Rhynchoglossum. PI. *2* to 3 feet.

Cult. For culture and propagation see *Angeldnia,* p. 609.

ORDER CLXX. RHINANTHA^NCE.E (this order contains plants agreeing with the genus *Rhinánthus* in the characters given below.) D. C. fl. fr. 3. p. 454. D. Don. in edinb. phil. journ. vol. *S3.* p. 112. July 1835. Melampyraceae Richard. Pedicularès part, Juss. gen. p, 99. ed. Usteri. p. 111.

Calyx tubular, 4-5-cleft, permanent. Corolla tubular, hypogynous, deciduous, irregular, imbricate in aestivation; upper lip usually galeate. Stamens 4, didynamous, all fertile ; anthers spurred at the base. Ovarium 2-celled. Stigma undivided. Capsule 2-celled, 2-4-valved, many-seeded. Testa of seeds membranous. Albumen copious, fleshy. Embryo inverted, terete ; radicle centrifugal, remote from the umbilicus.—Usually humble, herbaceous, rarely suffruticose plants, natives of Europe, Asia, and North America. Leaves usually opposite, and pinnatifid. Flowers terminal, spicate, bracteate. This is intimately allied to the preceding order, but is satisfactorily distinguished by its inverted embryo, with the radicle directed to the opposite extremity of the seed. The tribe *Euphrasies* of *Scrophularinece* have been included by most botanists in this family, and were they to be retained, the separation between it and the preceding order would be impossible. *Cymbaria* differs from the rest of the genera in the very considerable degree of developement of its embryo.

Synopsis of the genera.

TRIBE I.

RHINANTHIE\E. Embryo minute at the apex of the albumen.

1 RHINANTHUS. Calyx compressed, membranaceously inflated. Upper lip of corolla galeate. Seeds few, girded by the membranous wing.—Alector61ophus, Stev.

2 E'LEPHAS. Superior lip of corolla linear, beak-h[illegible] Seeds few, striated.—Rhinánthus, Stev. [illegible]manthus; Stev.

3 PEDICWRIS. Calyx 5-cleft, or unequally *Z-3-cle,* [illegible] Upper lip of corolla galeate, elongated, usually incurved, beeas[illegible] g by a membrane. [illegible] repli-

4 MELAMPYW. Galea of corolla compressed, with *V* cate lobes. Seeds large, wingless, one in each cell.

5 PARENTUCE'LLIA. Upper lip of corolla galeat[illegible] lower one linear at the base, channelled, S-lobed at top 5-toothed, inflated. Seeds wingless.

6 TRIPHYSAW Superior lip of corolla sub[illegible]late^ ^ tripartite, with saccate segments ; anthers 1-ce 4-cleft. Seeds wingless.

TBIBE II.

CYMBARIE^XJE. Embryo rather foliaceous, almost the length of the albumen.

7 CYMBA^VRIA. Corolla tubularly ventricose. **Calyx** 10-parted.

I. RHINA'NTHUS (from *far, rhin,* a snout; [illegible] *in. genanthos,* a flower; so named from its ringent coron[illegible]; ^ ^^ no. 740. Schreb. gen. no. 997. Juss. gen- p. [illegible] ^ t. *5V* p. 113. Gsertn. fruct. 1.p. *255.* t. 54. *t. 5.* [illegible] fl, taU *2.* f. 1. Schkuhr, handb. t. 169. Alectorolophus, *Bic* p. *68.* Stev. mon. ped. p. 4. Ledeb. fl- aj[illegible] irr. Pedicularis species, Town. inst. 77.-CristagalH, * t. 92. f. 2, and of many other old authors.

LIN. SYST. ***Didynamia, Angiospermia.*** [illegible] membranous, inflated, 4-toothed. [illegible] spreading; ate, compressed, bidentate at apex :: lowei [illegible] lobed. Anthers bipartite, mutic, viUous. [illegible] obtuse, compressed. Seeds compressed, [illegible] by a membranous wing—Marsh annual Plan[illegible] Europe. Leaves opposite, sessile, lanceolate, [illegible] cordate at the base. Flowers opposite, bra[illegible] terminal, secund spikes or racemes. [illegible]

] R. CRISTA-GA'LLI (Lin. spec, p[illegible] ed; leaves lanceolate, serrated ; calyx sm[illegible] seeds with a dilated, membranous border. [illegible] Europe and America, in barren pastures an[illegible] in Britain. Smith, engl. bot. *651.* [illegible] dan. 981.? Mart. fl. rust. 148. R[illegible] beitr. 6. p. *UY.* Alectorolophos crista-gal[illegible] p. 68. Mimulus crista-gálli, Scop. fl. [illegible] torolophus glaber, All. ped. no. 206. Hall, helv.no. 313. Crista-galli femina, Bauh. hist. 3. p. 436. f. 3. Dill. giss. append. 44. Crista-galli, Riv. mon. irr. 92. f. 3. Stem branched, quadrangular. Calyx greenish yellow ; segments of the upper lip short, bluish. The plant has the name of yellow-rattle from the yellow flowers and rattling of the seeds in the capsule when ripe ; and for the same reason it is called rattle-boxes in Ireland. It is known in some counties by the name of *renny*-grass, and in Yorkshire by that of Henpenny, from the shag and size of the seed-vessels, like

FIG. 60.



the silver penny. Its other appellation of Cockscomb is derived from the appearance of the upper leaves, or bracteas, which accompany the flowers. Mr. Miller says, that the Dutch formerly carried on a trade with the seeds and seed vessels of a species of Rhinanthus to Germany. They call it Semen Savage use. It appears very like the seed vessels of this sort. They boil them in water, with the seeds and capsules in common water, and with it wash their wainscot, bedsteads, &c. effectually to destroy the insects.

Cockvalent.

Britain, pi\ Or Common Yellow Rattle. Fl. June, July. 2 R. foot.

branched MA i R Eh rh herb 56 beitr 6 P U4) stem much Pointed leaves linear-lanceolate, serrated; bracteas tapered. (7). Native of Europe, in corn fields; in the R. Crista-galli, m Yorkshire, Northumberland, Durham, &c. Rhinanthus Pollii ?/ of authors, Willd. spec. 840. R. Alectorogerin. D. no. 580. Hoffm. fl. Germ. 215. Roth. fl. Upper Jun. 1 7. 2, P. 53. Corolla yellow, with a purple tube. Yellow Rattle. FJ. July, Aug. Britain. PI. 2 to 3 feet.

lanceolate, serrated, 5 style inclosed; calyx hairy; seeds with a membrane. Native of Middle Europe, as France, Switzerland, &c. in dry pastures. Mimulus Alectorolophus Willd. spec. 840. Alectorolophus hirsutus, All. fl. ped. no. 752. Crista-galli mas. Bauh. pin. 166. Hall helv. no. 314. R. crista-galli, y, Lin. spec. 840. Corolla yellow, with a purplish upper lip? Perhaps a variety of *R. Crista-galli?*

Hairy-calyxed Yellow Rattle. Pl. 1 foot.

Cult. Sow the seeds in moist soil, and they will grow and flower in cultivation.

II. ELEPHAS

Elephas (from elephas, an elephant; from the resemblance of the upper lip of the corolla to the proboscis of that animal.) Upper lip of the corolla to the proboscis of that animal. Linn. gen. 794. Schreb. gen. no. 1067. Rottb. in coll. hafn. 2. p. 255. Gaertn. fruct. 1. p. 186. t. 181. Tourn. cor. 48. Lam. ill. 517. Schkuhr, handb. t. 171. Stev. mon. ped. Rhinanthus species of authors. Led. fl. alt. 1. p. 424.

LIN. SYST. *Angiosperma.* Calyx bipartite, even at the base: upper lip entire, or bidentate. Corolla bipartite: upper lip bifid, beaked, tubular = lower lip trifid. Capsule 2-celled, 2-valved, obtuse, compressed. Seeds few, simple, rarely serrated, winged. Annuals. Leaves opposite or sometimes alternate, opposite, disposed in terminal bracteate spikes. Corollas yellow/

Upper lip of corolla subulate, incurved; flexed under the beak of the corolla, the lateral sides and the fourth straight and obtuse, bifid. Native of the Levant. Rhinanthus orientalis, Lin. wild. no. 2. E'lephas orientalis flore magno, Tourn. cor. p. 48. itin. 2. p. 96. & 12[6]! Plants that Tournefort says this is one *of* the most showy

[illegible] Plants.

Long-beaked Elephas. FJ. July, Aug. Clt. 1759. PI. 2 to 3 feet.

Upper lip of corolla subulate, straight; calyx 4-cleft, segments reflexed, and the third larger, straight, also of Caucasus. Native of Italy and Siberia, in the coast of the Black Sea, by Tournefort; Rhinanthus Elephas, Lin. has orientalis, Bieb. cauc. 2. p. 69. N. C. 65. spec. 840. Lerchc. in nov. act. A. p. 1 86. t. 188. Elephas Campoclarensium, Col. cephl. Elephas Italica, flore magno, proboscide surrecta, Tourn. cor. 48.—Mor. hist. 3. p. *432.* sect. 11. t. 24. f. 14. Habit of the preceding.

Var. ft, parviflbra; flowers smaller. ©. H. Native of the Levant. E'lephas orientalis flore parvo, proboscide surrecta, Tourn. cor. p. 48. itin. *3.* p. 54.

Straight-beaked Elephas. Fl. July, Aug. Clt. 1759. PL 1 foot.

Cult. For culture and propagation see *Rhindnlhus* above.

III. PEDICULA'RIS

PEDICULARIS (from *pediculus,* a louse; from its supposed quality of making sheep that feed on it lousy.) Tourn. cor. t. *77.* Lin. gen. 794. Schreb. gen. no. 1067. Rottb. in coll. hafn. *2.* p. 255. Gaertn. fruct. 1. p. 246. t. *53.* f. 5. Lam. ill. 517. Schkuhr, handb. t. 171. Stev. mon. ped. Led. fl. alt. 1. p. 424.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-cleft or 5-toothed, or unequally 2-3-toothed. Upper lip of corolla galeate, elongated, usually incurved: lower lip trifid, closed, or often spreading. Stamens didynamous. Cells of anthers usually acute, but sometimes obtuse and spurred. Stigma subcapitate. Capsule obliquely mucronate, rarely globose and straight; valves entire. Seeds girded by a membranous testa, rarely naked.—Usually simple herbs. Leaves alternate, opposite, or verticillate, deeply toothed or pinnatifid. Flowers sessile, disposed in dense, terminal, interrupted spikes.

SECT. I. PERSONA'T^: (SO named from the personate corollas.) Stev. mon. ped. p. 17. Leaves opposite. Lower lip *of* corolla erect, ex Stev. Lips of corolla closed, ex Benth.

1 P. GRANDIFLÒRA (Fisch, in. mem. nat. cur. mosq. *3.* p. 60. no. *3.* Stev. mon. p. 17. t. 2.) galea of the corolla, which is closed, falcate; leaves tripinnatifid. 1/. H. Native of Dauria. Plant glabrous. Radical leaves a span long. Flowers rather remote. Bracteas broad, jagged. Calyx of *P. scèpirum.* Corollas purple. Filaments villous at the base. Cells of anthers awned.

Great-flowered Lousewort. PL ^ foot.

2 P. scEPTRUM CAROLÌNUM (Lin. spec. 845.) lips closed; corolla nearly equal; galea obtuse; leaves pinnatifid: lobes ovate, crenulated; stem few-leaved. 1/. H. Native from Bothnia to Dauria, in boggy or spongy parts of woods; in Russia, to lat. 550; in Europe, not further south than the tops of the alps *of* Salisburgh. Fl. dan. t. 26. Rudb. itin. 1. t. 1. Lin. fl. lapp. no. 243. t. 4. f. 4, 5. Plant glabrous. Spike interrupted. Flowers twin or tern. Lower bracteas leafy: upper ones ovate, serrated. Corollas an inch long, golden-yellow: lower lip tinged with purple or blood-colour. Filaments glabrous. Cells of anthers obtuse. Rudbeck named this plant *Scèpirum Carolìnum,* in honour of Charles II. king of Sweden, from its manner of growth like a sceptre. The plant is common in Norway, Denmark, and Lapland. In the plant figured in Flora Danica, the leaves, bracteas, and flowers are 3-4 in a whorl.

Charles's Sceptre. FL Aug. Clt. 1793. PL 3 to 4 feet.

3 P. LANCEOLA'TA (Michx. fl. bor. amer. 2. p. 18. Stev. mon. p. 18.) lips of closed corolla nearly equal; galea somewhat beaked; stem leafy; leaves lanceolate, opposite. 1/. H. Native of North America, in the States. Pursh, fl. 2. p. 425. P. Virginica, Poir. diet. 5. p. 126. P. pdllida, Nutt. gen. amer. 2. p. 50. Pursh, 1. c. P. serótina, Muhl. cat. Stem usually simple, glabrous at top, but furnished with 2 rows of villi at base. Leaves doubly crenated, cut, downy beneath. Spikes dense, H inch long. Bracteas ovate, crenated. Calyx obliquely 2-lobed: lobes crenulated. Corollas yellow, smaller than those of *P. sceptrum Carolìnum.* Filaments glabrous. Cells of anthers obtuse.

Lanceolate-leaved Lousewort. PL 1 to 3 feet.

4 P. CAPITA'TA (Adams, in mem. nat. cur. mosc. 5. p. 100. no. 8. Stev. mon. p» 19. t. 3. f. 2.) lower lip of corolla, which is closed, about half the length of the upper one : galea obtuse ; stem nearly naked ; leaves bipinnatifid ; heads few-flowered. 1/. H. Native of Siberia, at the mouth of the Lena, Adams ; Kamtschatka, Steller; Unalaschka, Langsdorf; Russian America, Chamisso. Stem downy, 2-edged at top, and twisted. Leaves downy beneath: radical ones few : cauline one usually solitary. Bracteas foliaceous, villous. Corollas yellow, size of those of *P. sceptrum Carolinum.* Calyx 5-cleft; segments toothed, oblong. Anthers hardly cordate.

Capitate-flowered Lousewort. PI. \ to f foot.

5 P. STRIA^TA (Pall. itin. 3. p. 266. 321. 435. *737.* no. 98. t. R. f. 2. Willd. spec. 3. p. 208. no. 12. Stev. mon. p. 20.) corolla closed; galea acutely bidentate; leaves pinnate, with linear, serrulated segments. %. H. Native of Dauria, in high exposed places about Kjachta and elsewhere. P. vendsa, Pall, herb. Corollas size of those of *P. sceptrum.* Galea drawn out into a beak, as in *P. comosa.* Two of the filaments bearded. Capsule acuminated. Cells of anthers acute.

Striated Lousewort. PI. 1 to 2 feet. ?

6 P. AVA'NA (Wall. cat. no. 1007. Benth. scroph. ind. p. *52.)* diffuse, hairy ; leaves opposite, pinnatifid ; with short, lanceolate, rather cut segments ; calyx 5-parted, with linear, quite entire segments; both lips of corolla nearly equal ; galea straight, obtuse : lower lip shortly 3-lobed. 1/. H. Native of the Birman Empire, near Ava, towards Mount Taong Dong. Perhaps not a species of this genus.

Ava Lousewort. PI. ?

SECT. II. VERTICILLA'TVE (SO named from the leaves being disposed in whorls or verticils.) Stev. mon. ped. p. 20. Corolla ringent. Leaves verticillate.

§ 1. ROSTRA'T^:. *Galea beaked.*

7 P. CHAMISSONIS (Stev. mon. p. 20, t. 4.) leaves pinnatifid, 4 in a whorl, with lanceolate segments : lower segments pinnatifid : upper ones serrated ; galea uncinate. ©. H. Native of Siberia, on the Corgon alps frequent, Pallas ; Unalaschka, Langsdorf and Chamisso. P. hamata, Bieb. herb.—A showy glabrous plant. Calyx 5-toothed. Corolla yellow, drying purple. Galea drawn out into an acute, deflexed, or straight, toothless beak. Capsule very oblique, with a long mucrone.

Chamisso's Lousewort. PL 1 foot.

8 P. MYRIOPHY'LLA (Pall. itin. 3. pp. 331. 446. 737. no. 99. t. S. f. 1. A.) leaves 4 in a whorl, bipinnatifid, with linear segments; galea of corolla hooked. 1/. H. Native of Siberia, on rocks at the river Jenesee ; in alpine marshes of Dauria, at the river Kirkun, among the Altaian mountains. Radical leaves length of stem, bipinnate. Whorls of flowers crowded, spicate. Calyx 5-toothed. Beak of galea hooked, bidentate. Two of the filaments bearded. Anthers sagittate. Capsule oblique, acuminated.

Myriad-leaved Lousewort. Fl. May, July. Clt. 1816. PI. 1 foot.

9 P. ABROTANIFOLIA (Bieb. in Stev. mon. p. 22. t. 5. f. 1. Led. fl. ross. alt. ill. t. 275.) leaves 4 in a whorl, bipinnatifid, with linear segments ; galea of corolla straight, a little beaked. ©. H. Native of Ulterior Siberia. P. verticillata, /3, Willd. spec. 3. p. 214. Plant downy. Stem branched at base. Spike dense, hairy. Calyx hairy, 5-toothed : teeth linear, and are, as well as the bracteas, hairy, ciliated : lower one usually serrated. Corolla sulphur-coloured. Beak of galea short, obtuse. Stamens glabrous. Capsule oblique, hardly mucronate.

Far jS, *glabrescens* (Ledeb. fl. alt. 2. p. 426.) plant earlier and taller than the species ; calyxes and bracteas smoothish ; spike interrupted at the base. $. ? H. Native of Altai* on dry mountains at the river Tschuja.

Southern-wood-leaved Lousewort. FL

10 P. INTERRU'PTA (Stephan, in litt. ex Wild. spec. Stev. mon. p. *23.* t. 6.) leaves 4 in a whorl, pinnatifid, ceolate, deeply serrated segments ; galea hemispherical, with a very short beak. Altaian mountains. Ledeb. fl. ross. alt. Hi. t. Stem flowered, pie. Spike interrupted. Whorles of spikes Lower bracteas denticulated. Calyx smoothish ments serrated. Corollas pale yellow, glabrous. Capsule oblique, mucroiate. toothless.

Interrupted-spiked Lousewort. PL 2

11 P. LOCILIS (Wall. cat. no. 413. Benth. »cwp 52.) tall, and paniculately branched; stem leaves 4 in a whorl, pinnatifid, with oblong, obtuse, cut segments ; flowers distant ? calyx short, obtuse, quite entire ; beak of galea Native of Nipaul, in Gosainthan and Kamaon, ree, Royle. P. stricta, Wall. cat. no. 414. Wall. cat. no. 422. There are varieties of more or less cut.

Slender Lousewort. PI. tall.

12 P. PECTINA'TA (Wall. cat. no 420. p. 52.) erect, tall, nearly simple, with lanceolate, acute, serrated, or pinnatihd rather loose ; teeth of calyx short, entire ; beak twisted at apex. 1/.?H. Native of Kamaon, Pyr Pundjal, and towards Cashmere, Koyle.

Pectinate-leaved Lousewort. PI. tall.

13 P. PYRAMIDA^TA (Royle, mss. ex Ben *52.)* erect, tall, nearly simple; stem leaves pinnatifid, with oblong-lanceolate, interrupted ai nated, or somewhat pinnatifid segments ; spike the base ; calyx hairy, with short, acute, beak linear, twisted, twice as long as the galea the Himalaya, towards Cashmere, Royle.

Pyramidal-spiked Lousewort. PI. tall.

14 P. TENUIROSTRIS (Benth. scroph. ind. neaily simple ; stem quadrifariously pilose , with ovate-oblong, obtuse, crenulated imbricate ; calyxes hairy, with short, slender, and a little twisted at top, hardly long itself.—Native at Pyr Pundjal, Royle.

Slender-beaked Lousewort. PI. tall.

15 P. PORRE'CTA (Wall. cat. no. 423.) nearly simple ; stem furnished with 2-3 rows pinnatifid, with oblong, obtuse, deeply serrated rather loose, few-flowered ; calyx glabrous, crested teeth; beak of galea long, twisted. %. H. Native of Kamaon, Wall, towards Cashmere, Royle.

Stretched Lousewort. PI. f foot.

16 P. BREYIF&UA (D. Don' prod. fl. villous, pinnatifid, with short, deeply rather dense; calyx hairy, with short galea slender, long, straight. Gosainthan, Wall. P. laciniata, Wall. purple.

Short-leaved Lousewort. H. ?

17 P- *uL* (Wall. cat. no 53.) stem erect, tall, branched, hairy at

Pinnatifid or bipinnatifid, with oblong-lanceolate, deeply serrated segments; spikes interrupted, slender; calycine teeth oblong, erected-Dahurian, galea straight, toothless and beakless.—Native of Nilona, in Gosainsthan, Wallich. Corolla slender, hardly 4 lines long. Lousewort. Pl. tall.

VERTICILLATA (Linn. spec 846.) erect, nearly simple, smooth; leaves pinnate or pinnatifid, with oblong or linear toothed segments; spikes dense, or interrupted at the base; calycine teeth 5-toothed: teeth short, entire; galea beakless. toothless and beakless. %. H. Native of the western Europe; Kanaour, Royle. Jacq. fl. austr. 3. t. 206. fig. 2. Hall. helv. ed. 2. no. 318. Fl. Dan. t. 1723. Hall. helv. ed. 1. no. 323. Fl. Dan. t. 1723. Pall. itin. 3. p. 444. no. 23. t. 17. f. 1.—Gmel. sib. 3. p. 206. no. 18. Hardly distinct from the species.

Flowers white. Fl. May, June. Clt. 1790. Pl. 1 to 1 foot.

PECTINATA (Meyer, verz. pflanz. p. 108.) stem simple; leaves 4 in a whorl, pinnatifid; segments short, obtuse, deeply serrated; flowers densely spicate; calyx smoothish, semiquinquefid; corolla purple, ringent; galea straight, with a short beak. Native of Caucasus, in alpine meadows, at the height of 1200 to 1400 hexapods. Leaves of *P. verticillata,* and *P. comosa.* Flowers purple. Fl. June. Pl. 1 foot.

ASCENDENS (Bunge, in Ledeb. fl. alt. 2. p. 427.) plant ascending, hairy; leaves 4 in a whorl, pinnatifid; segments ovate, obtuse, doubly serrated, imbricated; calyx smoothish, semiquinquefid; corolla purple; galea straight, obtuse, shorter than the calyx; beak of galea short, straight, obtuse; capsule ovate, acuminated, nearly as long as the calyx. Native of Dauria and Altaia, in humid places at the river Jebagan. P. verticillata, Pall. itin. 3. p. 444. no. 23. t. 17. f. 2. Hall. helv. ed. 2. no. 318. Fl. Dan. t. 1723. Hall. helv. ed. 1. no. 323. Fl. Dan. t. 1723. Pall. itin. 3. p. 444. no. 23. t. 17. f. 1.—Gmel. sib. 3. p. 206. no. 18. Hardly distinct from the species.

Flowers purple. Fl. June, July. Pl. 1 to 1 foot.

TAURICA (Pall. itin. 3. p. 444. no. 23. t. 17. f. 2.) stem simple; leaves 4 in a whorl, pinnatifid, with obtuse segments; calyx 5-cleft; galea of corolla straight, obtuse. 2. H. Native of Dauria, in meadows; in shady places at Imgula. Stem branched, quite entire, sometimes 5 in a whorl: the uppermost ones often opposite. Spikes dense, elongated. Calyx hairy: lobes of the calyx unequal, obsolete toothed. Corollas purple, like those of *P. verticillata.* Galea shorter than the lower lip. Capsule ovate, acuminated.

Flowers purple. Fl. June, July. Pl. 1 foot.

ADUNCA (Adams, ex Stev. mon. p. 25. t. 7.) leaves 4 in a whorl, pinnatifid, with obtuse segments; calyx 5-cleft, with serrated segments; galea straight, obtuse, very short. 1£. H. Native of Caucasus, on alps, Casbek and Schagdag; and on the alps in the north of Persia, Hablitz. Spikes terminal, short. Calyx hairy.

Caucasian Lousewort. Pl. 1 foot.

SECT. III. SIPHONA'NTHA (from *oifpiov, siphon,* a tube; and *arOog, anthos,* a flower; in allusion to the long tube of corolla.) Leaves alternate. Corolla ringent; tube much exserted; galea falcate, beaked; beak proboscis-like, twisted or hooked.

24 P. SIPHONA'NTHA (D. Don, prod. fl. nep. p. *95.)* plant humble, tufted, smoothish; leaves elongated, pinnate: leaflets short, oblong, serrated; spikes short; calyx hairy, cleft on one side or bifid, crested; tube of corolla 4 times longer than the calyx; beak of galea proboscis-like, twisted and emarginate. %. F. Native of Nipaul, on Gosainthan, where it is called *Cheelomoote Swa* by the natives. Stem and petioles villous. Leaves glabrous. Lateral lobes of calyx 2-lobed or toothed. Corolla purple. Lobes of lower lip of corolla and filaments ciliated.

Tube-flowered Lousewort. Pl. \ foot, tufted.

25 P. HOOKERIA'NA (Wall. cat. no. 421. Benth. scroph. ind. p. 53.) plant ascending, a little branched, smoothish; leaves pinnate or pinnatifid, with oblong or ovate, toothed or pinnatifid segments; calyx hairy, cleft on one side or bifid, crested; tube of corolla about 3 times longer than the calyx; beak of galea proboscis-like, twisted, and emarginate. %. ? F. Native of Kamaon, Wall.; at Simla, and in Cashmere, Royle. Corolla reddish purple or white.

Hooker's Lousewort. Pl. ascending.

26 P. MEGALA'NTHA (D. Don, fl. nep. p. 94.) plant erect, glabrous or hairy at top; leaves pinnatifid, with oblong or ovate, pinnatifid or serrated segments; spikes at length elongated, interrupted; calyx 5-toothed, crested; tube of corolla twice as long as the calyx; beak of galea proboscis-like, twisted, and trifid. %. F. Native of Kamaon and Gosainthan, Wall.; at Choor, in Mussoree and Cashmere, Royle. Stems simple. Leaves glabrous. Pedicels and calyxes villous. Corolla large, yellow. Filaments hairy.

Large-flowered Lousewort. Pl. J to 1 foot.

27 P. ELEPHANTOI'DES (Benth. scroph. ind. p. 53.) plant erect, pubescent; leaves pinnatifid, with ovate-oblong, pinnatifid or toothed segments; spikes elongated, dense; calyx 5-toothed, crested, cleft on one side; tube of corolla one half longer than the calyx; beak of galea proboscis-like, ascending, incurved and emarginate at top. %. *1* H. Native at Pyr Pundjal, Royle.

Elephas-Uke Lousewort. Pl. \ to 1 foot. ?

SECT. IV. FAUCIDE'NTES (from *faux,* the throat, and *dens,* a tooth; in reference to the upper lip or galea being toothed beneath the middle.) Stev. mon. ped. p. 27. Corolla ringent. Superior lip of corolla or galea with a tooth beneath the middle on both sides. Stem branched. Leaves alternate.

28 P. WLASSOVIA'NA (Stev. mon. p. 27. t. 9. f. 1.) superior lip of corolla straight, with a toothlet on both sides beneath the middle; leaves narrower, less divided than those *of P. jwlustris.* 0. H. Native of Dauria, about Doroninsk, Wlassow. Habit of *P. palustris.* Plant glabrous. Flowers on short pedicels: lower ones remote: upper ones spicate. Calyx unequally 5-toothed; larger teeth serrated. Corolla size of that of *P.fldmmea;* upper lip dark purple: lower one paler. Filaments ciliated. Capsule roundish, very oblique, with a straight nmcrone.

(Bieb. ff. cauc. 2. p. 72. Stev. in mem. mosq. 3. p. 267. mon. p. 26. t. 8.) stems simple; leaves 4 in a whorl, pinnatifid, with obtuse, sharply serrated segments; calyx 5-cleft, with serrated segments; galea straight, obtuse, very short. 1£. H. Native of Caucasus, on alps, Casbek and Schagdag; and on the alps in the north of Persia, Hablitz. Spikes terminal, short. Calyx hairy.

Wlassow's Lousewort. PL 1 foot.

29 P. PALU'STRIS (Lin. spec. 845.) upper lip of corolla furnished with a tooth on each side below the middle; galea dilated, gibbous. ©. H. Native of Europe, in marshes '; plentiful in Britain, North of Russia, Siberia, Altaia, Aleutian Islands Smith, engl. bot. t. 399.—Riv. mon. t. 92. f. 1. Petiv. brit t' 36. f. 3. Branches spreading. Leaves bipinnate or pinnate' with pinnatifid segments, Spikes loose. Corolla purple vary- «w. ^ivu* purple, varying to' white; lower lip fringed. In marshes and wet meadows this is rather common, particularly in the North ; it is said to be disagreeable to cattle, and thought by some to be destructive to sheep.

Marsh Lousewort. Fl. June, July. Britain. PL 1 foot.

30 P. MACRODONTIS (R. Br. in Richards, fl. no. 233.) stem almost simple ; leaves pinnatifid; segments linear, obtuse, sinuately toothed or crenated ; flowers axillary, sessile ; calyx 2-lobed, curled; galea very blunt, toothed at the throat. If. H. Native of Hudson's Bay. Flowers like those *of P. palustris.*

Large-toothed-calyxed Lousewort. PL 1 to 1J foot.

31 P. ADU'NCA (Bieb. ex Stev. mon. p. 29. t. 5. f. 2.) upper lip of corolla furnished with a tooth on each side beneath the middle; galea falcate, beaked. ©. H. Native of Siberia and Kamtschatka. P. palustris, var. Willd. spec. 3. p. 203. Plant glabrous, branched. Leaves an inch long, deeply pinnatifid, with toothed segments. Calyx 2-lobed: lobes ovate, denticulated. Corollas smaller than those of *P. palustris.* Two of the filaments ciliated at top. Capsule very oblique, mucronate.

Hooked Lousewort. PL \ foot.

SECT. V. ROSTRA'T^E (from *rostra,* a beak ; in allusion to the galea of corolla being beaked.) Stev. mon. ped. p. 30. Leaves alternate. Corolla ringent; tube hardly exserted. Galea toothless at the base, falcate ; beak straight.

32 P. CARNOSA (Wall. pi. rar. asiat. 2. p. 44. t. 154.) erect, pubescent ; leaves oblong, obtuse, crenated, narrowed at the base : lower ones petiolate ; spikes few-flowered, at length elongated, interrupted ; calyx cleft on one side, obliquely 2-3-cleft, crested a little ; corollas straight; beak of galea slender, straight; lip very broad. 0. H. Native of Nipaul, at Narainhetty, Flarajlt.; at Choor, and in Mussooree, Royle. Corollas large, rose-coloured.

Fleshy Lousewort. PL 1 to 2 feet.

33 P. FURFURA'CEA (Wall. cat. no. 412. Benth. scroph. ind. p. 54.) plant ascending, branched a little; leaves petiolate, ovate : lower ones ample, half pinnatifid: lobes ovate, deeply toothed or pinnatifid ; superior leaves small, deeply toothed, or somewhat pinnatifid; calyx cleft on one side, and 2-3-toothed on the other ; beak of galea slender, straight, emarginate ; lower lip very broad. ©. ? H. Native of Nipaul, on Gosainsthan.

Scurfy Lousewort. PL | to 1 foot. ?

34 P. ASPLENIFOLIA (Wall. cat. no. 416. Benth. scroph. ind. p. 54. but not of Floerke) humble; leaves lanceolate, pinnatifid : segments ovate-lanceolate, serrulated; raceme few-flowered ; calyx 5-toothed at apex, crested ; galea of corolla elongated, falcate, with a straight beak.—Native of Kamaon, Wall. Corolla more open than in *P.* [illegible] only a variety.

Spleenwort-leaved Lousewort. PL J to 1 foot.

35 P. ROSTRA'TA (Lin. spec. 845.) stems declinate; leaves pinnate : leaflets or segments pinnatifid ; raceme few-flowered • calyx cylindrical, 5-cleft: teeth dilated, serrated; galea fall cately beaked. %. H. Native of the West of Europe, on the alps ; as of France, Italy, Savoy, Switzerland, Austria, &c. Jacq. austr. tr. 3. t. 205.—Hall. helv. no. *322.* t. 8. f. 1. p. [illegible]

asplenifolia, Floerke, spicul. fl. salisb. med. ex Willd. p. 208. Plant sometimes glabrous, and sometimes [illegible] of the rollas purple. Beak of galea truncate at apex. [illegible] jn a filaments are bearded. Capsule ovate, oblique, enaw[illegible] hooked mucrone. pi \ to

Beaked Lousewort. FL July, Aug. Clt. 1819. *ru* i foot. *58.*

86 P. TUBEROSA (Fischer in mem. nat. cur. mosc Stev. mon. p. 30.) glabrous ; leaves pinn[illegible] crenated segments: floral ones with [illegible] calyx downy, 2-lobed : lobes deeply toothed, sometim[illegible] is a small third lobe ; tube of corolla very long [illegible] lately and circinately incurved. %• H. Native at lake Baical, among moss. P. longiflora, Rudolph acad. petrop. 4. (1811.) p. 345. t. 3. Filaments [illegible] top of the tube, not at the base, as in other species. short, compact. Corollas yellow ; tube narrow, 3 mci Stamens all bearded.

Tube-flowered Lousewort. PL \ foot.

37 P. TEUCRIIFOLIA (Bieb. ex Stev. mon. p. 31. t. [illegible] stems many, simple ; leaves lanceolate, doubly crena[illegible] tose on both surfaces ; calyx more deeply cleft above, bifid ; galea of corolla subulate, falcate. %. H. [illegible] Curil Islands, Bieb. et Pallas. Very like the P[illegible] differs in the form of the corolla. Root tufted. half the size.

Germander-leaved Lousewort. PL § foot.

38 P. RESUPINVTA (Lin. spec. *846.* Stev. *mon.*, p. [illegible] branched; leaves nearly sessile, lanceolate^ doubly smoothish ; calyx more or less downy, oblique, [illegible] circinately hooked. If. H. Native throughout shady humid places. Pall. itin. 3. p. 316. 319. A[illegible] 42.—Gmel. sib. 3. p. 204. no. 16. t. 44. Stem [illegible] often pubescent. Leaves generally glabrous, rarely beneath. Flowers sessile in the upper axils, [illegible] length aggregate into a dense head or short spike. pie, flesh-coloured, or white. Beak of galea acuminate. Longer filaments bearded. Capsule obliquely mueron[illegible]

Resupinate Lousewort. FL May, July Clt. 1° foot.

39 P. GRCENLA'NDICA (Retz. scand. ed. 1st. p. [illegible] spec. 3. p. 212. Stev. mon. p. 32.) stem simple ; leav[illegible] pinnatifid, with lanceolate, acuminated, serrated segme[illegible] glabrous, 5-toothed; corolla closed ; beak *of f[illegible]* arched upwards. 1/. H. Native of Greenland. 1166. P. incarnata, e. Grcenlandia, Retz. obs. 4. p- Filaments all glabrous. Corolla red.

Greenland Lousewort. PL

40 P. PROBOSCIDEA (Stev. mon. p. *33.)* leaves deep[illegible] tifid ; segments doubly serrated ; spik[illegible] campanulate, bilabiate, 5-toothed, glabrous, [illegible] ovate, acuminated, rostrately beaked, with a villous [illegible] H. Native of Dauria, at Angura, Gmelin; [illegible] in fertile meadows, Pallas. P. uncinata, labio coroi villoso, Steph. in Willd. spec. 3. p. 213.—Gmel. siu. no. 20. t. 45. Pall. itin. 2. p. *523.* but [illegible] rous, and nearly imbricated. Bracteas all lanceola[illegible] entire, with villous edges. Corolla yellow. straight, acuminated, truncate at apex. Oaiea lower lip.

Proboscis-like Lousewort. PL 2 to 3 feet. Stev.

41 P. UNCINATA (Steph. in Willd. spec. 3. p. [illegible] mon. p. 34. t. 12.) glabrous; stem simple; lea[illegible] natifid, with lanceolate, serrated segments; [illegible] campanulate, 5-toothed;

acuminated, emarginate, twice as long as the lower

Native of Siberia, from the Jenesee even to Dahuria, in cold sandy places. Root annual. Stem simple, or branched from the base, 1 to 2 feet high. Leaves on short petioles; serratures acute. Corolla yellow; galea sometimes falcate at the apex. Capsule ovate, oblique, mucronate. Two of the filaments are bearded. Fl. July, Aug. Clt. 1815. Pl. 2 to 3 feet.

42 P. FLAVESCENS (Willd. spec. 3. p. 219.) stem downy, simple; leaves deeply pinnatifid: segments lanceolate-linear, acutely serrated; spike short, few-flowered; calyx 5-toothed, rather hairy; galea beaked, arcuately inflexed, ciliated, equal in length to the lower lip, and inclosed in it. %. H. Native of Altaia, between the rivers Katunga and Kelujin. Root annual. Stem 1 to 2 feet. Leaves bipinnatifid; segments deeply serrated: upper ones subconfluent. Bracteas deeply serrated: upper ones subulate, serrated. Calyx 5-cleft almost to the base; segments acute, serrated. Corolla cream-coloured, with a short beak. Galea and habit of P. procera. Two of the filaments are bearded.

Short-spiked Lousewort. Pl. 1 to 2 feet. ?

43 P. RECUTITA (Lin. spec. 847.) stem simple; leaves nearly pinnatifid, with serrated segments; spike short, loose; calyx 5-cleft, with serrated segments; corolla 5-cleft on the under side; galea beaked, ciliated, with a short beak. %. H. Native of Lapland, Greenland, Kamtschatka, and Siberia, even to the mouth of the river Lena, in stony places; also of the Caucasian alps. Oed. fl. dan. t. 2. Willd. spec. 3. p. 220. Hall. helv. no. 334. 444.—Lin. fl. lapp. 242. t. 4. f. 1. Stem downy at top. Calyx 2-3-toothed, rarely 5-toothed. Beak of galea truncate at apex. Filaments glabrous. Capsule ovate, oblique, mucronate. Corolla yellow.

Lapland Lousewort. Pl. \ foot. ?

44 P. COMPACTA (Steph. in Willd. spec. 3. p. 219. Stev. mon. p. 36.) stem simple; leaves bipinnatifid, with serrulated segments: upper pinnae imbricate and confluent; spike dense, many-flowered; calyx inflated, membranous, 5-toothed; galea of corolla falcately beaked, furnished with a rectangular deflexed hook. %. H. Native of Siberia, in meadows; Soongaria, Altaia, &c. P. brevis, Herb. Gorenki. Stem downy at top. Calyx glabrous, cleft almost to the middle on the under side. Corolla yellow, beak

Lousewort. Fl. July, Aug. Clt. 1815. Pl. 1 to 1½ foot.

45 P. INCARNATA (Jacq. austr. 2. t. 140. Stev. mon. p. 38.) stem simple; leaves deeply pinnatifid, with unequally toothed, linear lanceolate segments; spike loose; calyx ovate, 5-cleft, clothed with hoary pubescence; galea of corolla falcately beaked. %. H. Native of the alps of Switzerland, Austria, Carniola, Carinthia, &c. P. roseato-spicata Crantz. austr. p. 317.—Hall. helv. no. 318. Corolla pale red. Beak of galea obtuse or emarginate. Filaments glabrous. (fig. 61.)

Flesh-coloured-flowered Lousewort. Fl. June, July. Clt. 1796. Pl. 1 foot.

FIG. 61.



46 P. TUBEROSA (Lin. spec. p. 847.) stem simple; leaves bipinnatifid: segments toothed; spike loose; calyx campanulate, 5-cleft, smoothish; galea of corolla falcately beaked. %. H. Native of the alps of Europe; as of France, Switzerland, and Italy. Vill. dauph. 2. p. 430. Willd. spec. 3. p. 217. exclusive of var. /3.—Hall. helv. no. 323. t. 10. P. alpina lutea, Segu. pi. ver. 3. p. 126. Angles of stem downy. Superior bracteas palmately jagged. Teeth of calyx usually quite entire. Corolla yellow; beak of galea emarginate. P. adscendens, Sternb. et Hoppe. in act. soc. bot. bav. 2. p. 22. bot. zeit. 1820. p. 62. is more hairy, and the teeth of calyx ciliated; but it is hardly a species; it appertains to P. tuberosa, v. Bertol. amoen. ital. p. 381.

Tuberous-rooted Lousewort. Fl. July, Aug. Clt. 1799. Pl. \ to 1 foot. ?

47 P. ATRORUBENS (Schleicher, cat. pl. helv. 1817. p. 21. D. C. syn. fl. fr. 212.) glabrous; stem simple; leaves bipinnatifid; spike compact, calyx 5-cleft; galea of corolla arched, with a short beak, which is somewhat bidentate at apex. %. H. Native of Switzerland, on Mount St. Bernard. P. pennina, Gaudin. Habit of P. *recutita,* with which it is mixed in herbaria. Bracteas ciliated. Calyxes hairy, usually entire. Corolla dark purple. Two of the filaments bearded, and the other two furnished with a few hairs under their top. Capsule ovate, oblique, mucronate.

Dark purple-flowered Lousewort. Fl. June, Aug. Clt. 1819. Pl. 1 foot.

48 P. GYROFLEXA (Vill. dauph. 2. p. 426. t. 9. Stev. mon. p. 40.) stem hairy, simple; leaves pinnate; leaflets bipinnatifid; spike elongated, loose; calyx downy, 5-cleft, with serrated segments; galea of corolla arched, with a short conical beak. %. H. Native of the alps of Dauphiny; Mount Cenis; and the Apennines, Switzerland, &c.—Hall. helv. no. 324. t. 11. P. tuberosa, All. ped. no. 131.? Flowers purple. Beak of galea emarginate. Filaments all more or less bearded.

Circular Lousewort. Fl. July, Aug. Clt. 1819. Pl. \ to 1 foot.

SECT. VI. BICUSPIDATAE (so called in consequence of the bidentate top of the galea of the corolla.) Leaves alternate. Upper lip of corolla toothless at the base; galea short, bidentate at apex, without a beak.

49 P. JEQUINOXIALIS (H. B. et Kunth. nov. gen. amer. 2. p. 332. Stev. mon. p. 41. t. 3. f. 1.) stem simple; leaves lanceolate, crenately pinnatifid, with very blunt, emarginate, toothed segments; calyx obliquely 2-lobed; galea of corolla convex, bidentate. %. G. Native of Mexico, on the mountains, in shady places. Habit of *P. Canadensis;* but the leaves are more numerous, and the segments dense and obtuse.

Equinoxial Lousewort. Pl. 1 foot.

50 P. CANADENSIS (Lin mant. 86.) stems simple; leaves pinnatifid, with obtuse, crenated segments; calyx hairy, obliquely 2-lobed: galea of corolla obtuse, bidentate. %. H. Native of North America. Pursh, fl. 2. p. 425. Nutt. gen. amer. 2. p. 50. Sweet, fl. gard. t. 67. P. mariana, & Plukn. phyt. t. 437. f. 3. Very like *P. euphrasidides,* but differs in the compact hairy spike. Lobes of calyx obtuse, entire. Corollas like those of *P. comosa,* wholly cream-coloured, or the galea is purple. Two of the stamens bearded at top. Capsule obliquely acuminated.

Far. β, *gladiata;* spike elongated. *H.* H. Native of North America. *Pl* gladiata, Michx. fl. bor. amer. 2. p. 18. Pursh. l. c. Nutt. l. c.

Canadian Lousewort. Fl. July, Aug. Clt. 1780. Pl. ½ to 1 foot.

51 P. EUPHRASIOIDES (Steph. in Willd. spec. 3. p. 204.) stem branched; leaves linear-lanceolate, pinnatifidly toothed: upper ones becoming entire; racemes terminal, loose; calyx cleft on the lower side, and shortly tridentate on the other; galea of corolla convex, bidentate. ©. H. Native on the eastern part of the Ural mountains; at the Lena; beyond the Baical; in Kamtschatka, and Aleutian Islands; Labrador, &c. P. paniculata, Pall. itin. 3. p. 34, 265, 287, 316. P. corymbosa, Pall, in herb. Bieb. P. heterophylla, Patrin, in herb. D. C. P. ramosa, Wormskiold, in herb. D. C. P. Labradorica, Houtt. pfl. syst. 8. p. 39. t. 57. C—Gmel. sib. 3. p. 203. no. 15. t. 43. Stem downy at top. Lower leaves similar to those of P. *palustris,* but becoming gradually entire as they ascend. Corollas size of those of *P. palustris,* yellow, fulvous, spotted with purple, or altogether purple. Two of the filaments bearded. Capsule lanceolate, obliquely acuminated. The Labrador, Kamtschatka, and Greenland plants have pure yellow flowers.

Eyebright-like Lousewort. Fl. ? Clt. 1816. PL | to 1 foot.

52 P. NASUTA (Bieb. ex Stev. mon. p. 43. t. 15. f. 1.) stem or scape naked, or furnished with 1 leaf; leaves bipinnatifid: segments linear, serrated; calyx downy, 5-cleft; galea of corolla arched, with a very short, bidentate beak. %. H. Native of Kamtschatka and the neighbouring islands. Plant glabrous, with the habit of the preceding. Spike terminal, ovate, dense; lower bracteas like the leaves: upper one ovate, hairy. Corollas purple, size of those *of P. palustris.* Filaments all glabrous.

Beaked-flowered Lousewort. PI. § foot.

53 P. SUDETICA (Willd. spec. 3, p. 209. Stev. mon. p. 44. t. 15. f. 2.) stems simple; leaves pinnatifid, with lanceolate, serrated segments; calyx 5-cleft: segment entire, or finely serrulated; galea of corolla convex, obtuse, bidentate. %. H. Native of Savoy; Siberia, on the sea-shore, about the mouth of the river Lena; Kamtschatka, &c. Richards, in Frankl. journ. ed. 2d. append. 25. P. hirsuta, Hsenke, sud. p. 86. ? P. incarnata, Krok. siles., no. 984. P. comosa, Mattuschk. siles. no. 600. Stem downy under the spike. Filaments all glabrous. Corollas purple. The Siberian plant has the calyx more densely woolly than that from Savoy; and the colour of the flowers is purple; this is *P. serotina,* Adams. There is also a variety from the Lena, *(P. Stevenii,* Adams,) which has the corolla yellow, with a purple helmet.

Savoy Lousewort. PI. \ to § foot.

54 P. SYLVATICA (Lin. spec. 845.) stem branched at the base; leaves pinnate; leaflets ovate, deeply toothed; spikes few-flowered; calyx glabrous, 5-toothed, inflated in the fructiferous state; galea of corolla very blunt, bidentate. ©. H. Native of Europe and Siberia, in wet marshes and heaths, also in woods. Smith, engl. bot. t. 400. Fl. dan. t. *225.*—Petiv. brit. t. 36. f. 4. P. minor, Riv. mon. t. 92. f. 2. Aletorolophus III. Clus. 2. p. 211. f. 1.—Gmel. sib. 3. p. 203. no. 13. Habit of P. *palustris,* but differs in the want of the teeth on the sides of the galea of the corolla. Two of the filaments bearded at top. Capsule inclosed, oblique, mucronate. Corollas purple. Four of the calycine teeth are said to be crested. The expressed juice of the herb, or a decoction, has been used with advantage as an injection in sinous ulcers. The plant is said to be injurious *to* sheep which feed upon it.

Wood Lousewort. Fl. June. Britain. PI. J to 2 feet.

55 P. FLAVA (Pall. itin. 3. append, no. 97. t. R. f. 1. Stev. mon. p. 45. Ledeb. fl. ross. alt. ill. t. 439.) stem simple, pubescent'; leaves fleshy, deeply pinnatifid, with distant, oblong, coarsely and doubly toothed segments; calyx woolly, 5-toothed: teeth serrated, shorter than the foliaceous bracteas; galea of corolla obtuse, bidentate; filaments all glabrous. ^. H. Native of D*huria, in gravelly places at the river Onon-Borsa and of Altaia, in grassy places. P. sulphurea, Fisch. itin. 230, 321. Corolla like that of P. gyrosa, Sibth. et Smith, yellow, striped with red. Galea very convex. What is P. flava, Georgi. ?

Yellow-dowered Lousewort. PI. 1 *toot.*

56 P. COMOSA (Lin. spec. 847. Stev. mon. p. 46. t. 54.) root fascicled; stem simple, downy; leaves; pinnate, leaflets pinnatifid and toothed; calyx 5-toothed, only the entire bracteas; galea of corolla obtuse, bidenta to Calabria. of the Pyrenees, alps of France, and Italy, even Native throughout the Russian empire, in tieias, Bieb. fl. cane. no. 1195. Pall. itin. 1. p. 148. t. 3. All. ped. no. 229. t. 4. f. 1. Steph. con. mosc. spec. 50. t. 11. f. 1. P. tuberosa, Pall. itm. p. foliosa, itin. 2. p. 211. P. bulbosa, Pall. itin. 2. p. jnlbrjcata, Pall. itin. 3. p. 510. P. conica laciniosa, Pyr. Vill. daup"- and frondosa, Pall, in herb. Bieb. P. tuberosa? with a fig. 2. p. 427.—Alectorolophos, alp. I. Clus. var. 21". The flowers, The plant varies much in the leaves and colour of and in downiness. Segments of the calyx usually more or less rolla cream-coloured. Two of the filaments are obliquely bearded. Capsule shorter than the calyx, ovate, mucronate. Spike short, dense.

Var. |3; corolla white, or flesh-coloured. p. tana, I. cetifdlia, Adams, mem. nat. scrut. mosc. 5. p. incarnata, Pall. itin. 2. p. 404.

Var.y; corolla purple. 1/. H. P. ^ "lata ^parago^ spec. *3.* p. 218. D. C. fl. fir. 3. no. 2440. *V. I* pl. Lapeyr. ex D. C. 1. c. clt. 1775.

2u/<ed-spiked Lousewort. Fl. July, Aug. \ to 2 feet.

57 P. ALTAW (Steph. mon. p. 48. 1.14. A. ross. ill. t. 442. fl. alt. 2. p. 436.) stem "P1«' ted leaflets-pinnate, with ovate, bluntish, coarsely crenate-ser lobes; upper cauline leaves deeply pinnatifid, with serrulatea most ones linear, crenated; spike loose, elongate, canescent, aceous, cylindrical, obsoletely and bluntly S-tooth spotted about eq.,al in length to the pinnatifid bracteas; two of the filaments are bearded. and in Corolla yei- of Altaia, in grassy places at the river Kirghisean Steppe. Stem spotted with purple-low; galea furnished with very short teeth.

Altaian Lousewort. Fl. July. PI. 1 to 2 feet.

58 P. RUMENS (Steph. in Willd. spec. 3. p. fl. ross. alt. ill. t. 435. fl. alt. 2. p. 435.) stem ish, pilose; leaves lanceolate, bipinnate: segm unequally brous; spike leafy; calyx foliaceous, cylmO. ri gerrated; 5-toothed: teeth and bracteas foliaceous, Na<> teeth of galea drawn out into thickish beaks. of Siberia and Altaia, in marshes at the rivei places. Ursul. P. incarnata, Pall. itin. 2 & 3, ". J. 210. comosa, var. *y,* Steph. mon. p. 48—Gmel. sib. 81—Amm. ruth. p. 32. no. 41. Bracteas bearded-the calyx. Corolla purple. Two of the filam Capsule twice as long as the calyx.

Reddish-flowered Lousewort. PI. i to 1 foot.

59 P. ACHILLEAEFOLIA (Steph. in W.Hd. spec. deb. fl. ross. alt. ill. t. 446.) plant canescent innatifid; *#f-* simple; leaves pinnate: leaflets distant, deeply foliaceous ments deeply toothed: spike dense, elongated, cylindrical, acutely 5-toothed, about equal in the filaments, oreaceous, deeply toothed bracteas; two of the filaments bearded. %.H. Native of Altaia, on dry ground of Caucasus. Tscharysch, Kurtschum, and Tschuja; and plant at comosa, var. *(3,* Stev. mon. p. 47. et **o.*

first canescent, but at length becoming glabrous. Spikes naked, crowded pale yellow, or white ; galea furnished with short teeth. Capsule ovate-lanceolate, acuminated.

Hair-foil-leaved Lousewort. PL 1 to 1 ½ foot.

60 P. LASIOSTACHYS (Bunge, in Ledeb". fl. alt. ross. ill. t. 440. n. alt. 2. p. 4?40) stem downy ; leaves pinnate : leaflets dense, linear, pinnatifid ; spike short, dense, leafy ; calyx membranous, funnel-shaped, acutely 5-toothed, densely woolly, shorter than the bracte^ Corolla ringent, pale yellow, hardly twice the length of the calyx, and serrulated at top ; filaments all glabrous. *%.* H. Native of Altaia, in marshes on the tops of the mountains at the river Tschuja, near the mouth of the river Tschelowiah. Root fascicled. Branches and calyxes clothed with yellowish down. Style less exserted than in *P. flavescens,* but that has no teeth at the top of the galea.

Yellow-spiked Lousewort. FL July. PL \ to \ foot.

61 P. ARCTICA (R. Br. in Frankl. journ. append, p. 742.) stem ascending, pubescent, woolly ; leaves pinnatifid : lobes subovate, deeply cut, glabrous in the adult state; petioles of cauline leaves dilated; calyx woolly, 5-cleft; galea obtuse, truncate, longer filaments hairy. *%.* H. Native of Melville Island, Arctic America, on the tops of the mountains, and allied to *P. sudetica.*

Arctic Lousewort. PL \ foot.

62 P. LANGSDORFII (Fisch. in Stev. mon. p. 49. t. 9. f. 2.) stem simple, woolly ; leaves pinnatifid : segments more or less cut: the uppermost leaves dilated ; calyx 5-cleft, 4 times shorter than the galea obtuse, truncate. *%.* H. Native of Arctic Siberia, about the mouth of the river Lena; Kamtschatka ; and other parts of Russian America and the Aleutian Islands. **Stem hairy, or woolly at top.** Spike more or less dense, leafy. Corolla purple. Filaments all more or less ciliated. Capsule a little longer than the calyx, oblique, mucronate.

Var. β. calyx woolly. *If.* H. P. alopecuroides, Adams, mss. in Pall. in Bieb. herb. Willd. herb. no. 11310. Cham. *Lanata* Linnæus, 2. p. *583.* Perhaps a species.

63 P. HIRSUTA (Lin. spec. p. 848. Stev. mon. p. 51.) stem simple, hairy ; leaves pinnatifid, with lanceolate, bluntly toothed segments ; cauline leaves dilated into foliaceous petioles ; corolla twice as long as the calyx ; galea very blunt. Native of Lapland; and of Siberia, at the South' ?" **' Native of Lapland; and of Siberia, at the river Lena. Pall. itin. 3. p. 34. Wahl. fl. lapp. no. 310. *Arctica,* Adams, mss.—Lin. fl. lapp. 245. t. 4. f. 3. Petiolus of cauline leaves stem-clasping. Segments of the leaves more or less cut. Calyx often woolly. Filaments all glabrous. Capsule longer than the calyx, oblique, mucronate.

Hairy Lousewort. PI. 1 foot. ?

64 P. FLAMMEA (Lin. spec. 846. Stev. mon. p. 51.) stem simple ; leaves pinnate: leaflets roundish, imbricated backwards, blunt, fourfold crenate-cleft, glabrous ; galea of corolla very obtuse. Segments of the lower lip linear. *%.* H. Native of Siberia, and Greenland. **Willd. spec. 3. p. 215,** most of the synonymes. Wahl. fl. lapp. no. 310. *β.* Lin. fl. lapp. 244. t. 4. f. 2. Filaments all glabrous. Corolla pale red.

Flame-coloured-flowered Lousewort. FL May, June. Clt.? 1 foot.

65 P. WAHLENBERGII (Wahl. fl. helv. p. 118.) dwarf; leaves VOL. IV. 4 L

spike oblong ; calyx 5-cleft, hairy, crested a little ; galea straight, obtuse, angular in front. *If.* H. Native of Siberia, towards the mouth of the river Lena, Altaia, Kamtschatka, Aleutian Islands: Lapland, Switzerland, Denmark, Carpathian mountains, &c. ; on the Himalaya at Sholma, and towards Cashmere, Royle. Royle, ill. himal. t. 72. f. 1. P. flammea, of German and Swiss authors. — Fl. dan. t. 30. P. filicifolia, Adams, mss.—Hall. helv. no. 315. t. 8. f. 3. Root fasciculately tuberous. Petioles of lower cauline leaves slender: of the upper ones dilated at the base, and supporting the flowers. Apex of galea reflexed. Two of the filaments bearded. Corolla party-coloured, ? red and yellow, or pure yellow.

Party-coloured-flowered Lousewort. FL June, Aug. Clt. 1819. PL I to 1 foot.

66 P. ZEYLANICA (Benth. scroph. ind. p. 54.) erect, simple; leaves oblong, obtuse, cartilaginous, doubly crenated, clothed with scurfy down beneath ; raceme elongated, loose ; calyx cleft on one side, and 5-toothed on the other, crested ; galea straight, obtuse, rather angular in front.—Native of Ceylon, Macrae.

Ceylon Lousewort. PL ?

67 P. ELATA (Willd. spec. 3. p. 210. Stev. mon. p. *53.* t. 11. f. 2.) glabrous; stem simple ; leaves pinnatifid, with lanceolate, serrulated segments ; spike loose, elongated ; calyx ovate, glabrous, with 5 short teeth ; galea of corolla obtuse, obsoletely toothed, glabrous. *If.* H. Native of Siberia, at the Oby ; about Kranojarsk ; and about Smejof, Patrin. P. punicea, Pall.—Gmel. sib. 3. p. 211. no. 22, exclusive of the synonymes. Root fascicled. Corolla purple. Two longer filaments bearded. Capsule mucronate, rather oblique.

Tall Lousewort. PL H to 2 feet.

68 P. ORIZABE (Schlecht. et Cham, in Linnaea, 5. p. 103.) stem erect, simple ; leaves pectinately pinnatifid, with lobately pinnatifid segments, glabrous ; calyx 5-toothed : teeth lobulate ; galea short, rostrately truncate.—Native of Mexico, on Mount Orizaba. Radical leaves 3-4 inches. Corolla purple: lower lip trifid. Allied to P. *elata.*

Orizaba Lousewort. PL \ to \\ foot.

69 P. ROSEA (Jacq. icon. rar. 1. t. 115. Wulf. in Jacq. misc. 2. p. *57.)* stem simple ; leaves pinnate : leaflets linear, pinnatifid ; calyx hairy, tubular, unequally 5-toothed, or 5-cleft; galea of corolla obtuse. *If.* H. Native of the Alps, as of Carinthia, Italy, and France ; also of Siberia. P. hirsuta, All. ped. *227.* t. 341. spec. 52. t. 12. f. 1. Stems naked, or few-leaved. Flowers few, purple. Two of the filaments bearded. Capsule longer than the calyx, obliquely mucronate.

Rose-coloured-flowered Lousewort. PL \ foot.

70 P. RECUTITA (Lin. spec. p. 846.) stem simple ; leaves pinnatifid, with deeply toothed segments ; spike compact, leafy; calyx glabrous, about equally 5-toothed; galea of corolla very blunt. *%.* H. Native of the alps of Middle Europe, as of Switzerland, Italy, Austria, &c. ; and on the confines of Russia. Jacq. austr. 3. t. 258. P. obsoleta, Crantz. austr. p. 316, —Hall. helv. no. 316. t. 8. f. 2. Habit singular, from the leaves being collected under the spike. Calyx usually glabrous, but sometimes hairy. Corolla purple. Two of the filaments bearded. Capsule mucronate, very oblique.

Surrounded-spiked Lousewort. Fl. July, Aug. Clt. 1787. PL 1 to 1½ foot.

71 P. WILHELMSIANA (Stev. mon. p. *55.* t. 16. Bieb. fl. taur. 3. p. 412.) stem simple; leaves pinnate: segments or leaflets ovate, pinnatifid; spike dense ; calyx ovate, woolly, 5-cleft, with linear, elongated segments ; galea of corolla very short. 1/. H. Native of Caucasus, on Mount Beschtau, and about Nartzana. Habit of *P. foliosa.* Root yellow, divided into oblong tubers. Stem downy, with few leaves, or even naked

0 the spike. Radical leaves similar to those of *Spiraea Jill-éndula.* Bracteas large, foliaceous. Corolla cream-coloured, laments all bearded. Capsule length of calyx.

Wilhelms's Lousewort. PI. ^ to l£ foot.

73 P. FOLIOSA (Lin. syst. 552. mant. 86. Stev. mon. p. 56.) tem simple ; leaves pinnate : leaflets pinnatifid, with lanceolate, nequally toothed segments; spike dense; calyx obliquely 5-tothed; galea of corolla very blunt. %. H. Native of !urope, as of Switzerland, Hungary, Daupbiny, Italy, even to ie Crimea. Jacq. austr. 2. t. 139. P. comosa, Scop. cam. *0.* 765.—Hall. helv. no. 317- t. 9. f. 3. P. sumana, Poll. pi. er. 16. Stem short, and almost naked, or tall and leafy, alyx glabrous, or hairy. Corolla cream-coloured ; galea owny, or glabrous.

Leafy Lousewort. FL July. Clt. 1786. PI. £ to 3 feet.

73 P. CONDENSATA (Bieb. fl. taur. 2. p. 73. nor 1193.) stem mple ; leaves pinnate : leaflets pinnatifid, with lanceolate, uneually toothed segments ; calyx woolly, tubular, with a straight, -toothed mouth; galea of corolla very blunt. %. H. Nave of Caucasus, in humid, alpine meadows ; Iberia, above schala ; and of Hyrcania. This is a very showy species; the saves and flowers as they ascend give the stem a pyramidal ppearance. Corolla exactly of *P.folibsa.* Filaments all beard-*1,* more or less.

Dense Lousewort. PI. 1 foot. ?

74 P. TRISTIS (Lin. spec. 846. Stev. mon. p. 57, t. 10. f. .) stem simple ; leaves pinnatifid, with short, obtuse, sharply id doubly denticulated segments; spike dense; calyx 5-cleft; alea of corolla furnished with a short mucrone, villous on the Iges. 0, H. Native of the Altaian mountains, in Dauria, id beyond the Lena, &c.; also of Kamtschatka. Pall. itin. 2. . 566, 8. p. 444. P. maerocarpos, Pall. herb.—Gmel. sib. 3. . 21 a. no. 23. Plant trailing. Corolla yellow. Filaments labrous. Capsule hardly exceeding the calyx.

tW-flowered Lousewort. PI. $ to 1 foot.

75 P. ACAU'LIS (Wulf. in Jacq. coll. 1. p. 207. t. 14.) stem-IKS ; leaves pinnate: leaflets ovate, obtuse, toothed; scapes or eduacles 1-flowered, shorter than the leaves; calyx 5-cleft, •itli toothed segments ; galea obtuse, with a villous margin. (.. H. Native of the alps of Carmola and Carinthia.—Scop. arii. no. 761, t. 31. Flowers showy, very unlike those of ther species. Corolla whitish. Filaments all villous at the ase, or only 2 of them.

Slemless Lousewort. PI. dwarf.

Cult. All the species of *Pedlcularis* are extremely shy of cultivation. Peat soil and a moist situation suit the generality of be species. All foreign species require the protection of a rame, or other covering in winter, and for this purpose they ad better be grown in pots. Tragus affirms, and others take *1* from him, tl»t these plants in pastures breed lice on animals hat feed on them.' The truth, however, seems to be, that they ndicate a very bad pasture, and the want of proper food may occasion the cattle to be in bad condition, and to breed vermin,

IV. MELAMPY^RUM *(MfXafiinpov,* ofTheojjhmtBSJ from tAnc, *melas,* black ; and Trvpoj, *pyros,* wheat,") Tourn, inst. t. 8. Lin. gen. no. 742, Schreb. gen. no. 999. Juss, gen. p. 01. ed, Usteri. p. 113, Gsertn. fruct. I. p, 244. t. 53. Lam. 1. t, 518. Schukhr, handb. t. 170. Nutt. gen. aroer. 2. p. 58. led. fl. alt. 2. p. 4S8. ;

LJN. SYST. *Dtdynaraia, Angiospermia.* Calyx tubular, biia-iate, 4-cleft. Corolla tubular, bilabiate : upper lip galeate, ompressed, with the margin folded back : lower lip grooved, •ifid, nearly equal. Stamens 4, didynamous, inclosed ; anthers blon'g; cells acuminated. Capsule 2-celled, obliquely acuminated, opening on one side; cells 2-seeded, *ex* N<itt., 1-seeded, ex Lin. Seeds cartilaginous, cylindrical oblong, or « ^ £ j ^ Annual plants. .Leaves opposite, lanceolate-linear, entire-ers opposite, usually secund, forming terminal racemes: more or less pinnatifid.

1 M. CRISTATUM (Lin. spec. 842.) spike bracteas cordate, plicate, denticulated, imbricate, color and lycine segments linear, acute. 0. H. Native ot si middle of Europe, and Siberia, in meadows and woods., in some parts of Britain. Smith, engl. bot. t. 41. 1104.—Riv. mon. t. 81. f. 1.—Plukn. phyt. t. 9». r.-•• hist. sect. 11. t. 23. f. 32.—Leaves linear-lanceolate entire. Flowers reddish, yellow, and white. constantly yellow. According to Relham the galea is purp white, with a yellow edge. Corolla gaping.

Crested Cow-wheat. Fl. July, Aug. England,

* M. ARVE'NSE (Lin. spec. 842.) spikes conical, loose , teas ovate, setaceously-tootlied, coloured; teeth ot caiy brous, lanceolate-linear, acuminated ; corollas closed. Native of the South of Europe, in fields of wheat; in but rare, particularly in Norfolk. Smith, engl- Jjll.—Riv. mon. t. 80.—Sabb. hort. rom. 3. t. 8.— sect. 11. t. 23. f. 1. Triticum vaccinium, Dod. pempt. 2. Lob. icon. 1.1. 37. Plant slightly downy- lanceolate. Bracteas purple, entire at top. Corolla dusky purple. The seeds when ground with corn give ness and greyish cast to the bread, but do not render it some.

Far. j3, *argyrocommm* (Fisch.) Native of the alpsne of Caucasus. Bracteas white.

Corn-jield Cow-wheat. Fl. June, July. England

J) M. BA&BVTUM (Waidst. et Kit. ex Willd. spec. 3 spikes conical, loose; bracteas setaceously tootned, calyx bearded; corolla gaping. 0. H. of Hungary, in fields. This species differs from *M-* in to which it is nearly allied, in the the teeth of the calyx being furnished with long hairs, in the corolla being gaping, the upper lip more the edges, and the corolla totally yellow.

Bearded-edyxeA Cow-wheat. PL I to U foot.

4 M. NEMORO'SUM (Lin. spec. 843.) bracteas cordate-lanceolate, toothed : upper sterile; calyxes woolly, lanceolate, or ovate acumina H. Native of Europe, in woods ; as of Uoland and Denmark, Switzerland, Carniola, Austria, Silesia, ana phiny. Fl. dan. t. 305. M. sylvaticum, —Barrel, icon. t. 769. f. 2. Stem 4 cornered. Lejm- lanceolate, acuminated, or somewhat sagittate, curei at the base, rough, hairy beneath, with hispid edg teas bluish violet, jagged, or toothed at the greenish yellow ; throat deeper yellow;- the tube p« Calyx coloured, woolly. Anthers bearded at the o is the most showy of the species.

Grove Cow-wheat. Fl. July, Aug. Clt. .

5 M. PRATK'NSE (Lin. spec. 843.) flowers corollas gaping; leaves long-lanceolate : floral pinnatifidly cut; calycine segments linear, a cur Native of the North of Europe, in dry fields ana tiful in many parts of Britain, in like situations, bot. t. 113.—Hail. helv. no. 308.—Besl. eyst. t. Mor. hist. sect. 11. t. 2S. f. 3.—Besl. eyst. as«v. Crat^ogonum album, Gerard, herb. 84. emac. *J>-* yellow 5 throat orange coloured.

foot. Cow-wheat. Fl. July, Aug. Britain. PL 1 to 1½

6 M. SYLVA'TICUM (Lin. spec. 843.) flowers axillary, secund; corollas gaping; segments ... leaves long-lanceolate, quite entire; calycine of Europe linear lanceolate, acute. *Q.* H. Native of the north Europe; in woods; and on the mountains in the south of 804.—Hall. ... ^nglarid Fl. dan. t. 145. Smith, engl. bot. t. *?citensp* ... ^bis species is said to differ from *M.* Jir^, and ... t corollas being one half shorter, with a gaping that speci... not with a white tube as *in*

wood Cow-wheat. Fl. July, Aug. Britain. PI. 1 to U foot, gaping ... EA^E (Lam. dict. 4. P. *W.*) flowers axillary; corolla Mother... leaves linear, quite entire: floral ones lanceolate, lied b... VIA rl. Native from Canada to Carolina, in woods, particularly on the mountains. M. Americanum, Michx. ... aubbetrocinal. P« 16. Habit of *Euphrasia linifolia.* Branches Superior... pale yellow, with a tinge of purple: Lower lip obtuse, with a villous margin,

8 M. heaved Cow-wheat. PI. 1 foot.

We know nothing of this plant but the name. ©. H. Native On the Delaware.

Bread-leaved Cow-wheat. PI, 1 foot. ?

Cult. The plants being annual, the seeds of them may be sown in the open ground. They are, however, very shy of Cultivation.

V. PARENTUCE'LLIA (named in honour of Th. Parentucelli, of Sarzana in Liguria, founder of the botanic garden at Rome.) Viv. fl. libyc. p. 31. t. 21. f. 2.

Gen. Syst. *Adynamia, Angiospermia.* **Calyx tubular, inflated, inconspicuously** ^-toothed; teeth linear-lanceolate, unequal, reset with glandular hairs. Corolla with a slender tube, and a bilabiate ... Upper ... ovate, concave, galeate; lower linear, ... towards the throat) channelled, 3-lobed at top. Stamens ... ymous, ... from the base of the upper lip; anthers globose, ... 2-celled, ... Stigma ... truncate. Capsule somewhat ... valves, ... dissepiment incomplete from the ... ftinicle ... seeds inserted in parietal placentas, hanging by ... 5-7-... hairy, annual, erect herb. Leaves opposite, ... ovate, acute, deeply serrated: ... ones ovate-lanceolate, dentately cut: upper ... allied to *Pedicularis.*

1 P. FLORIDU'SSIMA (Viv. fl. libyc. p. 32.) ©. H. Native of Libya, on hills and ... the seaside. Hairs on the calyxes and corollas ... glandular. Flowers solitary, axillary ... spicate ... Flowers solitary, axillary or racemose; pedicels very short.

Cut. Jagvered Parentucellia. PI. J to 1 foot.

For culture and propagation see *Melampyrum,* p. *626.*

VI. TRIPHYSA'RIA (from *rpetg rpia, treis tria,* three; and *phyga,* a bladder; the 3 segments of the lower lip of the ... are saccate) Fish, et Meyer, cat. sem. hort. petrop. ... Fisch. et Mey. *Adynamia, Angiospermia.* Calyx tubular, 4-... late. Inapersonate; tube filiform; superior lip undivided, ... partite; segments saccate. Stamens 4, ... 2-celled, ... Stigma ... Seeds ... oblong, wingless; testa scrobiculate, closely ... ring to the ... cut.—An annual herb, with the habit of *Onco-*

1 T. VERSI'COLOR (Fisch. et Meyer, l. c.) ©. H. Native of New California, about Port Bodega. Leaves elongated, dilated at the base, half stem-clasping, pinnately lobed at apex, cut, scattered; lowers ones usually opposite; floral ones scarcely longer than the calyx. Flowers axillary, solitary, sessile. Corolla white, at length rose-coloured; tube flliform, twice as long as the calyx; upper lip straight, subulate, with inflexed margins; lower one large, trifid; segments obovate, each apiculated by a small, erect segment, and furnished with a longitudinal chink in the throat.

***Party-coloured-fiowered* Triphysaria. PI. ?**

Cult. For culture and propagation see *Melampyrum,* p. *G26.*

***Tribe* II.**

CYMBARIE'iE (this tribe only contains the genus *Cymbaria.)* D. Don, in edinb. phil. journ. vol. 37. July, 1835. p. 112. Embryo rather foliaceous, almost the length of the albumen.

VII. CYMBA'RIA (from *Kvfiftrj, cymbe,* a boat; in reference to the boat-shaped fruit.) Lin. gen. 751. Schreb. gen. no. 1008. Amm. ruth. 1. t. 1. f. *2.* Juss. gen. p. 119. ed. Usteri, p. 134. Gsertn. fruct. 1. p. 252. t. *53.*

LIN. SYST. *Didynamia, Angiospermia.* Calyx 10-parted, unequal, with linear segments. Corolla with a ventricose tube, and a bilabiate limb: upper lip arched, 2-parted: lower one *3*-lobed, obtuse; palate prominent. Stamens 4, didynamous; anthers 2-cleft, prominent. Stigma obtuse. Capsule cordate, 2-valved; placenta central, tetragonal, with the angles membranously winged, therefore the capsule is falsely 4-celled, but 1-celled, ex *Lin.* Seeds angular, smooth, compressed.—A plant with the habit of *Antirrhinum.* Stem a little branched; branches opposite, sterile. Leaves opposite. Flowers few, axillary, usually solitary, nearly sessile, large, yellow.

1 C. DAU'RICA (Lin. spec. 861. mant. 417.) leaves lanceolate; calyx 10-toothed; upper lip of corolla 2-parted, reflexed. %. H. Native of Dauria, on the mountains, in exposed, stony places.—Amm. ruth. 47. t. 1. f. 2.—Gmel. sib. 3. p. 198. no. 8. Plant hoary. Seeds compressed, with an irregular, membranous edge.

Daurian Cymbaria. Fl. June, July. Clt. 1796. PL 1 foot.

2 C. ? BORYSTHE'NICA (Pall, ex Spreng. syst. 2. p. 815.) leaves linear; calyx 5-cleft; upper lip of corolla entire, erect. 1(.H. Native of the province of Cherson, between Borysthene and Hypanim.

Borysthene Cymbaria. PI. 1 foot. ?

Cult. For culture and propagation see *Pediculàris,* p. 626.

ORDER CLXXI. OROBA'NCHEJE (this order contains plants agreeing with *Orobdnche* in the characters given below.) Juss. ann. mus. 12. p. 445.—Rich.—Ledeb. fl. alt. 2. p. 450. D. Don, in edinb. phil. journ. vol. 37. p. 113. July, 1835.—Pediculares, sect. III. Juss. gen. p. 101. ed. Usteri, 113.

Calyx divided, permanent. Corolla tubular, hypogynous, irregular, permanent, imbricate in aestivation. Stamens 4, didynamous, all fertile; anthers usually spurred at the base. Ovarium 1-celled; stigma 2-lobed, or undivided. Capsule 1-celled, 2-valved, many-seeded. Seeds inserted into narrow, parietal placentas, which rise from the margins of the valves; testa very thin, membranous, reticulated by nearly square areolae. Albumen copious, cartilaginous. Embryo inverted in the top of the albumen, excentric, minfite, nearly globose, usually undivided.

Radicle superior, remote from the umbilicus.—Usually parasitical, leafless, rather fleshy, rufescent, scaly herbs. Flowers terminal, solitary, spicate, or racemose.

This is a very natural family, well distinguished from the preceding by their permanent corolla, unilocular ovarium, centrifugal embryo, and peculiar economy, in being for the most part parasitical herbs, destitute of proper leaves, and of the green colour common to other plants. The seeds are attached to the narrow, depressed placentae, formed by the united edges of the valves. The embryo is placed in the ventral side of the seed, and at the opposite extremity from the hilum, resembling a minute, nearly globular homogeneous mass, and is, therefore, probably devoid of true cotyledons. In all these respects the genera *Obolaria* and *Tozzia* seem to agree, but differ in having proper leaves, and in being terrestrial.

Synopsis of the genera.

TRIBE I.

OROBANCHIE *JE.* Parasitical, leafless herbs.

1 OROBA'NCHE. Calyx bractless, somewhat 1-2-parted.

2 PHELIPJE'A. Calyx tubular, bibracteate, 4-5-toothed, or 4-5-cleft.

3 ANOPLON. Calyx bractless, 5-cleft, sub-bilabiate.

4 BOSCHNIA'KIA. All as in *Orobdnche,* but the calyx is truncate, and unequally 5-toothed ; the capsule opens laterally, the stigma sub-bilabiate, and terminated by a stigmatose margin.

5 CANOPHOLIS. Calyx ventricose, 5-parted, bibracteate. Corolla incurved : upper lip entire : lower one bifid.

6 EPIPHE^GUS. Calyx short, 5-toothed, bractless.

7 LATHR/E^A. Calyx bibracteate, campanulate, 4-cleft.

8 HYOBA'NCHE. Calyx tubular, 7-cleft, unequal, bibracteate.

9 ALE'CTRA. Calyx bilabiate, bractless ? upper lip 2-cleft; lower one trifid.

10 -/EGINE^TIA. Calyx spathaceous. Capsule many-celled.

11 AMBLA'TUM. Calyx campanulate, 4-cleft. Both lips of corolla entire.

TRIBE II.

OBOLARIE'JE. Terrestrial, leafy plants.

12 OBOLA'RIA. Calyx 5-cleft, bibracteate. Corolla campanulate.

13 TOZZIA. Caylx 5-toothed, bractless. ? Corolla ringent, tubular. Capsule 1-seeded by abortion. ?

Tribe I.

OROBANCHIE'^E (this tribe contains plants agreeing with the genus *Orobdnche.)* Parasitical, leafless, fleshy, scaly plants.

1 OROBA'NCHE (of Pliny, *Opoftav^r,* of Theophrastus and Dioscorides ; from *opofioq, orobos,* a vetch ; and ay^w, *ancho,* to strangle ; because it is supposed to strangle and kill the plants on which it grows.) Tourn. inst. p. 176. t. 81. Lin. gen. no. 779. Schreb. gen. no. 1045. Juss. gen. p. 101. ed. Usteri, p. 113. Gsertn. fruct. 3. p. 42. t. 185. f. 4. Lam. ill. t. 551. Wallr. orob. sect. 1. Osproleon. Led. fl. alt. 2. p. 450.—.Aphyllon, Michel, gen. t. *25.*

LIN. SYST. *Didynamia, Angiosptrmia.* Calyx bractless, 1-2-parted ; sepals distinct, or combined on one side at the base. Corolla tubular, ringent: upper lip 2-lobed: lower one 3-lobed. Stamens 4, didynamous. Stigma capitate, emarginately trifid. Ovarium glandular at the base. Capsule 1-celled, 2-valves dehiscing laterally, but joined at the base, and ap centas parietal, 2 in each valve.—Parasitical, fleshy, simple, rarely branched, scaly, erect herbs. Flowers fleshy erect, solitary, in the axils of the floral scales. Here is a gland that girds the ovarium. Filaments usually Dairy the base. Anthers glabrous ; cells mucronate at the Da

SECT. I. Sepals free, or combined in front at the lower par open behind.

§ 1. *Upper lip of corolla emarginate, or retuse, never*

* *Corolla dilated, sub-campanulate, never narrow, or cylw*

1 O. CARYOPHYLLA^CEA (Smith, in Lin. trans. 4. p. fl. alt. 2. p. 452.) hairy, or pubescent; floral scales lanc equal in length to the flowers ; sepals bifid : lobes linear- late, equal; corolla sub-campanulate, straightish : lower little snorter than the upper : lobes equal, obtuse, curled ; filaments hairy at the base, glandular, as well style at the apex; stigma emarginate. %. H. Siberia ; Italy ; and about Lauterine in the Palatinate; also Himalaya at Pungee. Wallr. orob. p. 36. Bieb. taur. 0. major, Poll. pal. no. 600. Vill. dauph. 2. p. 407. topog. beytr. 2. p. 212. Pall. ind. taur. Hablitz, taur. Desf. fl. atl.' 2. p. *58.* Orobanche major caryophyllum lens, Bauh. pinn. p. 87. Tourn. inst. 176. t. 81. Riv. 1. t. 89.—Gmel. sib. 3. p. 214. no. *28,* exclusive of synonymes. Plant yellowish, or rufescent, as well as the which are tipped with purple. Upper lip of corolla large? ginate. Stigma brown, or purplish. The plant smell of cloves when fresh, hence the specific name. is said to be scaly.

Clove-scented Broom-Rape. PI. 1 to 1| foot.

2 O. CRUE'NTA (Bertol. amcen. ital. p. 89.) pubescent lanceolate, acuminated ; spikes loose at bottom and top; floral scales shorter than the flowers ; upper lip emarginate ; segments of the lower lip fimbriately curle sides of filaments very hairy, as well as the top and style ; stigma yellow. %. H. Native of Italy. phyllata, Viv. ann. bot. 1. p. 175. Plant, as well as n reddish.

Blood-red Broom-Rape. PI. 1 to \\ foot.

3 O. MA^JOR (Lin. spec. 882, exclusive of the syn. but D. C.) hairy; bulb middle sized, scaly ; scales lanceolate, adpressed ; sepals bifid ; corolla inflated, a little curved ; lip blunt, entire; lobes of lower lip equal, acute, denti filaments glabrous at bottom, and hairy at top; pubescent at top, yellow ; stigma 2-lobed. %. parts Europe, growing on furze or broom; plentiful m of Britain. Sutton, in Lin. trans. 4. p. 175. Curt. 44. Smith, engl. bot. 421. O. barbata, Brot. fl. l O. Ulicis EuropaeM, Vauch.—Petiv. brit. t. *69.* dusky yellow, or tinged with purple. Corollas o rust-colour, tinged with purple, yellowish, or P^P^'.

Larger, or Common Broom-Rape. Fl. June, Juiy. PI. 4 to 1J foot.

4"O. RI'GENS (Lois. fl. gall. p. *384.)* scape glawed lanceolate, stiff, downy, imbricated; flowers style and stamens glabrous ; lobes *of* lower acutish; stigma bifid; lobes distant. 1/. H. sica; and of Germany. Lois. D. C. fl. fr. 5. p.

Stiff-scaled Broom-Rape. PI. \ foot. ?

5 O. BmTHYMUM (D. C fl. fr. *3.* p. 490.)

equal; scales lanceolate ; flowers spreading, scattered, glandularly viscid. remote ; calycine segments lanceolate, rarely bifid ; superior lip of corolla lobes Tl i rounded, crenulated : lower one 3-lobed : tive'n Family crenated. stigma 2-lobed, reddish. %. H. Na-

41. Fancied and

5f mountains, on the roots of *Thymus* O. Thymi-serp^lli, Vauch. mon. t. 6. Plant reddish.

Var. inflated ^ *epithymoMes* (Duby. bot. gall. 1. p. 349.) scape rather bent. L CO Jr Olla Veiny ; upper lip 2-lobed; lobes superincum- °n thp Native of Provence, near Brignollis, growing r 00ts of *Th$mus vu/gdris.* O. Thymi-vulgaris, Vauch. mon> p. 5 3.

[Broom-Rape. PI. 1 foot,

thickened ^L" ^Dubt bot* S all# *• p. 349.) scape moderately cine sp6 ^ ^ baSe, Sca^y, sca*es lanceolate, blackish ; calyup per ^ments lanceolate, or irregularly bifid; corolla inflated ; ro undish^ fl rcbe^» sub-emarginate : lower lip 3-lobed : lobes dark red ents inflexed; anthers blackish; stigma 2-lobed, roots of *r>-* ^" Native of France, in gravelly places, on the 7. Sca Uallum *Molluao.* O. Galii Molluginis, Vauch. 1. c. t. Scarlet Flowers purplish.

Italian Broom-Rape. PL 1 foot.

7 O. HEDERAE (Vauch. mon. p. *56.* t. 8.) scape thickened into a spurious scaly bulb ; scales lanceolate, fewer ; bracteas attenuated at the apex, reflexed; upper lip of corolla entire : lower lip 3-lobed : lobes rounded ; calycine segments nearly entire ; Wet stamens approximate : superior ones divaricate ; stigma emarginate, yellowish. %• H. Native of Vascony, parasitical °n ivy,

^8 Broom-Rape. Pj. i foot.

0. CRASSICAULIS (Smith, in Lin. trans. 4. p. 172.) pubescent; scape simple ; floral scales shorter than the flowers ; corolla inflated • lower lip very short, with the segments obcordate, Unequal, . ? ger 1 and curled ; stamens and style beset with 2/ • H. Native near Genoa, in hilly pastures lipi sot a Sese- Corolla size of that of *0. major*; but the upper Ovarium dark or purplish colour, and less fringed and curled, 0. minor in smooth. Stamens rather exserted. It differs from stainens, and the larger inflated corolla, short lower lip, longer hairy style.

Slender Broom.

9 O. CYTISI (Lib y, b0t, galL M9<) Scape PL *l* to *lh* foot- yond the b Scurfy hairs ^ j ^oaleS ovate-oblong, remote, clothed with Corolla ventricose, calycine segments divided into linear segments; entire : lower glandular outside ; upper lip short, nearly Nat*ve of Pro one 3-lobed; stigma deeply divided. %. H. venees, Colosu, and Vasconv. O- fe'tida, Duby, bot. gall. p. *0. *D* C fl fr- 5. p. 392. O. variegata, Wallr. diask. p. °fth sLa' sco Parii> Vauch. mon. p. *37.* This is the largest Cytil \T' Flowers fulvous.

"" Broom.Rape. PL U to 2 feet.

Corolla cylindrical, not campanulate, more or less incurved.

10 O. ^M^o/pH^A (C. A. Meyer, in Led. fl. ross. alt. ill. t. 8S9. fl. a|t ?Vat e-lai)c \ ' P* ^54.) clothed with white wool; floral scales lobes lance°l ate, ec*uallin g the flowers in length; sepals bifid : ro Ua. Hich O-t nearly equal, shorter than the tube of the co- e lob lS l !? curve(l and cylindrical; lips of corolla nearly o tne nts a J o I ^0We r lip obtuse, denticulated, nearly equal; pre adino> s St^e ^r y > stigma sub-bipartite, with very the rivers gmentS- ^' H, Native of AItaia, in Sandy plaCes, Pals fV^. r^y sch and Bekun, and at the mines of Loktewsk. -This is said to differ from *0. ccerulea,* in the deeply cleft; in the shorter tube of corolla, and in being deeper blue ; and in the filaments and style being always hairy.

Sand-loving Broom-Rape. PL } to 1 foot.

11 O. CRINITA (Viv. fl. cors. p. 11.) scape furnished with linear, elongated scales at the base; floral scales linear, acuminated, hairy outside, exceeding the flowers ; corolla 4-cleft, incurved, subcylindrical; lobes rounded, crenately ciliated; filaments and capsule quite glabrous; stigma 2-lobed, recurved. *y..* H. Native of Corsica, near Bonifacio. Flowers fulvous.? Spike elongated, compact, comose by bracteas at top.

Long-haired Broom-Rape. PL ^ to 1 foot.

12 O. SPARSIFLORA (Wallr. sched. crit. 1. p. 310.) pubescent; flowers remote, spicate ; floral scales equal in length to the flowers; corolla hairy; upper lip subemarginate; lobes of the lower lip obovate: middle one the largest: stamens ciliated. %. H. Native of Middle Germany.

Scattered-flowered Broom-Rape. PL \ to 1 foot.

13 O. CERULESCENS (Steph. in. Willd. spec. 3. p. 349.) plant pubescent; scape simple ; lower scales adpressed : upper ones spreading, and clothed with white villi: floral ones ovate, long-acuminated, length of flowers ; spike dense, elongated; •calyx bifid, with bipartite, subulate, unequal segments, nearly the length of the tube of the corolla; genitals glabrous ; upper lip *o£* corolla emarginate. %. H. Native of Siberia, towards the Caspian sea; and of Caucasus, about the river Terek. Bieb. cauc. 2. p. *82.* Spike 3 inches long. Corollas bluish. Floral scales and calyxes white from hairs.

Bluish-flowered Broom-Rape. PL \ to 1 foot.

14 O. MEDICAGINIS (Duby, bot. gall. p. 349.) scape hardly inflated at the base ; lower scales numerous, lanceolate, blackish : floral ones short, and fewer ; calycine segments 2-lobed ; corolla elongated, with a constricted throat; lower lip 3-lobed ; galea subemarginate ; stigma bifid, reflexed, yellowish-red. %. H. Native of France, growing from the roots of *Medicago sativa.* O. Medicaginis sativae, Vaucher, mon. t. 2. Plant yellowish.

Lucern Broom-Rape. PL ^ to 1 foot.

15 M. MINOR (Sutt. in Lin. trans. 4. p. 179. t. 17. f. 1, 2, 3.) hairy; scape thickened at the base, moderately scaly; floral scales lanceolate, pilose; calycine segments sometimes simple and sometimes bifid; corolla arcuately cylindrical ; upper lip rounded and crenulated : lower one trifid, with equal, rounded, crenulated lobes; stamens inserted beyond the base of the corolla, beset with glandular hairs below ; stigma retuse, ex Sutton ; 2-lobed, purplish, with transverse chinks, ex Duby ; anthers blackish; style smooth at top. 3/. Fl. Native of Europe, in fields and pastures, growing from the roots of *Trifblium pratense;* plentiful in some parts of Britain, as in Norfolk, Smith, engl. bot. 422. O. major, Loefl. hisp. no. 35. O. major, /3, Haller, helv. ed. 1. p. 610. ed. 2d. no. 209. O. barbata, Lam. diet. 4. p. 621. O. flore minore, Ray. syn. 288. O. ramdsa, /3, Huds. engl. ed. 2. p. 266. O. trifolii-pratensis, Vauch. mon. t. 5. Plant flesh-coloured. Flowers whitish-yellow, with purple veins, varying to full yellow, finally becoming of a rust-colour or purplish.

Smaller Broom-Rape. FL July, Aug. Britain. PL \ to 1 foot.

16 O. ELATIOR (Sutt. in Lin. trans. 4. p. 178. t. 17. f. 4.) clothed with clammy hairs ; scape nearly equal; scales lanceolate ; flowers remote ; calycine segments bifid, with linear lobes; corolla tubular, cylindrical, recurved, veiny ; limb plicate or fringed ; upper lip emarginate : lower *one* 3-lobed ; stamens beset with hairs below; stigma bifid, obcordate, brownish-yellow ; style smooth above. %. H. Native of Europe, in woods and fields, growing from the roots of *Centaurea scabiosa,* in England, in clover-fields, thickets, and bushy, hilly places, on a gravelly soil. Smith, engl. bor. *5(i8.* Fl. dan. 1334. O.

aura's srtss^s^B^^ftj

i r veins.

Broom-Rape. Fl. July, Aug. Britain. PL l I

17 O. WVI»FU>KA (Walir. *ch<*d. crit. 1. p. 310.) pal scales oarrow, few ; naike few*Sw< 8«d «•* the flowers, which are tubular ; lobe* of corolla quite lc segment of the lower lip ol>o«ate ; stant

•Native of Vk^vnftaror and UvnmaiV., O, mtafit, ViW,

td-^Wft |Bt, to 1 i IM. Rrlib, icon, (thtlar Uair* at

itui largr, 2-lobed. It II- raUM.

§ 2. *Superior lip of corolla bifid.*

ShtHftf Broom-Rajie, M. t foot.

cence; •- •. utxiivitli i lobe *ait* creiwtt'J *t»«i ii •• *it thort,* <iuiar hjiir«(on tin utar. 1/. H. Native of trie North of *he-* •i, on ba»aUic roots; jilcmifnl at Cave-bilt, tu'ar i on die Giant's Causeway; at Staffa, and Kii Hook. *i*\ loud, t, 105. Root rock. "Mif whole pirrnt is of a rusty-purpl i iiettli ra with a powerful scent of honeysn-

d>fiovered 1) room-Rape. PI. i toot. *Par* fi, grati*

21 O, ACAU'US (Roxb. fi. ind. 3. p. Sit.) scspden ; flowern crowds ir head*, which an sessile on the roots; 1-Wwwi side, or divided into 2 unequal corolla j:ig(;^d ; antbera tanul*, eacb imwr gland ; stigma pel- tate> .7, « ladiw, parasitic*] on d ia the houuiic gW«n *m* I the b*M or* l or mor, ids.

Pi. im

22 O- CON^NSATA (Mor. eleuch. sard, fac, ->d. ex Linn^^ .'>. p, &4.) MBSpes viilou*; st-aies lanceolate, a< bipartite, with semibifid Mgroents; upjr Jbed ; spike elongated, cylindrical, coinpct; »tv)« gU- tmt-n-i rather pilose at the ba«. %,H, Nntiv« of MKi on the roots of 6>it«fa ''' rwarly ailtt'tl tO O. 4JMXWMl, I). C,

alt. 2.

irly equal j corolla cyli I length : lob, •<' <**•»* ire, flat, middle lobe the filaments hau ma C-lobM ^. H. Native eft the Arkanl *aotmwm,* no* *we* rocky glace*. H«n«Ai*e« f '0.

Viv. fl. tibyc p 1.1*4. timplc, l«iry, iwtaW: »«It%» "» d: *w* tJianeht •,«W, aub«Ut*. t.nv, VI ' Lint- ;,. SIC. t. 68 i seofO,^. PL t to 8 feet * ;ij i.

Ti* Sit*''

than tb(ftw»' iw r-lan i«c«rvttl; hps roti» of a ii «>fo«r. with » W^B JI.....i Lobes; of the upprr li{' allied to •

Pleasant Broom-R 1 foot.

26 C. *UjCrVM < 1 !,u<}. jxiir.* rd, *tO. p- 3U>* » * * 1. />. 849) »a*p* thkktni-t! mte Aa(»J < * ^ mg, clothed with chmt nts if?*, bifut, Vitfi Bt&ty <qn'f, Ji flatfd ; upper lipS-tabed; yellow. %, U, N i - *>osn the roots of *GenUta tinctoria,* O. major, Lam. ill. t. 551. bat not of Un «. t. 1.—Mor. hist, sect I r*d(ii*!i-yeHow.

Us; plant much more slender; the base ; flowers few, short. 3/. H. *0;i-* roots of *Gtnuta nagitUtlis. O.* vul 621. t D. C. rl. fr, S. p. 4*0. O. t' imm. Pcrbap* a species.

Kap< ttroom-Hapc. I 1 foot.

87 I. PRUINÓSA (Laper. »br- i a middle n* d lad nrtrrowK bifid: '*!* °~.", the top: superior one bifid: *iomve em* * > w * f' « Ui. -A tkeplv <K««W, p»le *V*0+* , %', *l*a, ° ' the Easte sativæ, Vauch. mos. p. 87. <- 5. Flowers white.

f-'r<u{t4 Broom-R«pV. PI. ^ to 1 foot.

U O, AUXA'SU (Bidi !•• *> «siU* lanciHilat« ; spike few-fi«wt>red ; than the corolla, and are, w well a» »b«

Ggni CntS bifid ; lobes ofcorolla acutish; stamens glabrous. ...tive of Podolia, Bessarabia, Tauria, and Caucasus. ...cretica procerior non ramosa, caule tenui, flore parvo sub-...mi? ...Tourn. cor. p. 10. Scapes simple. Corolla blue: upper lip bifid.

Sand Broom-Rape. Pl. 1 foot. ?

sea O. SANGUI'NEA (Presl. del prag. p. 176.) pubescent; ...pe simple, scaly ; floral scales about equal in length to the ...s; spike dense ; lobes of corolla equal, obtuse, denticu-...; stamens quite glabrous. %. H. Native of Sicily.

Bloody Broom-Rape. Pl. 1 to U foot. ?

O ...; RUBI (Duby, bot. sa\\. p. 550.") scape thickened into a ... with white hairs, scales numerous, bracteas, calycine segments bifid ; upper lip of corolla bifid : lower one 3-lobed : lobes roundish, erose; stamens adnate above the base; stigma 2-lobed, yellowish. }/. H. Native of Provence, in cornfields near Lac, parasitical on the roots of *Rubus fruticosus.* O. *rubi fruticosi,* Vauch. mon. t. 9. Scapes reddish. Flowers pale yellow.

Bramble Broom-Rape. Pl. 1 foot.?

31 O. ERYNGII (Duby, bot. gall. p. *350.)* scape incurved at the base, scaly; scales numerous, lanceolate, half adherent; calycine segments deeply bifid : lobes linear ; upper lip of corolla arched, hardly bifid: lower lip 3-lobed, subplicate; stigma 2-..., reddish. %. H. ... Native of the southern provinces of ...rance, parasitical on the roots of *Eryngium campestre.* O. ...ng«i ...campestris, Vaucher, mon. p. 58. t. 10. Scapes red, ... flowers reddish white.

Eryngo Broom-Rape. Pl. 1 foot. ?

32 O. CONCOLOR (Duby, bot. gall. p. 350.) scape dilated at the base, scaly, slender ; scales numerous, lanceolate, blackish-yellow ; flowers numerous ; calycine segments hairy, generally ... W. ...Corolla yellow: upper lip somewhat 2-lobed: lower lip ... ...vi...ated ; stamens and ovarium 2-lobed ; stigma yel... *foabic. Native of Provence, parasitical on the roots of* ... *sis. O. columbaria, Chcerophyllum sylvestre, and Mentha arven-*... holly ... Scabiosae Columbariae", Vauch. mon. p. 59. t. 11. Plant ... yellow.

Self-coloured Broom-Rape. Pl. 1 foot. ?

33 O. PEDUNCULVTA (Roxb. fl. ind. 3. p. *29.)* smooth ; scape ... with few ... scales ... scales; ... on the ... formed, 1-leaved, opening by a single ... calyx ... side; corolla with an inflated tube, as long as ... 5-Parted, nearly equal: segments reniform, ... on the edge ; filaments smooth; stigma broad, ... S. Native of Bengal, parasitical upon ... *muriedtus.* Peduncles length of stem, ... powers very large. Corolla with a yellow tube, ... violet limb. Calyx filled with a clear clammy liquor, ... closed. Anthers connected, entangled by a long, ... neshy appendage, into which the filaments are inserted. Capsule ovate. Perhaps a species of */Eginetia.*

Broom-Rape. Pl. \ to £ foot.

SECT. II. ... ...petals combined in the back part towards the base ... ... as in the sect. 1. ; the front part being free.

34 O. ...(C. A. Meyer, in Led. fl. ross. alt. ill. t. 390. fl. ... ...) plant scurfy; floral scales ovate, acute, about ... flowers ; calycine segments bifid or undi... lanceolate, nearly equal; corolla cylindrical, in... lip the longest, 2-lobed : lobes of the lower lip ... orbicular, denticulated, nearly equal; filaments pu... base, but glabrous at top, as well as the style; ... Native of Altaia in the Soongarian desert, ... gillaceous and sandy soil, on the banks of the river Tschuganka, towards the foot of Mount Tschingistan ; and of Spain. ? O. cérnua, Pall. ind. taur. Lin. spec. 882. ? Loefl. itin. 2. p. 229.? Corollas white or pale violet: limb small, deep violet. Stigma yellow.

Two-coloured-flowered Broom-Rape. Pl. \ to f foot.

35 O. MEDIA (Desf. fl. atl. p, 59.) scape simple, hairy, striated, firm ; scales adpressed, ovate or ovate-lanceolate; flowers densely spicate; floral scales ovate, concave, length of calyx; calyx 2-leaved: leaflets bifid: lobes narrow, acute; corolla curved, twice as long as the calyx; upper lip 2-lobed : lower one 3-lobed: lobes rounded, nearly e(\ual; stamens inclosed. 1|. H. Native of Barbary, near Cafsa, in sandy places. Corollas size of those of Phelipæa ramosa, pale yellow.

Intermediate ^Toom-^.ape. Pl. \ to \^ foot. |

'f *Species hardly known.*

36 O. PURPUREA (Lin. suppl. 288. syst. *573.)* stem simple and branched, villous ; flowers racemose ; pedicels opposite corolla quadrifid, campanulate ; anthers spurred. *If..G.* Native of the Cape of Good Hope. Plant purplish-red, with large flowers, becoming black on drying.

Purple Broom-Rape. Pl.

37 O. CAPE'NSIS (Thunb. prod. 97.) •tern simple, villous ; corolla curved, clavate. 1£. G. Native *of* the Cape *of* Good Hope.

Cape Broom-Rape. Pl.

38 O. INTERRU'PTA (Pers. ench. 2. p. 181.) stem branched, flexuous ; spike of flowers interrupted. %. G. Native of the Cape of Good Hope. O. ramosa, Thunb. prod. 97. but not of Lin.

Interrupted-spiked Broom-Rape. Pl. 1 foot. ?

39 O. LONGIFLORA (Pers. encM. 2. p. 181.) stem hairy, *branched a little; tube of corolla flaccid, very long. %. G. Native of the Cape of Good Hope.*

Long-flowered Broom-Rape. Pl.

40 O. JEGYPTI'ACA (Pers. 1. c.) many-stemmed; flowers on long peduncles ; calyx 5-cleft; artfhers bearded at top. %. G. Native of Egypt. Filaments glabrous. Perhaps a species of *Phelipæa.*

Egyptian Broom-Rape. PL

Cult. Singular parasitical plants, none of *which* are proj>er/y cultivatable.

II. PHELIPiE'A (so named by Tournefort, after the illustrious family Phelipeaux ; great patrons of the natural sciences, and *of* Tournefort.) Tourn. inst, p. 47. Desf. fl. atl. *2.* p. 60. t. 145. Led. fl. alt. *2.* p. 459. Orobánche, Lin. and other authors. Gaertn. fruct. *3.* p. 43. t. 185. f. 4. Lam. ill. t. 971.

LIN. SYST. *Didynàmia, Angiospérmia.* Calyx bibracteate, tubular, 4-5-cleft or 4-5-toothed. Corolla bilabiate ; upper lip bifid : lower one trifid. Stigma capitate, 2-lobed. Capsule 1-celled, 2-valved ; valves dehiscing at top, but cohering at the base ; placentas parietal, *2* in each valve.—Plants with th* habit of *Orobdnchc;* but are readily duistinguished by the tubular, bibracteate calyx, and in the capsule dehiscing at top instead of at the side.

SECT. I. TRIONY'CHION (from *rpiv; rpia, treis tria,* three; and *ovvyjiovy onychion,* a little claw ; in reference to there being *3* bracteas to each flower; that is, *2* bracteas to the calyx, and one floral scale.) Ledeb. fl. alt. *2.* p. 460. Orobánche, sect. Trionychion, Wallr. diask. p. *58.* Vauch. mon. p. *65.* Kopsia, Du-

mont. Calyx 4-5-cleft: lobes elongated, unequal, acuminated. Anthers with glabrous superfices, and villous dehiscing cells. Capsule crowned by the base of the deciduous style.

1 P. LANUGINOSA (C. A. Meyer, in Led. fl. ross. alt. ill. t. 377. fl. alt. 2. p. 460.) clothed with white wool; floral scales ovate-lanceolate, longer tlian the calyxes ; lobes of calyx lanceolate^nearly equal; throat of corolla inflated a little; superior lip rather the longest: lobes of lower lip nearly equal, elliptic, obtuse, a Httle denticujpted; filaments and anthers glabrous ; style glandular ; stigma 2-lobed. 2/ . H. Native of Altaia, in grassy places at the rivers Talitza and Katunga, and near Barnaoul ; and of Caucasus. Orobanche cae'sia, Rchb. icon. t. 698. Scape yellowish. Corolla bluish. This is said to be intermediate between *P. combsa* and *P. ccerulea,* but differs from both in being clothed with white wool, &c.

Woolly Phelipaea. PI. \ to f foot.

2 P. RAMOSA (Meyer, verz. pflanz. p. 104.) root a solid bulb ; scape naked, or furnished with a very few scales, hairy, swelling at the root, branched; spikes acute, terminal ; bracteas hardly as long as the calyxes ; calyx suburceolate, 4-5-cleft, unequal, acuminated; corolla tubularly funnel-shaped, swollen at the base, and yellow : upper part and lips blue, hairy outside: upper lip roundish, bifid : lower lip trifid; segments rounded, obtuse: the middle segment largest, with 2 yellow prominences at the mouth ; stamens inclosed, downy at the base ; stigma emarginate, white, *y.*. H. Native of Europe ; as of the South of France, Germany, and Britain ; also of Caucasus, Barbary, and the Grecian Islands ; in many parts of Britain, from the roots of hemp, in moist, rich fields, particularly in Norfolk nnd Suffolk, on *Galeopsis Tetrahit.* Orobanche »mosa, Lin. spec. 882. Smith, engl. bot. 184. Sutton, in Lin. trans. 4. p. 18.5. Lam. ill. 551. f. 2. Rchb. icon. t. G96. Orobanche ^annabis, Vaucher. mon. t. 16.—Mor. hist. sect. 12. t. 16. f. 7. Root furnished with one or two ovate-lanceolate, sessile scales. Stem and branches brown, or dirty yellow, or yellow tinged with purple. Filaments and style bluish ; anthers yellow. Stigma blunt. It is distinguished frgm *P. ccerulea* by its sharp spikes, the few scales on the stem and branches ; the calyxes and bracteas being shorter by half than the corolla, the tube of which becomes globular at bottom after florescence. The stem is sometimes, though seldom, unbranched.

Far. ft, violacea; this differs from the European plant in the corollas being wholly blue. ***Ift*** H. Native of Barbary and the Levant. O. ramosa, Desf. fl. atl. 2. p. 60. Smith, fl. ursec. t. 608. Orobanche ramosa, floribus purpurascentibus, Baub. pin. p. 88. Tourn. inst. p. 136.

Branched Phelipsea. Fl. Aug. Sept. Britain. PI. \ to 1 foot.

6 P. CJERU'LEA (Meyer, verz. pflanz. p. 104.) root fibrous; scape simple, hairy; scales ovate-lanceolate, hairy; spikes loose, bluntish ; bracteas linear-lanceolate, scarcely equal in length to the calyx; calyx 4-cleft, with the rudiment of a fifth, lanceolate, acuminated, exceeding the capsule; corolla hairy; tube cylindrical below, incurved in the middle : segments of the lower lip equal ; filaments naked ; stigma 2-lobed, yellowish. %. H. Native of Europe, on the borders of fields ; as of Switzerland, Austria, Germany, South of France ; also *of* Cauasus ; in Britain, but rare, in grassy pastures near the sea; on the borders of fields in Hampshire ; near Northreps, Norfolk. Orobanche caerulea, Vill. dauph. 2. p. 406. Sutton, in Lin. trans. 4. p. 182. bmitn, encrl. bot. t. 423. Rchb. icon. t. *692.* Orobanche purpurea, ^ Jacq. austr. t. 276. O. ltfvis, Lin. spec. 882. Orobanche purpurascens, Gmel. syst. p. 954. t. 14. Orobanche ramosa, *p,* With. arr. ed< 3d. p. *558.* Orobanche Artimiseae vulgaris, Vauch. mon. t. 14. P. cernua, Pall. ind. tanr.—Buxb. cent.**. p. 2. t. 1. f. 2.^-Gmel. sib. 3. p. 215. t. 46. f. 1. Scape simple, of a yellowish olive colour. Flowers bluish-violet. Stigm capitate.

FIG. 62.



Blue-ftowered Phelipsea. Fl. July. Britain. PL 2 lo 5 * foot

4' P. I'NDICA ; plant branched, hairy ; scape with a scale - k ^ each ramification only ; calyx subunilateral, 5-cleft ; spi li-- dense, clavate; corolla tubular : upper lip 2-lobed : lower y 3-lohed ; anthers woolly, 2-lobed: cells spurred; filaments smooth ; stigma 2-lobed. 7J. S. Native of Hindostan, Nipaul, at the roots of Tobacco. Orobanche I'ndica, K ind. 3. p. 27. This species is said to be nearly allied to *r. cernua* and *P. ramosa ;* but differs from both, in the flowers being twice the size, but also blue. Root fibrous.

Indian Phelipaea. PI. \ to 1 foot.

5 P. COMOSA ; scape nearly simple : scales hairy; calyx - - lobed : lobes linear; corolla funnel-shaped, tubular, wide, 0 cleft: lobes roundish : lower one smaller: anthers at leng pilose; stigma 2-lobed, rufescent. %. H. Native ot the southern provinces of France, parasitical on the roots of many kinds "of plants. Orobanche comosa, Wallr. sched. cnt.. 1.. p. 314. Orobanche vagabunda, Vauch. mon. t. 15. Scape bluisn, Corollas blue.

Comose Phelipaea. PI. \ to § foot.

6 P. LONGIFLORA; pubescent; floral scales ovate, obtuse, calyx 4-5-parted ; spikes loose ; cordlla 3 times as long as the calyx: lower lip elongated ; stamens downy. 7J. H. Native of Siberia, at the Volga. Orobanche longiflora, Trev. in nov. soc. nat. berol. 1813. 2. p. 150. t. 2. f. 10, 11. Said by bieb. to be a variety of *P. ccerulea.*

Long-flowered Phelipaea. PI. 1 to 1\ foot. ?

7 P. LUDOVICIANA ; clothed with powdery pubescence; scape low and simple ; flowers and ovate scales subimbricated ; calyx unequally and deeply 5-cleft; corolla recurved, 5-cleft; stamens inclosed, smooth. *1/.*. H. Native of North America, in sandy alluvial soil, around Fort Mandan abundant, but not apparently parasitical. Flowers very numerous and crowded, much longer than the bracteas. Segments of calyx long, linear, and acute. Upper lip of corolla bifid : lower one trifid and plaited, purple. Anthers whitish : lobes acute at the base.

Louisiana Phelipaea. PI. 3 to 4 inches.

8 P. CALIFORNIA ; clothed with viscid down ; scape simple ; flowers corymbose ; scales broad-lanceolate, acute, short, numerous at the base; corolla straight, tubular : upper lip flat, 2-lobed at apex : lower one trifid : segments distant, linear, acute; anthers sagittate, with a villous chink ; stigma orbicular, peltate. %. H. Native of California, at Port St. Francisco. Orobanche Calif6rnica,Cham. et Schlecht. in Linn«a, 3. p. 1JJ. Flowers pedicellate. Calyx bibracteate, campanula, deeply^ 5-toothed ; segments linear-narrow, dilated at the base.

Californian Phelipaea. PI. \ foot.

9 P.COMPA'CTA; scape simple, imbricated with scales flon ferous from the base; spike ovate, ^any-flowered bracteas ovate; upper lip of corolla bifid; segments ovate, acute. J. H. Native on the shores of the Great ^rtu, Ongjche compacta, Viv. fl. libyc. p. 34. t. 1o. *t. i.* »cap nt the base. Floral scales one half the length ot the, flouers Calyx 4-leaved ; segments ovate, obtuse, sometimes truncate,

tubes shorter than the corolla, dilated to the mouth: lobes nearly equal. Stamens of unequal length, hoft«be; filamS[8] 'Und V'^.nearly equal. Stamens inserted near the mouth of the tube, and anthers hairy from inbracteas, floral »cale, anHkly curved; ljjj P'fid; dalvx-S. Tr.xr ""r theCape *T*? PP'fid; dalvx-S. SlTi? Tr.xr ""r 97. ood Hope. Orobanrl ? * ^ Native of u»obanche squammata, Thunb. prod, Cape Phelipsea. PI. 1 foot.

Corolla incurved, gradually acute; ^Cg" ?e Iovv er hp'roundish[1]. "TT"P^ T^ I c" ll. Compact-flowered Phelipsea. . ½ to ⅔ fOO# 10 P. Cape NSIs» dahr [1]

2ft a >. Hexandrian (from nine, hexa, in allusion , blood: and *Swpov,* Port- , e(leb, ft. alt. 2, p. to the flowers in most species being th«i¥*UI'n- ^yxsemin] <ftanthe, Hoffm- et Link, fl. sWe, r.)01^ a» over m;3 IIIn<lucfid 5 lobes equal, obtuse. Anjen gth sep arafin apsuI^ te"minated by the permanent ung lengthwise. Scapes very simple.

f'Mfih!* (^yer, in fl roosa-]t- ll- *•0V6. Tlfl KLx (•) Plant rathe ,.. Led. fl.' alt. nearly ne (he calw Wooliy 5 floraJ scales ovate-lanceolate, late-Y^ular, equal I n * 8 nearly linear; lobes of calyx WQ nearly emVi straightish, tubular, campanu- 5 Sti^a ema)'", semiorbicular, spreading; style gla- Steph ward e, n ; smar Kinate. ** ur XT_Y r ,P V- i • the east. Ambl L» of the Kirghisean the Kurtschum, to- tuberously thickened at th átum Tataricum, Fisch. in litt. Scape Calyx glabrous. Corolla Iolot b ro U8 o Utsi(le; tu «>e white; limb Woolly throat yellow» hair y- Filaments W^ base >*nd the whole surfaces of the anthers J to 1 foot,

Floral scales lanceolate, obtuse, longer than the calyxes; upper or posterior segments of calyx linear: lower or anterior one spathformed, and 4-toothed; teeth obtuser corolla violaceous, straightish, campanulately tubular, with nearly equal, semiorbicular, spreading lobes; filaments nearly equal, drawn the base; anthers inucronate, drawn at the base; anthers mucronate, stigma capitate. Allied to the preceding; but differs in the corolla being yellow, in the tube being narrower at the base, and in the limb being widened below.

Violaceous-flowered Phelipaea. PI. i to 1 foot.

15 R LuVrEA (Desf atL ~' P' GL '• U 6') scape flesh y> f«r. rowed; corolla arched, narrowed at the base. £. H. Native of Barbary, in humid, sandy places on the shores of the river Elhammah, near Mascar; and of Portugal. Orobanche tinctoria, Forsk. desc. p. 112. Vahl, symb. 2. p. 70. Phelipsea Lusitanica flore luteo, Tourn. cor. 47. Lathrsea Phelipaea, Lin. spec. 844. Very nearly allied to the preceding; but differs in the corolla being yellow, in the tube being narrower at the base, and in the limb being widened below.

Yellow-Cowered Phelipaea. PI. * to 1 foot.

16 P.-? SUBACAU'LIS (Benth. scroph. ind. p. *55.)* stem very short, thick, scaly; peduncles 3-4 on each stem, shorter than the scales, 1-flowered; calyx *6-7* lines long, tubular, inflated a ^ltt^ at the base, irregularly 4-5-toothed at apex- corolla 2½ inches long: tube slender at the base, but widened at length jnjo an ample dilated throat: limb short, and broadly somewhat bilabiate, 5-lobed; stamens 4, glabrous; anthers glabrous; cells spurred; stigma capitate;? capsule not seen. %. S. Native °L the In(3ian Peninsula. In the Madras herbarium along with */Egmetia abbreviata.*

Almost-stemless Phelipaea. PI ? CulL Plants TM cultivatable-'

III. ANOTLON (from a priv. and *birXov, hoplon,* a shield; in reference to the scapes being without scales.) Wallr. diask. p. *78.* Meyer, verz. pflanz. p. 103. Phelipee'a species, Desf. Spreng. Orobánche species of authors. *

LIN. SYST. *Didyniimia, Angiospérmia.* Flowers hermaphrodite, bractless. Calyx campanulate, 5-cleft, sub-bilabiate; upper lip of corolla bifid: lower one trifid. Stigma capitate, quite entire, or sub-emarginate. Capsule 1-celled, 2-valved; valves dehiscing at top, combined at the base; placentas parietal, 2 to each valve.—Plants with the habit of *Orobánche.*

1 A. TOURNEFORTH; scape simple, villous, 1-flowered, naked, but involved in scale-like sheaths at the base, which rise from the root; lobes of corolla spreading, circinate. 1/. H. Native of Armenia. Phelipaea Tournefortii, Desf. ann. mus. 10. p. 298. t. 21. Phelipaea orientalis flore coccineo, Tourn. cor. p. 47. Calycine segments ovate-lanceolate, unequal. Corolla large, scarlet, with 2 large, bearded, black plicae in the throat. Style recurved. Stigma capitate, entire.

TourneforVs Anoplon. PI.^ ibot.

2 A. BiEBERSTEiMi (Meyer, verz. pflanz. p. 104.) scape simple, 1-flowered, remotely scaly; lobes of corolla equal, orbicular, spreading. *11.* H. Native of Tauria and Caucasus, in alpine regions, at the elevation of 800 to 1200 hexapods; also of Siberia, towards the Caspian sea. Phelipae'a foliata, Spreng. syst. *2.* p. 818. Orobánche coccinea, Bieb. casp. p. *58.* pi. rar. ross. *2.* t. *56.* Phelipaea coccinea, Pers. ench. 2. p. 181. Lathree'a Phelipaea, Guild, itin. 1. p. 422. Calyx unequally 5-parted. Corolla inflated, 5-cleft, sub-bilabiate, scarlet.

Bicberstexris Anoplon. PI. \ foot.

3 A. FASCICULA^TUM \ stem short and simple; peduncles many, naked, nearly terminal, and about the length of the stem; scales few, ovate, and concave, pubescent; lobes of corolla very short, rounded, and naked on fife margins. "2/. H. Native in sandy alluvial soils around Fort Mandan. Orobánche fasciculata, Nutt. gen. amer. 2. p. *59.* Phelipaea fasciculata, Spreng. syst. 2. p. 818. Stem clothed with powdery pubescence, terminating in 6 or more naked, filiform peduncles. Calyx campanulate, semiquinquefid; segments sublanceolate, acute. Corolla curved, tubular, pale purple: segments short: lower lip producing a grooved palate. Stamens smooth. Lobes of anthers parallel.

Fascicled Anoplon. PI. \ to \ foot.

4 A. BIFLÒRUM ; stem very short, usually obsolete, mostly 2-flowered; peduncles scape-formed, naked ; scales smooth, concave ; lobes of corolla oblong-oval, with a pubescent, coloured margin. %. H. Native in shady woods throughout the Atlantic States, Nutt.; Carolina to Virginia, Pursh. Orobànche uniflòra, Lin. spec. 882. Pursh. fl. amer. sept. 2. 431. Orobànche bifldra, Nutt. gen. amer. 2. p. 59. Phelipae'a biflòra, Spreng. syst. 2. p. 818. Calyx and corolla as in the preceding; but the lobes of the corolla are deeper, the whole yellowish white, the segments bordered with an azure blue line ; plicae in the throat yellow, as in the preceding. Stamens smooth. Anthers pubescent on the margins of the cells.. Stigma bilamellate. Plant of a tan-colour.

Two-jlorvered Anoplon. PI. £ foot.

Cult. Plants not cultivatable.

IV. BOSCHNIAKIA (in memory of —— Boschniak, a Russian bfitanist.) Meyer, mss. ex Bongard, in mem. acad. imp. st. petersb. 2. p. 157. Orobànche species, Cham, et Schlecht.

LIN. SYST. *Didynàmia, Angiospèrmia.* Calyx unequally 5-toothed, bractless. Corolla bilabiate; tube short; upper lip arched, stretched out, bifid : lower lip short, somewhat 3-lobed. Stamens exserted ; cells of anthers mutic at the base. Style tubular at top, sub-bilabiate, terminated by a stigmatose margin. Capsule 1-celled, dehiscing laterally, with a solitary, parietal placentae to each valve.—A plant with the habit *Orobànche,* from which genus if is principally distinguished by the capsule dehiscing laterally, by the style being tubular at top, and somewhat bilabiate, terminated by a stigmatose margin, and by the placentas in both valves being solitary and very distant.

1 B. GLA'BRA (Meyer, mss. ex Bongard, 1. c.) *If.*. H. Native of Siberia, at the Lena; Kamtschatka ; Chamisso's Island; Island of Sitka, &c. Orobànche Rossica, Cham, et Schlecht, in Linnsea, *3.* p. 132.—Gmel. sib. 3. p. 216. t. 46. f. 2. Tuber naked, usually with many scapes rising from it. Spikes dense. Floral scales, calyxes, and corollas ciliated. Plant reddish. Anthers glabrous. The scales of the scape are shorter, and less pergamaceous than those of *Canopholis Americànus.*

Glabrous Boschniakia. PI. \ to 1 foot.

Cult. Plant uncultivatable.

V. CANO'PHOLIS (from iravuv, *kanon,* a rule; and <f>o\iQ, *pholis,* a scale ; the scales are imbricated in 4 rows.) Wallr. diask. p. 78. Orobànche species, Lin.

LIN. SYST. *Didynàmia, Angiospèrmia.* Calyx ventricose, 5-parted, unequal, bibracteate. Corolla incurved, bilabiate : upper lip entire : lower lip 2-parted, erect. Stamens exserted. Stigma capitate. Capsule 1-celled.—A parasitical plant, with the habit of *Orobanche.* Scapes simple. Corollas nearly white.

1 C. AMERICA'NUS (Wallr. 1. c.) %. H. Native from Carolina to Pennsylvania, often growing in vast clusters at the roots *of* trees, in moist shady forests. Orobànche Americàna, Lin. syst. *57S.* mant. p. 88. Pursh. fl. amer. sept. 2.*p. 431. Plant of a brownish yellow colour, gJRibrous. Scapes simple. Scales oval-lanceolate, imbricate. Spike dense, imbricate, glabrous • bracteas equal in length to the tube of the corolla.

American Canopholis. PI. £ to % foot.

Cult. An uncultivatable plant.

VI. EPIPHFGUS (from £*«, *epi,* upon; and *fryoc, phegos,* beech; the plant is parasitical on the roots of beech.) Nutt. gen. amer. 2. p. 60. under Epifàgus. Orobànche species oi L.

'"LIN. SYST. *Didynàmia, Angiospermia.* Flowers polygamous. Calyx short, 5-toothed. Corolla of the infertile flower ringent, compressed, 4-cleft : lower lip flat; fertile flower minute, 4-toothed, deciduous. Capsule truncate, oblique, imperfectly 2-valved, opening only on one side.—A rather neb herbaceous plant, parasitical only on the roots ot *neecn,* virgately branched ; branches simple, every where floriferous. Scales small, and remote, commencing extremity of the root; upper parts of the branches P^ perfect flowers, but abortive fruit; lower imperfectly flowers fructiferous. Capsule coriaceous and small, racter *of Mdampy' rum,* but truncated, and at length by moisture in the form of a cup.

1 E. AMERICANUS (Nutt. 1. c.) %. H. Native ot^ part of North America, equally indigenous. Orobanche niàna, Lin. spec. 882.—Mor. hist. *3.* p. 502. sect. *IZ>. 9.* ? Root tuberous, fleshy, scaly. Upper lip of corolla ginate : lower one 3-toothed, white, with dark, but purple stripes ; plicae in the throat wanting. Stamens exserted, smooth. Anthers pubescent.

American Beech Drops. PI. 1 to \\ foot.

Cult. Plant not cultivatable.

VII. LATHR^A (from *Xadpatoc, lathraios,* clandestine, which is from \aQoa, *lathra,* clam.) Lin. gen. no. 743. bclin no. 1000. Gaertn. fruct. 1. p. 242. t. 52. Lam. ill. t. 1. Juss. gen. 102. ed. Usteri, p. 114. Clandestine inst. 952. Squammària, Scop.

LIN. SYST. *Didynàmia, Angiospèrmia.* Calyx campanulate, 4-cleft. Corolla tubular, bilabiate : upper lip concave, lower one trifid, reflexed. Stamens 4 didynamous, hidde the upper lip. Anthers connected. Ovarium &TMTM£ base. Stigma 2-lobed. Capsule covered by the calyx, initiated, 1-celled, elastically 2-valved; p t a a s « each valve. Seeds few, globose.-Succulent herbs, parasitical on the roots of trees. Flowers solitaiy, spicate, ^ r S L i n . spec. 843.) .t» branched^almost under the earth; flowers et Europe, in shady places, para and Italy. egtina rectiflora, Lam. Clandestina pendulifloru, Lam. Clandestina montana, Lam. ill. t. 392. Orobanche montana, Lam. ill. t. 392. Dentaria aphylla, Ray, hist. 1gso.—Mor. hist. p. 298. f. 14. 12. t. 16. f. 15. The stem bears a corybulb wers only appear above blue. This is probably

distinct genus from the following.

Clandestine Toothwort. PI. paras, f. ca

2 L. squAMMA'RiA (Lin. spec. 844.) stem quadrangular; flowers spicate, unilateral, disposed in 8 rows. ^ roots parasitical %. H. Native of most parts °£ Europe and Jay almost on the roots of trees as elms j ^ ^ i Lrts of Britain ; covered by the fallen leaves ; penuful «n some it has also been discovered on the Himalay^ ^ ^ ^ fruct. 1. p. 242. t. 52. Smith, engJ. bot. t. 420. Squammaria Clandestina penduliflora, Lam.-Blackw. ^ Orobdnche, Scop. earn. no. 160. ^ not articulated) branched, Amblatum, Dod. pempt. *ooS.t.* J. « ed except perhaps and surrounded by white scales. S'em JJKeas or flora, scales furnished with one or two oval scales. Bract

...ndish-oval, ...ar p, reddish on one side of each pedicel. Calyx ...7>*hitish; ...segments equal, bluntish. Corolla pale purple, ...flesh-coloured ...lower lip white : upper one short, and rather ...truncate. ...The English name Toothwort is derived from the ...hen it was fann... ...ance, ...the seal ...seems to ...lie human fore-teeth, and ...^y-rooted ...merly to be good for the tooth-ache, ...foot. ...oted loothwort. Fl. April. Britain. PI. £ to 1

Cult. Uncultivatable plants.

HYOBA'NCHE

...*ancho*... to ... Ken W ; the plant is said ... *hyos,* a pig; and ... Lin. ... Juss. gen. p. 101. ed. Usteri, p. 112. ... Lin. syst. *Didynamia, Angiospérmia.* Calyx 7-parted ; segtoent linear, Corolla ... tubular : lower lip wanting: superior one ... ginate. Stamens 4, didynamous, inserted at the bottom of ... corolla; anthers ovate, nutant. Stigma emarle ... Capsule 2-celled, many-seeded.—A parasitical herb, ... habit of *Orobánche* ... Scapes simple, thick, scaly. Spike ... thick ; floral scales imbricate, villous.

... RAN Gu^ EA (Lin- ... roots *of* shrubs. ... of the Cape ... of Good M ... Spike villous. The whole plant is blood red. Flowers purple. Plant of a blood red colour.

Bloody Hyobanche. Pl. ... foot.

Cult. An uncultivatable plant.

ALECTRA

... L Schreb. ... (derivation unknown to us.) Thunb. nov. gen. no. 1066. Pers. ench. *2.* p. 182. Lin. syst. *Didynamia, Angiospérmia.* Calyx bilabiate : upper lip cleft; lower ... limb ... Corolla tubular, widened towards ... didynamous; ... segments broad ovate, obtuse. Stamens ... included ... Stigma a little ... bearded ; anthers ... Capsule ovate, ... in the coll... ... twin» 2-celled, 2-valved. Seeds ... black on drying.—Plant with the habit of *Orobdnche,* ... the V... (Thunb. ... nov. *gen.* p. 82.) ©. G. Native ... of Good Hope. ... In grassy places near rivers. Stem ... seal... ... ascend ... the stem. Spike terminal, leafy, ... flowers ... Corollas yellow, streaked with ... Nov. Dec. pi. 1 to 1 foot.

Cult. An uncultivatable plant.

X. ÆGINETIA (named in memory of Paul Æginette, a ... p. 30, cor. t. p. 63. t. 91. Wall. pl. ... asiat. p. 19. t. ... Orobánche species, Lin. ... Lin. syst. *Didynamia, Angiospérmia.* Calyx spath-formed, ... one-leaved. Corolla ... erect, ... ^ ... *but* ... P'tcher-fornied above, and bent. Stamens ... ^ ... ; ... P'tcher-fornied above, and bent. Stamens ... ^ ... twin, united by pairs# ... Stigma ... ^ ... celled ... ; ... Centas, and ... ; ... maining various convolute, ... annual ... with ... oth, naked, intricately inter- ... ISI ... Pes ... with a ... scales» ... except ... the ... nearly ... ^le> naked ... ative ... of X. ^ ^ red ; limb of corolla shortly 4-cleft. Wall. ... Dl^oun, ... Klarkonta, Kheree Pass, Royle. Orobánche Æginetia, ... Spec. P. 883.—Rheed. mal. 11. p. 97. t. 47. Corolla ... Purple. Calyx yellowish.

Indian iEginetia. PI.

2 JE. ABBREVIA'TA (Hamilt. mss. ex Benth. scroph. ind. p. *55.)* stem very short, branched, scaly ; corolla large ; limb bilabiate : lower lip amply 3-lobed. 1/. G. Native of the Indian Peninsula, Silhet, Rangoon, Prome. Wall. cat. no. 3965.

«S7*o>7-stemmed ^Eginetia. PJ.

Cult. Uncultivatable plants.

XI. AMBLATUM (meaning unknown to us.) Tourn. cor. 48. Lathrae'a species, Lin. Orobánche species.

LIN. SYST. *Didynamia, Angiospérmia.* Calyx campanulate, 4-cleft. Corolla tubular, bilabiate, both lips entire : upper one galeate. Stamens 4, didynamous ; anthers connected. Stigma truncate. Ovarium glandular at the base. Capsule 1-celled, 2-valved; placentas parietal, 2 in each valve.—An herb with the habit of *Lathrcea,* or *Orobánche.*

1 A. TOURNEFORTII ; %. II. Native of the Levant, tathrae'a Amblatum, Lin. spec. 844. Amblátum orientale More purpurascente, Tour. cor. p. 48.

Tourneforts 'Amblatum. PI. £ to 1 foot. ?

Cult. An uncultivatable plant.

Tribe II.

OBOLARIE'^E (this tribe contains plants agreeing with *Obolaria* in being terrestrial, not parasitical.) D. Don, *in* edinh* phil. journ. vol. 37. p. 113. July, 1835.

Xll. OBOLA'RIA (from *obolus,* a small coin ; in allusion to the bracteas being round, like a piece of money.) Lin. gen. no. *778.* Schreb. gen. no. 1044. Juss. gen. 101. ed. Usteri. p. 113. Nutt. gen. amer. 1. p. 103.

LIN. SYST. *Didynamia, Angiospermia,* or *Tetrdndria, Alonogynia.* Calyx none, or in the form of two bracteas. Corolla campanulate, 4-cleft; segments entire (the margins sometimes crenulately torn). Stamens 4, equal, or nearly so, proceeding from the clefts of the corolla. Stigma emarginate. Capsule ovate, 1-celled, 2-valved, many-seeded. Seeds minute.—A very small vernal plant, with a simple stem, and opposite leaves. Flowers terminal, sessile, and marcescent, collected by pairs, or by threes, towards the summit of the stem. Stigma minutely bifid.

1 O. VIRGI'NICA (Lin. spec. 881. Nutt. gen. 1. p. 103) *11.* ? H. Native of Pennsylvania, in the neighbourhood of Philadelphia rare ; and near West Chester ; abundant in the shady forests of Lake Erie.—Mor. hist. 3. p. 504. sect. 12. t. 16. f. 33.—Pluk. aim. *209.* f. 6. Plant about 3-4 inches high, with a small, branching root. Leaves thick, green, almost fleshy, frequently purplish *on* the under side. Flowers bluish-white, or pale red, supported by foliaceous bracteas.

J'irginian Obolaria. PI. 3-4 inches.

Cult. For culture and propagation see *Pediculdris,* p. 626.

XIII. TO'ZZIA (so named by Micheli, in honour of Bruno Tozzi, Abbot of Vallambrosa, F.R.S., Micheli's companion *in* his botanical excursions, in one of which he found this plant.) Michel. gen. p. 20. t. 16. Lin. gen. no. 745. Schreb. gen. no. lOOS. Juss. gen. 97. ed. Usteri, p. 109. Lam. ill. t. *522.*

LIN. SYST. *Didynanna, Angiospermia.* Calyx campanulate, sub-bilabiate, 4-toothed, 5-toothed. ? Corolla tubular ; limb bilabiate, nearly equal: upper lip 2-lobed : lower one 3-lobed. Stamens 4, didynamous ; cells of anthers awned at the base. Stigma capitate. Ovarium 2-celled ; cells 2-seeded ; ovula fixed their whole length, free at bottom. Capsule spherical, 2-valved,. 1-seeded by abortion.—An erect herb, having the stem scaly at the base, as in *Orobánche.* Leaves opposite. Flowers solitary, axillary, pedicellate.

1 T. ALPI'NA (Lin. spec. 844.) stem weak; flowers axillary, disposed into an interrupted, leafy spike. %. H. Native of the Alps of Jura, and the Pyrenees, Switzerland, Austria, Italy, in rough, moist places. D. C. fl. fr. 3. p. 487. Lam. ill. t. 522. Jacq. austr. 2. t. 165.—Mentz. pug. t. 9. f. 3, 4.—Mor. hist. 3. sect. 12. t. 16.—Col. ecphr. 2. p. 49. t. 50. Root formed of many scales (fig. *63.* b.) Stem tetragonal, branched. The whole habit succulent and tender. Leaves roundish, bluntly notcfied, pale. Corollas yellow; the 3 lower segments spotted *of* a deeper yellow (fig. *63.)*

FIG. *63.*



Alpine Tozzia. PL

Cult. For culture and propagation see *Pediculàris,* p. 626.

ORDER CLXXII. CHELO NE£) (this order contains plants agreeing with *Cheldne* in the characters given below.) D. Don, in edinb. phil. journ. vol. 19. no. *37,* July, 1835. Genera of Scrophularineae of authors.

Calyx 5-parted, permanent. Corolla tubular, hypogynous, irregular, deciduous; limb 5-lobed. Stamens 4, didynamous, fertile, with the rudiment of a fifth; anthers 2-celled, mutic; cells confluent at apex. Stigma undivided. Capsule 2-celled, many-seeded. Seeds erect, angular, or compressed, with membranous edges. Albumen fleshy. Embryo erect, foliaceous.—Herbs or under shrubs natives of North America. Leaves opposite. Inflorescence panicled, or spicate. This order approaches *Bignoniàcece* and *Pedalinece,* but is readily distinguished from both in its many-parted calyx, undivided stigma, and erect, albuminose seeds. All the plants contained in this order are extremely showy.—This group is well entitled to be retained apart from *Scrophularinece,* on account of the greater degree of developement of the embryo, its compressed, winged seeds, and of the presence of a rudimentary stamen, all of which characters bring it near to *Pedalinece* and *Bignoniàcece,* from which it is distinguished by its albuminous seeds.

Synopsis of the genera.

1 PENTSTE'MON. Seed angular.

2 CHEL6NE. Seed surrounded by a membranous margin.

I. PENTSTE'MON (from Trey™, *pente, five;* and στι ‰v, *stemon,* a stamen; in reference to the 4 fertile stamens, and the one sterile.) Micheli, gen. 14. and in act. nat. cur. 8. append. 214. Schreb. gen. no. 1758. p. 808. Ait. hort. kew. 3. p. 511. Nutt. gen. amer. 2. p. 51. Cheldne, Spreng.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-parted, with a distant, solitary bractea. Corolla ventricose, bilabiate. Stamens didynamous, with the rudiment of the fifth, which is usually filiform and bearded on the upper side; anthers separate, usually alabrous. Capsule ovate, 2-celled, 2-valved, mauy-seeded. Seeds angular.—Herbs or under shrubs, natives of North America. Leaves opposite, smooth, acuminated, entire, or serrated. Flowers paniculately racemose, purple, blue, rose-co white, or pale yellow, rarely scarlet. The corolla is bilabiate, oblong, and tubular: the upper lip shorter, and coarctate; the orifice generally pubescent; in species the corolla appears campanulate, and with almost equally 5-lobed; in these the sterile filament is spicuous. The anthers in some species are woolly or

SECT. I. *VE'RJE* (this section contains the true species genus.) Anthers glabrous.

§ 1. CAMPANULAS. Corolla sub-campanulate: hmb equally 5-lobed.

1 P. CRISTVTUM (Fras. cat. 1813. Nutt. gen. 52.) pubescent; radical leaves lanceolate, denticulated ones sessile, linear-oblong, sub-lanceolate; peduncles and terminal, 1-3-flowered, very short; calyx segments linear lanceolate, acuminated; sterile filam exserted, very conspicuously and crestedly bearded, as the orifice of the lower lip. 3/. H. Native of A arid, naked, argillaceous hills, from the confluence of the river and the Missouri to the mountains. P. erianthera, fl. amer. sept. 2. p. 737. Chelone cristata, Spreng. 813. Corolla large and violaceous, ventricose; border spreading.

Crested Pentstemon. Fl. Aug. Sept. Clt. 1811- 1 foot.

2 P. CERU'LEUM (Nutt. gen. amer. 2. p. *52.)* P and glaucous; radical leaves sub-linear: cauline ones olate-linear, all entire and sessile, minutely margin; segments of the calyx lanceolate, acute; many-flowered; sterile filament short and bearded. H. Native on the plains of the Missouri, near and the Indian towns. P. angustifolium, Fraser, Pursh, fl. amer. sept. 2. p. 738. Chelone caerulea, Corollas sub-campanulate, azure blue.

tf/we-flowered Pentstemon. Fl. July, Sept. Clt. 1 1^ foot.

3 P. A'LBIDUM (Nutt. gen. amer. 2. p. *53.)* ovate-lanceolate, sub-serrulated, smooth, and sessile, partly fascicled, axillary, and terminal; sterile filament and interruptedly bearded; corolla internally smooth tubular, with an almost equally 5-cleft, spreading downy, with linear-lanceolate segments. 1{. H. the plains of the Missouri, common from the confluence river Platte to the mountains. P. teretiflora, Fraser, Stems rather angular. Leaves approximate. Flowers white.

Whilish-Qovrered Pentstemon. Fl. June, Sept. PL *i* to I foot.

4 P. GRANDIFLORUM (Fras. cat. 1813. Nutt. gen. 52.) smooth and glaucous; leaves entire: oval: cauline stem-clasping, roundish-oval, point; flowers large, mostly solitary and axillary, panulate, with a 5-lobed, spreading limb; pubescent at the summit. %. H. Native of plains of the Missouri; common from the con river Platte to the mountains; also near the Mississippi. P. Bradburii, Pursh, 2. p. 738. burii, Spreng. A beautiful species. Flowers as large as those of *Digitalis purpurea,* which they resemble.

Great-jlowered Pentstemon. Fl. July, ^ept. 2 to *3* feet.

5 P. SPECIOSUM (Dougl. in bot. reg. t. 127U-;

Janceolate fk[illegible] tlre: radical ones spatulate: cauline ones cle[illegible]d; lob[illegible] UndU[illegible]ted, sessile 5 flowers verticillately pani- glabrous. %. H. £[illegible] 5 «eri[illegible]e filament qui* banks of tl[illegible] o?o[illegible]r.; [illegible] Dou[illegible]. D- Don, in Sweet, fl. lowers very' [illegible] segments equal, sub-imbricate. [illegible] stlow[illegible] In axillary, many-flowered cymes, the »td, S[illegible] pyramidal panicle. Corola sky blue, varying [illegible] an inch long.

[illegible]owy Pentstemon. Fl. June, Sept. Clt. 1827. PI. 2 to 6 [illegible]

glabr[illegible] (Dougl in bot, re[illegible] *L* 1285,) ascending, long petioles, [illegible] GUCOUS; radical leaves ovate-oblong, on bracteas [illegible] coriaceous : cauline leaves and flowers on sh[illegible] sessile, stem-clasping ; fascicles of [illegible] calyx segments acuminated, quite [illegible] at; seam [illegible] with a funnel-sh[illegible]ped tube, and an inflated [illegible] of the linib broad, retuse. [illegible] Native [illegible] America, in barren, sandy plains on the Columbia river. [illegible] those of P. [illegible] purple, bordered with lively blue, rivalling [illegible] [illegible] Radical leaves tufted. Sterile filament [illegible] [illegible] Corolla [illegible] and hooked at to[illegible]

ruminated [illegible] [illegible]eaved Pentstemon. Fl. June, Sept. Clt. 1827. 7 [illegible] foot.

[illegible]46,) Pube[illegible] (NUU[illegible] In [illegible] acad. nat. sc. [illegible] vol. *7.* p. [illegible]6ntil[illegible]e [illegible] rather tufted; leaves lanceolate-linear, acute, [illegible] few-flowered flowers rather [illegible] S'abrous [illegible] calyx [illegible] segments lanceolate, acuminated; sterile [illegible] Colu[illegible] [illegible] H. Native near the sources of [illegible] Ro[illegible] [illegible] On the borders of the little Goddin river. [illegible] not more than *3-1* inches high. Flowers [illegible]

8 [illegible] Stemon- [illegible] foot.

[illegible] (Nutt[illegible] *Journ,* acad. nat. sc. [illegible] vol. 7. p. 182) clothed with [illegible] Pubescence; leaves sharply serrulated, [illegible] lanceolate, petiolate : cauline ones ovate : [illegible] stem-clasping ; throat of corolla inflated, [illegible] Native [illegible] America, in the sterile and denudated [illegible] [illegible] Red River, in calcareous soil; and of [illegible] bot. [illegible] in Sweet, fl. [illegible] 3465) Peduncles 3-5-flowered, the whole [illegible] with [illegible] Panicle [illegible] Leaves broadish, and thick. Calyx [illegible] [illegible] [illegible] [illegible]

[illegible]92 to3 feet. Fl. May, Sept. Clt. 1835.

[illegible] [illegible] [illegible] [

ed, sessile; superior bracteas entire; flowers verticillate; calyxes and bracteas villous; corolla glabrous, twice as long as the calyx; segments of the limb roundish, entire. 1/. H. Native of North-west America, near the Priest's Rapid, on the Columbia river. Plant pruinose. Radical leaves tufted, downy. Peduncles many-flowered, short. Corollas blue, rivalling in brilliancy those of *P. speciosum.*

Pruinose Pentstemon. FL June, Sept. Clt. 1827. PL J to lfbot.

§ 3. *Corolla bilabiate. Upper lip of corolla compressed; the lower plaited.*

16 P. GLAU'CUM (Graham, in edinb. phil. journ. 1829. p. 348. Lindl. bot. reg. 1286.) stem smoothish ; leaves all glabrous: radical ones lanceolate, petiolate, quite entire, or denticulated : eauline leaves and bracteas ovate-lanceolate, sessile, stem-clasping panicle thyrsoid ; corollas inflated, and are, as well as the calyxes, clothed with glandular down outside; sterile filament stretched out, bearded, i/. H. Native of Arctic America. P. gracile, Hook. bot. mag. 2945, description, but not the figure. Corollas bluish-purple, with a pale or whitish throat.

Glaucous Pentstemon. FL June, Sept. Clt. 1827. PL 1 foot.

17 P. ATTENUA'TUM (Dougl. in bot. reg. 1295.) stem erect, pilose at top; radical leaves elliptic, acute, petiolate : superior ones ovate-oblong, stem-clasping, sessile, all quite glabrous and quite entire; panicle strict, and are, as well as the calyxes and corollas, downy ; capsule glabrous ; sterile filament bearded. *If.*. H. Native of North-West America, on the mountains of. Lewis and Clark's river. Leaves dark green : radical ones sometimes cuneated and cuspidate. Corollas cream-coloured.

Attemiatcd-\?axed Pentstemon. Fl. June, Sept. Clt. 1827. PL 1± to 2 feet.

18 P. DEU'STUM (Dougl. in. bot. reg. 1318.) stem almost simple, ascending, glabrous ; leaves deeply toothed : radical ones ovate-oblong: those near them spatulate ; eauline leaves oblong, acute, Sessile: upper ones almost quite entire ; calyxes glabrous ; limb of corolla flat, with retuse segments : upper ones the smallest. %. H. Native of North-west America, on scorched rocky plains in the interior. Peduncles axillary, many-flowered, the whole fonning a panicle. Radical leaves on long petioles : upper eauline leaves half stem-clasping, all coarsely and unequally toothed. Corollas cream-coloured. Calyxes and corollas glabrous.

Burned Pentstemon: Fl. June, Sept. Clt. 1827. PL 1 foot.

19 P. DIFFU'SUM (Dougl. in bot. reg. t. 1132.) stem branched ; leaves ovate-oblong, glabrous, unequally serrated ; peduncles axillary, many-flowered, the whole forming a terminal panicle ; calyx turbinate, with jagged segments ; sterile filament length of tube, bearded. 2/. H. Native of North-west America, in the district around the mouth of the Columbia river. Root creeping. Stems decumbent, radicant, branched, purple. Leaves evergreen. Inflorescence downy. Corolla purple, an inch long ; upper lip retuse.

Diffuse Pentstemon. FL June, Oct. Clt. 1827. PL \\ to 2 feet.

20 P. STATICIFOLIUM (Lindl. bot. reg. 1779.) stems aseend-\ng9 pubescent; radical leaves oblong-lanceolate, narrowed to the base, entire, glabrous ; eauline leaves sessile, cordate-ovate, toothed, pubescent; cymes nearly sessile, tomentose ; corolla ventricose, pubescent. 3/. H. Native of California. Radical leaves 7 inches long. Corolla violet, an inch long. The cymes *ht* im? sessile, the flowers appear somewhat verticillate.

SLS-torrf Pentstemon. FL June, Oct. Clt. 1834. PL 2 f...

21 P. CORDIFOLIUM (Benth. in scroph. ind. p. 7.) stem pruinose; leaves on short petioles, ^road, ovate, obtuse, quite entire, cordate at the base, bullate, nerved beneath , panicle loose: corollas tubular, deeply bilabiate ; upper lip emarginate: lower one trifid; sterile filament bearded. %. native of California, Douglas.

Heart-leaved Pentstemon. PL? humble;

22 P. TMPHY'LLUM (Dougl. in bot. reg. 1 oblong: leaves 3-4 in a whorl, glabrous, bluntly cut: lower peduncles floral ones entire, linear-lanceolate, usually alternate 2-3-flowered, and are, as well as the calyxes, clothed webbed down ; segments of corolla oblong, Native the lower lip equal ; sterile filament bearded. district of North-west America, on the blue mountains, California. watered by the river Columbia; and of Nortner geg- Stem branched. Flowers sparingly panicled. Kurrea. ments ovate, acute. Corolla ventricose at the base,

Three-leaved Pentstemon. FL June, Sept 1 to U foot.

23 P. CRASSICLE (Xutt. gen. amer. 2. p. *52.)* *Jflj* slender; leaves smooth, linear, acute, half stem-clasping serrulated; panicle simple, few-flowered ; sterile man ed longitudinally ; corolla smooth inside ; segments o from the linear-oblong. 1*. II. Native of North America, Arikarees to Fort iMandan, in depressed soils, tubular 2945. figure, but not the description. Corolla sm leaves blue, ex bot. mag. ; pale purple, ex Nutt. Kadicai lateral ceolate-ovate, entire : eauline ones pungently serrul

Slender Pentstemon. FL June, Sept. Clt. foot.

24 P. PUBE'SCENS (Ait. hort. kew. 2. p. *yderi* Ian- mag. 1424.) stem pubescent; leaves repandly serrulate; the ceolate-oblong, sessile, stem-clasping ; flowers in panicle fiddle* sterile filament bearded from the summit below the middle *11.* H. Native of North America, in the Southern in Carolina and Georgia. Chelone Pentstemon, Willd. spec. Asarina erecta, Mill. diet. no. 2. fig. t. 252.—Mor. 417. sect. 11. t. 21. f. 2. Corollas pale purple.

Downy Pentstemon. Fl. June, Sept. Clt. feet.

25 P. HIRSU'TUM (Willd. spec. 3. p. 227.) stem hairy ; leaves acuminated, repandly serrulated, lower ment long, very villous at top ; orifice of the corolla pubescent. 2/. H. Native of Virginia. /3, angustifolia, Martyn and Mill. no. 2. Chelone barbata spec. 849. Mill. diet. no. 3.—Mor. hist. 3. P- t. 21. f. 3—Gron. virg. 71-93. 2, 3. Flowers pale purple Perhaps only a variety of *P. pubescens.*

Hairy Pentstemon. FL Aug. Sept. Clt. 1758.

26 P. LAVIGATUM (Ait. hort. kew. 2. p. lanceolate: the mag. 1425.) glabrous; lower leaves quite entire, *V.* rest repandly serrulated, sessile, or half stem-clasping late ; sterile filament bearded at top ; orifice of the corolla pubescent. %. H. Native of North America lone Penstemon, J. F. Mill. icon. 4. Arduin, spec. t. 5.—Mor. hist. 2. p. 479. sect. 5 t. 8. i. panicled. Corollas purple.

Smooth Pentstemon. FL June, Sept. Clt. feet.

§ 4. MEXICAN. Sometimes herbs,.but shrubs. Leaves lanceolate, sharply serrate, serrated. Superior filaments flat at the base, Corollas tubular: lower lip usually bearded, flowered, disposed in a terminal panicle.

27 P. PULCHE'LLUM (Lindl. bot. reg. *UJJ* glaous, pubescent ; leaves sessile, ovate-lanceo

brous; peduncles whorle forming a Secund raceme; calyx downy, with lanceolate segments • cLn Villous; steril*: «1 ventrico se, rather pilose, glandless; palate co«-olla. y p fil ne dt bearded; stamens length of tube of ?uill <>, at the" nii- tl e of Me3 <ico, between Toh.ca and Tian- «av ana. p a) lUlde of 1500 hexapods; and of Cuba, near the ^elone eW ans fH V Do in LoU(L hort brit P- 243, £ave s half stem' et unth> nov, Sen 2 P- 36i- Superior This specie!: dSe g ? mg# Cor0llaS liIac> dovvn y; P alate s P otted- Pale and deathnt !?"?, cam *T^ulatum,* in the corolla being *Preth,* p stitute of glands. foot. ents temon. Fl. June, Sept. Clt. 1827. PI. \\

28 P. Stitt n won, m Loud. hort. brit. p. 243.) herbaceous; leaves acsile lated, acuminated > glabrous, ovate-lanceolate, sharply serru- >y a-Flowere l su erior leav « broader; peduncles gene- ratl ei- hairy l w f. nor filame^ flat at the base; corollas bearded at ; i lf lk Native of Mexico. P. angustifo- livin, Lud I boV 22, but Ot of Kunth Chel «» e ^ea, Cerv. mss " Sv L ? fl gard 230< Inflorescence rather glandu- J 'T* P anicle tl e u at Ventricos, «f TM an y-flow ered. Corolla tubular, some- ? the Plant. abn Fu ro se-colour, glandular, like the top Ros ^ foot flo Wered Pentstem on. Fl. June, Sept. Clt. 1825. PI.

Of P. Kv'rtuit Do in Loud* hort brit P - 248) stem eaul leaves quite ^ Sf^adingly recnr gabrous leav^ linear, sharply serrulated, I - a 8i «nple h^r rVed >.P edu cles 1-2-flowered, hairy, disposed t air 5 corolla f panicle 5 calycine segments linear-lanceolate, erile filament i Wny i o Wer lip densely bearded at the base; ^ o r a S Pha at a P ex V.F. Native of Mexico! Leaves an gutif ^-lia, ii. r. J at tIle altitude *of* 1320 hexapods. Che- sessile, so -B Ct K h nov. gen. amer. 2. p. 165. ard ly exserTeT 131 Stem clas l ir S- Corolla purple.' Sta- feeJJ«A« Pentstemon. Fl. July, Sept. Clt. 1825. PI. 2 to 4

t Ves P gla C bZs N r VTU r (Willd - s) ec - 3 - P 228) stem « H x; ^rollas 1^ t 1 31 P anicle; ca b'c'ne segments Ian- Jo Nati ve of M cxi d ve, Sterile filament bearded *at* t0 P- ^• 36 reS at the alt tml Co r n ear Santa Kosa de La Sierra an<1 L()s In . Sims bot T ? 3oo llexa P ods- ^q. schoenbr. 3. t. Slet ^^ • 29 Ch r ne caiD l »n «>oides, Andr. bot. rep. t. 40. r olla bearded' 7 & labro »s- Calyx downy. Throat Corollas Pale purple.

Pentstemon. Fl. March, Oct. Clt. 81 P to 2 feet. shrubby; s m re her T (G. Don in Loud « hort b" t. p. 243.) one, ? t0 P; leavpJ exuo »s, shining, beset with glandular acii ance olate Iff SeSSlle shar D Jy serrulated, glabrous: lower ered > Btlm l P nor ones ovate, <Wi oal^es anH 1 g; P eduncles axillary, usually 3-flow- tiv Warded corollas clothed with glandular pubescence; fil of ^^ico n y nus bearded at top. 7/. H. Na- Flowers dark nn V ne atropurpurea, Sweet, fl. gard. t. 235. Dark-purp Pl lewIole forming a panicle. 1825, Pl. 2 t flo V S ed P-tstemon." Fl. July, Sept. Clt. 3? p

•Wte 81 > iANoi DKS stem d own y at t0 P; leaves lanceolate, alii composed *of* 1-2-3-flowered pe- alvcin r0US; panicle ovate; corollas beardless; sterile at the altitJl e of 175o hexapods. Chelone gentianoides, H. B. et Kunth, nov. gen. amer. *2.* p. *363.* t. *172.* Stem and branches downy. Leaves 4 inches long, and 6-8 lines broad. Corolla violaceous, downy outside; tube short; throat large; limb bilabiate; superior lip 2-lobed: lower one trifid, beardless. Anthers glabrous. Stamens inclosed.

Gentian-like Pentstemon. Fl. July, Sept. Clt. 1825. PI. 3 to 4 feet.

SECT. II. ERIANTHE'RA (from *epiov, erion,* wool; and *avdrjpa, anthera,* an anther; the anthers are ciliated or downy, not glabrous, as in the last section.

33 P. HETEROPHY'LLUM (Lindl. bot. reg. 1899.) leaves glaucescent, quite entire: lower ones linear-lanceolate: superior ones linear; raceme twiggy; sepals ovate, acuminated; corolla ventricose, beardless; sterile stamen glabrous; anthers sagittate, fringed at top. %. H. Native of California, Douglas. Leaves hardly ever serrulated. Peduncles 1-2-flowered, bibracteate above the middle. Corolla bilabiate; sterile filament sub-emarginate.

Fariable-leaved Pentstemon. Fl. June, Sept. Clt. 1834. PI. H to 2 feet.

34 P. GLA'BRUM (Pursh, fl. amer. sept. *2.* p. 738.) very smooth; leaves sessile, ovate-lanceolate, entire, having the margins partly undulated; peduncles many-flowered, secund; segments of calyx roundish-oval, acuminated; corolla subcampanulate; sterile filament slightly bearded under the refuse apex; anthers pubescent. %• H. Native *of* North America, in arid soils near the confluence *of* the Shian river, and towards the sources *of* the Columbia river. Curt. bot. mag. 1672. P. erianthera, Nutt. gen. amer. *2.* p. *52.* but not of Pursh. Flowers numerous, purple.

Glabrous Pentstemon. Fl. July, Sept. Clt. 1811. PI. 1J foot.

35 P. GLANDULOSUM (Dougl. in bot. reg. 12G2..) plant clothed with glandular pubescence; radical leaves ovate, coarsely toothed: cauline ones stem-clasping, acute, almost quite entire; peduncles many-flowered; calyx loose, with ovate segments; corolla ventricose; anthers ciliated; sterile filament glabrous. 7/. H. Native of North America, on the banks of the Kooskooskee river, 6300 feet above the level of the sea. Radical leaves on long petioles: cauline ones cordate-ovate. Peduncles forming a racemose panicle. Corolla large, pale rose-coloured, striped with purple inside. Anthers white. Capsule glabrous, equal in length to the calyx.

Glandular Pentstemon. Fl. June, July. Clt. *1827.* PI. 2 to *2* feet.

36 P. VENU'STUM ^Dougl. in bot. *reg. 1309.)* stein suflfruticose, erect, glabrous; leaves Sessile, ovate-lanceolate, acuminated, denticulated, glabrous; peduncles many-flowered, the whole forming a panicle; calyx glabrous; corolla ventricose, ciliated; anthers pilose; sterile filament bearded at top. 1-. H. Native of North-west America, in dry channels of rivers, among the mountains. Very nearly allied to *P. diffusum;* but differs in the stem being more erect; in the leaves being sessile, longer, straighter; in the corolla being of a more obscure colour; in the calyx being glabrous; and in the anthers being pilose.

Graceful Pentstemon. Fl. June, Sept. Clt. 1827. PL *2* feet.

37 P. RICHARDSONII (Dougl. in bot. reg. 1121.) herbaceous; leaves sessile, pinnatifid; peduncles few-flowered; calyx clothed with glandular pubescence: with ovate-acute segments; corolla ventricose; anthers ciliated; sterile filament bearded with a few hairs at apex. %. H. Native *of* North-west America, on dry rocks in the vicinity *of* the Columbia. Hook. bot. mag.

3391. Plant a little branched, minutely downy. Calycine segments oblong-lanceolate. Corolla purple, nearly glabrous outside. Valves of anthers ciliated towards the apex.

Richardson's Pentstemon. Fl. June, Sept. Clt. 1825. PI. 1^foot.

38 P. DISSE'CTUM (Ell. car. 2. p. 129.) leaves opposite, sessile, compoundly dissected: the segments linear, and generally blunt; flowers in panicles. %. H. Native of Georgia, Louisville. Stem slightly pubescent. Corolla purple; segments of the upper lip larger than those of the lower, and more blunt. Stamens inclosed; anthers downy, or hairy. ?

DissectedAeaved Pentstemon. PI. 2 feet.

39 P. SCOULE^RI (Dougl. in bot. reg. 1277.) suffruticose; leaves obovate-lanceolate, serrulated: upper ones quite entire; peduncles 1-flowered, racemose; calyx downy, with acuminated segments; corolla ventricose; anthers woolly. %. H. Native of North-west America, on the Kettle falls of the Columbia. Branchlets pilose. Corolla purple, nearly 2 inches long; palae open. Mr. Douglas considered this a species of *Chelone* from the woolly anthers; but it has the angular seeds of *Pentstemon.* (fig. 64.)

FIG. 64.



Sconlers' Pentstemon. Fl. May, July. Clt. 1827. Shrub 2 to 3 feet.

SECT. III. GENTIANOI'DES (from *gentiana,* gentian; and *idea, like;* habit of species.) Sterile filament glabrous. Anthers glabrous. Leaves narrow, entire, glaucous: radical ones crowded. Flowers panicled.

40 P. HUMBOLDTII; stems simple, downy; leaves linear, quite entire, glabrous; peduncles 2-flowered, disposed in a panicle; calycine segments roundish-ovate, acute; corollas beardless; sterile filament glabrous. 1/. H. Native of Mexico, in mountain places between Puerto de Varientos and Santa Rosa, at the altitude of 1350 hexapods. Chelone imberbis, H. B. et Kunth, nov. gen. amer. 2. p. *363.* Leaves bluntish, 2-3 inches long, itnd \\ *to 2* lines broad. Calyx downy. Corollas similar to those of *P. barbatum,* but smaller and beardless. Stamens exserted.

Humboldt's Pentstemon. PL 1 to 1| foot.

41 P. BARBA^TUM(Nutt.gen.amer.2. p.51.)glaucous,glabrous; stems branched; leaves connate, sessile, linear-lanceolate, quite entire, very long, channelled: radical ones crowded, spatulate; peduncles axillary, opposite, 2-flowered: the whole forming a panicle; limb of calyx scarious; corolla bearded on the lower lip with yellow hairs. %. H. Native of Mexico. Chelone barbata, Cav. 3. p. 22. t. 242. Ker. bot. reg. t. 116. Chelone ruelloides, Andr. bot. reg. t. 34. Corollas showy, scarlet outside, and white inside, drooping. Sterile filament glabrous.

Bearded-flowered Pentstemon. Fl. June, Sept. Clt. 1794. PL 4 to 5 feet.

42 P. CENTRANTHIFOLIUM (Benth. scroph. ind. p. 7.) glabrous, glaucous; leaves ovate-lanceolate, quite entire, cordately stem-clasping at the base; peduncles axillary, many-flowered, disposed in an elongated, terminal panicle; corolla tubular, pendulous, glabrous; throat naked; limb almost equally 5-parted; sterile filament beardless. 7/. H. Native of California. Corolla scarlet. Chelone ceiftranthifolia, Benth. in hort. tran ser. 2d. vol. 1. p. 481. Lindl. bot. reg. t. *1737.* 1832.

Centranthus-leaved Pentstemon. Fl. July, Nov. wt. PI. 3 to 7 feet.

Cult. The species *of Pentstemon* are amongst the most showy border flowers we possess in our gardens. They grow in light rich soil, and are readily increased by cuttings. They are rather tender, being usually killed by severe frosts or damp in winter, if allowed to remaining it is therefore safest to keep a few plants of each species so that they may be readily sheltered by placing them frame in winter.

II. CHELONE (from *x^»>"1> chelone,* a tortoise, the back of the upper lip of the corolla is compared to a t no. 100^ Dill. gen. p. 11. Lin. gen. no. 748. Schreb. gen Juss. gen. 137. ed. Usteri, p. 153. Gaertn. fruct. t. 54.—Anonymos, Gron. virg. 71, 72. Act. par. p. 87. Pentstemon species of authors.

LIN. SYST. *Didynamia, Angiosj)ermia.* Calyx 5 parted> bracteate. Corollaringent,ventricose: upperlipemargin one trifid, sterile, Stamens didynamous, with a sterile filament, which is shorter than the rest; anthers woolly. Capsule 2-celled, 2-valved. Seeds surrounded by a membranous margin. —Herbaceous plants, with opposite leaves; flowers spiked, terminal. Lower lip of corolla internally bearded. Capsule oval.

1 CTG'LAW (Lin. spec. 849.) leaves lanceolate-obtuse, terminated, serrated, nearly sessile, glabrous. %. H. Native of the United States.—Trew, ehrh. t. *83.* C. glabra Pursh, fl. amer. sept. 2. p. 427. Corollas white.

Far. /3, *lanceolata* (Nutt. gen. amer. 2. p. leaves lanceolate, conspicuously acuminated, serrated, sessile, downy beneath; bracteas scarcely dilated; segments of calyx oblong-ovate. %. H. Probably a distinct species according to Nutt.

Glabrous Chelone. Fl. Aug. Oct. Clt.,.1730. ri. feet.

2 C. OBLIW (Lin. syst. *553.)* leaves petiolate, oblique, lanceolate. %. H. Native of North America, in the southern States. Ker. bot. reg. 175. A. glabra, *(3,* Lin. spec. 849. C. glabra, /?, purpurea, Michx. fl. bor. ^'yf'j^^ C. purpurea, Mill. diet. no. 2. fig. t. 93. Digitalis «urnea, Ray, suppl. 397. Plenk. mant. t. 348. f. 4. Corollas yellow.

Oblique Chelone. FL Aug. Oct. Clt. 1752. *ri.* feet.

FIG. 65.



3 C. LYONI (Pursh, fl. amer. sept. *2.* p. *737.)* glabrous, branched; leaves petiolate, cordate-ovate, serrated; spikes terminal, with the flowers clustered. 1/. H. Native of North Carolina, near Wilmington; and of Georgia. C. major, Sims, bot. mag. 1864. Flowers purple, (fig. *65.)*

Lyons Chelone. FL July, Sept. Clt. 1812. PL 3 to 4 feet.

4 C. LATIFOLIA (Muhl, cat. ex Ell. car. 2. p. 127.) glabrous; leaves wide-ovate, or oval, serrated, abruptly acuminated, tapering at the base, petiolate; sterile filament bearded near the summit. %. H. Native of Carolina. Corollas pale purple.

Cheldne Pentstemon, Walt. car. p.

Broad-leaved Chelone. pi. 1 to % feet.

—Small, creeping, rooting, tufted herbs, with small, alternate, reniform leaves, and axillary, solitary, pedicellate, inconspicuous flowers.

1 S. EUROP^A (Lin. spec. p. 880.) plant hairy, creeping; leaves on long petioles, reniform, 7-9-lobed ; flowers tetrandrous, somewhat didynamous. %. H. Native *of* the South of Europe, as of Portugal, Spain, West *of* France, &c, in shady places about springs; in England, as in Devonshire and Cornwall plentiful ; and about Longledale in Westmoreland, Smith, engl. bot. G49. S. prostrata,Salisb.icon. II. t. C—Plukn. phyt. t. 7. f. 6.—Petiv. brit, t. 6. f. 11. Calyx hispid. Corolla pale yellow, with a purplish tinge on the *3* upper segments. Seeds plano-convex, or sub-angular, brown, (fig. 6(i.)

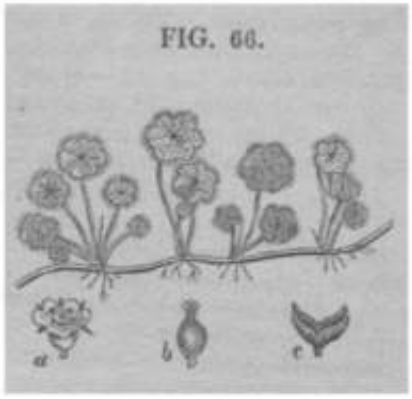
FIG. 66.

European Sibthorpia. Fl. June, Sept. Britain. P). creeping.

% S. PICHINCHE'NSIS (H. B. et Kunth, nov, gen, amer. 2. p. 390. t. 1 7G.) plant hispid, creeping ; leaves on Jong petioles, reniform, 7-9-lobed : lobes obtuse; flowers pentandrous. %. F. Native on the burning mount of Pichinca, in rugged places between the plains *of* Verdecuchu and Chorro de Cantuna, at the altitude of 1800 hexapods. Flowers purple. Seeds very minute. Habit of-5". *Europa'a.*

Pich'mcha Sibthorpia. J[1]. creeping.

3 S. RETI/SA (H. B. et Kunth, 1. c. p. 391. t. 177.) plant hispid, creeping ; leaves on long petioles, reniform, many-lobed : lobes retuse ; flowers pentandrous. %. F. Native of New-Spain, near Tiangillo, at the altitude of 1500 hexapods. Leaves twice or three times the size of those of *S. Europcea.* Flowers double the size of those of *S. P'tchinchensis,* purplish violet.

,fte(«se-Iobec] Sibthorpia. PI. creeping.

Cult. Sihthorpia is a genus of singular plants, but of no beauty ; ihey are, therefore, only grown in botanic gardens, or those of the curious. They succeed best in peat soil and moist situations, and are readily increased by division. *S. Pichinchensis* and *S, rctusa* require protection from frost in winter.

II- DISA'NDRA (from *?t^,dls,* twice; and *avtjp avSpoc, aner andros,* a male; in reference to the stamens being sometimes 4 and sometimes 8, therefore often double the common number 4.) **Lin.** syst. *$52.* Scbreb. gen. no. 627. Juss. gen. 99. ed. listen, p. 111. Lam.ill. t. 275. f. *2.* Sibtborpia species, Lin.

FIG. *67.*



LIN. SVST. *Pertta-Oct/mdria, Monogynta.* Calyx 5-8-parted. CoroJIa rotate, 5-8-)obed. Stamens 5-8. Stigma simple. Capsule ovate. Seeds ovate.—Herbs with the habit of *Sibthorpia.* The number of floral parts are variable, but usually 7.

1 D. I>ROSTRA[1]TA (Lin. syst. 352.) prostrate, pubescent ; leaves reniform, crenatod ; pedicels twin. *11.* G. Native of Madeira. Curt. bot. mag. 218. Sibthorpia peregrina, Lin. spec. p. 880. amœn. 3. p. 20.—

Broad-leaved Chelone. pi. 1 to % feet.

Cult. The species of Chelone are extremely handsome flowering plants. They grow in any common garden soil, but prefer peat earth. They are readily increased by dividing at the root.

ORDER CLXXIII. SIBTHORPIA'CEÆ (this order contains plants agreeing with *Sibthórpia* in the characters given below.)

vol. 19. no. 37. July, 1835.—

Calyx 4-8-parted, Permanent. Corolla rotate, 4-8-cleft, regular, deciduous, imbricate in estivation. Stamens 4-8, equal, alternate with the lobes of the corolla ; anthers 2-celled ; cells parallel. Style one; Stigma capitate, undivided. Capsule 2-celled, 2-valved, many-seeded, erect, placenta large, spongy, globose. Seeds numerous, membranous ? albumen copious, dense, fleshy. Embryo obtuse, cylindrical, erect, inclosed. **Radicle** long, **eylindrical,** ascending, umbilicary to the umbilicus, centripetal—Herbs, with alternate, undivided leaves, and axillary, solitary, pedunculate flowers, in small racemes. Gen. and sp. char. The family is intermediate between *Scrophulariaceæ;* and *Primulàceæ;* and is distinguished from the first by the regular tubular, hardly campanulate, 4-cleft, deciduous calyx; and globose placenta; and from the second by the regular tubular, hardly campanulate, 4-cleft, deciduous calyx; and globose placenta; and the regular monopetalous flowers, in the stamens being alternate with the lobes of the corolla, not opposite them, and in the 2-celled capsule.

Synopsis of the genera.

1 SIBTHÓRPIA. Corolla rotate, 5-cleft. Stamens 4-5.

2 DISA'NDRA. Corolla **rotate,** G-8-cleft. Stamens 7.

3 CAPRA'RIA. Corolla campanulate, 5-parted. Stamens 4, subdidynamous.

4 XUARE'ZIA. Corolla campanulas, 5-parted. Stamens *5,* equal.

5 LEUCÓSPORA. Corolla tubular, hardly campanulate, 4-cleft. Upper lobe emarginate. Stamens 4, subdidynamous. Capsule at length 1-celled.

6 SCOPA'RIA. Corolla rotate, 4-cleft. Stamens 4, equal.

7 ROMANZÒVIA. Corolla salver-shaped, 5-cleft. Stamens 5, equal.

I. SIBTHORPIA (after Humphry Sibthorp, M.D. Professor of Botany Oxford, successor to Sherard, who collected in the Levant, and author of "Flora Graeca," and "Prodromus Florae Graecae Oxoniensis") **Lin. gen. 775. Schreb. gen.** H. B. et Kunth, nov. gen. amer. 2. Corolla sub-rotate, 5-lobed. Stamens 4-5, nearly equal. Stigma capitate. Capsule sub-orbicular, compressed, dehiscing at top.

Plukn. phyt. *257.* f. 5. Leaves on long petioles, resembling those of Ground-ivy. Pedicels usually twin, but sometimes solitary and by threes. Corollas yellow, (fig. G7.)

Prostrate Disandra. Fl. May, Aug. Clt! 1771. Pl. pros.

2 D. AFRICA'NA (Lin. syst. ed. Reich, p. 137.) prostrate, pubescent ; leaves orbicular, crenated ; pedicels solitary. *V* ' G. Native of the North of Africa. Sibthorpia Africana, Lin' spec. 880. amcen. 3. p. 22.—Shaw. afr. f. 149.

African Disandra. Pl. prostrate.

Cult. A light rich soil is the best for the species of *Disandra,* and they are readily increased by division.

III. CAPRA'RIA (from caper, a goat; goat-weed.) Lin. gen. no. 768. Schreb. gen. no. 1077. Vahl. eclog. 1. p. 50. t. *53.* Juss. gen. p. 118. ed. Usteri. p. 133. Lam. ill. t. 534. f. 2. H. B. et Kunth, nov. gen. 2. p. 354.

LIN. SYST. *Didyndmia, Angiospérmia.* Calyx 5-parted, equal. Corolla campanulate, with a short tube, and a 5-cleft, nearly equal limb. Stamens 4, nearly equal, inclosed. Stigma capitate, 2-lobed, ex Bonpl. Capsule ovate, compressed ; valves bifid.—Annual herbs, with alternate leaves, and axillary pedicellate flowers.

1 C. BIFLORA (Lin. spec. 875.) branches pilose; leaves oblong, serrated, narrowed and quite entire at the base, ciliated, smoothish ; pedicels twin, elongated, capillary, pilose. 0.? S. Native of the warmer parts of America, common. Jacq. amer. 182. t. 115. pict. 90. t. 174. Swartz. obs. 239. Lam. ill. 534. f, 2. C. Curassávica, Herm. par. t. 110.—Comm. hort. 1. p. 79. t. 40.—Plukn. aim. 237. t. 98. f. 4. Feuil). per. 1. p. 764. t. 48. Corollas white. Pedicels solitary, or twin, rarely bv threes.

" *Two-flowered* Goatweed. Fl. July, Aug. Clt. 1752. Pl. 2 to 4 feet.

2 C. HIRSU'TA (H. B. et Kunth, nov. gen. amer. 2. p. *355.)* branches hairy ; leaves oblong, serrated, cuneated at the base, and quite entire, hairy; pedicels twin, short, hairy. ©.? S. Native of Mexico, between La Venta del Exido and Acapulco, at the altitude of 200 hexapods, and elsewhere. Corolla white ; lower segments marked by a pilose red spot. Very like the preceding, but the flowers are smaller, pedicels shorter, &c.

Hairy Goatweed. Pl. 1 to 2 feet.

3 C. SEMI-SERRVTA (Vahl, eclog. 2. p. 47.) branches hairy ; leaves lanceolate, serrated from the top to the middle ; peduncles 1-4-flowered, solitary.? ©.? S. Native of the Island of St. Martha. Leaves *2-3* inches long, quite entire at the base. Calycine segments subulate. Corolla with a villous throat, and linear, oblong segments. Stigma capitate. Capsule oblong. Placenta linear, free.

Half-serrated'leavcd Goatweed. Pl. 1 to 2 feet.

4 C. SAXIFRAOIFÓLIA (Cham, et Schlecht, in Linnaea, 5. p. 105.) plant branched, hairy; leaves spatulately obovate, cuneated, doubly and deeply serrated, rather pilose ; peduncles almost solitary, short, hairy. ©.? S. Native of Mexico, near Vera Cruz. Said to be allied to *C. hirsuta.*

Sax frage-leaved Capraria. Pl. 1 to *2* feet. ?

f *A species hardly known.*

5 C. ? HU'MILIS (Ait. hort. kew. 2. p. 354.) pubescent ; leaves opposite, or 3 in a whorl, ovate serrated, petiolate; peduncles axillary, shorter than the petioles. ©. S. Native of

^ S J A Fl. J«i* Au* Ch- 1781- Pl- * » i

Cult. The seeds of the species of *Caprària* require to be reared on a hot bed in spring, and when the plants are of sufficient size, they require to be planted in separate pots and placed in the greenhouse or stove; and some of them may set out in the open ground in a warm, sheltered situation.

IV. XUARE'ZIA (named after Caspar Xuarez, a Spanish botanist, who has written a work on the plants of Italy.; et Pav. prod. p. 24. t. 4. fl. per. 2. p. *123.* f. a. Fers. 1. p. 176. H. B. et Kunth, nov. gen. 2. p 355.

LIN. SYST. *Pentdndria, Monogynia.* Calyx 5-partea. Corolla sub-campanulate, with a very short tube, and a equal limb. Stamens 5, equal. Stigma bilarnellate. oblong, obtuse, rather compressed; valves bifid; partral, at length free.—A shrub with alternate, entire leave , axillary, twin, white, pedicellate flowers.

1 X. BIFLORA (Ruiz, et Pav. 1. c.) *h* . G. Native and the neighbouring parts of South America. Paviana, Feuill. per. 2. p. 764. t. 48. Shrub much glabrous. Leaves lanceolate, remotely serrated, narrow the petioles, and quite entire at the base. Corolla small yellow, campanulately rotate. Called Tea in Peru.

Two-flowered Xuarezia. Shrub 4 to 6 feet.

Cult. A light rich soil will suit this plant, and cutting readily rooted.

V. LEUCOSPORA (from *XEVKOC, leucos,* white ; *spora,* a seed ; seeds white.) Nutt. journ. acad. nat. 7. p. 87. Caprària multifida, Michx.

LIN. sm, *Tetrdndria, Monogynia.* Calyx 5-parted, rolla tubular, hardly campanulate, obtuse, 4-cleft: ment emarginate. Stamens 4, nearly equal. Capsule at length 4-valved, many-seeded.—An annual, erect, vis Leaves 3 in a whorl, trifid. Flowers solitary, axillary. Nuttall to be nearly allied to *Gratiola.*

1 L. MULTI'FIDA (Nutt. 1. c.) ©. H. Native of America, on the banks of the large western Mississippi, Missouri, and Arkansas. Capraria multifida; fl. bor. amer. 2. p. 22. t. 23. Leaves lyrate, partly the segments linear, oblong, and blunt. Capsule ovate ; placenta central, narrow, and almost columnar. Seeds white, diaphanous. Flowers pale red, and very fugaceous.

Multifld-lenved Leucospora. Pl. ½ foot.

Cult. For culture and propagation see *Capraria,* p«

VI. SCOPA'RIA (from *seopa,* a broom; to which it is adapted.) Lin. gen. no. 143. Schreb. gen. 187. Juss. gen. p. 118. ed. Usteri. p. 132. fruct. 1. p. 251. t. *53.* R. Br. prod. p. 443. H. B. et Kunth, nov. gen. amer. 2. p. 354. Cham, et Schlecht, in Linnaea, 2. p. 603.

LIN. SYST. *TetrAndria, Monogynia.* Calyx 4-5-partea, segments usually 3-nerved. Corolla rotate, 4-clett, throat girded by a crown of hairs. Stamens 4, equal. obtuse. Capsule 2-valved, with a septicidal semi-bifid ; placenta central, large, bipartible, at length free — Glabrous herbs or under shrubs. Leaves dotted, opposite, 3 in a whorl. Peduncles axillary, 1-flowered. Calyx ura Corollas small, white.

§ 1. *Calyx deleft.*

1 S. m/rxis (Lin. spec. 168.) leave. ovate-lanceolate, serrated, tapering into the petioles. 0. » part within the tropics, common, P» —Sloan. Plukn. phyt. t. 215. f. l—Herm. par. t. 108. f. *--l"F*rrj£i* Cojam, l.p. 195. t. 108. f. threads on their rollas small, white ; the segments have beardea

edges. TK p
the Spaniards ../enCh CalI the Plant *Balai doux*> or *Sweet Besom;* of ^ is ugeifo ?W/fl *menuda,* or *Little Besom.* An infusion h ^av be ounsidered r dlsorders *of* the breast. According to Browne branches usimHy 3*b TM TM exCeIlent vulnerai 7- Leaves and Var. 3 b whorl. cuneens; leaves in fours; flowers near]y sessile. ©. s . % ^ c ; NeW Spain* S- Procutnbens, Lin. spec. 168. Ste*s proe Zl P
Var? *unb «« Leaves narrower.
corymbs com J ; leaves lanceolate, alternate, quite entire ; of Good Hn c trichotomous. \i . G. Native of the Cape Willd - spec. i. p 64 arborea> Lin. syst. 157. Thunb. prod. 29.

Sweet Scoparia. T This is Surely a species *Fny&nia.*

June, Sept. Clt. 1730. PI. 1 to *3 feet.*

§ 2. *Calyx 5-cleft.*

lanceolaL LAfVA ham - et Schlecht, in Linnsea, 2. p. 603.) leaves brous ; calvp5 Pering m to the Petl K toothed ; peduncles gla- Native of R ne Se ments acute> vvith pellucid edges. %. F. car p3ea Mom V" tlle Province of Cisplatin, Sello. Micro- yello*. LZ! Vue T S, Spren S- st« *• P- 42« hollas pale F *bellow* fl VCS and Indies 4 in a whotl. 3 R owered Scoparia. PI. * to 1J foot.

leave* linear, qui 6611111*5 Peduncles pubescent; calycine seg- ? ou* acutP -i ments of p' Jth Pell cid margins. *hc* . G. Native of the leaves opncJrte, Shrilb niuch branched, glabrous. gOnal brand, tetra S onal branches ; 3 in a whorl, on hexa- *toeath-iiL*V and 4 in a whorl, on polygonal branches. Sep 4 S - PLEBV IA ?Ar ria, Shrub ! to 2 feet

the ar> a li tt] (Cnan>. et Schlecht, 1. c. p. 605.) leaves nearly Q ute» a litfl 6 ou K d ; peduncles glabrous ; calycine segments l!o- Bnacics C ated* ©• S- Native of the South of Brazil, *Pkbeian* Sc l exa gonal. Leaves 3 in a whorl. 5 8. iu / opana - PI, 1 to 1-J foot.

g s of branrPlx (Cham - et Schlecht, in Linnaea, 8. p. 21.) an- ar 8'ns of le i WIn ed a little ? peduncles, calyxes, nerves, and c i ont; calvcin V6S Pll ose; leaves elliptic, coarsely serrated in pl ated towar a tlg Segments a cute, with pellucid edges, and finely o T ar y stems a I IG apex, o' s- Native of Brazil) Sello- n f exa gonal T branclles tetragonal; branchlets pentagonal, ^ orolla VCS near] y sessile, opposite, or 3 in a whorl. exceeding the C3lyX a liUle , nger than thOSG of *St*

Elliptic-leaved ScOparia, PI- 1 to 1| foot. ?

linear, (Chain, et SdlIccht, »• c, 8, P ejual, acutissh tt/i Pecluncjes glabrous; calycine segments un- the ca lyx. ^ J Pellucid edges : corolla twice the length of or S Native of BrazIl> Sello# Lt?aves opposite, *M** in a whorl'

C ? Fc TI SCOparia, Shrub i '> l ^

rarria» p (Uo an(l Propagation of annual species see t>42. and of the shrubby species see *Xuarezia,*

VII. ROMANZOFFIA (named in honour of Count Roman- u5 at *hose ^ NZOF'FI zo *Un^ertakp \ PenCe the voyage of Kotzebue round the world l h P- 547 i Cham - hor. phvs. berol. p. 71. t. 14. Lin-

in^L Corofla Pe tdndri «> *Monogynia.* Calyx 5-cleft, permaple bot tom of Sa Wer ,sha Ped . deciduous. Stems 5, inserted ni Ca Psule IrIG IU e of tlie cor la « St g ma capitate, simpl Co^trarv !)Vate.» obtuse, 2-valved, many-seeded ; dissepi- Ste lle rbs, y /Ilc valves. Seeds obovate, angular.—Fleshy, ms ^any' u i, al(ernate leaves. Root praemorse, fibrous, Cordate, ^usually simple. Radical leaves roundish-reniform, 1> or crenated; cauline leaves few, similar to the radical ones. Flowers white, bractless, marked with veins, racemose; raceme secund, revolute at top.

1 R. UNALASCHE'NSIS (Cham. 1. c.) radical leaves on long petioles, reniformly-cordate, many-lobed, or crenated, pilose; petioles channelled, pilose; stem usually simple, tufted, few-leaved ; flowers racemose. %. H. Native of the Island of Unalascha, in valleys, growing in the fissures of rocks. Saxifraga ntitans, D. Don, in Lin. trans. 13. no. 2. Saxifraga secunda, Willd. herb. no. S408. Calycine segments lanceolate, bluntish. Lobes of corolla equal, roundish. Filaments capillary ; anthers 2-celled, incumbent. Placentas 4, linear, 2 in each cell, adnate longitudinally to the dissepiment along the axis. Seeds numerous, minute, angular, scrobiculate. Albumen cartilaginous. Embryo in the axis of the seed, cylindrical, erect.

Unalascha Romanzoffia. PI. \ to ^ foot.

2 R. SITCHE'NSIS (Bongard, mem. acad. imp. st. petersb. *2.* p. 156.) radical leaves on long petioles, roundish-reniform, coarsely-toothed, glabrous, rarely furnished with a few hairs; petioles glabrous, or pilose dilated; stems tufted, simple, or dichotomous, furnished with 1-2 leaves, similar to the radical ones; flowers racemose. If. H. Native of the Island of Sitcha. Plant a span high. Petioles dilated at the base, 2-4 inches long. Calycine segments lanceolate. Corollas largish, 5-cleft, rarely 4-cleft. Stamens 4-5, alternating with the lobes of the corolla. Stigma 2-lobed.

Sitcha Romanzoffia. PI. £ to \ foot.

Cult. Should any of these plants ever be introduced to our gardens, we would recommend their being grown in pots in a mixture of peat soil and sand.

ORDER CLXXIV. GESNERIA^CEJE (this order agrees with *Gesnéria* in the characters given below.) Gesnéreae, Richard, et Juss. in ann. mus. 5. p. 427. H. B. et Kunth, now gen. amer. 2. p. 392. Mart. nov. gen. 3. p. *68.* Cyrtandráceae, Jack, in Lin. trans. 14. p. 23. Didymocárpeae, D. Don, prod, fl. nep. p. 122.

Calyx 5-cleft. Corolla oblique ; tube drawn out behind and in front above, or tubular at the base; limb 5-cleft, sub-bilabiate. Stamens 4, didynamous, with usually the rudiment of a fifth, alternating with the divisions of the corolla: the upper one or more of them abortive. Anthers distinct, cohering by pairs, or altogether. Ovarium 1-celled; placentas 2, parietal, bilamellate. Fruit capsular or baccate, silique-formed, or round. Seeds numerous, hanging by long funicles, or erect. Albumen copious or wanting. Embryo straight, slender.—Herbs or shrubs, usually tuberescent at the base. Leaves opposite or verticillate, rarely alternate, thickish, entire. Inflorescence cymose, rarely racemose. Down or hairs simple. Cymes axillary or racemose, from the flowers being axillary and solitary. Corollas beautiful, of various colouring, scarlet, violet, blue, lilac, rose-coloured, green, cream-coloured, and white; *of* one colour or spotted, or marked with other colours. Roots usually tuberous. Stems erect, decumbent or parasitical, and climbing on trees. Leaves entire or quite entire, thickish, green above, but often purple or reddish beneath. Leaves emollient.

Synopsis of the genera.

TRIBE I.

GESNERIE*:. Calyx usually adhering to the ovarium at the

base; the ovarium is therefore half inferior. Seeds albuminous.

SUBTRIBE I.

GLOXINIE^. Calyx adnate to the ovarium. Corolla half inferior, perigynous.

1 TREVERAVIA. Ring round the ovarium entire. Corolla oblique; limb spreading.

2 GESNE'RIA. Glands around the ovarium free. Corolla straightish, tubular, furnished with 5 gibbosities at the base.

3 GLOXINIA. Glands as in *Gesneria.* Corolla very oblique, campanulately ringent, with only one gibbosity at the base.

SUBTRIBE II.

CONRADIE^E. Calyx adnate to the ovarium. Corolla superior. Leaves alternate or scattered.

4 RYTIDOCA'RPUM. Epigynous ring thick and sinuated. Leaves stipulate.

5 CONRA^DIA. Ring or glands scarcely present.

SUBTRIBE III.

BESLERIE\E. Calyx free. Corolla inferior.

6 SARMIE'NTA. Fruit baccate. Ring hypogynous. Stamens 4, 2 hind ones perfect: front ones abortive.

7 BESLE'RIA. Fruit baccate. Ring hypogynous. Stamens 4, all perfect, with a chaff-formed rudiment of a fifth.

8 HYPOCY'RTA. Fruit baccate. Glands hypogynous. Anthers connected. Corolla tubular, ventricose in front,

9 COLU'MNEA. Fruit baccate. Glands hypogynous. Anthers connected. Corolla tubular, ringent: hind lip arched.

10 MITRA^RIA. Fruit baccate. Glands hypogynous. Anthers free. Bracteas mitre-formed.

11 DRYMONIA. Fruit capsular. Rudiment of a fifth stamen wanting. Corolla very oblique, campanulately ringent; throat ample.

12 KLU'GIA. Fruit capsular. Rudiment of a fifth stamen wanting. Stigma capitately truncate. Corolla tubular, ringent.

13 TAPI^NA. Fruit capsular. Rudiment of a fifth stamen present. Corolla very oblique, campanulately ringent, with a constricted throat.

14 NEMATA'NTHUS. All as in *Tapina;* except that the corolla is campanulate, and its limb nearly equal and spreading.

15 ALLOPLE'CTUS. Fruit capsular. Rudiment of a fifth stamen present. Corolla straightish, club-shaped or funnel-shaped. Stigma capitately funnel-shaped.

10 EPI'SCIA. All^as in *AllopUclus;* except that the corolla is tubularly funnel-shaped, and the stigma 2-lobed.

TRIBE II.

CYSTANDRA%CE;E. Ovarium wholly superior. Seeds exalbu**minous.**

SuBTRIBE I.

TRICHOSPOREVE. Capsule silique-formed, terete. Seeds pendulous, expanded at both ends, or only at the apex or base into a setaceous or membranous wing.

17 TROMSDORFFIA. Calyx tubular, somewhat 5-cleft. Stamens 4, 2 of which are sometimes sterile, inclosed. Stigma sub-bilamellate. Seeds furnished with a membranous wing at the base.

18 JESCHYNA'NTHUS. Calyx ventricose, tubular, 5-cleft. Stamens 4, fertile, exserted, with the rudiment of a fifth, inclose Stigma somewhat funnel-shaped. Seeds drawn out into a bristle-formed tail at both ends.

19 LYSIONOTIS. Calyx deeply 5-cleft, or 5-parted. Stigma capitate. Anthers, capsule, and seeds as in *Mschynanthus.*

20 AGALMY'LA. Calyx 5-parted. Stamens 5, *2* or 4 of which are fertile, and exserted. Stigma bilamellate. Caps" and seeds as in ^*Eschyndnthus,*

SUBTRIBE II.

DIDYMOCA'RPE*:. Capsule silique-formed. Seeds pendulous, minute, naked.

21 STREPTOCA'RPUS. Calyx 5-cleft. Corolla tubularly fo»," nel-shaped; limb 5-lobed, nearly equal, oblique. Stamens *2* front ones fertile ; and the other *2* tubercle-formed and ste Valves of capsule twisted. Stigma 2-lobed. Seeds minu» naked.

22 DIDYMOCA'RPUS. Calyx campanulate, bluntly 5-toothet, o 5-lobed. Corolla tubular ; limb spreading. Stamens 4, rarefy 5, inclosed, *2* or 4 of which are antheriferous. Cells *of* anther^ divaricate. Stigma obtuse, or simple. Seeds subulate, roundish.

23 CHIRA'TA. Calyx 5-cleft, inflated, 5-angled. Cot^ funnel-shaped ; limb bilabiate. Stamens 5, inclosed, 2 1° ones fertile; anthers reniform, 1-celled. Stigma funnel-snap 2-lobed. Seeds subulate, acute at both ends.

SUBTRIBE III.

CYRTA'NDREJE. Fruit baccate. Seeds pendulous, naked.

24 CYRTA'NDRA. Calyx tubular, 5-cleft. Stamens 5, 3 o them sterile. Cells of anthers parallel. Stigma capitate, sometimes emarginate. Berry a little longer than the calyx.

25 WHI^TIA. Calyx small, 5-parted. Stamens as in *Cyrtandra,* but exserted ; cells of anthers unequal in insertion. Stigma somewhat funnel-shaped. Berry much longer than the calyx.

26 RHYNCIIOTE^CUM. Calyx 5-cleft. Stamens 4, fertile, inclosed; anthers 1-celled. Stigma obtuse. Berry globose, inclosed.

27 LOXO^NIA. Calyx tubular, 5-cleft. Stamens 4, fertile, inclosed; anthers sagittate. Stigma bilamellate. Berry oblong, nclosed.

28 CENTROVIA. Calyx spathaceous, cleft. Stamens 4, fertile, inclosed ; anthers 1-celled, spurred at the base. Stigma capitate. Berry longer than the calyx.

anthers *; Calyx 5-cleft. Stamens 5, fertile, exserted; ovate, longer than the calyx.

bractea V. DIA. Parted, inclosed in a spath-formed cose. Corolla tubularly ventricose, equal, 5-lobed, sub-bilabiate. Stamens 5, 4 fertile and sterile one included. Stigma bilamellate. Berry spongy, longer than the calyx. ?

SUBTRIBE IV.

Loxonieæ. Naked. Capsule 2-valved, or circumcised. Seeds erect,

§ 1. *Capsule 2-valved.*

short, bin. Calyx tubular, 5-cleft. Corolla tubular; limb minute, 4-cleft. Stamens 2, fertile; sterile ones none, or very small. Capsule 2-valved.

32 CLISSANTHUS. Calyx tubular, 5-cleft. Corolla tubular; limb very short: lower one large, convex. ?

33 PAGAMEA. Capsule 2-valved.

bilabiate. Calyx ovate, 5-cleft. Corolla rotatory, 5-cleft, without any tube. Stamens 4, very short, roundish. Stigma capitate, entire. Ovarium ovate, 2-celled.

34 ORTHOSIA. Calyx 5-parted. Corolla funnel-shaped; limb 4-cleft. Stamens 4, fertile. Stigma capitate, emarginate. Placenta 2, obovate, adnate to the dissepiment.

§ 2. *Fruit capsular, circumcised.*

35 STAUROSTEMMA. Calyx subrotately campanulate, 5-plicate, somewhat 10-cleft. Corolla with a very short tube, ampliate, obliquely 10-cleft. Stamens fertile, 4; anthers shortly 2-cleft at top. Stamens fertile, 4; sterile, 2, subulate, converging in a cruciate manner. Capsule fading, 2-celled, circumcised.

36 ALLOPLECTUS. Calyx tubular, 5-cleft. Corolla bilabiate, 5-cleft. Stamens 4, lower ones sterile. Capsule girded by the calyx, 1-celled, circumcised.

† *Genitus dubitful whether belonging to Gesneriaceæ or Bignoniaceæ.*

37 ANEMOPAEGMA. Calyx tubular, 5-toothed. Corolla tubular, ventricose near the base; limb 5-lobed, ciliated. Stamens 4, didynamous, with the rudiment of a fifth. Stigma bilamellate. Capsule linear-oblong, 4-cornered. Seeds winged at both ends, and bearded.

I. TREVERANIA (named in honour of Lud. Christ. Treveranus, M.D., professor of botany in the university of Bonn, on the Rhine.) Willd. enum. *2.* p. 638. Mart. nov. gen. bras. 3. p. *56.*—Cyrilla, Lher.—Achimenes species, P. Browne.—Achimenes, Pers.—Columnea species, Lam.

LIN. SYST. *Didynamia, Angiospermia.* Calyx adnate to the ovarium; limb 5-parted, nearly equal. Corolla funnel-shaped; tube rather oblique, gibbous behind at the base; limb nearly equal, spreading, 5-lobed. Stamens didynamous, with the rudiment of a fifth; anthers connected. Ovarium girded by a ring. Capsule dry, 1-celled, or half 2-celled; placentas *2,* parietal. Seeds many, scobiform.—Branched, pubescent, perennial herbs, furnished with scaly ament-formed stolons under ground, and sometimes from the axils of the leaves. Leaves opposite, or 3 in a whorl, serrated. Flowers axillary, solitary, or few and aggregate.

1 T. PULCHE'LLA (Willd. enum. *2.* p. *638.)* plant tomentosely hairy; leaves 3 in a Whorl, ovate, acuminated at both ends, serrated, with minute leaves in the axils; peduncles solitary, axillary. 7/. S. Native of Jamaica, among the mountains in steep places. Cyrilla pulchella, Lher. stirp. 1. p. 147. t. 71. Curt. bot. mag. 374. Buchnera coccinea, Scop, insubr. *2.* p. 10. t. 5. Columnea erecta, Lam. diet. *2.* p. *66.* Achimenes minor, P. Browne, jam. 271. t. 38. Achimenes coccinea, Pers. ench. *2.* p. 165. Gesneria pulchella, Swartz. prod. p. *90.* Corollas scarlet. Genitals inclosed. Capsule somewhat 2-celled.

iVW Treverania. Fl. Aug. Sept. Clt. 1778. PJ. 1 to 1| foot.

2 T. GRANDIFLORA (Schiede, in Linnaea, 8. p. *247.)* beset with spreading hairs; leaves opposite, equal, ovate, acute, oblique at the base, coarsely serrated. %. S. Native of Mexico, on shady places near the Hacienda de La Laguna. Leaves green above, and reddish beneath, very like those of elm; the largest ones \-½ to *2* inches long. Corollas large, of a violet purple colour. Genitals inclosed. Lobes of corolla roundish, quite entire.

Great-flowered Treverania. Pl. 1 foot.

3 T. HETEROPHY'LLA (Mart. nov. gen. bras. 3. p. *56.)* plant sparingly pilose; leaves opposite, the one smaller than the other, cordate ovate, acuminated, coarsely serrated. 1/. S. Native of Mexico, Karwinski. Largest leaves 1-3 inches long. Flowers solitary, or twin. Corolla scarlet; lobes roundish, ciliated. Genitals inclosed.

Variable-leaved Treverania. Pl. \ to 1 foot.

Cult. The species of this genus are exceedingly beautiful when in flower, like most of the other genera of the present order. A mixture *of* sand, loam, and peat is the best soil for them. As soon as the plants are done flowering they should not have any water given to them until the roots begin again to vegetate, when they should be taken out of the pots and divided. Five or six strong roots are sufficient for a sixty size pot. After this has been done, they require moisture and warmth to make them grow strong, and flower in perfection.

Tribe I.

Gloxinieæ. The genus Gloxinia is the only one that we are aware of which contains plants agreeing with the characters given below.) Calyx usually adhering to the ovarium; therefore half inferior.

Subtribe I.

Unis subtribe contains plants agreeing with the characters given below.) Calyx adnate to the ovarium. Corolla half inferior, perigynous.

II. GESNERIA (name given by Plumier in honour of Conrad Gesner, of Zurich, the famous botanist and naturalist.) Lin. gen. no. 749. Gsertn. fruct. 2. p. 472. t. 177. Juss. gen. 165. ed. Usteri. p. 184. H. B. et Kunth, nov. gen. 3. p. 392. Mart. nov. gen. bras. 3. p. *27.*

LIN. SYST. *Didynamia, Angiospermia.* Calyx adnate to the ovarium; limb nearly equally 5-lobed, free. Corolla semisuperior, tubular, with 5 gibbosities at the base; limb sub-bilabiate: upper lip drawn out, emarginately 2-lobed: lower lip 3-lobed. Stamens didynamous, with the rudiment of a fifth

behind ; anthers at first cohering into a round head. Glands 5, or fewer around the ovarium. Capsule dry in the calyx, 1-eelled, incompletely 2-valved ; placentas 2, parietal, many-seeded. Seeds scobiform.—Perennial plants, furnished with solid fleshy tubers of various forms; but in most of the species these tubers are nearly globose or placentiform, which send forth the stems every year. The plants are beset with compound, articulated hairs, and often with glandular, clammy pili. Stems simple, or branched, woody, or annual, terete, rarely angular. Leaves opposite, or verticillate, on short petioles, entire, toothed, or serrated, thickish, clothed with soft villi, which is often silky, but paler and more densely villous beneath. Buds naked. Leaves complicate. Flowers disposed in opposite cymes, constituting a terminal thyrse; the peduncles furnished with floral leaves, or bracteas at the base: rarely disposed in racemes or spikes. Corollas scarlet, or purple, rarely green, of one colour, or spotted with others, usually pubescent. This beautiful genus is diffused throughout the tropical parts of America, particularly in the fissures of moist rocks, and in shady, moist places.

* *Peduncles radical.*

1 G. TUBEROSA (Mart. nov. gen. bras. 3. p. 29. t. 212.) stem rhizomatoid, horizontal, marked by the cicatrices of the fallen leaves ; leaves opposite, broad-ovate, toothed, cordate at the base, clothed with soft pubescence, but hairy on the nerve and veins beneath ; peduncles from the base of the rhizomatose roots ; limb of corolla erectish, nearly equal ; hypogynous glands twin behind. %. S. Native of Brazil, in the mine provinces near Villa Rica, in the fissures of rocks. Tuber nearly globose, 1 to 1| inch in diameter. Peduncles radical, erect, numerous. Corollas tubular, erect, scarlet.

Tuberous-rooted Gesneria. PI. \ foot.

* * *Cymes terminal, umbellate,*

2 G. RUPICOLA (Mart. nov. gen. bras. 3. p. 30. t. 213.) the whole plant villously pubescent; stem a span high, leafless at top; leaves opposite, on short petioles, broad ovate, or obovate, purplish beneath, crenated ; cymes terminal; limb of corolla erectish, nearly equal; hypogynous glands 5. %.&. Native of Brazil, in the mine provinces, in high, exposed places. Tuber size of a filbert or walnut. Superior part of stem scape-formed. Floral leaves 2, sessile, under the cyme. Corollas tubular, scarlet.

Rock Gesneria. PI. \ to f foot.

3 G. CANESCENS (Mart. 1. c. p. *36.)* clothed with hoary villi; stem erect; leaves opposite, and 4 in a whorl, broad-ovate, acutish at both ends, a little toothed ; cymes terminal, few-flowered ; corolla clavately cylindrical: limb short, nearly equal; hypogynous glands 2, behind, *y..* S. Native of Brazil, in shady rocky places in the province of St. Paul, and on Serra do Mar. Stem purplish. Leaves 1 to lj inch long. Cyme of 3-G-8 flowers. Floral leaves under the cyme sometimes 4. Corolla scarlet, an inch long. Hypogynous glands linear-oblong, truncate.

Canescent Gesneria. PL f to 1 foot.

4 G. DOUGLA'SII (Lindl. in bot. reg. t. 1110. Mart. nov. gen. bras. *3.* p. *33.)* clothed with fine pubescence ; stem erect; leaves falsely verticillate, 4-5-6, rarely opposite, ovate, acute, crenately toothed; cyme terminal, simple, or compound ; limb of corolla nearly equal; hypogynous glands twin behind. %. H. Native of Brazil, in woods near Rio Janeiro, and in the tract of mountains of Serra do Mar, in various places. G. maculata, Mart. nov. gen. bras. t. 215. G. verticillata, Hook. bot. mag. t. 2776. Tuber nearly globose, *I?* to 2 inches in diameter. Stems solitary, or numerous from the tuberous, irregularly Corollas 1| inches long, drooping, rose-coloured, blood-marked with longitudinal, blood-coloured, or brownish coloured stripes and spots. 2fi pi. 2 to

Douglas's Gesneria. Fl. Aug. Sept. Clt. 1826. 3 feet.

* * * *Peduncles axillary,* 2, *or many-flowered, cymose.*

5 G. LATIFOLIA (Mart, in Otto, et Link, verh. 218. t. 1. nov. gen. bras. p. 34.) plant * Jjfviilous; stem erect; leaves opposite, broad, ovate-oblong, obtuse, upwards or elliptic, coarsely toothed; cymes axillary, equal tube into a terminal thyrse ; corolla cylindrical, with an 4, bebin(1. limb short, erect, nearly equal; hypogynous glana *V.* S. Native of Brazil, in the provinces of St. r* dianiet er, Geraes, in shady, rocky places. Tuber large, a span placenta-formed. Stems simple, numerous Irony Corolla all Leaves 4-7 inches long. Cymes 5-12-nowerea. bi- inch long, beautiful scarlet, villous outside ; tuu gibbous from the base downwards.

Broad-leaved Gesneria. PL l£ to 2 feet.

6 G. AGGREGATA (Ker. bot. reg. t. 329.) clothed with subviscid villi; stem erect, branched; leaves opposite, especially a whorl, oblong-ovate, acutish at both ends, villous on the veins beneath, crenated ; peduncles axillary, coarsely bi' ered, verticillate, 2 to 8, length of corolla, wine erect 5 gibbous behind, clavately cylindrical : limb nearly woods hypogynous glands 4-5. %. S. Native of Brazil, about Rio Janeiro, and elsewhere. G. penduhna, G. reg. t. 1032. This species agrees in some points Jla before. *latifblia,* particularly in the form of the corolla, yel!o florescence often tricoloured ; that is, scarlet at- mbous in the middle, and greenish at top; tube broadly often the base downwards. The 2 hind hypogynous giai combined in one. Clt.

Aggregate-flowered Gesneria. FL July, PL 2 feet.

7 G. DEPPEAVA (Cham, et Schlecht, in not s tomentum on the superior surfaces of the leave wish gosely scabrous; that on the lower surfaces y not fuscescent; the crense, tomentum of stems, calyx spreading, not reflexed; anthers exserted ; ate narrower, more acute, triangular, and the of than in (7. *elongdta,* H. B. et Kunth. If. S. - guna. ico, in the woods of Jalapa ; and at the Hacienda G. vetulina, Willd. herb. no. 11253. Nearly ainecalyxes, and the smaller corollas, which are also s

Deppe's Gesneria. PL

8 G. BULBOSA (Ker. bot. reg. t. 343.) tely leaves opposite, broad-ovate, cordate, acutish; axils of nated; cymes many-flowered, spreading from V- leaves, and disposed upwards into a terminal thyrse. lip of corolla very long; hypogynous glands Native of Brazil, in shady rocky places at Villa the mountains of Serra dos Orgaos, at the altitu 3000 feet. Leaves very like those of *G.* variable J tinguished by the figure of the corolla. It is the size of the corolla; and the cymes are some ed into a terminal thyrse, and sometimes otnei Corollas scarlet. pi. 181^.

^M/6ow5-rooted Gesneria. FL May, July. ft. anched; leaves

9 G. SELL6WII (Mart. 1. c.) stem pilose,

Pposite, on short petioles, cordate-ovate, acute, serrated, hairy above, and hoary from tomentum beneath ; cymes many-flowered, disposed into a long thyrse ; corollas clavately cylindrical; hmb short, nearly equal; hypogynous glands 4. %. S. Native of Brazil, in the province of Rio Grande do Sul, on Mount Butucaray, Sello. Leaves 5 inches long, and nearly 3 wide. Cymes opposite.

Selo's Gesneria. PI. *2* to 3 feet.

10 G. MICELIA (H. B. et Kunth, nov. gen. amer. 2. p. 395, t. 189.) acuminated, lanceolate ; leaves opposite, obliquely ovate-oblong, densely pilose, rounded at the base, sub-cordate, serrately crenated, pedunculate, and pilosely pubescent above, silvery and pilose beneath ; peduncles axillary, 3-flowered ; corolla tubular, inflated at top, bilabiate, limb 5-cleft, nearly equal, spreading ; hypogynous glands twin. %. S. Native of New Granada. Leaves 3 inches long, and lj inch broad. Corolla scarlet; limb spotted.

Sofic Gesneria. PI. ?

hoary d. MACROSTACHYA (Lindl. bot reg. t. *1202.)* clothed with cordate, ovate, crenated, wrinkled ; cymes from the axils of the upper leaves, terminal, compound raceme ; corolla tubular, bilabiate: limb nearly equal, short ; hypogynous glands twin behind the rest. %. S. Native of Rio Janeiro. Root tuberous, like *Lnn* ; Ora scarlet; limb spotted.

Long-spi/ced Gesneria. Fl. Aug. Clt. 1825. PI. 2 feet, clothed. LONGIFLORA (H. B. et Kunth, 1. c. p. 396.) branches acute, pilose, with woolly hairs; leaves opposite, obliquely ovate, finely acuminated into the short petioles at the base, crenated, 2fi. above and pubescent beneath ; peduncles axillary, 2-flowered ; corolla spreading, tubular, woolly : limb nearly equal, 5-cleft, hypogynous glands unknown. %. S. Native of New Granada. Leaves 4-5 inches long, and 2\ broad. Corolla purplish, ventricose at top ; limb spotted.

Long-flowered Gesneria. PI.?

13 G. LONGIFLORA (H. B. et Kunth, 1. c. p. 396.) branches tetragonal, clothed with woolly hairs ; leaves opposite, oblong or lanceolate, acute at the base, somewhat crenated, scabrous from the above, and clothed with fuscescent, woolly tomentum beneath ; peduncles axillary, 4-flowered, elongated ; corolla tubular, ventricose at top, hairy; limb 5-cleft, nearly equal, hypogynous glands unknown. %. S. Native of Quito. Leaves 7 inches long, veins purplish beneath. Corolla scarlet: limb spotted.

Plunged-flowered Gesneria. Shrub ?

U. CORDATA (Swartz, Prod. p. 89. fl. ind. occ. 2. p. 1016. US) rough, subdivided; leaves opposite, ovate, acute, serrated, short petioled, clothed with hoary tomentum beneath, cordate at the base ; peduncles terminal and axillary, many-flowered ; corolla cylindrical, incurved : 2 upper segments of the limb concave : the 3 lower ones longer, with crenated edges. %. S. Native of the South of Jamaica, in rocky places, on the banks of rivers. Leaves 2 inches long. Corollas scarlet.

Pl. Gesneria. Fl. June, Aug. Clt. 1822.

305. JASIANTHA (ZUCC. abhandl. acad. wiss. 1829, 1830. p. 1. t. 1.) Stem shrubby, branched, hairy; leaves petiolate, silky hairy, ovate-lanceolate, acuminated, serrulated, clothed with hairs at the base, with 4-flowered peduncles 4-flowered ; tube of corolla equal at the base, with 4 sinuosities; hypogynous glands 5, minute. F?. S. Native of Mexico. Corolla downy. Nearly allied to *G. Deppeana* Schlecht. et Cham. in Linnsea, 5. p. 110.

Many-flowered Gesneria. Shrub 2 to 3 feet.

* * * * *flowers verticillate, spicate, or racemose,*

16 G. SCEPTRUM (Mart. nov. gen. bras. 3. p. 32. t. 214.) villous ; leaves on short petioles, opposite, or 3 in a whorl, from subcordate at the base to oblong, bluntly serrated; whorls of flowers almost leafless at top, disposed in an elongated thyrse ; pedicels about the length of the corolla; upper lip of corolla drawn out; hypogynous glands 4 or 5. %. S. Native of Brazil, in the province of St. Paul, at Mogy das Cruce, along the banks of the Sapucahy river. Tuber large, depressed, globose. Leaves 2-3 inches long, villous. Stems simple.

Far. a, *rubra* (Mart. 1. c.) leaves with more parallel margins, lanceolate-oblong, acute, *3-5* inches long; peduncles loose and longer ; corollas red, or scarlet.

Far. y,fldvida (Mart. 1. c.) leaves broader, broad ovate-oblong, 4-6 inches long; peduncles loose and longer ; corolla pale yellow.

Far. y, *ignea* (Mart. 1. c.) leaves smaller, lj to 2 inches long, obtuse, rarely crenated, more densely pubescent beneath and canescent; peduncles shorter, strict; corollas pale fire coloured, reddish towards the edge of the limb.

Sceptre Gesneria. PI. 3 to 4 feet.

17 G. CHELONIOIDES (H. B. et Kunth, nov. gen. 2. p. *392.)* stem nearly simple, hairy ; leaves opposite, on short petioles, oblong, acutish, obtuse at the base, coarsely crenated, hairy *on* both surfaces, canescent beneath ; flowers spicate, opposite, solitary or twin; corolla tubular, hairy, gibbous above at the base : throat wide; hypogynous glands 5. 1/. S. Native of New Granada, in shady places in the valleys of Gualguase and Smitha, between Popayan and Almaguer, at the altitude of 580 to 700 hexapods. Leaves 3 inches long. Flowers pedicellate. Limb of corolla bilabiate: lobes all rounded. Corolla pale red. Ovarium only adhering to the calyx at the base.

Chelone-Rke Gesneria. PI. 3 to 4 feet.

18 G. ELATIOR (H. B. et Kunth, nov. gen. 2. p. 393.) stem simple ? pilose; leaves 3 in a whorl, nearly sessile, lanceolate, obtuse at both ends, crenated, pilose, but more densely so beneath ; spikes terminal, verticillate; whorles 3-flowered, remote ; corolla clavately cylindrical, villous; hypogynous glands 5. %. H. Native of New Andalusia, in shady places on Mount Tumiriquiri, at the altitude of 600 hexapods. Leaves on short petioles, canescent beneath, *2* inches long, and 7 lines broad. Flowers pedicellate, drooping. Corolla tubular, inflated at top, red.

Taller Gesneria. PI. 3 to 4 feet.

19 G. SYLVATICA (H. B. et Kunth, 1. c.) stem simple, pilose; leaves 3 or 4 in a whorl, lanceolate-oblong, acuminated, quite entire, strigosely pilose on both surfaces, but especially beneath; spike terminal, verticillate; whorles 2-4-flowered : lower ones distant; corolla tubularly ventricose; limb 5-lobed, reflexed ; hypogynous glands unknown. %.. S. Native of the province of Bracomoros, between Jaen and the river Amazon, at the altitude of 230 hexapods. Leaves canescent beneath, \\ inch long, and \ an inch broad. Flowers pedicellate. Corolla 8 lines long, scarlet, pilose outside.

Wood Gesneria. PI. 2 to 3 feet.

20 G. SPICATA (H. B. et Kunth, 1. c. t. 188.) stem subTruticose, simple, pilose ; leaves 3 in a whorl, on short petioles, lanceolate-oblong, acuminated, crenated, densely pilose above, and clothed with woolly tomentum beneath ; spike terminal, verticillate; whorles 10-flowered, approximate ; corolla tubular, incurved, hairy: limb 5-cleft: the 2 upper segments rather the largest; hypogynous glands 5. Tj . S. Native of New Granada, in boggy places near Ibrgue, at the foot of Mount Quindiu; also near the Hacienda de La Laguna, in Mexico, at the

altitude of 1730 hexapods. Leaves 5 inches long, and lj inch broad. Flowers pedicellate. Corolla scarlet. The Mexican plant usually has 4 leaves in a whorl, very scabrous above. The hairs of the stem are sometimes adpressed, of a fulvescent colour, not purplish. Corollas purplish.

Spicate-fiowered Gesneria. Clt. 1831. PL 3 to 4 feet.

21 G. ALLAGOPHY'LLA (Mart. 1. c.) stem erect, pilose, usually trigonal; leaves villous, nearly sessile, 3 in a whorl, or opposite, or scattered, linear-oblong or spatuiate, obtuse, crenated; flowers sessile, in whorls, disposed in a long terminal spike; tube of corolla cylindrical, pilose; limb equal, spreading, glabrous; hypogynous glands 2, behind. 1/. S. Native of Brazil, in the mine provinces, in various places. Lindl. bot. reg. t. 1767. Tuber large, often a span in diameter, placentiform. Superior leaves more approximate than the others. Floral leaves ovate, acutish, serrated. Lower whorles of flowers 2-3 inches distant, but more approximate upwards; sometimes the peduncles are scattered, and therefore constituting a long spike. Corolla scarlet, pilose.

Changeable-leaved Gesneria. FL May, July. Clt. 1835. PL 2\ to 3 feet.

* * * * * *Peduncles axillary, l-Jlowcred, solitary, or aggregate.*

22 G. PRASINA'TA (Ker. bot. reg. t. 428. Mart. 1. c. p. 37.) villous; stem erect; leaves opposite or 3 in a whorl, ovate or ovate-oblong, serrated; peduncles axillary, shorter than the corolla, which is campanulate, villous outside, with a nearly equal limb; hypogynous glands 5. %. S. Native of Brazil, in fields at Villa Rica, and elsewhere, in the mine provinces. Codonophora grandiflora, Lindl. in bot. reg. under no. 1112. Corollas scarlet? larger than those of *G. allagophylla,* campanulate.

Green Gesneria. FL May, July. Clt. 1818. PL lj to 2 feet.

23 G. RUVTILA (Lindl. bot. reg. 1158. Mart. 1. c. p. 34.) villous; stem erect; leaves opposite, oblong-lanceolate, acutish at both ends, coarsely crenated; peduncles axillary, shorter than the corolla; superior lip of corolla drawn out; hypogynous glands 2, behind. 1/. S. Native of Brazil, in shady woods, in a moist soil, and in the fissures of rocks near Rio Janeiro, and in the tract of the mountains called Serra dos Orgaos, in various places. This species differs from Cr. *sceptrum* in the smaller stature, slenderer, usually purplish, stem, opposite, narrower, more or less attenuated leaves, shorter, interfoliaceous peduncles, which are not disposed into a terminal thyrse; and in the corolla, which is always scarlet, of a deeper colour towards the margins, more constricted towards the base, and more ventricose towards the mouth, and in the hypogynous glands being only 2.

Var. /3, *atrosanguinea* (Bot. reg. 1279.) Corolla deep scarlet.

Brilliant Gesneria. FL Aug. Sept. Clt. 1825. PL 1 to 2 feet.

24 G. ULMIFOLIA (H. B. et Kunth, nov. gen. 2. p. 394.) shrubby? branches subtetragonal, and pilose; leaves opposite, ovate, acute, obliquely cordate at the base, crenated, blistered and scabrous above, reticulated and clothed with hairy pubescence beneath; peduncles axillary, 1-flowered, by threes or fours; corolla tubular, inflated at top, pilose outside; limb quinqnefid; *2* superior lobes the largest; ovarium girded by a yellow ring. ^ • S. Native of Quito, between Chillo and Sangolgui, at the altitude of 1350 hexapods. Leaves petiolate, 32-33 lines long. Flowers erect. Corolla scarlet, 4 times longer than the calyx. This belongs to a different genus, if the ovarium is really surrounded by a ring instead of glands.

Elm-leaved Gesneria. Shrub. ?

25 G. HIRSU'TA (H. B. et Kunth, 1. c. p. 394. t 1890 shrubby; branches very hairy; leaves opposite. °blong-o%a natcd, rounded at the base, tomentosely pilose above, a ed with woolly tomentum beneath :: peduncles appary, ered, twin; corolla tubular, inflated, hairy outside; glands hairy. I; S. S. Nti Native of the province of the monastery of Caripe, at the altitude of ^. 0 V veins Leaves on short petioles, about 3 inches long, having and margins purplish beneath. Flowers looping times longer than the calyx, ventncose at top, purpi 5 roundish spreading, spotted lobes.

Hairy Gesneria. HFIJ June, Aug. Clt. 18^.

26 G. HONDE'NSIS (H. B. et Kunth, L c. ?'**£ oppOstem nearly terete, clothed with silky white wool leav^ J ^ site, somewhat obliquely ovate-oblong, acumin f TV with white base, crenulated, very scabrous above, and cfome twoS and wool beneath; peduncles axillary, 1-flowereel, vv outside; limb threes; corolla tubular, ventricose at top, nany bidentate#. nearly equal; hypogynous glands 5, truncate, SUD- S. Native of New Granada, in rocky places near U J ^ 4j Honda, at the altitude of 150 hexapods. Leaves f. hajrs: inches long. Corolla yellowish green, beset with scan limb spotted with purple.

Honda Gesneria. PL 1 to 3 feet.

27 G. SUTTONI (Booth, in bot. reg. 1637.) stei- tevete, to- mentose; leaves ovate-cordate, crenated, tomento peduncles axillary, solitary, 1-flowered; upper lip of corolla dulated: lower one small, revolute. ^ • &• - Native of R,o Janeiro, near the bay of Bomviaga. £ oot ^ [£ large, scaropposite, green above, and hoary beneath. l^oroi let, downy, swelling at the base. pi. 2 feet-

'Sultan's Gesneria. FL July, Aug. Clt. 18<W.

28 G. TUBIFLORA (Cav. icon. 6. p. 61. t. 5S^ tetJ·ag0- *ried,* tonal, tomentose; leaves ovate, acuminated, cr or mentose; peduncles 1-flowered, axillary, by t*os corolla tomentose, tubularly ventncose, st^c renatures or contracted: limb small, equal, of 5 diverging, ere teeth. %. S. Native of Panama. . ^ V ^ W n t o s e, Peduncles unequal, longer than the petioles, Jong, adherent, with lanceolate segments. Cor°"a £ ^^ perscarlet. Hypogynous glands 5, obtuse, ^ap haps a distinct genus.

Tube-Lowered Gesneria. PL 1| to 2 feet.

29 G. VERTICILLA^TA (Cav. icon. 6. p. f L) stem tetragonal, villous; leaves ovate, crenulated, vi beneath; sile, hispid above, and clothed with hoary-tornei and appearing peduncles 1-flowered, numerous, axillary, villous, urceolate* as if they were verticillate; corolla villous, tuDUf , spreading throat contracted: limb equal, of 5 short, 'ounae, crenatures or teeth. %. S. Native of New G ^ f * an incb Guaranda and Chimborazo. Leaves opposite, nar long. Corolla scarlet, 3 lines long.

Whorled-flowered Gesneria. PL 1 foot.

N.B. What is Gesneria acaulis, Lin. *i*

Cult. All the species *of* this genus are very flower; they are, therefore, great favourites with cc light rich soil, or a mixture of loam, peat, ana them best. Most of the species are readily P r ^ o ^ s while in tings, and by the tubers of the root. dormant state should have no water given to tliem.

III. GLOXI'NIA (so named by L ' H e ^ ^ S Benj. Petr. Gloxin, of Colmar, author of U nicse." Argent. 1785. 4to.) Lher. stirp. i* kew. 2. p. 331. Mart. nov. gen. bras. 3. P« *

species Lin.—Paliava, Velloz. in Vand. script, t. 7. f. 17. Sinningia, Nees.

LIN. SYST. *Didynamia, Angiospermia.* Calyx adnate to the ovarium, to the middle : limb 5-parted, free. Corolla semisuperior> oblique, funnel-shaped, or campanulately subringent, gibbous behind at the base ; tube ventricose: limb spreading : upper lip 2-lobed : lower one 3-lobed. Stamens 4, didynamous, with the rudiment of a fifth behind. Glands 5, perigynous. Style 1. Capsule 1-celled, 2-valved ; placentas 2, parietal, 2-lobed. Seeds numerous, oblong. Root a thick unequal tuber.—Plants sometimes stemless, therefore the flowers and leaves rise immediately from the root, sometimes with simple, terete, soft stems. Leaves opposite, petiolate, thick, for the most part crenated or serrated. Gemmation naked. Flowers large, axillary, solitary, or many, aggregate, drooping, violaceous, greenish-yellow, or white, of one colour, or obscurely spotted, and striped with other colours. Native of tropical America, on the east coast, in wet shady places of woods, and on humid rocks, and sometimes at the roots of trees.

SECT. I. EUGLOXI'NIA. (This section is supposed to contain the true species of the genus.) Calyx terete. Corollas violaceous, bluish or white.

1 G. CAULESCE'NS (Mart. nov. gen. bras. *3.* p. 64. t. 226.) caulescent; stems elongated, rather pilose, as well as the leaves ; leaves oblong, attenuated at both ends, acute, serrated; flowers axillary> solitary or twin; calyx terete, with long, acuminated segments; corolla downy. 1/. S. Native of the province of St. Janeiro, in humid places, upon stones at Mount Corcovado, near Tejuco. Tuber size of a small apple, nearly globose. Stem 1 to 2 feet high, distant> stout, inches long, pale, and rather reddish below. Corolla an inch and a half long, blue or pale violet, very like that of *G. cauUscens* and *G. speciósa.*

Reader Gloxinia. PL 2 to 4 feet.

2 G. CAULE'SCENS (Lindl. bot. reg. 1127.) caulescent; leaves ovate, crenated, obtuse, tomentose, with revolute edges; pedunncles solitary> axillary> elongated; corolla downy: segments oblong, equal: middle one cordate-ovate, all undulated ; calyx cibsa, with acuminated segments, exactly like that of *G. speciósa.* Native of Pernambuco. Corolla large, a little archp drooping> bluish purple.

Cm Gloxinia. FL July, Aug. Clt. 1826. PL \ to 1 foot.

3 G. MACROPHY/LLA (Nees et Mart, in nov. act. bonn. 11. p. 66) Nearly stemless 5 leaves ovate, clothed with soft pubescence sessile, shorter than the flowers, crenated, obtuse ; flowers nutant; calyx large, 5-cleft, with triangular acuminated Segments. Leaves 8 inches long, and *b*\ inches-broad. Corolla blue Native of Brazil. Sims, bot. mag. 1191. Martynia perennis, Lin. spec. 862. Mill, diet. no. 2. Med. bot. beot. 1783. p. 238.—Martynia foliis serratis, Lin. hort. cliff, p. 322. t. 18.—Ehret. pict. t. 9. f. *2.* Root scaly, like that of *Dentária.* Corolla purplish-blue.

similar to the *Speciósa,* but smaller. This species is sessile, or *G. speciósa,* but differs in the flowers being in nearly the flowering smaller.

4 *Downy-leaved* Gloxinia. PL \ to | foot.

5 G. MACULVTA (Lher. stirp. t. 149.) caulescent ; stems simple, spotted ; radical leaves cordate, obtuse, doubly toothed, shining above, and reddish beneath ; cauline leaves petiolate, roundish-ovate, simply toothed ; peduncles axillary, 1-flowered, solitary ; calyx glabrous, with oblong obtuse segments ; corolla downy. 1£. S. Native of America, about Carthagena. Sims, bot. mag. 1191. Martynia perennis, Lin. spec. 862. Mill, diet. no. 2. Med. bot. beot. 1783. p. 238.—Martynia foliis serratis, Lin. hort. cliff, p. 322. t. 18.—Ehret. pict. t. 9. f. *2.* Root scaly, like that of *Dentária.* Corolla purplish-blue.

Spotted-stemmed Gloxinia. FL July, Oct. Clt. 1739. PL 1 foot.

6 G. HIRSU'TA (Lindl. bot. reg. t. 1004. Hook. bot. mag. 2690.) stemless, very hairy; leaves ovate-roundish, wrinkled, hispid, rather cordate at the base; scapes or peduncles aggregate, 1-flowered ; calyx tubular below, with lanceolate segments ; corolla funnel-shaped : tube narrow : limb spreading, with obtuse or retuse unequal lobes.]/. S. Native of Brazil. Leaves lying flat on the ground. Corolla pale blue, downy, striped with darker veins; the interior of the tube yellow, with darker spots.

Hairy Gloxinia. FL June, Aug. Clt. 1824. PL ± foot.

SECT. II. SINNI'NGIA (W. Sinning, gardener to the University of Bonne, on the Rhine.) Mart. nov. gen. bras. *3.* p. 64. Sinningia, Nees, in ann. scienc. nat. 6. p. 297. t. 12. The whole of the calyx, or only the bottom of it, angular or winged. Flowers white, yellowish green, or pale yellow.

7 G. SCHOTTII (Mikan. del. bras, p. 4.) leaves glabrous, cordate, ovate, serrated, ciliated ; calyx turbinate, twice as long as the ovarium. %. S. Native of Rio Janeiro. Sinningia Helleri, Nees, 1. c. Lindl. bot. reg. 997. Corolla pale yellow or greenish yellow.

SchotCs Gloxinia. FL June, July. Clt. 1820. PL 1 foot.

8 G. GUTTA'TA (Mart. 1. c.) leaves oblong-lanceolate, attenuated at the base, pubescent, lucid, serrated ; corollas spotted ; calyx cylindrically campanulate, 3 times as long as the ovarium. %. S. Native of Brazil. Sinningia guttata, Lindl. bot. reg. t. 1112. Corolla downy, pale, almost white, spotted inside with livid purple.

AS^offcd-flowered Gloxinia. FL July. Clt. 1826. Shrub 1| foot.

9 G. VELUTINA (Mart. 1. c.) leaves oblong, subcordate, velvety ; calyx cylindrically campanulate, 3 times as long as the ovarium. 1/. S. Native of Brazil. Sinningia velutina, Lindl. bot. reg. under no. 1112. Corolla pale yellow.

Velvety Gloxinia. FL July. Clt. 1826. PL 1| foot.

10 G. VILLOSA (Mart. 1. c.) stem and leaves villous; calyxes 5-parted, length of ovarium ; flowers aggregate. %. S. Native of Brazil. Sinningia villosa, Lindl. bot. reg. 1134. Larger than other species of this section. Corolla pale yellowish green.

Villous Gloxinia. FL July. Clt. 1826. PL 1| foot.

11 G. DU'BIA; calyx tubular, 5-angled, foliaceously winged, with a 5-cleft mouth ; corolla with an inflated sub-bilabiate limb ; rudiment of fifth filament inserted above the base of the corolla ; hypogynous glands 5, alternating with the filaments ; fruit capsular, rather fleshy. J?. S. Native of Mexico. Gesneriacese, Genus nova, Nees, in Linnsea, 1. p. *305.*

Doubtful Gloxinia. Shrub.

Cult. Gloxinia is a genus of splendid plants, and great favourites with gardeners. A light rich soil, or a mixture of sand, loam, and peat, suits them well. *G. maculata* is increased by dividing at the root; and it should be kept free from suck-

ers, and only a single stem in a pot, or it will not grow strong enough to flower. The rest of the species flower freely, and strike readily from cuttings. The leaves of *G. speciosa,* and probably of most others, if taken off close to the stem, and planted, will strike root, and make each a plant.

Subtribe II.

CONRADIE^N^ (this section agrees with *Conradia* in the character given below.) Calyx adnate to the ovarium. Corolla superior. Leaves alternate or scattered, not opposite, as in the last section.

IV. RYTIDOPHY'LLUM (from *fane fanSog, rytis rytidos,* a wrinkle; and <*pv\\ov, phyllon,* a leaf; leaves blistered.) Mart. nov. gen. bras. 3. p. 38.—Gesnèria species, Lin. and Swartz.

LIN. SYST. *Didyndmia, Angiospermia.* Calyx wholly adnate to the ovarium ; limb 5-toothed or 5-cleft. Corolla superior, campanulate, constricted in the middle; limb 5-lobed. Stamefts 4, didynamous, with the rudiment of a fifth behind ; anthers free or anisogeneous, and cohering. Disk epigynous, thick, annular, sinuous. Capsule dry, combined with the somewhat 5-ribbed calyx; top flat, 2-valved ; placentas 2, parietal, many-seeded.—Small trees and shrubs, with fibrous roots. Branches alternate and scattered, hairy. Leaves stipulate, on short petioles, scattered, very hairy beneath ; the parenchyma in the upper surface elevated into small blisters, each bearing a hair at apex. Flowers cymose, on peduncles which rise from the axils of the superior leaves, green, of one colour, or spotted with blood-colour, or wholly blood-coloured.

1 R. TOMENTOSUM (Mart. 1. c. p. 39.) branches hairy ; stipulas roundish, revolute, crenated, tomentose ; leaves oblong, acuminated, narrowed at both ends, serrated, reticulated, and clothed with hoary pubescence beneath, and papillosely rough above; corymbs axillary, on long peduncles ; calyx villous, with a 5-parted equal limb. f? . S. Native of tropical America, on the banks of rivers and rivulets. Gesnèria tomentdsa, Lin. spec. 851. Mill. diet. no. 1. Jacq. amer. 179. t. 175. f. 64. pict. 89. t. 261. f. 2. Sims. bot. mag. 1023. Codonophora lanceolata, Lindl.—Sloane, hist. 1. p. 162. t. 104. f. 2. Corollas spotted with yellow and dark purple. What is Gesnèria tomentosa, H. B. et Kunth, nov. gen. 2. p. 396, which is described as a herbaceous plant, with a fusiform root, a simple procumbent stem, and opposite leaves.

Tomentose Rytidophyllum. Clt. 1759. Shrub 2 to 4 feet.

2 R. GRA'NDE (Mart. 1. c.) branches hairy; leaves broad-lanceolate, very long, denticulated, hairy, scabrous above, petiolate ; peduncles long, terminal and axillary, dichotomous ; pedicels usually 3-flowered ; segments of calyx acute, equal. J? . S. Native of Jamaica, on the mountains. Gesnèria grandis, Swartz. prod. 89. fl. ind. occ. 2. p. 1018. Leaves scabrous and white beneath. Flowers large, greenish-yellow. Corolla irregular, dilated at the base ; limb ventricose towards the top ; upper lip large, arched, bifid.

Great Rytidophyllum. Shrub 6 to 15 feet.

3 R. BERTEROANUM (Mart. 1. c.) branches densely hairy; stipulas subulate; leaves lanceolate, acuminated at both ends, doubly toothed, scabrous from hairs beneath, and papillosely rough above ; calyx villous, with setaceously elongated segments. *? . S. Native of the island of St. Domingo, on rocks. Gesnèria seabra, Spreng. syst. 2. p. 838. but not of Swartz.

Berteros Rytidophyllum. Shrub.

Cult. This is a beautiful genus, like the rest of the present order. A light rich earth, vegetable mould, or a «ixtur? of ngs loam, sand, and peat, is good soil for the species; and cutti o strike root readily in heat.

V. CONRADIA (named after Conrad Gesner, see Gesnèria.) Plum. and Mart. nov. gen. bras. 3. p. 38. Gesnèria species, Swartz. . . r'oi.rv wholly adnate

LIN. SYST. ***Didynamia, Angiospermia.*** **Calyx** vv olla, ^^ to the ovarium ; limb 5-cleft or 5-toothed, free, do ^^ rior, tubular or campanulate; limb somewhat e bel)ind. Stamens 4, didynamous, with the rudiment ol djsk anthers usually cohering into a round head, ribbed ca,yX(wanting. Capsule dry, clothed with a 5 or iu- seeded. flat on the top, 2-valved; placentas *, pane tal,ornan^ ^ Seeds scobiform.—Shrubs, rarely herbs, with n alternate M> or Branches alternate or scattered. Leaves petiolate, gtiffigh scattered, towards the tops of the branches, rougn labrolis, white hairs, particularly on the nerves and veins, lare Qn usually toothed. Flowers disposed in few-Howereu Qt peduncles which rise from the axils of the upper lea green, spotted with blood-colour, white or pale.

SECT. I. SYNANTHE^RA (from *aw, syn,* togethei; and *anthera,* an anther.) Stamens inclosed. Antner all connected into a round head.

1 C. HiTMiLis (Mart. 1. c.) leaves lanceolate, serrated, sessile; peduncles dichotomous, 3-7-flowered, very long ; calyx rampa- nulate, 5-toothed ; corolla campanulate, humilis, live of Tropical America, and the West Indies p', gen. «• Lin. spec. 850. G. humilis flore flavescente, PJum. spots icon. 133. f. 2. Corolla yellowish green, vwtl. within.

Humble Conradia. Shrub 2 feet.

2 C. CRAHIOLA'EIA (Mart. 1. c.) leaves ovate, acu«» sub-runcinate, toothed, glabrous above and "«ry ^ calyx camdowny, with linear lanceolate, reflexed Begnenis of Hispaniola, panulate ; limb nearly regular, h • S- N^ Ve craniolar«. among broken rocks on the mountains. **sneria fr ^^ Swartz, prod. 89. fl. ind. occ. 2. p. 1015. Cianiou Leave g 4 6 Lin. spec. 861.-Plum. gen. £7, icon, t.187. dark pu ^ inches long. Corolla green outside, hairy, ana la lacinately Margins of the segments of the lower lip oi coro.

^cla'niolaria-Wke Conradia. Shrub 3 to 4 ^et- serrated,

3 C. SCAWA (Mart. 1. c.) leaves ovate-lanceolate, scabrous ; calyx scabrous, with ovate, ac«te, blood ual. ^ - g. ments ; corolla incurved, cylindncal: limb nearly eq^^ scabr8(Native of Jamaica, on calcareous rocks. Leaves petiolate, Swartz, prod. 89. fl. ind. occ, 2. p. 1020. beneath. Corolla scabrous above, wrinkled, hispid, and lioary small, blood red.

Scabrous Conradia. Shrub 2 to 4 feet.

SECT. II. DITTANTHE^A (from « ™ J ^ *uyOvpa, anthera,* an anther.) Stamens exserted , nected by pairs.

4 C. VENTRICOSA (Mart. 1. c.) let, veS/Ser'edrcalyc crenated, glabrous; peduncles usually *-J°*leal, incurved- segments subulate, elongated ; corolla cylin. g> Native of segments of the lower lip crenately ciliated. p. 90. Jamaica, Martinique. Gesnèria ventricosa, bwa Leaves fl. ind. occ. 2. p. 1028. Pentaraphia long.flo.a, ^

6-8 inches long. Flowers large, scarlet. Capsule turbinately-oblong.

Ventricose-flowered Conradia. Fl. June, July. Clt. 1823. Shrub 6 to 8 feet.

5 C. EXSERTA (Mart. 1. c.) leaves oblong-lanceolate, crenated, glabrous, reflexed; peduncles 3-flowered; calycine segments long, acute, tra[illegible] corolla with the tube dilated at the base, and constricted in the middle, gibbose behind, and ventricose in front. Fl. fc. Native of Jamaica, on the top of the mountains. Gesneria exserta, Swartz, prod. p. 89. fl. ind. occ. p. 1024. Leaves lanceolate, pale beneath. Corolla large, yellow, an inch long.

Exerted-stamened Conradia. Shrub 8 to 10 feet.

6 C. CALYCINA (Mart. 1. c.) leaves ovate-lanceolate, acuminate, calyx [illegible] glabrous; peduncles 3-flowered; erect-[illegible] campanulate, 5-toothed: teeth ovate, acute, sulcate. Corolla like that of *C. exserta;* genitals exserted; capsule [illegible]. Native of Jamaica, in mountain woods. Gesneria calycina, Swartz, prod. p. 90. fl. ind. occ. 2. p. 1026. Gesneria calycina, Hon. ex Loud. hort. brit. p. 241. Leaves lanceolate, 4-6 inches long.

Green-calyxed Conradia. Fl. July, Aug. Clt. 1826. Shrub [illegible] feet.

CHORISANTHERA (from χωρίζω *chorizo,* to separate, and ἄνθηρα *anthera,* an anther; anthers separate, not like those of the other species. Stamens a little exserted; anthers distinct. Fruit

7 C. PUMILA (Mart. 1. c.) stemless; leaves cuneate-obovate, crenated, nearly sessile, rather hairy; peduncles usually 2-flowered, shorter than the leaves; calycine segments ovate-lanceolate, acute, 10 times shorter than the ovate-lanceolate, reflexed corolla with a funnel-shaped tube dilated and sub-campanulate above: limb nearly regular, 5-crenately ciliated segments: upper 2 erect. Native of Jamaica. leaves rather scabrous. Corolla whitish, covered with blood-coloured hairs.

Culture. Conradla. Pl. 1 foot.

For Culture and propagation see *Rytidophyllum,* p. 650.

Subtribe **III.**

BESLERIEÆ. Anther-cells with [illegible] (the genera contained in this subtribe agree with Vl. [illegible]) Calyx free. Corolla inferior.

Botanist Nat. [illegible] et Pav. fl. per. 1. p. 8. t. 7. f. b. Mart, nov. gen. bras. 3. p. *66.* t. 219. f. 2. Urceolaria, Feuill. per. 3. p. *69.* t. 43.

ESSENTIAL SYST. *Didynamia, Monogynia.* Calyx inferior: limb 5-parted, nearly equal. Corolla urceolate: limb 5-lobed, nearly equal. Stamens perfect, with the rudiments of three others; the hind one of these subulate and smaller. Ovary inferior. Capsule 1-celled, circumcised, ex Ruiz. Placentas 2, parietal, many-seeded.—A branched, scandent, parasitical herb, with strong, wiry roots. Peduncles opposite, thickish, hairy, dotted. Flowers on long scarlet, bibracteate.

1 B. REPENS (Ruiz, et Pav. 1. c) V- S. Native of woods. Urceolaria scandens, Feuill. per. *3.* p. *69.* t. 43.

Sarmientas. Pl. climbing.

For culture and propagation see *Rytidophyllum,* p. 650.

VII. BESLERIA (SO named by Plumier after Basil Besler, an apothecary of Nuremberg, editor, with the assistance of Jungermann, of a large work, entitled " Hortus Eystettensis, 1613." The garden belonged to Conrada Gemmingen, a bishop, and the plates were engraved at his expense.) Plum. gen. 5. in part. Lin. gen. no. *755.* in part. Schreb. gen. no. 1012. Jacq. amer. 187. in part. Juss. gen. p. 121. in part. H. B. et Kunth, nov. gen. amer. 2. p. 397. in part. Gaertn. fruct. 1. p. 24. t. *52,* Mart. nov. gen. bras. 3. p. 43.—Eriphia, Browne, jam. 270.

LIN. SYST. *Didynamia, Angiospermia.* Calyx coloured, 5-cleft, free; segments quite entire. Corolla campanulately-ringent: upper lip 2-lobed: lower one 3-lobed. Stamens 4, didynamous, rising above the base of the tube, with a chaff-formed rudiment of a fifth behind. Hypogynous ring, without any gland. Berry globose, 1-celled. Seeds very minute, numerous, attached to two parietal, 2-lobed placentas.—Erect, branched shrubs. Stems sub-tetragonal. Leaves opposite, petiolate, thickish; nerves and veins very prominent beneath. Peduncles axillary, few-flowered. Down and hairs on the plants simple. All inhabitants of Tropical America, in shady, moist places.

1 B. UMBROSA (Mart. 1. c. p. 44. t. 218.) leaves oblong, acuminated, attenuated at the base, or cordate, quite entire, ciliated in the young state, and with the nerve and veins strigillosely pubescent beneath; peduncles axillary, solitary, usually 3-flowered, exceeding the petioles, fy . S. Native of Brazil, in shady woods, at fountains near Mandiocca, and elsewhere in the tract of the mountains called Serra dos Orgaos, at the altitude of 500 feet. Leaves *3-5* lines long. Corollas white, glabrous.

Shaded Besleria. Shrub 3 to *5* feet.

2 B. LUXTEA (Lin. spec. 863. Swartz, obs. 231.) leaves broad-oblong, acuminated, contracted behind, coarsely-toothed in front, glabrous; peduncles axillary, 1-flowered, about equal in length to the petioles. J? . S. Native of Jamaica, in humid places; Guiana and Para.—Plum. gen. 29. p. *36.* t. 49. f. 1. Eriphja, &c. Browne, jam. p. 271. Corolla yellow.

Yellow-flowered Besleria. Fl. July, Aug. Clt. 1739. Shrub 3 to 5 feet.

3 B. LUTEO-VIRENS (Nees, et Mart. nov. act. bonn. 11. p. 49. Mart. nov. gen. bras. 3. p. 45.) leaves oblong-lanceolate, acuminated, cuneated at the base, serrated, especially in front, rather pilose; cymes axillary, many-flowered, contracted, equal in length to the petioles. *fy.* S. Native of Brazil, in boggy parts of woods near St. Petro de Alcantara, in the district of Ilheos. Corolla greenish-yellow.

Greenish-yellojv-fiowered Besleria. Shrub.

4 B. EAEGANS (H. B. et Kunth, nov. gen. amer. 2. p. *397.)* leaves somewhat obliquely elliptic-oblong, acuminated, quite entire, glabrous; peduncles axillary, generally twin, and usually 3-flowered, shorter than the petioles. *2. S. Native of New Granada, on the Andes of Quindiu, between Quebrada de Tucheacto and the river San Rafall, at the altitude of 1350 hexapods, Branches terete, twisted, hairy while young. Leaves 7 inches long, and 3 broad. Calyx glabrous. Corolla scarlet, glabrous.

Elegant Besleria. Shrub.

5 B. SOLANOIDES (H. B. et Kunth, 1. c.) leaves lanceolate-oblong, acuminated, narrowed at the base, remotely and obsoletely denticulated, glabrous; peduncles axillary, usually by threes, 1-flowered, about equal in length to the petioles. J? . S. Native of the valley of San Lorenzo, on the banks of the river Pansitara, between the city of Popayan and Almaguer, at the altitude of 1050 hexapods. Stems wrinkled, glabrous. Leaves opposite. ? Peduncles solitary, twin, or by threes. Corolla orange-coloured, glabrous. Said to be nearly allied to the preceding.

Solanum-like Besleria. Shrub 3 to 6 feet.

6 B. INCARNA'TA (Aubl. guian. *2.* p. *635.* t. *256.)* leaves oblong, crenated, tomentose on both surfaces; peduncles axillary, solitary, 1-flowered ; genitals exserted. *%.* S. Native of Guiana. Plant erect, herbaceous, tomentose. Stem tetragonal. Corollas purplish; tube long, ventricose : lobes of limb reflexed, roundish, unequal, fringed.

Flesh-coloured-Cowered Besleria. Fl. ? Clt. 1820. PL *2 feet.*

7 B. ? VIOLA'CEA (Aubl. guian. *2.* p. 637. t. 254.) leaves ovate, acute, quite entire; peduncles racemosely panicled, terminal; stem scandent. T? . S. Native of Guiana, in woods. Leaves glabrous, stiff. Flowers purple, size of those of *Lilac.* Calyx ventricose, 5-toothed, purple. Corolla with a curved tube and spreading limb. Berry purple, edible.

Var. /3, ccerulea (Aubl. guian. *2.* p. 631.) berries blue.

Fiolet-berried Besleria. Shrub climbing.

Cult. For culture and propagation see *Rytidophyllum*^ p. 650.

VIII. HYPOCY'RTA (from *vîro, hypo,* under; and *Kvprog, cyrtosy-* gibbous ; the under part of the tube of the corolla exhibits a conspicuous gibbosity.) Mart. nov. gen. bras. 3. p. 48.

LIN. SYST. *Didyndmia, Angiospérmia.* Calyx free, deeply 5-parted. Corolla inferior, tubular, gibbous behind at the base, but, with the tube, ventricose in front : limb 5-lobed, or 5-toothed, nearly equal. Stamens 4, didynamous, with the rudiment of a fifth behind, which rises from the base of the tube; anthers cohering by pairs. Hypogynous ring bearing a gland behind. Berry globose, juicy, coloured, 1-celled. Seeds many, fixed to *2* 2-lobed, parietal placentas (f. 68. f.)—Glabrous, or hairy shrubs, inordinately branched, extending and radicant, rarely erect. Leaves opposite, thickish, paler beneath, and shining, and often reddish. Flowers axillary, solitary, or aggregate, of a beautiful colour, such as scarlet, white, cream-coloured, and rose-coloured.—Some of the species grow upon old trees^or in humid places throughout tropical Brazil.

SECT. I. CODONA'NTHE (from /cwcW, *kodon,* a bell; and *CLVQOQ, anthosy* a flower ; in reference to the campanulate tube of corolla.) Mart. nov. gen. bras. 3. p. 49. Tube of corolla sub-campanulate, a little more ventricose on the lower side ; limb broadish.

1 H. GRA'CILIS (Mart. nov. gen. bras. 3. p. 50. t. 220.) glabrous ; branches inordinate, ascending, rooting every where, loose, epidermis shining; leaves on short petioles, ovate, with sub-undulately-toothed edges ; peduncles axillary, solitary, or twin ; corollas sub-campanulately tubular : lobes rounded, spreading. ^ • S. Native of Brazil, in various places among stones, in humid places from Rio Janeiro to Para. Corollas glabrous, white outside, yellow inside, and spotted with red at the base. Branches obsoletely tetragonal.

Slender Hypocyrta. Shrub creeping.

2 H. AGGREGA^TA (Mart. 1. c. p. 51. t. 221.) stem erect, nearly simple, hairy ; leaves oblong, acuminated at both ends, quite entire, pilose in the young state ; petioles and nerves hairy beneath ; peduncles axillary, aggregate ; calyxes vermillion coloured ; corollas urceolate : lobes roundish, spreading. ^ . S. Native of Brazil, in the province of Rio Negro, in woods along the river Japura, near Manacuru and elsewhere. Stem terete, or obsoletely tetragonal. Corolla fine scarlet, finely pubescent outside.

Aggregate-flowered Hypocyrta. Shrub 4 to 6 feet.

SECT. II. ONCOGA'STRA (from oy/coc, *oncos,* a hook; and yaoriyp, *gaster,* a belly ; in allusion to the tube being gibbously ventricose downwards on the lower side.) Mart. nov. gen. bras. 3. p. 49. Tube of corolla very much gibbously ventricose downwards ; limb short, toothed, erect.

3 H. HIRSU^TA (Mart. 1. c. p. 52. t. 222.) stem erectish, or as-, cending, villously hairy at top; leaves on short petioles, obovate, bluntish, hairy; flowers axillary, solitary; corollas greatly swollen in front: limb contracted, erect, 5-toothed, fj . S. Native of Brazil, in the mine provinces, in shady, stony places on the edges of woods, near Villa Rica and elsewhere. Stem flexuous, or obsoletely tetragonal. Corolla an inch long, scarlet, pubescent, (fig. 68.)

FIG. 68.



Hairy Hypocyrta. Shrub 1 to \\ foot.

4 H. sTRiGiLLosA^(Mart. I.e. p. 52.) stem erectish, villous at top; leaves on short petioles, oblong, acutish, ^mucron flowers axillary, solitary ; corollas coarsely ventricose limb contracted, erect, 5-toothed. J? • S. Native of the mine provinces, on the rocks of Mount Lenbei, João d' El Rey and elsewhere ; also on the; mountain cora, in the province of Bahia. Flowers preceding, except the calyx, which has the segments acute, and the strigie on the nerves of the leavei spicuous than in the other parts, and the coroiia cent. Perhaps belonging to the first section *Codonani*

Strisillose Hypocyrta. Shrub 1 to 1 5 loot.

5 H. CILIOSA (Mart. 1. c. p. 53.) hairy ; / J h spreading: lower one with bent in cihae. T? . » the diocess of Japura, in woods at Manacuru. KK on trees, terete, purplish. Corolla more than an cream-coloured, pubescent; tube calcarately base behind, and widened upwards.

CWiflfcd-flowered Hypocyrta. Shrub creeprng- 650.

Cult. For culture and propagation see *Rytidofhyl*[lurn,] 1

IX. COLU'MNEA (a name given by ^"'Yi"ciSrui"' "f Fabius Columna, as he is commonly called, or i-ao ^ ^ the noble family of Colonna, in Italy ; author ot "(phyto banitarum stirpium Ecphrasis," Rome, I[616,] sanos," 1 vol. 4to. Naples, 1592.) Plum. 33. ^ j . p. 792. Schreb. gen. no.-1060. Juss. gen. 135. Mart. nov. gen. bras. 3. p. 56. t. 224. *i,-•*

LIN. SYST. *Didynmma,Anglosj>ermia.* ^W* parted. Corolla tubular, straightish, g.bbous base, ringent : upper lip erect, arched : lo spreading. Stamens 4, didynamous; anthers c the rudiment of a fifth behind. Glands 1-5 Berry 1-celled; placentas 2, parietal, 2-lobed. —Stems flexile, erect, or scandent. Leaves posite, thickish, hairy, or pubescent, duncles axillary, solitary, or crowded. Corollas *t,*

1 C. SCA'NDLS (Lin. spec. 891.) leaves £.* * rather villous ; segments of calyx denticulated, as the corollas, pubescent; upper lip of corona w. S. Native of Guiana, and the West Indies, in woods, climbing upon -trees. Jacq. amer. pici-

quadrangular. Leaves petiolate. Flowers French in the West Indies *Liane de Sirop.* The plant is flowers yellow ; fruit white. T? . ^. S. Columnea

Columnea flore lutescente, fructu albo, Plum. gen. 28.

climbing. Columnea - Fl - Aug. Sept. Clt. 1759. Shrub

IIIRSIJXTA (Swartz, prod. 94. fl. ind. occ. 2. p. 1080.) nated, serrated, hairy above ; calycine segments S. and are, as well as the corollas, hairy. *hc .* dense aica, at the roots of trees on the mountains in Brown, Ait, hort kew - P- 366.—Archimenes, &c. 1. Jam- ^70. t. 30. f. 3.—Sloan, hist. 1. p. 157. t. 100. f. Flowp. Petiolate. Corollas villous, purplish, or pale red. *fr.* usually twin.

8 Columnea. Fl. Aug. Nov. Clt. J 780. Shrub climbing, RUTILANS (Swartz, prod. p. 94. fl. ind. occid. 2. p. 1083.) denticulated, rather scabrous, hairy, and the enroll- heath 5 calycine segments jagged, and are, as well as a8fuVinous - ^ *yj'* S- Native of the interior of Jaon the trunks of trees in dense woods. Corallas

imbi- ed Colurnnea - Fl. Aug. Sept. Clt. 1823. Shrub

HISPIDA (Swartz, prod. p. 94. fl. ind. occid. 2. p. 1083.) denticulated, hairy ; calycine segments of the of Jamaica, on shady rocks. Calyx blood- West white.

Columnea - Shrub 1 to 3 feet.

ANTA (Schlecht, in Linnsea, 8. p. 249.) stems ovate, crenated, rather hispid above, and some- beneath. S. Native of San Carlos de peduncles terminal, solitary. Calycine segments tri- corolla scarlet, beset with white hairs. Capsule 2- ex Lav.

Columnea. Shrub creeping.

HIEDEANA (Schlecht, in Linnsea, 8. p. 249.) stems ovate-lanceolate, entire, and are, as well as the corolla potted and villous. S. Native of Mexico, near Misantla, and near the Hacienda de La smoothish at bottom, but clothed with broad - Corolla *2* inches long, clothed with white Variegated with yellow and brown. Berry glo- oblong, acutish at both ends.

Columnea - Shrub.

Cult. Stella, Loir. coch. p. 384. ?

Culture and propagation see *Rytidophyllum,* p. 650.

X. MITRARIA (from *fiirpa, mitra,* a mitre; in reference to the mitre P- 57 - formed bractea which covers the calyx.) Cav. icon. Lin, 5 79 . Mart. nov. gen. bras. 3. p. *66,*

Parted *Angiospermia.* Calyx inferior; limb calycinately 2-lobed, mitre-formed bractea. one %-oh A- y- ntricose ; upper lip *of* limb 2-lobed ; lower ment of Stamens 4, didynamous, exserted, with the rudiabit of *Columnea.* Stems scandent. Leaves ovate, lowers axillary. Corallas scarlet.

COCINEA Native of San Carlos de Chiloe. *Scarlet-fl*

Cult, Mitraria. **Shrub** scandent.

Culture and propagation see *Rytidophyllum,* p. 650.

XI. DRYMCTNIA (from ^pv/xoc, *drymos,* an oak wood ; in allusion to the plant growing on trees in woods.) Mart. nov. gen. bras. 3. p. *51.*—Gesnèria species, Jacq. et Kunth.

LIN. SYST. *Didynamia, Angiospermia.* Calyx free, oblique, 5-leaved; leaflets imbricate, *2* interior. Corolla oblique, campanulately sub-ringent, gibbous at the base behind; throat spreading ; upper lip 2-lobed ; lower *one* 3-lobed. Stamens 4, didynamous, without any rudiment of a fifth ; anthers free. Hypogynous disk, bearing an ovate gland behind. Capsule baccate, ovate, coriaceous, 1-celled, 2-vaived ; placentas 2, parietal, bilamellate. Seeds numerous, fusiform.—Shrubs climbing, and fixed by strong roots to trees, or lying upon the earth. Stems flexile, nearly terete, with a shining epidermis, inordinately branched. Leaves opposite, petiolate, serrated, pubescent fronj simple hairs, like all the herbaceous parts of the plant, thickish. Peduncles axillary, solitary, shortish, bractless. Corollas large, painted.

1 D. CALCARATA (Mart. i. c. p. *58.* t. 224.) leaves ovate, rounded at the base, cordate, acute at the apex, and are, as well as the obliquely cordate-ovate, toothed segments of the calyx, downy; segments of corolla denticulated; anthers spurred at the base. T? . S. Native of Brazil, in the province of Rio Negro, along the river Japura, on trees. Corolla large, white, striped with yellow, and spotted with purple. Calyx large.

/#pw/T£G?-anthered Drymonia. Shrub climbing.

2 D. SPECTABILIS (Mart. 1. c. p. 59.) leaves elliptic-oblong, acute, obsoletely toothed, clothed with adpressed pili; calycine, segments ovate-oblong, obsoletely denticulated, clothed with adpressed hairs ; segments of corolla crenulated, fringed, ex Bonpl. J? . S. Native of New Granada, in woods on the banks of the river Smitha, between Villa La Sequia and the town of Popayan, at the altitude of *600* hexapods. Leaves 2-3 inches long. Corolla large, white, campanulate, downy outside ; limb reddish.

Showy Drymonia. Shrub climbing.

3 D. JACQUINI ; leaves oblong, acuminated at both ends, hairy, toothed; calycine segments serrated; limb of corolla sharply serrulated. P? . S. Native of the West Indies. Besleria serrulata, Jacq. hort. schoenbr, 3. p. 21. t. 290. Leaves hairy, greenish above, and brownish purple beneath. Calyx large green. Corolla cream-coloured.

Jacquin's Drymonia. Fl. ? Clt. 1806. Shrub climbing.

4 D. ? GRANDIFLORA ; leaves ovate-oblong, acuminated, crenated, densely pilose above, villous beneath, as well as *on* the branchlets ; peduncles axillary, elongated, many-flowered ; calycine segments ovate-oblong, acute, quite entire, densely pilose ; corollas campanulate, villous ; throat open. J? . S. Native of New Granada, in humid woods between Paramo de San Fortunato and Fusagasuga, at the altitude of 1000 hexapods. Besleria grandiflora, H. B. et Kunth, nov. gen. amer. 2. p. 401. Leaves purplish beneath. Calyx purplish. Corolla campanulate, sub-gibbous at the base, villous outside, white, and glabrous inside: limb bilabiate, spotted with red. Anthers cohering cruciately with the rudiment of a fifth stamen.

Great-flowered Drymonia. Shrub.

Cult. For culture and propagation see *Rytidophijllum,* p. 650.

XII. KLIPGIA (named after Fr. Klug, M.D.) Schlecht, in Linnsea, 8. p. 248.

LIN. SYST. *Didynamia> Angiospermia.* Calyx free, pentagonally 5-winged, 5-toothed. Corolla tubular : limb bilabiate : upper lip large, roundish entire : lower *one* small, 3-lobed. Stamens 4, nearly equal, without any rudiment of a fifth. Anthers approximating by pairs. Hypogynous disk narrow, glandular. Capsule membranous, free, 2-valved ; placentas 2,

bilamellate. Seeds numerous, cylindrical.—An herb with alternate leaves, and somewhat grumose from minute down. Leaves unequal-sized. Flowers disposed in a terminal raceme. Habit of a species of *Cuphea.*

1 K. AZUˣREA (Schlecht, 1. c.) %. S. Native of Mexico, at Cueste grande de Chiconquiaco. Root creeping. Stems simple, or branched, roughish from minute, spreading, stiff hairs. Leaves oblong-ovate, acuminated, vertical, entire, or repand, or obsoletely and sinuately-toothed, bluntish at the base, green above, and beset with short, thick, rufous hairs, paler beneath, and clothed with somewhat grumose, minute down ; largest ones 4-5 inches long. Racemes usually solitary, downy. Corolla blue, 1\ inch long. Capsule elliptic, attenuated at both ends, 1-celled.

Azure-Cowered Klugia. PI. \ to 1 foot.

Cult. For culture and propagation *see Rytidophyllum,* p. 650.

XIII. TAPPNA (from *TCLTTUVOQ, tapeinos,* humble; dwarf plants.) Mart. nov. gen. bras. 3. p. 59.

LIN. SYST. *Didynamia, Angiospermia.* Calyx free, 5-parted, unequal. Corolla funnel-shaped, sub-ringent, gibbous in front at the base ; tube coarsely ventricose behind ; throat contracted ; limb erect; upper lip 2-lobed ; lower one 3-lobed. Stamens 4, didynamous, with the rudiment of a fifth behind ; anthers cohering. Hypogynous ring swelling into a gland behind. Capsule ovate, coriaceous, 1-celled, 2-valved; placentas 2, parietal, bilamellate. Seeds numerous, oblong.—Stems simple, or branched, rising from an underground tuber, and, like all the herb, soft and fleshy. Leaves petiolate, opposite. Peduncles axillary, 1-flowered, solitary, rarely twin.

1 T. BARBA'TA (Mart. 1. c. p. 60. t. 225. f. 1.) stem branched ; leaves oblong, or oblong-lanceolate, attenuated at both ends, acute, toothed ; segments of calyx cordately sub-deltoid ; corolla hairy outside. %. S. Native of Brazil, in the mine provinces, in dense woods near Almada ; and in like marshy places on the road to Felisbert. Gesnèria barbàta, Nees, et Mart, in nov. act. bonn. 11. p. 48. Stems decumbent, throwing out roots at the base. Corolla white, suffused with red inside, above an inch long, much inflated below, (f. 6M. a.)

FIG. 69.



Bearded-Covered Tapina. PL decumbent.

2 T, PUSI'LLA (Mart. 1. c. p. 61. t. 225. f. 2.) stem simple, an inch high ; leaves orbicularly-ovate, obtuse, crenated ; calycine segments triangular; corolla downy outside. ^. S. Native of the province of Rio Janeiro, in shady woods on Serra d' Estrella, Beyrich. Tuber size of a pea. Corolla 4-lines long, white, ventricose in the throat below.

Least Tapina. PI. 1 inch.

Cult. For culture and propagation see *Rytidophyllum,* p. 650.

XIV. NEMATA'NTHUS (from *vwa, nema,* a thread; and *avdog, anthos,* a flower ; in allusion to the flowers being hairy.) Schrad. in gött. gel. anz. 1821. 1. p. 719. Maximil. reise bras. 2. p. 108. and 343. Mart. nov. gen. bras. 3. p. 46.

LIN. SYST. *Didynamia, Angiospermia.* Calyx free, deeply 5-parted, oblique. Corolla inferior, campanulately funnel-shaped, oblique, gibbous at the base behind ; throat spreading ; limb equally 5-lobed. Stamens 4, didynamous, with a small rudiment of a fifth, or without; anthers coluering. Hypogynous ring swollen into an oblong gland behind. Cuuule pyramidal, coriaceous, 1-celled, 2-valved ; placentas 2, parietal, bilani Seeds numerous, oblong.-Shrubs with simple or branched stems, furnished with sh.ning, cinereoiis ep tumid at the nodi, climbing upon trees, and adl^rin by their roots. Leaves opposite, petiolate, thick.si nation naked, with complicate leaves. Peduncles a flowered, bractless, very long and filiform, pendulous, large, showy, scarlet.

1 N. CHLORONEˣMA (Mart. 1. c. p. 47. t. 21J"Y" glincies 2-4 lanceolate, acuminated at both ends ; calyxes ana p g inches long, green, clothed with white hairs. *I* on of the province of Rio Janeiro, in shady parts "oi" Yeddish Mount Corcovado; and on Serra dos Orgaos. beneath, or pale, glabrous, or ciliated. Calyx 1 a g inclies with glandularly denticulated margins. Corollas a long, scarlet, beset with white hairs outside, *ilamen

Green-threaded Nematanthus. Shrub climbing.

2 N. JONE\UA (Schrad. 1. c.) leaves broad-lanceoia minated at both ends; calyx of a violaceous colour with hoary villi; peduncles 6 to 12 inches long, violaceous and white villi. *?. ^ S. Native woods between Ilheos and St. Petro de Alcantal*, shorter the preceding. Calyx obscurely violaceous ; *ᵉB™ a little and narrower, hoary from white hairs. Corolla scd smaller, beset with scattered, minute hairs.

Violet-threaded Nematanthus. Shrub climbing.

Cult. For culture and propagation see *Rytidophyuu , i*

XV. ALLOPLE'CTUS (from *aXXoc, alias* ^^*Jtfin ITXFKU, pleco,* to plait; the calyx appears as it it w^fc^jja, diverse directions.) Mart, nov/gen. bras. *6.* p. *o*. Scop.—Orobànche species,Vellos. in Vand. script, t. Gesneria species, Lin., Aubl., Swartz, and £untn, coloured,

LIN. SYST. *Didynamia, Angiospermia.* Calyx i Jnterior. 5-cleft; segments imbricate, more or less combine Corolla inferior, tubular or club-shaped, straigntisii 5-lobed or 5-toothed. Stamens 4, didynamous, rudiment of a fifth from the base of the tube, ring swollen into a gland behind. Capsule baccate, o shrubs ceous, 1-celled, 2-^valved. Seeds numerous, oblong.^ the climbing on trees, and adhering to them by the roo clasping of the branches. Stems somewhat tetra fiHed and somewhat thickened at the nodi, rather ^ᵉKU one in with medulla. Branches opposite. Leaves °ppos gcattered each pair smaller than the other, petiolate, fleshy, * red- or decumbent, or erect down, the under ^ c \ ^ l j e f vildish. Gemmation naked, with the young leaves con lous, or hairy. Flowers axillary or many, *S&* soii- sessile or racemose, furnished with coboured biacte tary, on long peduncles. Calyxes and bracteas scar red Corolla yellow. The species inhabit the > ^ J e n i B t 0 woods in tropical America, in which they are great o the trees, from the vivid colour of the calyxes and brac^ ^ f.

1 A. SPARSIPLORUS (Mart. nov. gen. bras. j.^p. • ^ base, 1.) leaves oblong, or oblong-lanceolate, attenuatea acuminated, beset with fine stngee ; flowers nearly » illary, aggregate, or scattered; bracteas smaller tna cularly triangular segments of the calyx, winch are the bracteas of a deep blood colour, and almost quit limb of corolla villous, 5-toothed. hlr •»»• ^ u trees, in the province of Rio Janeiro, climbing "P⁰™™⁰** here on Serra shady humid places near Corrego Seco, and eisew the dos Orgaos; as well as on Serra de St. Geraldo, in

provinces. Leaves 3-7 inches long, yellowish beneath. Corolla yellow.

Scattered-flowered Alloplectus. Shrub climbing.

2 A. CIRCINNATUS (Mart. 1. c. p. *56.* t. *223.* f. *2.)* leaves obstriate, broad-oblong, attenuated at the base, acuminated, finely serrulate; peduncles racemed, axillary; peduncles nodulose; bracteas three, ovate, acuminated, calycine segments, and are, as well as the petals, pubescent; limb of corolla shortly 5-lobed, revolute. ?. ?. S. Native almost throughout Brazil, in moist parts of woods, climbing upon trees. Besleria [illegible] Schott, Sturm, medi. jahrb. 42, P. 8, ? Corolla yellow.

Circinate Alloplectus. Fl. July, Aug. Clt. 1824. Shrub climbing.

3 A. HISPIDUS (Mart. 1. c. p. *57.)* leaves oblong-elliptic, serrately crenated, hispid; peduncles axillary, solitary, 1-flowered; calycine segments ovate-lanceolate, sharply serrated, hispid; bracteas unknown. ?. S. Native of New Granada, in the Andes of Popayan, and in the Pastoyo, between Mamendoy and the town of B, at the altitude of 1040 hexapods. Besleria hispida, H. B. et Kunth, nov. gen. amer. 2. p. 399. Branches warted, hispid, yellowish. Leaves 2 inches long, and 1 broad. Corolla to be [illegible] from the limb oblique, 5-cleft, reflexed. Said to be [illegible] allied to *Besleria cristata.*

4 A. KUNTHII; leaves ovate-oblong, subacuminated, denticulate, [illegible] above, and pilosely pubescent beneath, and pursea[illegible] peduncles axillary, few together, 1-flowered; calycine bract[illegible] segments ovate, acuminated, denticulated, pilose, purplish; shadv[illegible] Unknown. ?. S. Native of New Granada, in La [illegible] On the Andes, about Quindiu, and near the Villa Almaj[illegible] and in the Plains of Sacandonoy, between the town of Pasto and [illegible] fever, at the altitude of 1000 to 1200 hexapods. Br[illegible] Color, H. B. et Kunth, nov. gen. amer. 2, p. 398. [illegible] on the [illegible] and so[illegible] somewhat gibbous at the base; limb somewhat [illegible]-bilabiate.

5 A. VELLOSIANUS. Shrub climbing.

serrated. CALCARATUS; leaves oblong, subacuminated, crenately hairy, [illegible] apex, pilose; peduncles axillary, 2-4-flowered; calycine limb of [illegible] acuminated, denticulated, coloured segments; the And[illegible] 5-lobed; bracteas unknown. ?. S. Native of hexapods [illegible] Quindiu, near La Pamilla, at the altitude of 1130 2. p. 399. Besleria calcarata, H. B. et Kunth, nov. gen. amer. rolla or[illegible] fuscous, pilose, hispid while young. Coabove at [illegible] glabrous, tubularly calceolate, spurred Spur sho[illegible] saccately inflated under the lower lip; rounded [illegible] obtuse; throat constricted; lobes of limb [illegible] superior ones larger.

6 A. [illegible]nowered Alloplectus. Shrub 2 to *3* feet.

Hated [illegible] SAGULNEUS (Mart. 1. c.) leaves obovate-oblong, acumiWith [illegible] furnished with a few adpressed hairs, marked segment [illegible] Spots beneath; flowers axillary, sessile; calycine of st[illegible] deeply serrated, very hairy, coloured. ?. S. Native Quindiu, [illegible] and the Antilles; of New Granada, on Mount Pods [illegible] near El Passo del Machin, at the altitude of 1030 hexPhoenl[illegible] Besleria sanguinea, Pers. syn. 2. p. 165. Dalbergaria [illegible] Jacq. obs. 1. p. 9. t. 141. Jacq. ic. rar. 1. p. 141. t. *30.* Calyxes more jagged [illegible] Corolla tubular, villous, gibbous, sub-bilabiate, [illegible] rudiment of a fifth stamen wanting.

7 A. [illegible]calyxed Alloplectus. Shrub climbing. ?

Cles[illegible] axillary. CRISTANUS (Mart. 1. c.) leaves ovate, serrated; peduncles solitary, 1-flowered; bracteas cordate, toothed, [illegible] Scarlet, as well as the calycine segments, which are serrated, hairy outside; lobes rounded, entire. ?. ?. S. Native of Guiana and Martinico, in humid woods. Besleria cristata, Lin. syst. p. 4G8. Aubl. guian. *2.* p. *637.* Svvartz, obs. *232.* Jacq. amer. p. 188. t. 119. Mill. diet. no. 3.—Plum. gen. 29, with a figure. Corolla yellowish.

Crested-calyxed Alloplectus. Fl. June, Aug. Clt. 1739. Shrub climbing.

8 A. COCCINEUS (Mart. J. c.) leaves ovate, glabrous, stiff, a little toothed; peduncles axillary, bearing *3-6* flowers in an umbel at top; bracteas 2, at the division of the common peduncle, orbicularly cordate, toothed, scarlet, like the calycine segments, which are serrated. I?. ?. S. Native of Guiana, in marshy parts of woods. Besleria coccinea, Aubl. guian. *2.* p. 632. t. *255.* Corolla and fruit yellow.

yScflr/^-calyxed Alloplectus. Fl. ? Clt. 1819. Shrub climbing.

9 A. SCHOTTII; leaves ovate-lanceolate, quite entire, pubescent; flowers axillary, crowded, nearly sessile; calyxes red, denticulated, roundish; limb of corolla, which is clavate, erectish. *2.* y,. S. Native of Brazil. Besleria bicolor, SchoU. in oestr. med. jahrh. 4. *2.* p. 8. Besleria dichrous, Spreng. syst. *2.* p. 840.

SchotVs Alloplectus. Shrub climbing.

Cult. For culture and propagation see *Rytidophyllum,* p. 650.

XVI. EPFSCIA (from *em, epi,* upon; and o-Kta, *scia,* a shadow; so named because the species delight *in* shady places.) Mart. nov. gen. bras. 3. p. 39. Besleria species of authors.

LIN. SYST. *Didynamia, Angiospermia.* Calyx free, 5-cleft or 5-parted. Corolla inferior, funnel-shaped; tube straightish, gibbous behind at the base; limb 5-lobed. Stamens 4, didynamous, furnished with the rudiment of a fifth behind, which rises from the base of the tube. Hypojynous ring swelling into a gland behind. Capsule nearly globose, membranous, 2-valved; placentas 2, parietal, bilamellate. Seeds numerous, oblong.—Soft, juicy, glabrous, or villous, decumbent herbs, rooting upon the earth or decayed trees. Leaves opposite, petiolate; the middle nerve prominent beneath, and with the veins thick, anastomosing, and juicy. Flowers axillary, solitary, or in little cymes, and bracteate, of various colours.

1 E. DECUMBENS (Mart. 1. c. p. 40. t. 216.) plant smoothish; stems decumbent and creeping; leaves oblong, subcordate at the base, acute, crenated; cymes axillary and terminal; calyx about half as long as the corolla, with lanceolate, acuminated subserrated segments; lobes of corolla quite entire. %. S. Native of Brazil, in the province of Rio Negro, in marshy parts of dense woods, along the river Japura, &c, creeping on the trunks of decayed trees. Leaves *3-5* inches long, reddish beneath. Corolla white, 1J inch long.

Decumbent Episcia. PI. 1 to 3 feet.

2 E. REPTANS (Mart. I. c. p. 41. t. 217.) plant pilosely hairy; stem sarmentose,radicant; leaves ovate, obtuse, crenated; peduncles solitary, axillary, 1-flowered; calycine segments linear-subspatulate, obtuse; lobes of corolla toothed. %. S. Native of Brazil, in thickets along the river Japura and elsewhere. Leaves whitish beneath. Corolla scarlet, hairy outside, (fig. 70.)

FIG. 70.



Creeping Episcia. PI. creeping.

3 E. MELITTIFOLIA (Mart. 1. c. p. 42.) pilose; stem erect; leaves ovate, acutish at both

ends, coarsely crenated ; cymes axillary and terminal; calyx nearly equal in length to the tube of the corolla ; calycine segments lanceolate, acuminated, subserrated ; lobes of corolla quite entire. 2J.. S. Native of Guiana and the Antilles. Besleria melittifblia, Lin. spec. p. *862.* Aubl. guian. *2.* p. 636. Smith, exot. bot. 1. t. 54. Besleria melissae Tragi folio, Plum, gen. p. 29. t. 5. icon. t. 48. Corolla purple. Capsule globose, size of a large pea, and, without doubt, 2-valved, but probably baccate from the umbilical funicles being long and fleshy. Seeds as in *E. reptans.*

Balm-leaved Epi^cia. Fl. July, Aug. Clt. 1789. Shrub 1 to 3 feet.

4 E. ? PULCHE'LLA (Mart. 1. c.) stem erect; leaves oblong-ovate, wrinkled, crenated, running into the petioles, which are connate ; cymes axillary ; calyx pentagonal, coloured ; lobes of corolla entire : lower ones the largest. %. S. Native of Trinidad. Besleria pulchella, Donn, hort. cant. p. 140. Sims, bot. mag. 1146. Besleria umbellata, Herb. Banks. Bracteas *X,* opposite, under the corymbs. Calyx scarlet; segments serrated. Corolla yellow, striped with red. This differs from the other species of *Episcia,* in the calyx being tubular and 5-toothed, and of a reddish colour. The rudiment of the fifth stamen wanting. It is said to be nearly allied to *Besleria littea,* and *B. coccinea,* Lin. but is probably a species of *Alloplectvs.*

Neat Episcia. Fl. July, Aug. Clt. 1806. PI. *2* to *3* feet.

Cult. For culture and propagation see *Rytidophyllum,* p. 650.

Tribe II.

CYRTANDRA'CEJE (this tribe agrees with the genus *Cyrttindra* in the characters given below.) Calyx inferior. Fruit capsular and baccate, superior. Seeds exalbuminous.

Sublribe I.

TRICHOSPORE^E (the plants contained in this tribe agree with the genus */Eschyndnthus,* in the seeds being furnished with hairs at ends.) Blum, bijdr. 779. Fruit capsular, siliquose. Seeds pendulous, expanded at both ends, or only at the base or apex, into a setaceous or membranous wing.

XVII. TROMSDO'RFFIA (named in honour of J. B. Tromsdorff[1], who has written various works on the use of many plants, as well as analyzing their chemical parts.) Blum, bijdr. p. 762.

LIN. SYST. *Didynamia, Angiospermia.* Calyx tubular, 4-5-cleft; segments equal. Corolla funnel-shaped, widened upwards, with an unequal, somewhat bilabiate limb. Stamens 4, *2* of which only bear anthers; anthers 2-celled, cohering; cells equal in their insertion. Stigma broad, somewhat bilamellate. Capsule silique-formed, elongated, falsely 4-celled, 2-valved ; lobes of the dissepiment, which is contrary, bearing the seeds on the margins, which are revolute. Seeds minute, pendulous, expanded at the base into a membranous wing. Erect or radicant shrubs, with opposite or alternate, serrated leaves, and elongated, axillary peduncles. This genus is nearly allied to *Didymocdrpus,* from which it differs in the seeds being furnished with a membranous wing at the base.

I T. SPECIOSA (Blum, bijdr. p. 763.) stem erect; leaves opposite, nearly equal, elliptic-oblong, acuminated, unequally toothed, clothed with rough hairs above, downy beneath ; peduncles crowded, bifid, or sometimes dichotomous; flowers diandrous. f? . S. Native of Java, on the west side of the island, on the banks of rivers. Flowers showy, having the tube of a deep violet colour at bottom, and the throat sulphur-coloured. Filaments 4, villous at top.

Showy Tromsdorffia. Fl. Year. Shrub erect.

2 T. ? PTONGA'TA (Blum. bijdr. p. 765.) stem climbing, radicant; leaves alternate, or the opposite one is very small, elliptic, attenuated at both ends, doubly serrated, downy ; peduncles solitary, very long, bearing ^ ^ *f* ^ ^ *J* . The flowers didynamous. tj . ^. h. Native of Java. Corolla and fruit has not been seen, but the structure of the ovar ovula agree with those of the first species.

Elongated Tronisdorffia. Shrub climbing.

Cult. For culture and propagation see *Rytidophyllum, y*

XVIII. ESCHYNDNTHUS (from *a%uvw,* to be ashamed; and *avdog, anthos,* a flower.) Jack. ^. Trich6sporum, D. Don. prod. fl. nep. p. 124- Blum. bijdr. p. 763. Incavillea species of Roxb.

LIN. SYST. *Didynamia, Angiospermia.* ^alyx ventricosely dilated tubular, 5-cleft. Corolla tubular, incurved with campanulate throat, and an oblique, sub-bilabriate limb. Stamens 4, didynamous, exserted, usually with the rudiment of a fifth; anthers at first conniving by pairs ; cells parallel, excavated, somewhat funnel-shaped. Capsule ^ ^ formed, 2-valved, falsely 4-celled. Seeds small, fibrous from papillae ending in a bristle-like tail at the simple, Twining, radicant, parasitical shrubs 5 with opposite entire leaves, and axillary and terminal, few-flowered peduncles.

1 *M.* RADIANS (Jack, in Lin. trans. 14. p. 3 cordate at the base, villous in the young state, veinless ; calary, sometimes terminal, 2-flowered, villous, lyxes villous. Tj. ^. S. Native of Java and woods, rooting on old trees. Trichosporum Blum, bijdr. p. 764. Leaves 1-2 inches long. Corolla of a crimson colour, and villous outside, phur coloured inside. The rudiment of the sterile small.

Radicant iEschynanthus. Shrub climbing. leaves

2 M. VOLU^BILIS (Jack. 1. c. p. 4«.) stem, twining, oval, acute at both ends, glabrous, with indistinct peduncles axillary, 2-flowered, bibracteate ; pedicel the peduncle; calyxes glabrous. neighbourhood of Bencoolen. The axils of the times furnished with a flower-bearing branchlet, appearance of a many-flowered peduncle, coloured.

Twining iEschynanthus. Shrub twining.

3 *JE.* PU'LCHER ; stem radicant; leaves lanceolate, at the base ; peduncles 2-flowered, axillary and terminal fascicles. *2 • v* *f* axillary and terminal fascicles. along with *JE. radicans.* Trichosporum pulchrum, -D 764. Corollas scarlet.

Fair JEschynanthus. Fl. Year. Shrub creeping. leaves oval-lanceolate, nerveless ; umbels terminal, many-flowered ; rounded, nearly equal. f? . w. S. Nat.ve of the gal, in forests of Silhet, and on the Garrow hills, trees. Incarvillea parasitica, Roxb. cor. 2. p. p. 112. Tricl.6sporum grandiflorum, D. *Von,* journ. and prod. fl. nep. p. 125. Flowers large, lour of a beautiful mixture of orange and of *Digitalis.* Segments of calyx ovate. Myle

Great-flowered JSschynanthus. Shrub creeping.

5 *M.* PARVIFLORUS ;' stem radicant; leaves nated, nerved ; umbels terminal, few-flowered. of corolla shorter, and acutisb. Nipaul, creeping on the trunks of trees. Incnosp

from the preceding, in the flowers being not one-third the size ; lobes of the calyx being linear; in the 2 superior lobes of the corolla being shorter, and acutish ; and, lastly, in the upper lobe twice as broad, shorter, and nerved ; as well as in the style being inclosed.

Small-flowered Eschynanthus. Shrub creeping, uncertain ; BLONGIFOLIUS ; downy ; stem thick, tetragonal; leaves axillary, ovate-oblong, acuminated, downy, serrulated ; cymes commonly Incarvillea ; peduncles solitary, dichotomous, with a flower in each fork; large flowers, all very villous. Corollas like those of *Martynia didndra,* colour a mixture of white and red, tinged with yellow ; one pair of the filaments large and fertile, the other abortive ; the fertile pair thick and villous, bearing large 2-lobed anthers. The capsule is shorter and thicker than in the Preceding species. The seeds are flat, and winged by a membrane all round. Perhaps a new genus.

Oblong-leaved JEschynanthus. Shrub.

RHIZOMORPHA (Wall. pl. rar. asiat. 1B p. *55, t. 7L.*) umbels terminal, branched radicant; leaves oblong, acuminated; with axillary many-flowered ; corolla subclavate, clothed with glandular down. P?. ^. S. Native of Nipaul, in woods, creeping upon trees and on rocks. Capsule 4-angled, and 4-furrowed, inches in length, compressed, 10 Seed, oblong, Celled, 4-valved. 2 bristles in the middle, and ending in a tail, at the base. Calyx tubular, 4-toothed. Corolla curved : tube slightly ventricose, upper one bifid. Stigma clavate, planu convex at top. Corolla orange-coloured, reddish above. Very nearly allied to *M. grandiflorus* (fig. 71.)

FIG. 71.



Much-branched Eschynanthus. Shrub creeping. *Cult.* For culture and propagation see ***Kytidophyllum,*** **p. 650.**

XIX. LYSIONOTUS (from λυω, *iluo,* to release ; and νωτος, *notus,* the back ; in reference to the capsule opening with elastic dorsal suture.) D. Don, in edinb. phil. journ. 7. p. 124. Blum, bijdr. 764. Incarvillea species. Willd. Chirita, Hamilt. mss.

Calyx deeply 5-cleft or 5-parted, equal. Corolla tubular, incurved, with a dilated throat, and an oblique, bilabiate, 5-lobed limb. The 2 lower ones sterile, and shorter : and upper ones antheriferous ; anthers linear, combined ; cells excavated, Capsule long, silique-formed, 2-valved, falsely 4-celled, opening with elasticity from the dorsal suture. Seeds terete, ending in a hair at both ends, as in the following herbs. Terrestrial or Parasitical glabrous, perennial herbs with creeping roots and stems. Leaves opposite or verticillate, simple. Peduncles axillary and terminal, 1-flowered, solitary or in fascicles, furnished with two opposite, involucrate leaves at the base, and bibracteate in the middle.

1 L. ARRECTA (D. Don, l. c.) root creeping; stems erect, rather fleshy; leaves 3 in a whorl, oblong-lanceolate, acuminated, coriaceous, serrated, reticulately veined ; corymbs pedunculate, 5-10-flowered, below the top of the stem. %. S. Native of Nipaul, upon trunks of trees and on rocks. L. ternifòlia, Wall. pl. asiat. rar. *2.* p. 2. t. 118. Chirita ternifòlia, Hamilt. mss. Plant glabrous. Peduncles verticillate or opposite, like the leaves. Corymbs twice or thrice trichotomous, furnished with *2* opposite bracteas under each division. Seeds terminated by a long simple hair at each end. Corollas large, pale blue.

Serrated-leaved Lysionotus. PL 1 foot.

2 L. ANGUSTIFÒLIUS (Blum, bijdr. p. *765.)* stem radicant; lower leaves opposite : superior ones subverticillate, linear-lanceolate, bluntish, veinless; axillary flowers solitary : terminal ones aggregate. %. S. Native of Java, near Buitenzorg, creeping upon trees. Bignònia angustifòlia, Blum. hort. buit. p. 82. bat. verh. 9. p. 194. Trichósporum angustifòlium, Blum, in bot. zeit. no. 9. 1825.

Narrow-leaved Lysionotus. Fl. Year. PI. creeping.

3 L. ALBIDUS (Blum, bijdr. p. *765.)* stem radicant; leaves oblong-lanceolate, rather crenulated, glabrous, veinless ; peduncles disposed in axillary and terminal fascicles; bracteas minute, subulate. 1/. S. Native *of* Java, in the western provinces, in woods, where it is called *Mengando-Manjal.* Bignònia álbida, Blum. cat. hort. buit. p. 81. bat. verh. 9. p. 195. Thichósporum álbidum, Blum. bot. zeit. no. 9. 1825. Flowers whitish.

Whitish-Cowered Lysionotus. PI. creeping.

4 L. LONGIFLÒRUS (Blum, bijdr. p. *766.)* stem radicant; leaves opposite, oblong-lanceolate, or ovate-oblong, long-acuminated, quite entire, almost veinless, glabrous; flowers disposed in terminal fascicles. If. S. Native *of* Java, in the provinces of Tjanjor, Buitenzorg ; and Bamtam, in woods on the mountains.

Far. fi; leaves narrower. 1/. S. Native of Java, among the elevated woods of Mount Gede, upon old trees.

Long-Lowered Lysionotus. Fl. Year. PI. creeping.

Cult. For culture and propagation see *Rytidophýllum,* p. 650.

XX. AGALMYNLA"(from αγαλμα, *agalma,* an ornament; and ὑλη, *hule,* a wood ; the species are great ornaments to the woods in which they grow wild.) Blum, bijdr. p. 766.

LIN. SYST. *Didyndmia, Angiospermia.* Calyx 5-parted, equal. Corolla tubular, incurved, with a dilated throat, and an oblique, 5-lobed, sub-bilabiate limb. Stamens 5, exserted, of which 2 or 4 are fertile ; anthers linear, connected, with parallel cells. Stigma biiamellate. Capsule very long, silique-formed, 2-valved, falsely 4-celled. Seeds minute, ending in a hair at both ends.—Climbing or radicant herbs, with simple leaves, and axillary fascicles of flowers. This genus is nearly allied to *Lysionòtus,* from which it differs in the biiamellate stigma, and in habit.

1 A. STAMINEA (Blum, bijdr. *767.)* stem radicant, and is, as well as the petioles, hairy; leaves alternate, oblong, acuminated, denticulated, nearly equal at the base, downy beneath and on the edges ; flowers diandrous, disposed in axillary fascicles. *1/.* S. Native of Java, in mountain woods. Justicia parasitica, Lam. ill. 1. p. 42. Cyrtándra staminea, Vahl, enum. 1. p. 105.

Long-stamened Agalmyla. PI. creeping.

2 A. ASPERIFÒLIA (Blum, bijdr. p. *767.)* stem rather scandent ; leaves opposite, elliptic-oblong, acuminated, denticulated, nearly equal at the base, rather hispid ; flowers didynamous, disposed in axillary fascicles. 1/. S. Native of Java, in humid parts of woods in the province of Tjanjor.

Rough-leaved Agalmyla. Fl. Aug. PI. climbing.

Cult. For culture and propagation see *Rytidophyllum,* p. 650.

Subtribe II.

DIDYMOCARPEJE (the plants contained in this subtribe agree with the genus *Didymocarpus,* in the siliquose capsules and naked seeds.) All as in *Trichospbrece,* except the seeds, which are not furnished with any hair at either end.

XXI. STREPTOCA'RPUS (from *arpsTTTog, slreptos,* twisted ; and *Kapnog, carpos,* a fruit; the capsule is spirally twisted.) (fig. 72. f.) Lindl. bot. reg. 1173. Didymocarpus species, Hook.



LIN. SYST. ***Didndria, Monogynia.*** Calyx 5-parted (fig. 72. a.) Corolla tubularly funnel-shaped ; throat ventricose ; limb oblique, 5-lobed, nearly equal. Stamens 4, the 2 anterior ones fertile, and the 2 sterile ones tubercle-formed (f. 72. d.) ; anthers glabrous, connate (f. 72. c.) : cells divaricate. Style compressed; stigma bilabiately dilated : lips rtfniform. Capsule siliquose, spirally twisted ; placentas bilamellate, conniving in the middle; margins revolute, seminiferous. Seeds numerous, minute, glabrous.—A tufted, stemless herb. Leaves wrinkled, flat on the ground. Peduncles radical, 1-flowered, bibracteate above the middle. Corollas pale blue.

1 S. RE'XII (Lindl. 1. c.) %. S. Native of South Africa, in the lands of Mr. G. Rex, at the Knysna, where it was discovered by Mr. Bowie. Didymocarpus Rexii, Hook. exot. fl. t. 227. Leaves ovate, crenated, 6-9 inches long, and 3-4 broad. Peduncles on the axils of the leaves. Corolla 2 inches long, pubescent. (Fig. 72.)

Rex's Streptocarpus. Fl. Year. Clt. 1824. ? PI. ½ foot.

Cult. A light rich earth or vegetable mould is a good soil for this plant; which is readily increased by division.

XXII. DIDYMOCA'RPUS (from &%xoc, *didymos,* twin ; and *Kapwog, karpos,* a fruit; in reference to the twin capsules.) Wall, ex Jack, in Lin. trans. 14. p. *32.* D. Don, prod. fl. nep. p. 122.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-cleft. Corolla funnel-shaped, with a ventricose throat; limb 5-lobed ; upper lip the shortest. Stamens 4, rarely 5, 2 of which are antheriferous, inclosed : sterile ones very short; anthers adnate: cells transverse. Stigma lateral, flattish, obtuse. Capsule silique-formed, falsely 4-celled, 2-valved ; valves opening elastically from the dorsal suture. Lobes of dissepiment with revolute, seminiferous edges. Seeds naked, pendulous, ovate. Perennial, stemless, or caulescent herbs. Roots tufted, fibrous. Leaves usually cordate, crenated, wrinkled, hairy. Stems or scapes erect, simple. Flowers rose-coloured or purple, involucrated, disposed in dichotomous umbels.

§ 1. SCAPI'GERJE. *Stemless, scapigerous plants, with radical leaves.*

1 D. MACROPHY'LLA (Wall, in litt. ex D. Don, prod. fl. nep. p. 122.) leaves cordate-oval, dentately serrated or crenate, L. above and nearly naked beneath; scapes glabrous, shorter than the leaves; involucra and involucels quite entire, connate at the base; calycine segments 1/. G. Native of Nipaul and Kamaon; from 3000 to 7000 feet on the Himalayan mountains, towards Mussooree, and near Simla. Koy^ t. 70. f. 2. Leaves large, usually solitary, 3-7 inches long, 2½ or 5 inches broad. Petioles 3 inches long, in height to the petioles, rarely higher. Flowers eels purple.

Long-leaved Didymocarpus. PL ? to 2 tooc.

2 D. CINE^REA (D. Don, prod. fl. nep. p. 1^J. date-oval, obtuse, unequally crenated, clothed tomentum above, as well as the petioles; flowered, shorter than the leaves; involucra and are, as well as the involucels, clothed with turn ; calycine segments ovate, acute. paul. Leaves lj to 2 inclies long, about equal petioles, grey on both surfaces. Scapes large, purple.

Cinereous Didymocarpus. PI. 5 foot.

S D. TLICATA (D. Don, l. c.) leaves twin, cularly cordate, fleshy, rugosely plicate above, lacunosely veined beneath, with revolute edges cent, many-flowered. %. G. Native of N.paul. branched, fibrous, densely tufted. Leaves an men 5 inches high.

Plicate-leaved Didymocarpus. PI. f i

§ 2. *Caulescentes. Caulescent plants*

4 D. VILLOSA (D. Don, l. c. p. 12*0 villous; leaves unequal, oval, petiolate, doubly ci with silky villi on both surfaces ; peduncles many-flowered, glabrous, longer than the leav smooth. IC. G. Native of Nipaul. Leaves 1-^m rounded at the base: radical ones none. very short, rounded. Corolla large, purple.

Villous Didymocarpus. PL \ to \ foot.

5 D. OBLONGA (Wall. pi. rar. asiat. 2. p. »* Don, prod. fl. nep. p. 123.) stem furnished with 2-4 leaves at top, woolly, or downy ; leaves elliptic-oblong, or ovate-oblong, acuminated, rather villous ; peduncles terminal, crowded, twice forked, with 2 sessile, cordate sessile bracteas under each bifurcation, downy. 1(1. G. Native of Nipaul, among rocks on Sheopore. Radical leaves none. Leaves 2\ inches long, and below an inch broad. Middle pedicels 1-flowered, and lateral ones generally 2-flowered. Corollas dark purple. Bracteas or involucral leaves quite entire, and are, as well as the calyxes, coloured. (Fig. 73.)



Oblong-leaved Didymocarpus. PL \ to \ toor.

6 D.AROMA'TICA (Wall, in edinb. phil. J rar. asiat. 2. p. 31. t. 141. D. Don, prod. fl. nep. leafy, pubescent; radical leaves few, pressed to ovate-cordate, obtuse, crenated, on short petioles, cauline ones broad-cordate, on long petioles,

acutely toothed, and with two pairs of others at the top of the stem, which are crowded, ovate, acutely toothed ; peduncles 2-3, terminal, twice or thrice dichotomous or trichotomous; central pedicels twin, or solitary: terminal ones by threes. %. G. Native of Nipaul and Kamaon, on rocks and trunks of trees. Plant pubescent. Bracteas or involucels cordate under each division of the peduncles. Calyx campanulate, fleshy, bluntly 5-toothed. Corollas purple. This species yields an aromatic drug which is in high repute among the Hindoos, especially their ladies, who use it as a perfume. It is called *Kumkuma,* also *Rani-Goindhi,* and consists of the dried primordial leaves, which are wrinkled, small ovate, covered with dense silvery, soft hairs, intermixed with numerous brown, resinous dots. When rubbed between the fingers they assume a reddish tinge. Their fragrance is of a very delightful kind, and continues long after they have been dried. The leaves of all the species possess in a greater or less degree a peculiar fragrance, which is elicited by rubbing the green parts, but is entirely lost in the dried state, except in the present species.

Aromatic Didymocarpus. PL 1 to 1 foot.

D. PRIMULIFOLIA (D. Don, prod, fl. nep. p. 123.) stem procumbent, bearing 4 crowded leaves at top ; leaves cordate-oval, petioled, twice crenated, wrinkled and silky on both surfaces ; peduncles axillary-flowered, and are, as well as the calyxes, at the base bracteas or involucels roundish oval, mucronate, connate. Leaves radical leaves none. Flowers like those of *Primula veris.* Calycine segments roundish. Corolla purple.

Primrose-leaved Didymocarpus. PL \ to \ foot.

33 D. CRININTA (Jack. mal. misc. vol. 1. Lin. trans. 14. p. 33.) stem short, thick, erect; leaves alternate, spatulate, acute, serrated, pilose, red; peduncles 2-5 together, axillary, 1-flowered, cohering with the petioles at the base; flowers reddish, hairy. %. S. Native of Pulo-Penang, in the tall forests, where it is called *Timmu* by the natives. Root long, sessile. The whole plant hairy. Leaves crowded, nearly alternate, 9 inches long. Peduncles furnished each with 2 incurved bracteas. Corolla white, tinged with purple ; tube swelling above ; limb sub-bilabiate. Anthers combined, divaricate, transverse lobes.

Long-haired Didymocarpus. PI. 1 foot with the leaves.

D. RACEMOSA (Jack. in Lin. trans. 14. p. 34.) stem erect; leaves opposite, lanceolate, attenuated at both ends, doubly serrated, glabrous above; peduncles axillary, usually bifid; flowers disposed in two rows along the rachis. %. S. Native of Sumatra, on the west coast at Tappanooly. Leaves on short petioles, spreading about 9 inches long ; all pilose, on the under surface, and the midrib on the upper, purple. Petioles short, stem-clasping. Peduncles covered with ramified glandular hairs. Bracteas lanceolate, acuminated, serrated. Corolla white. Calyx reddish, hairy. Capsule cylindrical, hairy.

10 D. PROSTRATA (Jack. mal. misc. vol. 1. Lin. trans. 14. p. 25.) Prostrate> creeping ; leaves petiolate, elliptic, crenulated; peduncles 1-3 together, axillary, 1-flowered. %. g. Native of Pulo-Penang, in the forests, where it is called *Timmu-Kichel* by the Malays. Stem villous. Leaves (when flat) slightly cordate, opposite, obtuse, covered with white hairs, rather reddish beneath. Petioles villous. Peduncles filiform, villous with reddish hairs. Calyx funnel-shaped with bracteas near the summit. Corolla white, Anthers approximate, reniform, 2-celled. Disk surrounding the ovarium, 5-toothed. Creeping didymocarpus. PL creeping.

11 D. CORNICULATA (Jack, 1. c. p. 3G.) villous; stem erect; leaves alternate, obovate, acuminated, serrated ; flowers fastigiate, secund; peduncles solitary, axillary, elongated. %. S. Native of Sumatra, at Tappanooly. Peduncles bearing several dense fascicles of secund flowers, spreading in a kind of semicircle somewhat in the manner of *Lotus corniculatus.* Pedicels and calyxes covered with glandular hairs. Bracteas linear, acute. Corolla white, form of the genus ; anthers cohering; cells transverse. The capsules spreading horizontally like radii in a semicircle, of which the peduncle is the axis.

Horned Didymocarpus. PL 1 to *2* feet.

12 D. BARBATA (Jack. 1. c. p. 38.) shrubby, erect; leaves opposite, ovate, somewhat unequal sided, hairy ; peduncles slender, axillary, fascicled, 2-6-flowered ; stamens 4, bearded at top, *2* of which are sterile ; calyx smooth, funnel-shaped, f? . S. Native of Sumatra. Branches scabrous. Leaves petiolate, entire, strigose above. Peduncles bifid, or trifid, sometimes again divided, so as to be dichotomous. At each division of the peduncle is situated a funnel-shaped bracteal cup, apparently composed of two opposite bracteas, which are united nearly their whole length. In the axillae at the base of the peduncles the bracteas are distinct and woolly. Mouth of calyx 5-cleft. Corolla with nearly equal, rounded segments. Anthers with transverse lobes. Stigma sublobate.

Bearded-stamened Didymocarpus. Shrub.

13 D. ELONGATA (Jack, 1. c. p. *37.)* erect, pilose; leaves opposite, ovate, acute at both ends, serrated ; spikes axillary, secund ; pedicels binate, remote; calyx tomentose, as well as the spike ; corolla elongated. %. S. Native of Pulo Bintangor, an island lying off the west coast of Sumatra. Leaves petiolate, papillose and pilose above, but villous beneath ; petioles ciliated. Bracteas linear at the base of the pedicels. Corolla tubular, a little curved, white, with a purplish tinge, slightly tomentose ; limb bilabiate : lower lip elongated. Stamens 4, all fertile and didynamous ; anthers connected by pairs, 2-lobed, reniform. Stigma thickened, emarginate.

Elongated-flowered Didymocarpus. PL \ foot.

14 D. FRUTESCENS (Jack, mal. misc. vol. 1. Lin. trans. 1. c. p. 39.) stem suffrutescent, erect; leaves opposite, on long petioles, ovate-lanceolate, attenuated at both ends, glabrous above, canescent beneath ; flowers axillary, fascicled ; stamens didynamous ; calyx tomentose, with glandular hairs. T?. S. Native of Pulo Penang. Stem simple, densely covered with ferruginous, adpressed scales, or chaffy hairs. Leaves slightly serrated, 8-10 inches long, tomentose beneath ; petioles villous. Peduncles 1-3-flowered, shorter than the petioles, purplish. Bracteas lanceolate, acute. Calyx tubular, 5-parted. Corolla white, tomentose, incurved; segments obtuse. Anthers connected by pairs, adnate, consisting of *2* nearly parallel lobes. Stigma truncate.

Shrubby Didymocarpus. Shrub.

Cult. For culture and propagation see *Slreptocdrpus,* p. *658.*

XXIII. CHIRATA (altered from the vernacular name of one of the species.) Hamilt. mss. D. Don, prod. fl. nep. p. 89. Royle, ill. himal. t. 70. Wall. pi. rar. asiat. 1. p. 43. t. 50.—Calosacme, Wall.—Didymocarpus species, Wall.

LIN. SYST. *Didynamia^ Angiospermia.* Calyx deciduous, tubular, 5-cleft. Corolla tubular at the base, ventricose at top ; limb campanulate, 5-lobed, bilabiate; lobes rounded, imbricate in aestivation. Stamens 2, antheriferous, inclosed, sometimes without any rudiments of sterile ones, and sometimes with 3 ; filaments glabrous; anthers roundish, naked, adnate. Stigma bipartite ; lobes linear, obtuse. Capsule siliquose, 2-celled,

many-seeded ; dissepiment parallel. Seeds naked, acute at both ends.—Perennial hairy herbs. Stems simple. Leaves opposite, unequal in size. Peduncles axillary, opposite, bibracteate, usually 1-flowered. Flowers large red, or purple.

1 C. URTICIFŌLIA (Hamilt. mss. ex D. Don, prod. fl. nep. p. 90.) leaves elliptic, acute, nearly equal, serrated ; peduncles 1-flowered, shorter than the leaves ; calycine segments linear-lanceolate, obtuse. 7/. G. Native of Nipaul, at Narainhetty. Didymocárpus specidsus, Wall. mss. Stem ascending, rooting at the base, tetragonal, hairy. Leaves often 4 inches long. Bractea ovate-oblong, bluntish, remote from the flower. Flowers reddish purple, size of those *of Digitālis purpùrea.*

Nettle-leaved Chirata. PI. | to 1 foot.

2 **C.** PU'MILA (D. Don, prod. fl. nep. p. 90.) leaves unequal, elliptic, bluntish, serrated, red beneath ; peduncles 2-flowered, about equal in length to the leaves. *%.* G. Native of Nipaul. Stem low, tetragonal. Larger leaves *2*\ inches long, and \\ inch broad. Peduncles bibracteate in the middle. Very like the preceding, but much more humble, and the flowers smaller.

Dwarf Chirata. PL \ foot.

3 **C.** BIFŌLIA (D. Don, prod. fl. nep. p. 90. Royle, ill. himal. t. 70.) stem 2-leaved'' pubescent; leaves very unequal in size, pubescent, crenated, the one small and petiolate, and the other large, cordate, sessile; peduncle terminal, 1-flowered. 1£.G. Native of Nipaul and Kamaon, Wall. ; from Jurreepanee upwards towards Mussooree, and near Simla, Royle. Didymocárpus bifòlia, Wall, in lit. Calosácme amplectens, Wall. cat. no. 800. Stem filiform. Largest leaf *2* inches long, and 1^ broad, rounded at top. Flowers like those of the preceding, reddish purple, but smaller.

Two-leaved Chirata. PI. \ foot.

4 C. MACROPHY'LLA (Wall. pi. rar. asiat. 1. p. *56.* t. *72.)* root creeping ; leaves on lorfg petioles, ovate-cordate ; scape elongated, few-flowered; corolla cylindrical, ventricose in the middle. 1/. G. Native of Nipaul, on Sheopore, in shady woods.. Corolla yellow. Stamens 5, the *3* sterile ones subcapitate. Anthers oblong.

Large-leaved Chirata. PI. *2* feet.

5 C. GRANDIFLŌRA (Wall. pi. asiat. rar. 1. p. 43. t. 50.) stem ascending ; leaves ovate, acuminated, pilose ; peduncles axillary, few-flowered. *%.* G. Native of Nipaul, on the high mountains in humid places, upon rocks. Flowers large, rose-coloured. Calyx 5-nerved, 5-angled, 5-cleft, inflated. Corolla funnel-shaped, pilose. Stamens 5, the *2* lower fertile, bearing reniform, cohering, 1-celled anthers; the *3* sterile ones subulate, pilose, and subcapitate. Stigma funnel-shaped, 2-lobed. Seeds small, subulate, naked, acute at both ends.

Great-Jlowered Chirata. PI. 1 to *2* feet.

Cult. For culture and propagation see *Streptoc&rpus,* p. *658.*

Subtribe III.

CYRTA'NDREiE (this tribe contains plants agreeing with the genus *Cyrtándra,* in the fruit being baccate, and in the seeds being erect.) Fruit baccate. Seeds pendulous, naked.

XXIV. CYRTA'NDRA (from *KV,TOQ, kyrtos,* a curve ; and *avr)p avdpog, aner andros,* a male.) Forst. gen. *3.* no. 1. Jack, in Lin. trans. 14. p. *25.* t. *2.* f. 1. a. g. Blum, bijdr. 767. Gaud, in Freyc. voy. pt. bot. p. 446. t. *56.* &c. Besléria species, Forst. prod. no. 236.

LIN. SYST. *Didndria, Monogýnia.* Calyx tubular, 5-cleft, nearly equal, or sometimes somewhat bilabiate. Corolla funnel-shaped, having the tube widened upwards; the limb 5-lobed and sub-bilabiate. Stamens 5, ex Blume, 4, ex Jack, *2* of which are antheriferous, the other *2* or 3 stenle; ceUs of thers parallel. Stigma obtuse, or cap.tate, often « Fruit baccate, longer than the calyx. Lobes of d.ssep.mentw revolute, seminiferous margins. Seeds naked, usuallj dotted—Shrubs or herbs with erect or P^umbeD' -ste Leaves opposite, those opposed to each other ™eqi*n one of them being almost abortive. Flowers cap.tate, fascicles, rarely solitary, axillary, bracteate, or involucra white, or of a dull purple colour.

§ I. *Stems herbaceous, procumbent, or erectish. capitate, almost inclosed in the large one-leaved Species natives of Java and Sumatra.*

1 C. GLAW (Jack, in Lin. trans. 14. p. 28. Blurry 768.) almost stemless ; leaves alternate, (the °PP^" sometimes subcordate at the base, serrulated, of flowers on short peduncles, involucrated; campanulate, closely embracing the flowers. %• *>. Java, in the humid parts of woods in the provinces Buitenzorg, &c. Blume. Interior of Bencoolen, large, white, with a pale yellowish throat. Antheriier ments thick. Leaves about 7 inches long by *5* broaa.

Glabrous Cyrtandra. PI. \ to \ foot.

2 **C.** PE'NDULA (Blum, bijdr. p. 768.) stem, mitom ; leaves opposite, on long petioles, elhptic-ooi nated, serrated, smooth above, but rather villous on beneath ; heads of flowers involucrated on pendulous. %. S. Native of Java, in humid place mountains. Flowers dirty white, dotted with bottom. Calyx tubular, 5-cleft, split on one siae. stamens *3,* minute. Nearly allied to *C. bicolor.*

Pendulous-flowered Cyrtandra. PL creeping.

3 **C.** BI'COLOR (Jack, in Lin. trans. 14. p. *27.)* creeping at bottom ; ? leaves opposite, elliptic-lanceo at the base, glabrous above, villous and purple bene the length of the petioles; heads of flowers on' are shorter than the petioles, embraced by a deem crum. %. S. Native of Sumatra. Leaves on 9-10 inches long, the opposite ones nearly abortive. reflexed, bearing each a head of 6-10 flowers. <- white. Sterile filaments *2.*

Two-colouredAeaved Cyrtandra. PI. erectish.

4 C. PI'CTA (Blume, bijdr. p. 769.) stems F torn ; leaves remote, opposite, one of which is aimos on long petioles, broad-ovate, acute, a little attenua base, or subcordate, serrated, but rather villous on beneath ; heads of flowers involucrated, axillary, ? %. S. Native of Java, in humid places on the i Flowers large, white, having the throat dotted wit Stigma dilated, obtuse. Sterile stamens 3, minute. allied to *C. maculdta.*

Painted-flowered Cyrtandra. PI. procumbent.

5 **C.** MACULA TA (Jack, in Lin. trans. 14. p. leaves opposite, one abortive, the other roundish cor serrated, glabrous above, and rather villous beneaui, heads of flowers involucrated, axillary. %- Sumatra. Leaves 4 inches long by H 5-toothed. Corolla white, with a large purple spot o the *3* lower lobes. Sterile stamens *2.* Fruit obion disposed round the lobes of the dissepiment.

Spotted-flowered Cyrtandra. PI. low.

6 C. HU^MILIS (Blum, bijdr. 769.) stem pr°cumben ing; leaves approximate, opposite, on long petioles,

obtuse at both ends, rounded at the base, serrated, glabrous above, but rather downy on the veins beneath ; heads of flowers axillary, involucrated, sessile. 1/. S. Native of the island of ^usae-Kambanga, in woods. Corolla pale yellowish. Filaments of the fertile stamens rather villous on the back. Stigma emarginate. Nearly allied to *C. picta.*

Humble Cyrtandra. PL creeping.

U MACROPHY'LLA (Jack, in Lin. trans. 14. p. 25. t. 2. f. 1. g«) erectish; branches 4-sided, with rounded angles, and two opposite sides deeply furrowed ; leaves roundish-ovate, serrated, glabrous, the opposite ones abortive, on long petioles ; peduncles shorter than the petioles ; flowers capitate, nearly sessile, supported by a 1-leaved involucrum. %. S. Native of the interior of Sumatra. Leaves dark green above, and whitish beneath. Corollas white. Sterile filaments *2.* Stigma funnel-shaped.

Large-leaved Cyrtandra. PI. 1 foot.

C. HIRSUTA (Jack, 1. c. p. 27.) plant ascending, pilose ; leaves elliptic-ovate, cordate at the base, crenated, pilose on both sides, on long petioles, the opposed ones generally unequal; peduncles 5 heads few-flowered, involucrated by a 2-parted involucrum, densely woolly. 1/. S. Native of Sumatra, 6 inches long and 3 broad 5 petioles as long as the leaves, emerging from the stem at the base, and uniting with the base of the opposite one. Peduncles axillary, reflexed, villous. Corolla Cents. Stigma thick, depressed. Sterile fila-

Hairy Cyrtandra. PI. ascending,

C. INCOMPTA (Jack, I.e. p. 29.) plant erect, shaggy with brown hairs ; leaves elliptic-ovate, serrated, on long petioles, leaves opposed ones abortive; heads of flowers propped by a 2-leaved involucrum, densely woolly. 1/. S. Native of Sumatra, where it is called *Langkavang* by the Malays. Leaves villous, villous beneath. Peduncles shorter than the petioles. Corolla ring Ovarium embraced by a nectanal

R ecked Cyrtandra. PI. erect.

Pilose Vom AUXREA (Jack, L c.) sllow, erect; Stem thick) 4-sided, acum adpressed hairs ; leaves opposite, roundish ovate, heads serrated clothed with silky pili, on long petioles ; ativ lowers dense, nearly sessile, involucrated. %. S. B 6 of the interior of Bencoolen, at the foot of Gunong the Leaves both perfect. Involucrum closely investing n Ca of flowers. Corolla yellow, sub-campanulate : limb Stigma bilabiate/

Golden-flowered Cyrtandra. *Pl. erect.

C. PELTATA (Jack, l- c. p. 30.) kaves peltate, ovate, acuminated; heads on very short peduncles, involucrated. %. Leaves of Sumatra. Stem ascending, terete, smooth, serrated, on long Petioles, the opposite petioles, abortive, bluntly White Smooth» Paler beneath, 8-10 inches long. Corolla 2. ^^llrnel-shaped ; limb rather irregular. Sterile filaments Pen^XX\m embraced by a nectarial ring.

We-leaved Cyrtandra. PL ascending.

§ 2. *Stems herbaceous. Peduncles bibracteate, 1-2-3-jlorvered. Flowers not coloured.—Species natives of the Sandwich Islands.*

56. C. COR_DIFOLI/V (GaU(L in Freyc. voy. pt. bot. p. 446. t. hair leaves roundish-ovate, acute, obliquely cordate,, toothed, Pedun 3-flowered but cloth ed with villous tomentum beneath, rusty ; Native of the Sandwich Islands, from the altitude of 100 to 300 along with the following species.

Cordate-leaved Cyrtandra. PI. erect.

IS C. GRANDIFLORA (Gaud. 1. c. p. 447. t. *55.)* leaves oblong, acuminated, narrowed at the base, obsoletely denticulated, ciliated, smoothish above, but paler beneath, with the nerves and veins clothed with powdery down ; peduncles 2-leaved and *2*-flowered at the apex; calyxes glabrous. 1/. S. Native of the Sandwich Islands.

Great-flowered Cyrtandra. PI. erect.

14 C. LESSONIA'NA (Gaud. 1. c. t. 54.) leaves oblong, acuminated, narrowed at the base, denticulated, puberulous above, but clothed with silky tomentum beneath, rusty ; peduncles 1-flowered, bibracteate; calyx rather villous, 5-parted, with the edges of the segments undulately indexed. %. S. Native of the Sandwich Islands.

Lesson's Cyrtandra. PI. erect.

15 C. TRIFLORA (Gaud. 1. c. t. 52.) leaves oblong, sub-acuminated, cuneated at the base, somewhat doubly serrated, glabrous ; nerves and veins clothed with adpressed down beneath ; peduncles 3-flowered; calyxes smoothish. %. S. Native of the Sandwich Islands.

Three-flowered Cyrtandra. PI. erect.

16 C. BIFLORA (Forst. gen. 3. no. 1.) leaves ovate, quite entire; involucrum caducous, inflated; peduncles 2-flowered. 3£. G. Native of Otaheite. Besleria biflora, Forst. floral, no. 236.

Two-flowered Cyrtandra. PI. erect.

17 C. CARNOTIA'NA (Gaud. 1. c. t. *53.)* leaves elliptic-oblong, acute, running into the petioles, remotely serrulated, hairy above, and clothed with soft tomentose pubescence beneath, canescent; peduncles few-flowered, subdichotomous; calyxes villously pubescent. %. S. Native of the Sandwich Islands.

Carnoti's Cyrtandra. PI. erect.

18 C. PALUDOSA (Jack, 1. c. p. 447.) leaves oblong, acuminated, narrowed at the base, coarsely serrated, glabrous, paler beneath; peduncles 1-flowered. %. S, Native of the Sandwich Islands.

Marsh Cyrtandra. PI. erect.

19 C. MENZIE SII (Hook, et Am. in Beech, voy. pt. bot. p. 91.) leaves 4 in a whorl,? oblong, short-acuminated, cuneated at the base, somewhat denticulately ciliated towards the apex, rather scabrous above, glabrous beneath, but the nerves and veins are clothed with adpressed down ; peduncles bearing many flowers, which are disposed in an umbellate manner; calyx hairy, with subulate teeth. 1£. S. Native of the Sandwich Islands.

Menzies's Cyrtandra. PI. erect.

§ 3. *Stems suffrulicose, erect. Corollas bilabiate, dirty purplish, or dirty yellow, for the most part small, and disposed in fascicles. Habit different from the other sections, and have more resemblance to the Didymocarpus frutescens. The species of this section might form a distinct genus, on account of their bilabiate corolla and longer fruit, and in the whole superfees of the lobes of the dissepiment being seminiferous.*

20 C. PILOSA (Blum, bijdr. p. 770.) stem ascending, simple, tetragonal at top ; leaves opposite, obovate-oblong, sharply serrated, sessile, pilose above, and strigose on the veins beneath; fascicles many-flowered, on short peduncles, axillary, involucrated by foliaceous bracteas. T? . S. Native of Java, in humid places on the mountains of Salak, Gede, Seribu, &c. Flowers dirty yellow, having the lower lip reddish inside, and 3-lobed : upper lip emarginate, smaller. Sterile filaments 3, small. Allied to C *rubiginosa.*

Pilose Cyrtandra. Shrub small.

21 C. RUBIGINOSA (Jack, in Lin. trans. 14. p. 32.) stem erect, 4-angled, bristly in the young parts ; leaves opposite, petiolate, obovate-lanceolate, acuminated, acutely serrated; the nerves pilose on the lower surfaces ; peduncles axillary, fascicled, 1-flowered, and, like the calyxes, clothed with clammy pili. f? . S. Native of Sumatra. Bracteas linear, acute. Corolla of a dusky purple colour, pilose outside : lower lip of 3# small shallow lobes : upper lip bifid, shorter. Stigma bluntly bilabiate. Berry cylindrical. Sterile filaments 2.

Rusty Cyrtandra. Shrub small.

22 C. SULCA^TA (Blum, bijdr. p. 770.) stem erect, tetragonal, furrowed above, clothed with brown tomentum; leaves opposite, petiolate, oblong, long-acuminated, unequally narrowed at the base, unequally and sharply serrated at top, smoothish above, but rather villous on the nerves beneath ; fascicles of flowers almost sessile, axillary, bracteate. T? . S. Native of Java, on Mount Megamendung. Corolla dirty purple: upper lip 2-lobed : lower one larger and 3-lobed. Sterile filaments 3, small.

Var. ft; leaves larger; flowers white. *2 • S. Native of Java, on the Seribu mountains.

Furrowed Cyrtandra. Shrub small.

23 C. NEMOROSA (Blum, bijdr. p. 771.) stem erect, tetragonal, downy at top; leaves opposite, petiolate, oblong, acuminated, obliquely attenuated at the base, unequally and deeply serrated, rather downy on the veins on both surfaces ; fascicles of flowers pedunculate. T? . S. Native of Java, in groves. Calyx sub-bilabiate : lower lip bifid : upper trifid. Corolla bilabiate : upper lip emarginate, brown: lower lip 3-lobed, and larger, dirty white, and brownish in the throat. The fertile filaments are thickened at top ; and the middle one of the 3 sterile shortest.

Grove Cyrtandra. Shrub small.

24 C. ROSTRA'TA (Blum, bijdr. 771.) stem almost terete, erectish ; superior leaves alternate, those opposed being very small, petioiate, oblong, beaked, unequally attenuated at the base, and unequally and sharply serrated at top, glabrous above, but rather villous on the ribs beneath ; fascicles of flowers pedunculate, axillary. *1?* • S. Native of Java, in woods on the Seribu mountains, and on mount Salak. Corolla dirty purple, rather villous outside, sub-bilabiate, with a gibbous throat. Sterile filaments 3. Nearly allied to *C. nemorosa* and *C. sulcata.*

Far. ft ; flowers purple and white. ^ • •§.

Beaked-leaved Cyrtandra. Shrub small.

25 C. FLAVE'SCENS (Blum, bijdr. p. *772.)* stem terete, erectish ; leaves opposite, petiolate, oblong-lanceolate, acuminated at both ends, unequally and remotely serrated, downy on the veins beneath ; flowers solitary, axillary, almost sessile. h_c . S. Native of the Island of Nusae-Kambanga, in humid places among bushes. Corolla sulphur-coloured, funnel-shaped, bilabiate, rather villous outside. Sterile filaments 2, minute.

Yellowish-fiovtered Cyrtandra. Shrub small.

26 C. COCCINEA (Blum, bijdr. p. 772.) stem erect, tetragonal; leaves opposite, on long petioles, oblong, acuminated, glandularly serrated, oblique at the base, having the ribs for the most part blood-coloured beneath, smooth ; fascicles of flowers pedunculate, axillary, umbellate. ^ . S. Native of Java, in woods in the interior. Calyx ventricose, 5-cleft, sub-bilabiate. Corolla somewhat bilabiate, scarlet, sometimes whitish-brown. Sterile filaments 3, minute. Berry elongated, beaked.

Scarlet-flowered Cyrtandra. Shrub small.

27 C. CELE'BICA (Blum, bijdr. p. 772.) stem erect, tetragonal; leaves opposite, on long petioles, elliptic-oblong, acuminated, unequally attenuated at the base, crenulated, glabrous, but clothed with cobwebbed down while young; fasoclw o flowers panicled, axillary. *?. S. Native of the Cc'ebes, woods. Allied to *C. coccinea,* from which it diflers in fascicles of flowers being panicled.

Celebes Cyrtandra. Shrub small.

28 C. OJ'NDI. (Blum, bijdr. p. *773.)* terete ; leaves opposite, on long petioles, sometimes obliquely cordate at the base, doubly and g serrated, sometimes tomentose beneath on the nerve* fascicles of flowers pedunculate, axillary, involucre lucrum bifid. T? . S. Native of Java, in the nigne mounts Gede and Salak.

Far. ft ; leaves deeply serrated. *? . S.

Great Cyrtandra. Shrub.

29 C. ARBORE'SCENS (Blum, bijdr. p. *773.)* sterri erec gonal; leaves large, opposite, elliptic-oblong, running petioles at the base, unequally toothed, smoothish rather tomentose beneath ; heads of flowers pedunc lucrated; involucrum large, foliaceous, bifid. *?* humid of Java, in the province of Tjangor, on the mountains, parts of woods.

Arborescent Cyrtandra. Shrub.

30 C. CUNEATA (Blum, bijdr. p. 773.) stem erec leaves opposite, the one smaller than the other, peti ate-oblong, acuminated, obsoletely denticulated at top, above, but rather strigose on the veins beneath ; u lary, on long peduncles. Tj • S. Native of the Moluccas.

CuneateAesLved Cyrtandra. Shrub.

31 C. FRUTE'SCENS (Jack, in Lin. trans. 14. P erect; leaves opposite, lanceolate, serrated, glabrous peduncles axillary, generally 3-flowered, *not* so petioles. Tj.S. Native of Sumatra. Leaves Bracteas linear at the base of the pedicels. subulate. Corolla purplish: lower lip *longer;* shallow. Sterile filaments 2. Stigma dilated, Berry cylindrical: lobes of the dissepiment revoluce, niferous on their whole surfaces, like most of the oi in this section.

Shrubby Cyrtandra. Shrub.

Cult. For culture and propagation of the see *RyU'* see *Streptocdrpus,* p. 658, and for the shrubby specie *dophyllum,* p. 550.

XXV. WHITIA (evidently dedicated to the name of White, of whom we know nothing.) Blum. bijdr. p. 774.

LIN. SYST. *Didndria, Monogynia.* Calyx small, cleft, equal. Corolla funnel-shaped, having the tuo upwards ; limb 5-lobed, irregular, sub-bilabiate. of which are antheriferous and hardly exserted, ana setaceous and sterile. Cells of anthers unequal in Stigma somewhat funnel-shaped. Fruit baccate, siliqu lobes of dissepiment fleshy, and bearing the seeds on lute edges. Seeds naked, striated, surrounded Climbing shrubs, with opposite, simple, entire, o those opposed to each other of unequal size. *I* ers axillary, bracteate, on short peduncles. from *Cyrtdndra,* in the calyx being small, and divi the base, not tubular ; in the stamens being exser closed ; in the insertion of the anthers being lel; in the stigma being funnel-shaped, not capitate nate.

1 W. OBLONGIFOLIA (Blum, bijdr. p. 774.) ceolate, glabrous ; fascicles of flowers on short p

teas lanceolate; fruit elongated. I? . S. Native of Java, in n^am Woods, where *k* is called *Lida-bebek.*

Ublong-leaved Whitia. Fl. Year. Shrub climbing.

* W. CARNOSA (Blum, bijdr. p. 775.) leaves oblong-lanceolate, atlier tomentose beneath ; fascicles of flowers on short pedunES)^xillary, involucrated by 2 bracteas ; fruit oblong. f? . w. • Native of Sumatra, and of Java, in woods on the Seribu mountains. Cyrtandra carnosa, Jack, in Lin. trans. 14. p. *30.* lon Stem obscurely 4-sided, smooth. Largest leaves *7-8* incites : the °Pposite ones small, roundish-cordate. Corolla wh e.

Meshy Whitia. Fl. Year. Shrub climbing.

65o Cult. For culture and propagation see *Rytidophyllum,* p.

XX V. RHYNCHOTECHUM (from *pvyx°£> rhynchos,* a beak, but the application is not evident.) Blum, bijdr. *775.* Coroll' SYST* *DMywmia* Angiospermia.* Calyx 5-cleft, equal, limb a^ tha snort campanulate tube, and an unequal, 5-lobed celled f stamens 4» somewhat didynamous, inclosed; anthers 1-globo' ^ ^tya^e lncurve(^ » stigma obtuse. Fruit baccate, lute S6 glrded by tne calyx : lobes of fleshy dissepiment revo- *Vrt7ii* Seminiferous. Seeds naked. This genus differs from 1-cell T mall 4 stamens being fertile ; in the anthers being x ^ *> and in the berry being globose.

leaver" PARVIFLORUM (Blum. p. *775.)* stem simple, terete; neath • °Pposite> oblong-lanceolate, serrated, rather villous beh . S' °?r^mbs dichotomous, axillary ; pedicels subfasciculate. Sm /; ^ative o^Java J °n the Seribu mountains.

Cub er6d Rhynchotechum. Shrub.

65o. For culture and propagation see *Rytidophyllum,* p.

X^ T. LOXONIA (from Xofo, *loxos,* oblique ; flowers. ?) LIN trans< u P. 4 Blura bijdr. 776> gular, 5 cler* ^%n«w*«» *Angiospermia.* Calyx tubular, anSo^ewh"f ki Corolla funnel-shaped, with a 5-lobed, unequal, anthers b llabiate limb. Stamens 4, didynamous, inclosed;. Fruit b Sagittate> with divaricate lobes. Stigma bilamellate. celled . aC;Cate? ^closed in the calyx, and probably dehiscent, 2-naked,' ^ ^(^sseP"nent revolute, seminiferous. Seeds °Pposed —Herbaceous plants, with opposite leaves: the m ones small> generally unequal sided. Flowers raceb ISCOLOR ^Jack> in Lin# trans, 14, p# 40,^ leaVeS gla,, Purplish and retrorsely scabrous beneath ; ra^coolen elongated. %. S. Native of the interior of re curved. Stem tomentose, purple, terete, rather flexuous, form th ^eaves opposite, bifarious ; the one minute and reniaci minat Gl subsessile> semicordate, ovate-oblong, falcate, curved ; 4"5 inches long, slightly serrated; serratures repairs. n o(l leaves almost obsolete. Calyx covered with red *ith rjurn?- of a d^icate yellowish-green colour, streaked yiog pie inside.

L *2 i*Cotm*red-\eavea* **Loxonia. PL ? -** broad, r SUTA (Jack» L c. p. 41.) hairy; leaves semi-ovate, ? SumaV* cles 2 4 cleft 5 flowers racemose. 2/. S. Native leaves a and the interior of Bencoolen. Stem recurved, the oth e 7 short petioles : the one small and semicordate, inches r semi- vate, acuminated, slightly serrated, about *5* 4 u n i , and 2 or *H* broad. Peduncles dividing into *2* or

3 L y loxonia. PI ? *' ^CTJ'RRENS (Bl (Blum, bijdr. p. 776.) leaves opposite, oblong, acuminated, cuneated at the base, decurrent, serrated, glabrous ; flowers in fascicles, axillary. %. S. Native of Java, on the Seribu mountains, in humid places.

Decurrent-leaved Loxonia. Fl. Feb. Shrub.

Cult. For culture and propagation see *Streptocdrpus,* p. 658.

XXVIII. CENTRO'NIA (from *Kevrpov, kentron,* a spur; back of anthers spurred at the base.) Blum, bijdr. p. 776.

LIN. SYST. *Didyndmia, Angiospermia.* Calyx spathaceous, cleft on one side. Corolla funnel-shaped, with a bilabiate, nearly equal limb ; upper lip 2-lobed: lower lip 3-lobed, spreading. Stamens 4, inclosed; anthers 1-celled, spurred on the back at the base, free. Style thick; stigma capitate. Fruit baccate, silique-formed ; lobes of fleshy dissepiment revolute, seminiferous. Seeds naked.—A small, rather fleshy, parasitical plant, furnished with ovate obtuse stipulas and bracteas.

1 C. MIRA'BILIS (Blum, bijdr. p. *777.) 1/..* S. Native of Java, on Mount Salak, in humid parts of woods.

Showy Centronia. Fl. Sept. Oct. PL small.

Cult. For culture and propagation see *Streptocdrpus,* p. 658.

XXIX. UTA'NIA (an alteration from its vernacular name Tjankuda-Utan.) Kuhlia, Reinwdt. herb, ex Blum, bijdr. p. 777. but not of Kunth.

LIN. SYST. *Didynamia, Angiospermia.* Calyx 5-cleft; segments imbricate, permanent. Corolla funnel-shaped, with a 5-lobed, nearly equal limb. Stamens 5, exserted ; anthers incumbent, bifid at the base. Style erect; stigma capitate. Fruit baccate, olive-formed ; lobes of fleshy dissepiment revolute, seminiferous. Seeds naked.—A branched shrub, with rather large, opposite, oval leaves, which are acutish at both ends, quite entire, coriaceous, glabrous, and undulated. Panicles terminal, drooping ; pedicels subcorymbose.

1 K. MORINDIEFOLIA ; Tj . S. Native of Java, at the foot of Mount Salak, where it is called *Tjankuda- Utan.* Kuhlia morindaefolia, Blum, bijdr. p. 777.

Morinda-leaved Kuhlia. FL Year. Shrub.

Cult. For culture and propagation see *Rytidophyllum,* p. 650.

XXX. FIELDIA (named after Baron Field, F.L.S., &c. late Judge of the Supreme Court of New South Wales.) Cunningh. in Field's New South Wales, p. *363.* icone. Hook. exot. fl. t. 1. p. *232.*

LIN. SYST. ***Didyndmia, Angiospermia.*** **Calyx deeply 5-**parted, permanent, inclosed in a spath-formed bractea, which is cleft on one side. Corolla tubularly ventricose ; limb 5-lobed, equal, somewhat bilabiate. Stamens 4, didynamous, with the rudiment of a fifth ; filaments dilated ; anthers 2-celled, roundish. Stigma bilamellate. Berry white, spongy, fleshy, 1-celled. Seeds small, numerous, dotted, attached to two fleshy, parietal, bilamellate placentas.—A climbing, radicant shrub, almost parasitical upon the trunks of trees, clothed with dense rusty down when young. Leaves simple, opposite, remote: those opposed to each other, unequal in size, elliptic, acute at both ends, deeply serrated in the upper half, downy, of a deep green colour ; petioles downy. Peduncles axillary, solitary, 1-flowered. Flowers pendulous, greenish-white.

1 F. AUSTRA'LIS (Cunningh. 1. c. Hook. L c.) *h* . ^. G. Native of New South Wales, on the Blue Mountains, Caley, in 1804 ; and upon naked rocks on the Five Islands, Cunningh. in 1822.

Southern Fieldia. Shrub creeping.

Cult, For culture and propagation see *Rytidophyllum,* p. 650.

Subtribe IV.

LOXOTIE'^E (this subtribe agrees with the genus *Loxotis,* in the seeds being erect.) Capsule 2-valved or circumcised. Seeds erect, naked.

§ 1. *Capsule 2-valved.*

XXXI. LOXO'TIS (from *Xo&g, loxos,* oblique ; corollas.) R. Br. ex Benth. scrop. ind. p. *57.* Antonia, R. Br. but not of Pohl. Wulfenia species, Wall.

LIN. SYST. *Didndria, Monogynia.* Calyx tubular, 5-cleft. Corolla with a tubular base, and a short, bilabiate limb. Stamens *2,* fertile ; anthers cohering : sterile ones wanting, or very minute.— Herbaceous plants.

1 L. OBLI QUA (Benth. scroph. ind. p. *57.)* calyx shortly 5-cleft; segments broad-lanceolate, bluntish. *%»I* S. Native of Nipaul and Silhet; common on the Himalaya. Wulfenia obliqua, Wall. tent. fl. nap. p. 45. t. *35.*

Oblique-Cowered ? Loxotis. PL erect.

2 L. INTERMEDIA (Benth. 1. c.) calyx 5-cleft beyond the middle ; segments lanceolate, very acute. 1/. ? S. Native of Martaban, at Moolmyme. Wulfenia intermedia, Wall. cat. no. 408. Habit of the preceding, but the young leaves are often pubescent.

Intermediate Loxotis. PI. erect.

Cult. For culture and propagation see *Streptocdrpus,* p. 658.

XXXII. GLOSSA'NTHUS (from y\w<r<ra, *glossa,* tongue ; and *CLVOOQ, anthos, SL* flower ; in allusion to the large concave lower lip of the corolla.) Klein, mss. ex Benth. scroph. ind. 57. Wulfenia species, Wall.

LIN. SYST. *Didynamia, Angiospermia.* Calyx tubular, 5-cleft. Corolla tubular at the base : limb bilabiate ; upper lip very short: lower one large, convex. ? Stamens 4, fertile ; anthers cohering. Capsule 2-valved.—Herbaceous plants.

1 G. MALABA'RICA (Klein, mss. ex Benth. 1. c.) stem divaricately branched ; leaves and inflorescence of *Loxotis. "If..* ? S. Native of Malabar and the Nielghery mountains, in the Indian Peninsula. Wulfenia Notoniana, Wall. tent. fl. nap. p. 46. cat. no. 409.

Malabar Glossanthus. PL

Cult. For culture and propagation see *Streptocdrpus,* p. 658.

XXXIII. PLATYSTE'MMA (from *nXarvg, platys,* broad; and oTE/u^a, *stemma,* a garland of flowers ; in reference to the broad corollas.) Wall. pi. rar. asiat. *2.* p. 41. t. 151.

LIN. SYST. *Didynamia, Angiospermia.* Calyx ovate, 5-cleft, equal. Corolla rotate, very flat, without a tube: limb bilabiate, 5-lobed : lower lip larger, 3-lobed, contracted at the base : upper lip obcordate. Stamens 4, very short, equal; anthers large, reniform, 1-celled. Style very long and thick; stigma capitate, entire. Ovanum roundish-ovate, 2-celled. Ovula densely inserted in twin placentas—Small, pilose, rock, 1 or *g.* leaved herbs. Flowers few, large, blue, terminal, on long pedicels, twin or subumbellate. Corollas flat, hence the generic name.

1 P. VIOLOI'DES (Wall. pL rar. 2. p. 42. t. 151. Royle, ill. himal. t. 70. f. *2.)* leaves 2, opposite under the peduncles, one smaller than the other, but none radical ; peduncles 2-flowered, one from the axil of each leaf. 1/. (G. Native of Upper Nipaul, upon rocks among moss, Wall.; J... ; r~ pi... inches high, downy. Leaves sessile, orbicularly cordate, ately toothed.

Violet-like Platystemma. PI. 2 to 6 inches.

2 P. MA'JOR (Wall. pi. rar. asiat. 2. p. «;> f ... d'Vnately-nished with one ovate-cordate, acute, ... bearing toothed leaf; peduncles umbellately b.fid, each d.us.or 2 flowers, besides 1 or 2 solitary flowers from the b... under %. G. Native of Kamaon. Bracteas 2 opposite, sma the divisions of the stem or peduncles in both specie.

Larger Platystemma. PL \ to f foot.

Cull For culture and propagation see *Streptocarpu , y* p. 658.

XXXIV. OURI'SIA (named after Ouris, once Governor of the Moluccas, who received this plant from ix... had given it his name.) Comm. ex Juss. gen. p... p. 112. Gaertn. fil. carp. S. p. 44. t. 185. ... Cav. 438. Poppig, et Endlicher, nov. gen. 1. p. ... ann. des scienc. 3. t. 32. icon. 6. p. *59.* t. 28*. cies, Lin. fil. suppl. and Willd. 5-cleft.

LIN. SYST. *Didynamia, Mgiospirmta.* ... equal. Corolla funnel-shaped : limb 5-cleft, nearly equal; segments obtuse. Stamens 4, didynamous, ... emarginate or 2-lobed. Capsule 2-celled, ... septiferous in the middle. Placentas glubose, adnate ... sepiment. Seeds numerous, with an aril-terminated, and teita.—Creeping herbs, with opposite leaves, ana axillary, bractless peduncles'

SECT. I. OUKI'SIA (see genus for ... Endlicl)er, nov. gen. 1. p. 2. Calyx ... and curved • funnel-shaped; tube widened a little in the middle, limb erect, hardly equalling a sixth part of the tuo •

1 O. MAGEIXA'NICA (JUSS. 1. c. Gsertn. 1. c. ... Endlicher, 1. c. t. 4.) stem creeping; radicalle ... ovate or elliptic, doubly serrated, on long P... leaves reniform, opposite, half stem-clasping, P... lary, solitary, elongated, 1-flowered; calyx cil»ted ... tridentaie : lower one bifid. %. G. Native of W... Andes, among rocks ; and of the Straits of *M°&"*%n. sures of rocks. Chelone ruelloides, Lin. fil. suppl. ter, in Comm. goett. 9. p. 35. Willd. spec. 3. p. ... purple.

Magellan Ourisia. PI. 3 to 6 inches.

SECT. II. DICHROMA (from *he, du,* ... *chroma,* colour ; in reference to the scarlet colon... and green of the other parts of the plant.) ... nov. gen. 1. p. 3. Calyx equal: segments hardly c... the base. Corolla funnel-shaped: hmb spreading, ... a l length to a third or half the length of the erect tube.

2 O. WTECIIOLIA (R. Br. prod. p. « ... creeping; leaves subovate, quite ent.re; pe... generally solitary ; calyx deeply 5-cleft, equal. ... of Van Diemen's Land. This differs from *O.Mae* the calyx being equally 5-cleft, and in the coiolla being

Entire-leaved Ourisia. PI. creeping.

3 O. COCC'NEA (Pers. ench. 2. p. 169. Popp*-J... 1. c.) radical leaves cordate, doubly crenated, vioi

neath, downy above; petioles and stem villous; peduncles panicled, equal to the calyx in length, but 6 times shorter than the corolla, pilose. %. G. Native of the South of Chili, in shady places at the river Rucal; and of Chiloe, in humid shady places. Dichroma coccinea, Cav. icon. 6. p. 59. t. 282. Corolla scarlet. Seeds minute, ovate.

scarlet- flowered Ourisia. PI. \ to 2 feet.

1. L. ILLENS (Poppig, et Endlicher, nov. gen. chil. 1. p. 3. t. 5.) radical leaves orbicularly cordate, crenated, smoothish; petioles villous; tops of stem sub-panicled; peduncles equal in length to the calyx, and almost twice shorter than the tube of the corolla, which is regular, all quite glabrous. 1/. G. Native of the South of Chili, on the Andes at Antuco, in rocky Places.

JVe Ourisia. PI. ½ to ¾ foot.

* O. MICROPHYLLA (Poppig, et Endl. 1. c. p. 3. t. 7.) suffruticose, glabrous; leaves oval, sessile, closely and quadrifariously imbricated, coriaceous; peduncles axillary, solitary, 1-flowered, short; stamens one half shorter than the tube. ^. G. Native of the South of Chili, in the fissures of basaltic rocks on the Andes of Antuco. A small, branchy shrub, with the habit of *nca.* Corolla rose-coloured, or lilac.

^*mall-leaved* Ourisia. Shrub.

coril O. ALPINA (Poppig, et Endl. 1. c. t. 6.) radical leaves ovate-oblong, doubly crenated, and are, as well as the petioles and stem, villous; peduncles corymbose and equal; calyxes one-half shorter than the tube of the regular corolla, quite glabrous. %. G. Native of the South of Chili, on the top of Pilque, among the Andes. Corolla scarlet.

f me Ourisia. PL I to ½ foot.

bra P. POLYANTHA (Poppig et Endl. 1. c. p. 4.) suffruticose; bra down y 5 ^aves oval, sessile, by remote pairs, membranous; peduncles axillary, solitary, 1-flowered, elongated; on length of tube. /. G. Native of the South of Chili, on the Andes, in cold places. Corolla scarlet; limb yellow inside.

^-*flowered* Ourisia. Shrub.

m- For culture and propagation see *Streptocdrpus,* p. *658.*

§ 2. *Capsule circumcised.*

FL^XV* AIKI1/NIA (named in honour of Arthur Aikin, rar Secretary to the Society of Arts.) R. Br. in Wall. pi. Jack. asiat. 3. p. *G5.* t. 288. Epithema, Blume, but* not of

equaT' JST< *Didndri* <*> *Monogynia.* Calyx tubular, 5-cleft, lip bi Lor olla hypogynous, irregular; limb spreading; upper 4, the V Inv6r tri Partite> with nearly equal segments. Stamens steril^e ^uPerior ones fertile, with cohering anthers: lower 2 cell^ec i" ' S^ma capitate. Capsule girded by the calyx, 1-Pedi ClrCUmcised; placentas 2, free, seated on adnate, parietal tunic] Seminif erous all over. Seeds erect, with elongated tooth«f?"^Annual> rather pilose herbs. Leaves cordate, a little n^ear] low er usually one or more alternate: superior ones head^ oPPOsite- SPike s unilateral, circinate while young, and late ornq> but corymbose while bearing the fruit, peduncu- C%1 Pe Icels disposed in a double row along the rachis, roun bractless» but the racemes are involucrated by one Neai Tlsh cucullate leaf each at base. Flowers small, blue.

1 A ^lied *toL o^tis.*

P^dun i RUN^Nis (Wall. 1. c. *3.* p. *66.* t. 288.) leaves petiolate; Ti mor s so^tary, or many. ©. F. Native of the Island of 18^8 ? nJ;ar Colping. Gratiola involucrata, Roxb. fl. ind. 1. p. * lant branched, or simple.

s Aikinia. PI. ¼ foot.

VOL. IV.

2 A. HORSFIE'LDII (R. Br. 1. c. p. *66.)* leaf solitary, sessile, terminating the stem; peduncles solitary, many. ©. F. Native of Java. Epithema, Blum.

Horsfield's Aikinia. PI. \ foot. ?

3 A. CARNOSA; leaves petiolate; peduncles solitary, or many seriate; racemes capitate; bractea small, ovate; corollas exceeding the calyx a little. ©. F. Native of Nipaul. Epithema carnosum, Benth. scroph. ind. p. *57.* Paederotoides carnosa, Wall. mss.

Fleshy Aikinia. PI. \ foot. ?

Cult. For culture and propagation see *Streptocarpus,* p. 658.

XXXVI. STAURANTHERA (from *cTravpog, stauros,* a cross; and *avdrjpa, anthera,* an anther; in allusion to the anthers cohering in a cruciate manner.) Benth. scroph. ind. p. *57.*

LIN. SYST. *Didynamia, Angiospermia.* Calyx subrotately campanulate, 5-plicate, very broadly sub-10-cleft. Corolla ample, oblique, with a very short tube, spurred behind at the base, subquinquefid at top. Stamens 4, fertile; anthers heart-shaped, cohering cruciately. Capsule circumcised. Ramification of stem, and obliquity of leaves, like that of *Glossdnthus.* Leaves large, wrinkled. Racemes ditrichotomously panicled, 8-20-flowered.

1 S. GRANDIFLORA (Benth. 1. c.) %.l S. Native of Penang, Wall. Glossanthus ? grandiflorus, Benth. in Wall. cat. no. 6395.

Great-flowered Staurantheria. PL branched.

Cult. For culture and propagation see *Streptocdrpus*, p. 658.

f *A genus hardly known whether it belongs to the order Bignoniacece or the present.*

XXXVII. AMPHICOME (from *a^i, amphi,* on both sides; and *Kcofjirj, home,* a head of hair; in reference to the seeds being furnished with a tuft of hairs at both ends.) Royle, ill. himal. t. 72. f. 1. Incarvillea species, R. Br. ex Royle, 1. c.

LIN. SYST. *Didynamia, Angiospermia.* Calyx tubular, pentagonal; angles stiffer than the membranous ciliated sides, 5-toothed; teeth subulate, slightly hairy. Corolla tubular near the base, ventricose above; limb 5-lobed: lobes short, rounded, ciliated, imbricate in aestivation. Stamens 4, didynamous, with the rudiment of a fifth. Cells of anthers converging, each furnished about its middle with a small tail-like process; filaments terminated above in a broad, membranous process. Stigma bilamellate. Capsule long, slender, silique-formed, 2-valved, but only opening on one side; dissepiment free, opposite the valves, bearing on both sides along the margins suspended seeds. Seeds oblong, rough, slightly winged at both ends, and terminated in a much divided coma of fine hairs, exalbuminous. Embryo straight, almond-shaped; radicle above. Cotyledons foliaceous.—A diffuse shrub, with impari-pinnate, alternate leaves, and axillary and terminal racemes of flowers.

1 A. ARGUTA (Royle, 1. c.) f?. G. Native of Himalaya. Incarvillea arguta, Royle, 1. c.) Leaflets opposite, on short petioles, 3-4 pairs, lanceolate, acuminated, unequal at the base, dentately serrated. Corollas red.

***Sharp-serrated-\ea.ved* Amphicome. Shrub *3* feet.**

Cult. For culture and propagation see *Rytidophyllum,* p. 650.

ORDER CLXXV. LABIATE (so named from *labium,* a lip; in consequence of the two-lipped corolla.) Juss. gen. p. 110.

R. Br. prod. p. 499. Mirb. ann. mus. 15. p. *213.* Bartl. ord. nat. 180. Benth. lab. p. xiii.

Calyx tubular, regular, 5-cleft, or 5-10-toothed, or bilabiate; lips entire, or divided. Corolla tubular, irregular, bilabiate ; superior lip undivided or bifid, lying over each other in aestivation: lower lip trifid. Stamens 4, didynamous, *2* of which are sometimes sterile ; filaments inserted under the sinuses of the lower lip and interlabiate ; anthers 2-lobed : lobes usually divaricate; but sometimes dimidiate, and therefore somewhat 1-celled, with an obsolete division and a continuous suture. Ovaria 4, 1-seeded, connected with the base of the style, seated on a glandular disk, and girded at bottom ; ovula erect. Style 1. Stigma bifid, usually acute, sometimes unequal, or dilated. Achenia 4, hidden by the permanent calyx, some of them generally abortive. Albumen wanting, or very sparing. Embryo erect. Cotyledons flat.—Herbs, rarely shrubs. Stems and branches tetragonal. Leaves opposite, exstipulate, simple, undivided, or lobed ; petioles or bases of the leaves not articulated with the branch. Flowers opposite, verticillate, capitate, spicate, racemose, or solitary, axillary or terminal, bracteate or naked.

The order *Labidtce* is one of the most natural and distinctly marked of all. The opposite leaves, monopetalous corolla, *2* or 4 stamens, and the free 4-lobed ovarium, are characters so easily observed, and so constantly accompanying the general habit of the whole series, that from the time of Linnaeus to the present day but two or three genera have been improperly associated with, or separated from it. Its immediate affinities are few. The same 4-lobed ovarium is only found in *Borragmece,* but here the fifth stamen is always present and fertile, and the corolla is usually regular, with gyrate inflorescence. *Scrophulariniece,* and other allied tribes are at once separated by the capsular fruit. In *Verbendcece* alone, having frequently the same inflorescence and many of the characters of *Labidtce,* approach near enough to occasion any hesitation in drawing the line of separation. The ovarium is slightly lobed in *Verbena* and other neighbouring genera, and in *Cymdria* and some *Teucria* it is less lobed than in other *Labidtce,* but yet the distance is considerable in this respect between the former and the two latter genera, ex Bentham.

The species are to be found in more or less abundance over the surface of the globe, but the greater mass within the tropics. Many are extremely odoriferous ; some bear handsome flowers, others are mere weeds. They are remarkable for their tonic, cordial, stomachic virtues; they contain both a bitter and an aromatic principle in different proportions. The bitterness which is given out in decoctions resides in a gum resinous secretion abounding in some *Teucria,* which are particularly employed as stomachics, and sometimes as febrifuges; those which abound in essential oil, and are consequently aromatic, are used as stimulants. From the different degree of combination of these principles in different plants, they have obtained various uses, such as savory, thyme, marjoram for the seasoning of food ; sage, balm, ground ivy for tea ; cat thyme, marjoram, lavender, and thyme for sternutories; others, such as lavender, mint, balm, and rosemary, for perfume. The essential oil of all contain camphor, which is said to exist in such quantity in and lavender, that it has been supposed that the sep sage of it might become an object of commerce.

In the arrangement of this truly natural family, we have followed Mr. Bentham, whose elaborate work, entitled "Labiatarum Genera et Species," is a model for future monograph

Synopsis of the genera.

TRIBE I.

OCYMOIDEÆ. Stamens declinate. Corolla sub-bilabiate; the superior 4 lobes flat, and nearly equal, or the two upper differ- are joined: the lower segment is decimal, ent form from the others, sometimes flat, but usually concave, boat-shaped, or saccate. Old anthers usually saucer-shaped.

§ 1. *Segments of corolla almost of equal length: one the narrowest, declinate, and flatfish.—Tropical plants.*

1 O'CYMUM. Fructiferous calyx deflexed ; the uppermost tooth ovate, large, usually decurrent.—Whorls rarely with so many as 10 flowers.

2 GENIOSFORUM. Fructiferous calyx almost erect or declinate, usually transversely wrinkled at base ; teeth irregular: upper one not decurrent. Filaments naked. Lower subulate.—Whorls many-flowered.

3 MESONA. Upper lip of corolla divided ; lower one sinall and inflexed. Shorter stamens appendiculate at the base.

4 ACROCE'PHALUS. Calyx erectish, having the lower combined into an entire or 4-toothed lip.—Very nor capitate.

5 MOSCHOSMA. Fruit-bearing calyx decimate, upper tooth ovate, not decurrent. Tube of corolla inclosed. Stamens usually digstyle very short.—Whorls few-flowered, secund, us posed in axillary racemules.

6 ORTHOSIPHON. Fructiferous calyx deflexed, superior tooth ovate. Tube of corolla straight, exserted. Stamens by the stigma.—Habit of *O'cymum,*

§ 2. *Lower segment of corolla elongated, concave.—Tropical plants.*

7 HOSLU'NDIA. Superior stamens abortive. Fructiferous calyx baccate.

8 PLECTRA'NTHUS. Fructiferous calyx 5-toothed, not spiny, with an open mouth. Filaments free.

9 COLEUS. Fructiferous calyx toothed, not spiny, with an open mouth. Filaments monadelphous. Whorles of flowers spicate.

10 ANISOCHI'LUS. Fructiferous calyx closed, base in the fructiferous state.

11 (EOLLA'NTHUS. Calyx truncate, circumcised ac

12 PYCHNOSTACHYS. Teeth of fructiferous calyx subulately spinose.—Whorls of flowers spicate.

§ 3. ***Lower segment of corolla somewhat stipitate, transversely subcallous at the base, and at length saccate, but bent down abruptly at the time of Jit lorescence.***

13 PE'LTODON. Teeth of calyx subulate, peltate at apex.—*yptls capitata.*

14 MARSYPIA'NTHUS. Achenia concave, boat-shaped, with membranous, involute, fringed margins.—Habit of *Hyptis Plata,*

15 HY PTIS. Calyxes not peltate, fructiferous ones not bilate. Achenia not cymbiform.

16 ERIOPE. Floriferous calyx equal, fructiferous one increasing and bilabiate : upper lip tridentate : lower lip bidentate.

§ 4. ***Corolla bilabiate : upper Up 2-lobed : lower Up 3-lobed. Stamens inclosed in the tube.***

17 ^AVA'NDULA. Character the same as that of the section.

TRIBE II.

Menthoidea. Corolla tubular subcampanulate, or funnel-shaped ; Sorter than the calyx, or hardly longer; limb 4-5-cleft, the lobes nearly equal, rarely sub-bilabiate. Stamens disstraight, or diverging, not approximating by pairs, nearly the lower ones are a little longer; the superior ones sometimes abortive.

§ 1. ***Anthers terminal, also the younger ones are confluently l-celled. Stamens somewhat declinate.***

18 POGOSTEXMON. The *3* superior segments of corolla approx. 9 mnte: lOWGr one declinate.

DYSOPHY'LLA. Corolla almost regular.

§ 2. ***Anthers versatile; cells divaricate, at length confluent. Stamens sometimes somewhat ascending.***

20 Lobes of LSH6LTZIA. Corolla tubular ; limb short, bilabiate. gynophore shorter than the ovarium.

21 TETRADEXNIA. Corolla regular. Lobes of gynophore than the ovarium.

§ 3. ***Anthers 2-celled; cells parallel Corolla normal, as in the whole tribe.***

22 POLEBROOKTA. Fructiferous calyx pappose, adhering to the Achenia.

23 ERILLA. Upper tooth of fructiferous calyx small. Style bifid.

24 Achenia rather large, wrinkled reticulately.

25 Calyx 4-toothed.

26 Calyx 5-toothed, not pappose. Achenia Fertile stamens 4.

27 LYCO'PUS. Superior stamens abortive.

§ 4. ***Cells of anthers disjoined, with a filiform connective.***

28 MERIA'NDRA. Character the same as that of the section.

TRIBE III.

MONA'RDE.E. Corolla bilabiate. Superior stamens abortive, or if fertile bearing linear, connate anthers: lower stamens fertile, ascending ; anthers linear, sometimes confluently 1-celled, connate, sometimes dimidiate, free, or connate behind, with a linear connective, which is articulated to the filament, and bearing the fertile cell at top, truncate behind, but generally drawn out, filiform, elevated, bearing the other cell, which is sometimes diffbrmed and empty, and sometimes fertile.

§ 1. ***Connective filiform, articulated to the filament.***

29 SA'LVIA. Connective drawn out under the insertion, naked or bearing a cell behind.

SO AUDIBE'RTIA. Connective not drawn out under the insertion.

§ 2. ***Connective small. Fertile stamens 2.***

31 ROSMARI'NUS. Calyx bilabiate : upper lip entire : lower lip bifid. Filaments toothed at the base.

32 MONA'RDA. Calyx 5-toothed. Lower lip of corolla linear, shortly trifid at apex.

33 BLEPHI'LIA. Calyx 5-toothed, sub-bilabiate ; throat naked inside. Lower lip of corolla broad, trifid.

34 ZIZI'PHORA. Throat of calyx villous inside. Corolla of ***Blephilia.***

§ 3. ***Connective small Fertile stamens 4.***

35 HORMI'NUM. Character the same as that of the section.

TRIBE IV.

SATUREI'NEJE. Calyx 5-toothed, equal, or bilabiate, f. Tube of corolla exannulate, shorter than the calyx, and imbricating bracteas, or hardly longer ; limb sub-bilabiate: upper lip flat, entire, or emarginately bifid ; lobes of lower lip flat. Stamens straight, diverging, or hardly ascending, equal, or the superior ones are shortest, or abortive. Anthers not dimidiate.

§ 1. ***Fertile stamens 4. Calyx 10-13-nerved.***

36 BYSTROPOGON. Calyx equal ; throat villous inside—Inflorescence cymose, or spicate.

37 PYCHNA'NTHEMUM. Calyx equal, or sub-bilabiate, naked inside. Upper lip of corolla oblong, entire, or emarginate.—Whorls many-flowered, bracteate.

38 MONARDE'LLA. Throat of calyx naked inside. Segments of corolla 5, oblong, or linear, somewhat bilabiately disposed.

39 AMARA^NCUS. Superior lip of calyx erect, entire: lower one truncate, almost wanting, or shortly bidentate.—Spikelets membranaceously bracteate.

40, ORI'GANUM. Calyx somewhat equally 5-toothed ; throat villous.—Spikelets broadly bracteate, rather loose.

41 MARJORA^NA. Limb of calyx cleft, quite entire above, orbicular, with the margin implicate beneath at the base.

42 THY'MUS. Calyx bilabiate : upper lip tridentate : lower lip bifid ; throat villous.

43 SATURE'IA. Calyx nearly equal; throat almost naked inside. Superior lip of corolla ovate.—Whorles of flowers axillary, or aggregate into an oblong head.

§ 2. *Fertile stamens* 4. *Calyx 15-nerved.*

44 HYSSÒPUS. Character the same as that of the section.

§ 3. *Two lower stamens alone fertile.*

45 COLLINSÒNIA. Lobes of corolla 4 : superior ones nearly equal: lower one large, toothed or fringed.

46 CUNI'LA. Corolla normal with the tribe.

TRIBE V.

MELISSI'NEJE. Calyx 13, rarely 10-nerved, 5-toothed, bilabiate, f, or rarely equal. Tube of corolla exannulate, usually exserted ; limb bilabiate ; lips flat, or the upper one as in *Glèchon,* galeate. Stamens ascending: superior ones shorter, or abortive.

47 HEDEÒMA. Tube of corolla rarely exserted. Throat of calyx villous inside. Superior stamens abortive.

48 MICROME'RIA. Tube of corolla rarely exserted. Calyx nearly equal : superior stamens antheriferous.

49 MELI'SSA. Calyx bilabiate : upper lip tridentate : lower lip bidentate. Tube of corolla usually exserted. Superior stamens antheriferous.

50 GARDÒQUIA. Calyx tubular, somewhat incurved, with an equal or sub-bilabiate mouth. Tube of corolla much exserted. Stamens 1-3, now and then sterile.

51 GLE^CHON. Superior stamens abortive. Superior lip of corolla galeate.

52 KEI^THIA. Superior stamens altogether abortive. Lips of corolla flat; tube exserted.

53 THY'MBRA. Calyx much compressed, flat above. Superior stamens antheriferous.

54 DICERA'NDRA. Stamens 4, antheriferous; anthers bicalcarate.

55 POGO'GYNE. Stamens 4, antheriferous. Style villous.

TRIBE VI.

SCUTELLARI'NE-ffi. Calyx bilabiate ; upper lip truncate, entire or somewhat tridentate. Tube of corolla exserted, ascending: upper lip of limb arched, rarely flat. Stamens ascending: superior ones the shortest.

§ 1. *Gynophore equal, straight; lips of calyx toothed.*

56 PRUNELLA. Style bifid at apex.

57 CLÒNIA. Style quadrifid at apex.

§ 2. *Gynophore elongated, incurved, oblique at apex, of calyx entire.*

58 SCUTBLLA'RIA. Achenia naked. Superior lip of corolla arched. Segments

59 PERIT6MIA. Achenia membranously winged. 0 of corolla flattish.

TRIBE VII.

PROSTANTHE'REJE. Calyx campanulate, sometimes bilabiate ; lips flat, entire, or the lower one bidentate or bifid ; throat naked inside. Corolla with a short ample tube, a campanulate throat, and a bilabiate limb : lips flattish. Stamens di mous, shorter than the corolla: lower ones sometimes longe and sometimes sterile. Achenia coriaceous, reticuia j kled. Style permanent.

§ 1. *Calyx bilabiate: lips entire, or the lower one bidentate.*

60 CHIL'ODIA. Upper lip of calyx entire : lower one Anthers mutic.

61 CRY^PHIA. Both lips of calyx entire Antne

62 PROSTANTHE^RA. Both lips of calyx entire, or Anthers spurred.

63 HEMIA'NDRA. Upper lip of calyx entire: lowe Anthers dimidiate.

§ 2. *Calyx equal, 5-toothed.*

64 HEMIGE^NIA. Anthers all with one of the cells ferti e, the other abortive.

65 WESTRI'NGIA. Anthers of upper stamens brous : lower ones sterile.

66 MICROCORYS. Anthers of upper stamens bearded : lower ones sterile.

TRIBE VIII.

NEPE^TE*. Calyx equal or oblique, or sub-bilabiate, 15-nerved : superior teeth the largest. Corolla bilabial mens didynamous : superior ones the longest, diverging.

§ 1. *Stamens diverging.*

67 LOPHA'NTHUS. Character the same as that of the section.

§ 2. *Stamens ascending.*

68 NE'PETA. Calyx not bilabiate ; upper tooth a little

broader than the rest. Bracteas entire. Cells of anthers Merging or divaricate.

69 MARMORI%TIS. Calyx tubularly campanulate, longer than ^corolla. Cells of anthers parallel.

?° DRACOCE'PHALUM. Calyx bilabiate, or the upper tooth is large, or the bracteas are ciliately toothed.

71 CEDRONE'LLA. Tube of corolla exserted. (fells of anthers parallel.

TRIBE IX.

STACHY'DEE. Calyx irregularly veined, 5-10-nerved, equal, oblique, > or rarely sub-bilabiate, 3-10-toothed. Tube of corolla usually annulate inside ; limb bilabiate. Stamens 4, ascending, didynamous : superior ones the shortest. Achenia dry, not reticulately wrinkled.

§ 1# *Calyx inflated after florescence, or 2-4,-lobed. Corolla much exserted.*

72 MELITTIS, Calyx membranous, campanulate : lobes 3-5, Toothed. 73 P Corolla ample> much exserted.

PHYSOSTE'GIA. Calyx obscurely veined, inflated after florescence. Corolla much exserted, with an ample throat.

MACBRI'DEA. Calyx membranous, campanulate ; lobes *3* : upper one oblong : lower one roundish. Corolla much exserted, with 75 Very ample throat.

KEYSIA'NDRA. Calyx 4»parted. Upper cells *of* superior anthers empty, connate.

§ 2. *Calyx 5-toothed: limb not dilated. Stamens exserted from the tube. Corolla flat tish or arched.*

SUBER'MIUM. Calyx 5-nerved, 5-toothed: teeth not spiny. Upper lip of corolla a little arched or galeate ; lateral segments flat, acute 1 .rcllv anv tooth-formed, or rarely oblong. Achenia ?? ly triquetrous, truncate.—Leaves entire.

LACOCHINLUS. calyx 5-nerved; teeth 5, stiff, somewhat spiny. Upper lip of corolla oblong, bifid at apex. Achenia acuminate, 78 Tetrahedrous> truncate at apex.

SUPERIONUNRUS. Calyx 5-nerved ; teeth 5, stiff, rather spiny. Upper lip of corolla oblong, flattish, or arched; lateral segments broad, ovate; lower one 3-lobed. Achenia acutely triquetrous, truncate.—Leaves jagged; 79 ANISOMELES. Stamens exserted from the short upper lip of the corolla.

80 GALEOPSIS. Calyx somewhat 5-nerved, 5-toothed, somewhat bristly. Cells of anthers transversely and bivalvately dehiscent. 81 Cent! inner valve smaller> ciliated.

Corolla ample. CHYS. Calyx 5-10-nerved, 5-toothed. Throat of corolla ** rdly dilated ; galea a little arched, rarely oblong, flat, rai- ingInate, Stamens exserted from the tube. Achenia obtuse, truncate.

Tube STACHELE. Calyx reticulately veined; teeth nearly equal. 83 Corolla ample. Cells of anthers linear, diverging.

lirjK-i EPECHI/NIA. Calyx bilabiate: upper lip tridentate: lower Pblntate. Corolla small.

§ 3. *Stamens inclosed within the tube.*

84 CRANIOTOME. Superior lip of corolla very short, truncate.

85 SIDERI'TIS. Lower lobe of style dilated, clasping the superior one at the base, which is truncate.

86 MARRU'BIUM. Lobes *of* style nearly equal. Calyx tubular.

§ 4. *Limb of calyx dilated or 5-10-toothed, or with a truncate moulh,rather membranous between the teeth, or broadly and membranaceously campanulate. Superior lip of corolla generally compressedly galeate. Stamens exserted from the tube.*

87 BALLOTA. Calyx regular, somewhat funnel-shaped, 5-10-toothed. Anthers 2-celled.

88 LASIOCORYS. Calyx nearly equal; teeth 5, ovate, rarely with other 5 small acute ones in the recesses between the others, Galea of corolla very hairy. Anthers 2-celled.

89 ROYLEA. Segments of calyx 5, equal, oblong, membranous.

90 OTOSTEVGIA. Limb of calyx somewhat bilabiately and membranously drawn out; lower lip large. Anthers 2-celled.

91 LEU'CAS. Limb of calyx 8-10-toothed. Cells of anthers confluent. Galea of corolla very hairy, short; lower lobe of style very short.

92 LEONOTIS. Calyx of *Leucas section Plagiostoma.* Corolla yellow or scarlet. Galea much longer than the lip.

93 PHLOMIS. Calyx tubular, 5 or 10-striped, usually plicate, 5-toothed, the margins rather membranous between the teeth. Superior filaments generally appendiculate. Cells of anthers confluent.

94 NoTocHiEXTE. Mouth of calyx membranous, with 5 nerves, which are drawn out into as many subulate awns, which are hooked at apex.

95 EREMOSTACHYS. All as in *Phlomis,* except that the calyx is more ample, and the limb often large and membranous.

96 ERIOPHYNTUM. Calyx membranous, amply campanulate. Galea of corolla large, incumbent: lip small, trifid.

97 MOLUCE'LLA. Limb of calyx ample, oblique, with 5-10 mucrones or spines. Filaments naked at the base.

98 HOLMSKIOLDIA. Calyx large, coloured, somewhat rotately campanulate. Ovarium bipartite ; lobes bifid.

99 HYMENOCRA'TER. Calyx 13-nerved, with a 5-cleft spreading limb. Achenia tubercular.

100 ACHYROSPE'RMUM. Achenia covered with scales at top.

101 COLQUHOU'NIA. Achenia membranously drawn out at top.

TRIBE X.

PRASIE'AE. Corolla bilabiate. Stamens 4, ascending: lower ones the longest. Achenia fleshy, sub-baccate.

102 GOMPHOSTE'MMA. Throat of corolla dilated. Cells of anthers transverse, parallel.

103 PHYLLOSTE'GIA. Throat of corolla nearly equal. Cells of anthers diverging. Lobes of style not subulate,

104 STENOGYNE. Throat of corolla dilated. Cells of anthers at length divaricate. Lobes of style subulate.

105 PRA^SIUM. Calyx bilabiate. Tube of corolla inclosed.

TRIBE XI.

AJUGOI'DE*:. Upper lip of corolla sometimes very short, and sometimes cleft; segments cast down, rarely erect, arched : lower one elongated Stamens ascending, usually exserted : superior ones shorter, or abortive.

106 AMETHY'STEA. Superior stamens abortive.

107 TRICHOSTE'MMA. Limb of corolla nearly equally 5-cleft: segments declinate.

108 TEU'CRIUM. Segments of corolla 4, nearly equal, or the 2 superior ones are larger, all declinate, or very shortly truncate : lower one large, rounded or oblong, usually concave. Stamens exserted.

109 A'JUGA. Superior lip of corolla short or very short. Stamens usually exserted.

110 CYMA'RIA. Superior lip of corolla elongated, galeate.

Tribe I.

OCYMOI'DEJE (from *Ocymum,* Basil. ; and *idea,* similar ; because the plants contained in this section agree with *O'cymum* in the characters given below.) Benth. lab. p. 1. Stamens declinate. Corolla sub-bilabiate ; 4 upper lobes flat, and nearly equal: or the 2 uppermost ones are joined: lower one declinate, usually of different form, flat, but more often concave, boat-shaped, or saccate. Old anthers usually saucer-shaped.

I. O'CYMUM (said by Mathiolus to be derived from *o£w, ozo,* to smell; on account of the powerful scent of the plants.) Benth. lab. p. 1. O'cymum species of Lin. and other authors.

LIN. SYST. *Didynàmia, Gymnospérmia.* Calyx ovate or campanulate, 5-toothed: the upper tooth membranous, with winged, decurrent margins, at length deflexed. Corolla with a short tube ; throat usually campanulate : upper lip quadrifid : lower lip hardly longer, declinate, quite entire, flattish. Stamens 4 : lower ones the longest; filaments free : superior ones usually furnished with a tooth or a fascicle of hairs at the base ; anthers ovate-reniform ; cells confluent. Style bifid at top: lobes subulate or flattish ; stigmas minute or marginal. Achenia smooth.—Herbs or subshrubs; whorls 6-flowered, rarely so much as 10-flowered, disposed in interrupted spikes or racemes ; racemes simple, or a little branched at the base, rarely disposed in a thyrsoicl panicle.

SECT. I. OCYMODON (from *Ocymum,* and *odovg OSOVTOG, odous odontos,* a tooth; so called because the upper filaments are furnished with a tooth at the base.) Benth. lab. p. *3.* Superior filaments furnished each with a toothlet at the base.—Whorls usually 6-flowered. Pedicels reflexed, usually shorter than the fructiferous calyxes.

1 O. CA^NUM (Sims bot. mag. t. 2452.) herbaceous, erect, pubescent ; leaves petiolate, ovate, narrowed at both ends, almost quite entire, canescent beneath ; petioles ciliated ; racemes simple ; calyxes longer than the pedicels, reflexed in the fructiferous state: upper tooth of calyx orbicular, concave, shortly acuminated. 0. H. Native of Madagascar, East Indies, China Brazil, &c. O. Americanum, Lin. amcen. 4. p. 276. spec. *833**. but not of Jacq. O. album, Roxb., but not of Lin. O. starni^ neum, Sims, bot. mag. 2452. in text. O. incanescens, Mart et Spix, raise, bras. *2.* p. 787 - Very nearly f- ed to *O. Basilicum,* but the flowers are not half the size, and the habit distinct. Corollas white.

Hoary Basil. Fl. July. Clt. 1822. PI. 1 foot.

2 O.^BASI'LICUM (Lin. spec. 833.) ^rbaceous, glabrous, erect, or ascending ; leaves petiolate, ovate or o W^o n ^ ^ ; at the base, a little toothed ; petioles ciliated ; lacenie calyxes longer than the pedicels, reflexed in he true state : upper tooth ovate, concave, shortly acuminated. Native of the East Indies, and tropical Africa Corolla white. The sweet or larger Basil, *O. Busihcum,* *«*£* *silikum,* Germ. ; *Basilica,* Ital.; is a tender annual g n£ aromatic. The bush, or Least Basil, is the *U. m* also an aromatic plant, but more diminutive^ than Basil, forming a round bushy head. Ihe . branches, or leafy tops of both these species, gathered for culinary purposes, on account ot tmm. vour of cloves, to be used in highly seasoned disnes. leaves are sometimes introduced into salad, and not into soups. Both species are raised from seeds ; and.a *3* feet by lj, to furnish plants for a final transplanting, i^ feet by 12 ; a quarter of an ounce will be sufficient, o bed, in the end of March, and plant out in a warm bore soil; the larger at 8 or 10 inches every way. sorts are sown in the open border; but so treated late and small. In transplanting from the hot-bea, raise the plants in small tufts or single plants, witn ed, by which they receive no check ; and if ing, and in dry weather, will soon produce Seed can only be saved in England in warm dry & under the most favourable circumstances of situati city. In general it is procured from Italy by the see .

Far. a,pildsum (Benth. lab. p. 4.) stem mudi ascending; leaves small, oblong, quite entire, whorles of flowers very pilose ; racemes elongated ally glabrous. O. minimum, Burm. p. 129. but O. basilicum, Burm. ind. 129. O. hispidum, Larn. 384. O. pilosum, Willd. enum. 2. p. 29., Roxb. p. 45. O. cihatum, Horn. hort. hafn, O. hispiduiu pi. guin. in act. acad. hafn. 4. p. 42. Basilicum Rumph. amb. 5. p. 263. t. 92. f. 1.

Far. /3, *anisalum* (Benth. 1. c.) habit of var erect and less pilose; leaves larger, thicker, a corollas usually villous. ©. H. O. Basilicum, Lin. O.. anis^tum, Hort. Solodi-Tartkva, Rheed. mal. t. *87.* Basilicum citratum, Rumph. amb. 5. p. f. 1.

Far. y,glabratum (Benth. 1. c.) stem erect; lyxes sparingly ciliated; leaves hardly gated, simple. ©. H. O. integerrimum, Vahl. si 162. O. caryophyllatum, Roxb. hort. beng. p. 45. latum, Schum. pi. guin. in act. acad. hafn. 4. p. 4^.

Far. S, majus (Benth. 1. c.) leaves ovate, and are, the calyxes, large ; racemes elongated, simple. e> majus, Hort.

Far. e, *album* (Benth. 1. c.) leaves broad-ovate, toothed; raceme short, dense, hardly ciliated, cane* rollas glabrous or villous. ©. H. O. album, Lin. n O. laxum, Vahl, herb. O. Americanum. Jacq. norc. t. *86.*

Far. f, *difforme* (Benth. I.e.) leaves blistered, variously laciniately toothed ; corollas usually villous ; ra ous. ©. H; O. bullatum, Lam. diet. 1. p. 384. folium, Hortul, but not of Roth. O. fimbriatum, peltatum, Hortul. O. cochleatum, Hort, par. rioides crispum, Burm.

densiflbrum (Benth. 1. c.) erect, glabrous; petioles and calyxes hardly ciliated; raceme short, a little branched. Barrelieri, Roth, nov. spec. 278. Plectranthus Barrelieri, Spreng. syst. 2. p. 691.

Vipurpurdscens (Benth. 1. c.) erect, glabrous, dark purple; petioles and calyxes hardly ciliated; raceme elongated, much branched. Thyrsiflorum, Lin. mant. 84. Murr. comm. goett. 8. (1781). Jacq. hort. vind. 3. t. 72.

IMbo? or Sweet Basil. FL June, Aug. Clt. 1548. PL 1 foot.

FORSKCEXLII (Benth. lab. p. 6.) stem herbaceous, pubescent; petioles ovate, rounded at the base, racemose, quite entire, smoothish: petioles and nerves ciliated; flatecT Slm er ructiferous calyxes longer than the pedicels, the ba Camanulate> reflexed, ciliated above the gibbosities at Arabia Fr UPPeF tooth orbicular> concave. ©. H. Native of no tofL. -gratissimum, Forsk. fl. aegypt. p. 110. but glabro K Allied to the two preceding. Leaves canescent, nated Sa ove> an hispid on the nerves beneath, hardly crenated on the margins.

Forskoel Basil P }- 1 to li foot.

finely INIMUM (Lin. spec. 833.) stem herbaceous, erect, entire Scent 5 leaves on long petioles, ovate, almost quite others- GratissiMUS; Petioles naked: floral leaves almost like the shq ter laceme simple, short; whorls loose; calyxes rather upper Lin e Pedicels, reflexed in the fructiferous state; tive of Ti i orbicular: lo wef ones short, acute. ©. H. Na- 0. sa, Uull> ear Valparaiso. Schkuhr, handb. 2. t. 166.? **Wes T r i Molina, Nat, hist cllil 291, Much branched** white. ? larger than those of *Thyraus serpyllum.* Corollas

Least Basil FL July, Aug. Clt. 1573. PL \ to 1 foot,

Lacerate Coi (Benth. lab. p. 6.) quite glabrous; stem herbaceous, acute erect nearly simple; leaves petiolate, broad-ovate, sessile Cordate, serrate, subcuneated at the base: floral ones fructifer ange r than tlie calyx deciduous; raceme simple; little inc us f lx s longer than the pedicels, ovate, reflexed, a cave, tive, 4 te glabrous: upper tooth ovate, obtuse, con- Spajn^ jT* Native of South America; Brazil, Sello; New base u C? et Sesse- Stem branched from the perennial l ra ch es simple. Corolla white.

Sella Basil. PL 1 to 2 feet.

Pubescent IRIDE enum 639.) stem shrubby, branched, narrowed aves petiolate, ovate-oblong, acuminated, crenated, eaves b G ase> glabrous or downy on the ribs: floral ranched r otea orme d> ovate, acuminated, deciduous; raceme In the fr as Xe s about equal in length to the pedicels, nutant cave; c ruc er ous state: upper tooth ovate, acuminated, conSerted or a r dly exceeding the calyx; stamens a little extropics S# Native of the west coast of Africa, within the he pt0(1 U iridifl6rum, Roth, catal. 54. nov. spec. *279.* O. Lindl *I* Be auv. fl. d'ow. 2. p. 59. t. 94. bad. O. febrifugum, Glandularly eg. 753. Branches subtetragonal, pilose. Leaves dotted beneath. Calyxes pilose, and glandularly dotted. L/Oroll a small, greenish-white. The leaves of this speLeone U ed ia tbe manner of tea, as a febrifuge, at Sierra G Un er the name of Fever-plant,

feet. Basil- FL July, Oct. Clt. 1816. Shrub % to 4

ish; ie GRATI/SSIMUM (Lin. spec. 832.) stem sbrubby, smoothnarr0wed eS petiolate ovate, acute, crenated or coarsely toothed, at the base, glabrous or downy along the ribs; floral leaves bractea-formed, lanceolate, acuminated, hastate at the base; raceme simple or a little branched at the base, pubescent; fructiferous calyxes nutant: upper tooth ovate-oblong: lower ones very short; corolla hardly exceeding the calyx; stamens exserted. P?. S. Native of the East Indies. O. Zeylanicum, Burm. zeyl. 174. t. 80. f. 1. O. frutescens, Mill, diet. no. 6. O. petiolare, Lam. diet. 1. p. 385. O. gratissimum, Jacq. icon. rar. 3. t. 495. Cattu Tirtava, RheecL mal. 10. p. 171. t. 86. Branches bluntly tetragonal. Pedicels short, and are, as well as the calyxes, pubescent. Corollas white, (fig. 74.)

FIG. 74.



Very-grateful BasiL Fl. July, Aug. Clt. 1751. Shrub *2* to 3 feet.

8 O. SUA'VE (Willd. enum. 629.) stem shrubby, villous; leaves petiolate, ovate-oblong, acuminated, crenated, narrowed at the base, wrinkled, villous; floral leaves bractea-formed, ovate, acuminated; raceme somewhat panicled; whorls 6-flowered; fructiferous calyxes nutant: upper tooth ovate: lateral ones truncate; corolla larger than the calyx. ^ • S. Native of Madagascar. O. urticaefolium, Roth.^catal. p. 52. nov. spec. p. 279. O. gratissimum, Lam. diet. 1. p. 386. but not of Lin. O. Zeylanicum, Desf. hort. par. ed. 2d. p. 75. O. villosum, Weinm. in syll. pi. ratisb. 1. p. 121. but not of Roxb. O. holosericeum, Breit. ex Steudel. nom. p. 559. Branches bluntly tetragonal. Corolla white, larger than those of the preceding species. Stamens exserted.

Sweet Basil. Fl. July, Sept. Clt. 1816. Shrub *2* to 3 feet.

9 O. BOJE'RI (Benth. lap. p. 8.) stem shrubby, tomentose; leaves petiolate, ovate, crenated, rounded at the base or cordate, wrinkled, tomentose; floral leaves ovate, acuminated; raceme simple; whorls about 10-flowered; calyxes nutant: upper tooth ovate: lower ones very short; corolla twice as long as the calyx; stamens exserted. J? . S. Native of Madagascar. O. cordifolium, Bojer ex Loud. hort. brit. p. 240. *1*

Bojer's BasiL Clt. 1825. Shrub 2 to 3 feet.

10 O. FILAMENTOSUM (Forsk. fl. aegypt. p. 108.) stem shrubby, branched, clothed with hoary tomentum; leaves on short petioles, ovate-oblong, narrowed at both ends, acutely serrated, finely pubescent; raceme simple; calyxes longer than the pedicels, reflexed in the fructiferous state: lateral teeth truncate: lower ones shortly mucronate; corolla 4 times as long as the calyx; genitals much exserted. Tj . S. Native of the eastern coast of Africa, within the tropics; Abyssinia, Bruce; Arabia Felix, near Mount Melhan, Forsk. O. Abyssinicum, Hort. par. O. grandifldrum, Lher. stirp. 89. t. 43. Brandies bluntly tetragonal. Floral leaves coloured. Corolla white; tube exserted.

Thready BasiL FL July, Oct. Clt. 1S02. Shrub 2 to 3 feet.

11 O. SERPYLLIFOLIUM (Forsk. fl. segypt. p. HO.) stem shrubby; branches canescent; leaves oblong, cuneated, quite entire, clothed with hoary tomentum, narrowed at the base; raceme simple, few-flowered; whorls loose, 6-flowered; calyxes declinate, canescent: upper tooth ovate, obtuse: lateral ones ovate, acute: lower ones lanceolate, acuminated; corolla about twice, as long as the calyx; stamens much exserted. f? •

G. Native of Arabia Felix, on Mout Chadra, Forsk. ; Cape of Good Hope, Burchell. O. Burchellianum, Bentb. lab. p. 8. O. fruticulòsum, Burch. Leaves about tbe size of tbose of *Thymus vidgàris,* fascicled. Processes of filaments large, villous. Corollas purplish.

Wild-ThymeAesLYed Basil. Shrub dwarf.

12 O. ADSCE'NDENS (Willd. spec. *3.* p. 166.) stem herbaceous, prostrate ; branches pubescent ; leaves petiolate, ovate-oblong, obtuse, a little toothed, narrowed at the base, pubescent ; floral leaves bractea-formed, deciduous ; raceme simple ; fructiferous calyxes nutant: tube striated: lateral segments truncate, with membranous ciliated edges ; corolla twice longer than the calyx; stamens much exserted. 1/. H. Native of the East Indies, in sandy places. O. I'ndicum, Roth, nov. spec. p. *273.* Plectranthus I'ndicus, Spreng. syst. *2.* p. 691. O. cristatum, Roxb. hort. beng. p. 45. Leaves hardly larger than those of O. *minimum,* often clothed with hoary tomentum beneath.

Ascending Basil. Fl. July, Sept. Clt. 1822. PI. prostrate.

\ *Species belonging to the present section, but are not sufficiently known.*

13 O. GUINEE'NSE (Schum. pi. guin. 1. c.) suffruticose, branched ; branches hairy ; leaves petiolate, ovate, attenuated at both ends, serrated, pilose beneath, dotted and wrinkled;* racemes terminal, branched ; calyxes glabrous ; bracteas deltoid, acuminated, deciduous. J? . S. Native of Guinea, in the woods of Accra, Thonning. Branches quadrangular. Corolla length of calyx. • Upper tooth of calyx broadly orbicular, acuminated, concave outside ; middle tooth of the lower lip emarginate, deflexed.

Guinea Basil. Shrub 2 to 3 feet.

14 O. ARISTA'TUM (Blum, bijdr. *833.)* leaves ovate, obtuse, repandly crenulated, attenuated at the base, quite entire, puberulous on the margins and veins beneath ; branches tetragonal, and are, as well as the nearly simple raceme, obversely pubescent ; whorls remote, 6-flowered ; bracteas ovate-acuminated, ciliated, sessile; lower lip of calyx 4-toothed : middle teeth with long awns.—Native of Java, about Batavia, in grassy places.

Awned-ca\yxed Basil. PI.

15 O. BRACHIA[X]TUM (Blum, bijdr. p. 833.) leaves lanceolate-ovate, acutish at both ends, remotely serrulated above, puberulous on the margins and ribs beneath ; branches fastigiate, tetragonal, obversely hispid ; whorls distinct, 6-flowered ; bracteas ovate, petiolate, and are, as well as the pubescent calyx, ciliated ; lower lip of calyx 4-toothed: middle teeth the longest.—Native of Java, in dry places about Batavia.

Armed Basil. PI.

SECT. II. HIEROSCYMUM (from *lepog, hieros,* holy; and *Ocymum ;* so called because this section contains *0. sanctum.)* Benth. lab. p. 11. Superior filaments appendiculate by a fascicle of hairs at base. Raceme loose, slender ; whorls 6-flowered. Pedicels spreading. Calyxes nutant.

16 O. CARNÒSUM (Link, et Otto, ex Benth. lab. p. 11.) stem herbaceous, nearly glabrous; leaves petiolate, ovate, ac.utish, coarsely serrated, smoothish, rather fleshy ; floral leaves bractea-formed, deciduous ; raceme simple, many-flowered ; whorls 6-rlowered ; calyxes campanula^, glabrous : throat naked inside : upper tooth with reflexed margins: lateral ones truncate; corolla hardly exceeding the calyx. ©. ? S. Native of South America, Brazil, Buenos Ayres, and New Spain. Lumnitzera carndsa, Spreng. cur. post. 223. ? Stem sometimes pubescent towards the top. Leaves glandular beneath. Corolla small, purplish.

Fleshy Basil. PI. erect.

17 O. SA'NCTUK (Lin. mant. 85.) stems pilose; leaves olate, oval, obtuse, toothed, pubescent, with the petioles pilose: floral ones bractea-formed, sessile, shorter than the pedicels; raceme slender, simple, or branched; calyxes shorter than the pedicels, smooth, exceeding inside: upper tooth obovate, concave; corolla hardly exceeding the calyx O. S. Native of the East Indies, in many parts of the country. Hirsutum, Benth. in Wall. pi. njr. asiat^P 2— O. villòsum, Roxb. hort. beng. 44. ? but not of Lin. Plectranthus monachorum, L.n. mant. 85. O. tomentosum, Lam. diet. 1. p. 387- L« Willd. but not Spreng. syst. 2. p. 687. O. tenu.florum, Lam. 0. indo- rum, Burm. fl. ind. 130. O. frutescens, Burm. *a.* B^fl;cuB1 -Burm. thes. zeyl. 174. t. 80. f. 2. and *•. *• fc gle plant agreste, Rumph. amb. 5. p. 265. t. 92. f. 3- J he J is generally purplish. Leaves small, on long petioles pale purplish. Stamens a little exserted.

J5fo« Basil. Fl. July, Sept. Clt. 175S. PI. 1 »

18 O. TENU.FtouuM (Lin. spec. 833. exclusive of nymes) stems herbaceous, ? ascending, narrowed at on long petioles, oblong, bluntish, crenated, ratner the base, pubescent; racemes filiform, branchedla base; whorls few-flowered, remote; floral leave sessile ; calyxes on short pedicels, rather nu throat naked inside : upper tooth ovate, short; corolla rather shorter than »e calyx. East Indies. Very nearly related to 0. *saneim,* flowers cemes are shorter, the floral leaves broader, and the small and sessile.

Thin-Jlotvered Basil. PI. 1 foot.? ending, P

19 O. GRA'CIK (Benth. lab. p. 12.) stems ascend panicled at top; leaves on short petioles, oblong crenated, narrowed at the base, pubescent: olate, nearly sessile: floral ones bractea-formed, shorter than the pedicels; racemes numerous, f ferous calyxes longer than the pedicels, decimate inside : upper tooth ovate-obtuse ; corolla the calyx—Native of the Eastern coast ot tropic ; Island of Zanquebar. Very nearly related *turn,* but differs in the leaves being narrower, smaller, and in the calyx being villous inside.

Slender Basil. PI. 1 foot.?

20 O. TEKB'LUJM (Benth. lab. p. 12.) glabrous, creeping; leaves petiolate, ovate-roundish, loose, simple, the whorls 6-flowered ; calyxes on declinate, glabrous: upper tooth ovate, very. naked inside; corolla hardly exceeding the exserted.—Native of Madagascar, Lyall. HaD't. *nclla.* Sterile branches creeping, generally ous ones ascending, glabrous. Leaves like *cymbalana :* floral ones very minute. Corolla oi

. *Slender* Basil. PI. creeping.

SECT. III. GVMNOCYMUM (from yv/»w, ^"t.jSj'nakeJj) *Ocymum;* so called in allusion to the filaments be Benth. lab. 12. Filaments all naked and toothy 6-flowered, rarely 10-flowered. Pedicels shorte.

cal. i r a M ^ H ™ (Willd. enum. 630.) s«m erect, branched, nearly glabrous; leaves pe serrated, rounded at the base, or cuneated, floral ones bractea-formed, deciduous; f'uctiferou flexed, oblong : upper tooth obtuse, concave ; ©. H. Native of Tropical America, from Janeiro. O. frutescens, Sieb. pi. exsic. *O. Am*

jy authors. O. pubescens, Mill. diet. O. montanum, Hook, oot. mag. 2996. Stem bluntly tetragonal. Leaves glabrous, or Pubescent, glandular beneath. Corolla white, or pale purple, inclosed in the calyx.

Small-flowered Basil. Fl. May, Aug. Clt. 1816. PI. 1 foot.

22 O. CAMPECHIA^XNUM (Mill."diet. no. 5.) stem erect, villous, at length glabrous ; leaves petiolate, ovate, or ovate-lanceolate, acute, a little serrated, cuneate or narrowed at the base, canescent beneath ; petioles and nerves of leaves hairy ; floral leaves oractea-formed, broad, deciduous ; fructiferous calyx deflexed, ?blong, hispid : upper tooth obtuse, concave : lower ones ending in long awns like most of the species.—Native of New ^Pain; at Campeachy, Miller. This species differs from 0. *ntcrdnthum* in the stem being hairy, especially at the nodi, as well as on the nerves and petioles of the leaves, and in the leaves being smaller and canescent beneath. Corollas white.

^*Peachy* Basil. PI. 2 feet.

** O. OVA^TUM (Benth. lab. p. 13.) stems erect, a little branched ; leaves nearly sessile, broad-ovate, a little toothed, rounded at the base> smoothish, or hispid : floral ones bracteaformed, deciduous; racemes short; fructiferous calyx ovate, coaffexed, deflexe(1: upper tooth, ovate-oblong, obtuse, concave-; Corolla hardly exceeding the calyx. 1/. S. Native of the mountains of Brazil, Sello. Stem villous. Leaves bluntish, entire, or 1-2-t6othed.

jj«te-leaved Basil. PL } to 1 foot.

lea - O. NUDICAU'LE (Benth. lab. p. 14.) stem simple, naked ; Ves approximate at the base of the stem, hardly petiolate, ovate roundish> rather pilose ; racemes elongated ; calyx ovate, deflexed : Upper tooth rather cornered, twice as long as the calyx ; Bract lo* Sterns rising from a thick woody base, tetra- ^' PLglabrous, or downy.

*J«**d-3temmed* Basil. PI. ascending.

cent • I. RIGIDUM (Benth. I.e.) branches erect, strict, pubestire, leaves sessile> stem-clasping, lanceolate, acute, quite entire, ** decurrent at tbe base> stiff, ciliated: floral ones bracteaformed, coroll Ciliated 5 raceme loose ; whorls 2-flowered ; throat of Native of flexed hlside ; corolla liardlv exceeding the calyx, ^ ' S. Angola. Branches compressedly tetragonal. Rachi %S Clothed with glandular down.

si Shrub>

fruti ^RETICAU'LE (Poir. diet, suppl. 1. p. 595.) stem sufserrat?? ous ? leaves on short petioles, oblong, irregularly Surfac narrowed a long way at the base, pubescent on both ones S: floral ones conform, longer than the flowers : upper hardlv Persistent ; calyx declinate, tubular, hispid ; corolla Thon;- ger than the calyx. J? . S. Native of Guinea. O. ^retc ng wVorls Schum- Pl' Suiru in act* roc, hafn* 4* ?, 39, Branches *Ter* 6-flowered. Genitals inclosed in the tube.

er^ ^ d Basil. Shrub diffuse.

Q7 ^-*mmed* Basil. Shrub diffuse.

erect I BRACTEOSUM (Benth. lab. p. 14.) stem herbaceous, olate' Pllos ely hispid ; leaves on short petioles, oblong-lanceish acutl sh, remotely serrated, narrowed at the base, smoothed 98? Veran d rather hispid beneath: floral ones bractea-formiferon tlmes longer than the calyxes, cuneated, coloured ; fructiovatp Calyxes reflexed, ovate, a little inflated: upper tooth coast Stamens a liul e exserted. 0. S. Native of the west Leaves i- ica witllin the tropic- Branches bluntly tetragonaL *Brnn** lncnes long, pale beneath.

? 8 o-T Basil Pl.ltoljfoot.

15) Y^ DIF F^SUM (Benth. in Wall. pi. rar. 2. p. 14. lab. p. crenat sufFruticose, diffuse, villous ; leaves petiolate, ovate, racee ^""dedly cuneated at the base, villously tomentose ; Pes slender, few-flowered ; corolla hardly twice as long as the calyx, with a straight tube, and nearly equal throat; stamens shorter than the corolla, f?. S. Native of the East Indies, in arid places. Shrub much branched, clothed with rather clammy down all over. Whorls 2-4, rarely 6-flowered.

Diffuse Basil. Shrub diffuse, humble.

29 O. ? MEMBRANA'CEUM (Benth. lab. p. 15.) stem erect, villous ; leaves on short petioles, ovate, obtuse, crenated, rounded at the base, wrinkled, villous : lower floral ones conform : superior ones bractea-formed, lanceolate, membranous, villous ; racemes simple; whorls usually 10-flowered; calyxes oblong, pubescent: upper tooth orbicular, hardly decurrent, membranous; stamens shorter than the corolla. ©.? S. Native of Angola. Leaves minutely glandular : floral ones sessile. Corolla hardly exceeding the calyx.

Membranous-calyxed Basil. PI. erect.

•f Species not sufficiently known,

30 O. AFRICA'NUM (Lour. coch. p. 370.) leaves lanceolate, quite entire, pilose; spike terminal, verticillate, interrupted, Q.,S. Native of the eastern coast of Africa, in sandy places. Stem tetragonal, pilose. Leaves pilose, petiolate, ovate-lanceolate. Flowers white, minute. Spikes hairy. Plant sweet-scented.

African Basil. PI. 1 foot.

31 O. ZATARHE'NDI (Forsk. fl. segypt. arab. p, 110.) leaves fleshy, cuneate-oblong, generally 4-toothed on both sides, villous, sessile. Tj . G. Native of Arabia Felix. Stem diffuse. Branches terete, villous. Leaves villous, hoary above, and scattered with rusty dots beneath. Whorls 6-flowered. Plant very fragrant.

Zatarhendis Basil. Shrub 1 foot.

32 O. VAA O2 (Forsk. fl. segypt. p. 111.) stem tetragonal, bracteate ; roots filamentose; fruit pilose.—Native of Arabia Felix. Plant very sweet-scented.

Vaala's Basil. PI.

S3 O. MACROSTA'CHYUM (Poir. diet, suppl. 1. p. 392.) stem suffruticose ; leaves ovate-sublanceolate, obtuse, a little toothed, nearly glabrous ; spike dense, terminal. ^ • S. Native of the East Indies, at Pondicherry. Stem much branched ; branches pilose. Leaves small, hardly petiolate, oval, or oval-oblong, rather fleshy. Flowers dense ; calyxes hairy.

Long-spiked Basil. Shrub.

34 O. VISCOSUM (Roth, nov. spec. 274.) plant clammy, very pilose; leaves obovate-roundish, coarsely and bluntly serrated, reticulately wrinkled beneath ; raceme simple; bracteas ovate, petiolate ; lower lip of calyx 4-toothed : middle teeth the longest,—Native of the East Indies. Whorls 4-6-flowered. Corolla blood red. Filaments toothless. Perhaps a species of *Orthosiphon.*

Clammy Basil. PI. J to 1 foot.

35 O. ACUTUM (Thunb. fl. jap. 248.) racemes filiform ; leaves ovate, acuminated, serrated ; bracteas hairy.—Native of Japan. Stem tetragonal, glabrous. Petioles a little shorter than the leaves, hairy on the midrib beneath. Bracteas ovate, acute, hispid.

Acute-leaved Basil. PI.

36 O. CRI'SPUM (Thunb. fl. jap. 248.) racemes terminal; leaves ovate, serrated, curled ; calyxes hispid.—Native of Japan, about Nagasaki. Stem tetragonal, villous, branched. Leaves petiolate, acuminated, glabrous, purplish, an inch long; petioles villous. A decoction of this species is used in Japan to give a deep red colour to radishes, turnips, and various kinds of fruits.

CWed-leaved Basil. PI. ?

37 O. RUGOSUM (Thunb. fl. jap. p. 249.) racemes terminal;

leaves ovate, acute, serrated, wrinkled beneath. — Native of Japan. Stem tetragonal, furrowed, tomentose. Racemes of flowers terminal, contracted.

Wrinkled-leaved Basil. PL 2 to 3 feet.

38 O. SCABRUM (Thunb. in Lin. trans. 2. p. 338.) racemes simple, erect; leaves ovate, dotted beneath.—Native of Japan. O. punctatum, Thunb. jap. 249. Stem panicled, tetragonal, scabrous from pili, like the whole plant. Leaves oblong, acute, serrated. Racemes terminal; flowers opposite.

Scabrous Basil. PI. 1 foot.

39 O. INFLE'XUM (Thunb. fl. jap. 249.) panicle terminal, racemose ; stem and branches flexuous.—Native of Japan. Stem and branches inflexed at top, tomentose, tetragonal. Leaves ovate, acute, serrated, scabrous. This species powdered is used by the Japanese to perfume their idols.

Inflexed-branched Basil. PI. 1 foot.

40 O. VIRGATUM (Thunb. fl. jap. p. 250.) racemes verticillate, twiggy ; leaves oblong, serrated.—Native of Japan. Stem tetragonal, deeply furrowed, tomentose, branched. Leaves obovate-oblong, tomentose, 1 inch and more long. Whorles 6-flowered.

Twiggy Basil. PI.

41 O. CINE'REUM (R. Br. in append, to Salt. Abyss.) Native of Abyssinia. This species has not yet been described.

Grey Basil. PI.

Cult. Plants of easy culture and propagation. Any light rich soil will suit the species. The shrubby and perennial kinds are readily increased by cuttings. The seeds of annual kinds should be reared on a hgt-bed, and afterwards planted out. See *0. Basilicum*> p. 671.

II. GENIO'SPORUM (meaning unknown to us.) Wall, mss. Benth. lab. 19. O'cymum, species of Lin. and other authors.

LIN. SYST. *Didynamia, Gymnospermia.* Calyx ovate-tubular, with an irregularly, somewhat 5-toothed, membranous margin, when bearing the fruit erectish, or declfnate, usually transversely wrinkled at the base; throat naked inside; upper tooth not decurrent: lateral ones often joined by turns with the upper one and lower ones. Corolla with a straight tube, which is rather shorter than the calyx ; throat campanulate, sub-bilabiate ; upper lip 4-cleft; lower one hardly longer, declinate, quite entire, flattish. Stamens 4, declinate, didynamous : lower ones the longest; filaments free, toothless ; anthers ovate-reniform, with confluent cells. Style shortly bifid at top ; lobes usually flattened ; stigmas submarginal. Achenia smooth, or wrinkled, when examined by a lens. Annual, or perennial herbs, usually procumbent at the base. Whorles many-flowered, disposed in nearly simple racemes or spicate-racemes. Floral leaves usually cartilaginous at the base, white or yellow. Flowers small. The corolla is that of *O'cymum* and *Moschosma,* but the habit is very different. The form of the calyx and the many-flowered whorls separate it from the first; and the calyx, inflorescence, and style readily separate it from the latter.

SECT. I. GENIOSPORUM (see genus for derivation.) Two lower teeth of calyx free.

1 G. MADAGASCARIE'NSIS (Benth. lab p. 20.) stem suffruticose, procumbent, branched; leaves petiolate, ovate, bluntish, crenated, rounded at the base, or cordate, wrinkled, rather villous on both surfaces : floral ones bractea-formed, ovate, acute, white at the base. Native of Madagascar, on Mount Tanonarivan. Stem bluntly tetragonal. Floral leaves small, sessile. Whorles 10-flowered. Genitals exserted. *Madagascar* Geniosporum. Shrub procumbent. Benth.

2 G. STROBILI'FERUM (Wall. pi. asiat. rar. 2. p. 18, lab. p. 20.) stem erect, branched; leaves nearly sessile, oblong, narrowed at both ends toothed, and rather glabrous beneath; whorls many-flowered, the tops of the branches ; lower ones rather remote; leaves ovate, acuminated, exceeding the flowers; sessile, erect in the fructiferous state, tubular, transversely wrinkled at the base, with an irregularly 5-toothed, membranous border. Native of the East Indies ; as of Nipal, Silhet. Plectranthus colorata, D. Don. prod. fl. nep. Cauline leaves 2-3 inches long. Corolla hardly longer than the calyx, blue. Genitals rather shorter than the corolla.

Strobile-bearing Geniosporum. Shrub.

3 G. PARVIFLORUM (Benth. in Wall. pi. rar. asia lab. p. 20.) stem erect, branched; leaves oblong-lanceolate, acute, narrowed at the base, serrated, strigosely pubescent; elongated, loose, many-flowered; calyxes pedicellate, declinate while bearing the fruit, transversely wrinkled at the base, with a bilabiate border: upper lip tridentate: middle tooth larger, ovate ; lower lip quite entire, inflexed, closing the calyx.— Native of Silhet. Stem glabrous at the bottom, but furnished with a fascicle of hairs in the ghort pili at top, and the cauline and floral leaves. Leaves tapering into petioles. Calyx hispid at the base. Corolla small. exserted.

Small-flowered Geniosporum. PI. 1 to 1^ foot.

4 G. ELONGATUM (Benth. lab. p. 21.) stem erect, branched, and are, as well as the erectish, elongated branches, base, and rather hispid ; leaves on short petioles, oblong-lanceolate, acuminate, attenuated at the base, rather hispid ; whorles many, approximate, spicate ; calyxes on short pedicels, declinate in the fructiferous state, ovate, striated at the base, and wrinkled transversely, with a contracted mouth : upper tooth ovate, membranous, obtuse, 4 lower ones smaller, and acute. Native of Ceylon, on the mountains, Macrae. Rninantr Burm. fl. ind. 131. t. 39. f. 1.

Elongated-branched Geniosporum. PL

5 G. GRAW (Benth. lab. p. 21.) quite glabrous, prostrate, much branched; leaves oblong-linear, serrated, narrowed a long way at the base ; whorls many-flowered, racemose : lower ones remote; pedicels capillary, as long as the calyxes; calyxes tubular, striated, transversely wrinkled, with a membranous, acutely sub-bilabiate mouth —Native of Ceylon, on the sea-shore near Colombo, Macrae; Coromandel, Klein. Very near *G. prostrata,* but is distinguished at first sight by narrower leaves, and more loose inflorescence.

Slender Geniosporum. PI. prostrate.

6 G. PROSTRATUM (Benth. in Wall. pi. asiat. rar. 2. lab. p. 21.) stem prostrate, and is, as well as the upper ones lanceolate-linear, serrated, narrowed at the base, and transversely somewhat wrinkled; calyxes pedicellate, declinate in the fructiferous state, bilabiate, membranous mouth; upper lip erect, tridentate, with the middle tooth the largest : lower lip bidentate.— Native of the East Indies, Coromandel, Ceylon, &c. Lunanthera prostrata, Spreng. syst. 2. p. 867. O'cymum prostratum, Lin. mant. p. 366. O'cymum menthoides, Burm. fl. ind. p. 129. Lin. mant. 84. Th/ mus Indicus, Burm. fl. ind. p. 129. Mentha ocymoides, Lam. diet. 4. p. 103. Elsholtziaocymoides, Pers. ench. 2. p. 114. M6ntha Zeylanica, &c. Burm. zeyl. 158. t. 70. f. 2.—Katu-tumba, Rheed. mal. iv. 1

in *on* branched. Leaves \ to 1 inch long. Whorls ^-flowered. Corollas minute. Stamens exserted a little. prostrate. Clt. *1783,* PL

pro (Benth. lab. p. 21.) stem herbaceous, tus ent at ase, ulescent J aves sessile, ovate, obbran'f ! enate ora ones *conform,* smaller : upper ones and s white and cartilaginous ; whorls distant ; calyxes sessile, irregularly bilabiate: superior lip ovate, entire, toothed on both sides at the base : lower lip entire, or bifid: an Native of Madagascar. Stamens a little exserted. Leaves \ *-fll jme-leaved* Geniosporum. PI. prostrate.

P LAT6STOMA (from *wXarvg, platys,* wide; and mouth; calyx.) Benth. lab. p. *22.* Calycine teeth JbinecI into two almost entire lips.

leav ALIS TI (Benth. lab. p. *22.)* stem erect, pubescent ; one Prolate, ovate, cuneately rounded at the base: floral lips Fruy l on er tn an the whorls *of* flowers ; raceme slender ; Gui a x mem branous, nearly entire. ©. S. Native of p. 61 6a> an d Con S - Platostoma Africanum, Beauv. fl. d'ow. *2.* act t 95, 2t O'cymum sylvaticum, Sebum, pi. guin. in ead. haft,. 4. p. 44. Flowers small.

al sot de Beauvois's Geniosporum. PI. 1 foot.?

-tut. For culture and propagation see *O'cymum,* p. 674.

cai! J ES XNA (from *fievoQ, mesos,* middle; so called bediate genus was su PP osed l) y the author *to* be intermet> 8*a W6en the S enus *O'cymum* and *Scutellaria.)* Blum, bijdr. Li Benth, lab - P- 22.

upper V SYST# *Didynamia, Gijmnospermia.* Calyx bilabiate: lip of vided: lower one small > at len g th inflexed. Upper COro Ua arched lower one longer, undivided. Stamens te at *1* S \ declinate ; of these the two shorter are appendicu- e base; anthers 1-celled, beardless. A genus mter- e between *O'cymum* and *Scutellaria,* ex Blum. 1. c. This IS n arl y allie(l to *Geniosporum,* but differs in the shorter S appendiculate at the base ; and from *O'cymum* ne spnn ^ of calyx being diyided> and in the inflores- ex

1 M. PATT ft. (Blum) *y.* ? S. Native of Java, in blon<T ah ou uitenzorg. Herb scentless. Leaves ovate- cTfl t0C 5 tlle(^.' wrinkled, rather pilose. Flowers densely and *Mn» ^7* sP^ed ; whorls bracteate ; pedicles fascicled.

cJ'*Mesona. PI.

or culture and propagation see *O'cymum,* p. 674.

and A 5 :ROCE PHALUS (from *wepo* akros,* the highest ; dispose ^e m ^e > a head ; in allusion to the flowers being hot. ln small > dense, terminal, imbricate heads.) Benth. in oth r ,, \ 15# ^- P» 23. — O'cymum species, Lin. and authors.

gibb SYST, *Didynamia, Gymnospermia.* Calyx ovate in the lip us at nt ate, but elongated in the fructiferous state, tubular, oqua ^ . at tur 4-toothed ; throat naked inside. Corolla about lower m ght to the cal y x» sub-bilabiate : upper lip 4-tooihed : ilame o ne entire ; lobes all nearl y e(l ual, Stamens 4, declinate ; cell c ee> too thless ; anthers ovate-reniform, with confluent flatty ^ ^ le . shortly bifid at apex; lower lobe a little dilated, Herbs V-f^smas submarginal. Achenia glabrous, smooth.— al ost 1 l Wers small, disposed in densely imbricate, terminal, *P°rurn* g A os G heads - Tllis g enus differs from *O'cymum, Geniosand Moschosma* by the form of the calyx, and more especially by the inflorescence. The form of the corolla distinguishes it from all other genera *of* the tribe *Ocymoidece.*

1 A. CAPITA'TUS (Benth. in Wall. pi. rar. *2.* p. 18. lab. p. *23.)* stem procumbent, and are, as well as the leaves, which are ovate, nearly glabrous ; lower lip *of* calyx 4-toothed. 0. S. Native of the East Indies, China, &c. Lumnitzera capitàta, Spreng. syst. *2.* p. *687.* O'cymum capitàtum, Roth, nov. spec. *276.* O'cymum capitellàtum, Lin. niant. 276. Prunëlla l'ndica, Burm. fl. ind. p. 130. Branches glabrous, or with a pilose line on each side. Leaves petiolate, oblong-ovate, remotely serrated : floral ones 2-4 under each head, and longer than it, sessile. Heads ovate, pedunculate, or sessile.

Ca^ate-flowered Acrocephalus. Fl. July, Aug. Clt. 1806. PI. procumbent.

2 A. BLU'MEI (Benth. lab. p. 23.) stem diffuse, tetragonal; leaves linear-lanceolate, coarsely serrated; flowers densely capitate, terminal, girded by ovate, nerved bracteas. ©. S. Native of Java, in grassy humid places about Rompien. O'cymum acrocéphalum, Blum, bijdr. p. 834.

Blume's Acrocephalus. PI. diffuse.

3 A. VILLÖSUS (Benth. lab. p. 23.) stem erect, and is, as well as the leaves, hairy ; lower lip of calyx quite entire. ©. S. Native of Madagascar. Stem tetragonal, often glandular, as well as the under sides of the leaves. Floral leaves 2-4 under each head.

Villous Acrocephalus. PI. 1 foot.

Cult. For culture and propagation see *O'cymum,* p. 674.

V. MOSCHO'SMA (from ^ocrxoe, *moschos,* musk; and *osme,* a smell; plant exhaling a smell like that of musk.) Rchb. consp. reg. veg. p. 171. Lumnitzera, Jacq. fil. eel. 2. but not of Willd.—O'cymum species, Lin. and other authors.

LIN. SYST. *Didynamia, Gijmnospermia.* Calyx ovate, 5-toothed; upper tooth the largest, with the margins not decurrent. lower teeth nearl y e qu al > and somewhat declinate after florescence; throat naked inside. Corolla with an inclosed tube, and a sub-bilabiate limb ; upper lip shortly quadrifid : lower one quite entire, flattish; lobes all nearly equal. Stamens 4, declinate; filaments free, toothless; anthers ovate-reniform, with confluent cells. Style clavately capitate, and shortly bifid at apex ; stigmas minute. Achenia ovate, compressed, smooth. — Herbs. Whorls few-flowered, secund, loosely racemose; racemes axillary, subpanicled. The clavate style and form *of* the calyx separates this genus from the preceding genera. Flowers very minute.

1 M. POLYSTA'CHYA (Benth. in Wall. pi. rar. asiat. 2. p. 13. lab. p. 24.) stem acutely tetragonal, with smooth or hardly rough angles; whorls 6-10-flowered. 0. S. Native of the East Indies; Arabia, at Senaar, Bové; tropical New Holland, Bauer. Lumnitzera polystachya, Jacq. 1. c. O'cymum polystachyon, Lin. mant. *567.* Murr. comm. goett. nov. 3. p. 71. t. *3.* O'cymum tenuiflörum, Burm. ind. 129. but not of Lin. Plectránthus parviflörus, R. Br. prod. p. 506. ? Plectránthus micránthus, Spreng. syst. 2. p. 691. Plant branched. Leaves on long petioles, ovate, acutish, crenated, rounded at the base, glabrous, or finely downy above. Corolla minute, pale purple.

Many-spiked Moschosma. Fl. July, Aug. Clt. 1783. PI. 1 to 2 feetf

2 M. AUSTRA'LE (Benth. lab. p. 708.) stem acutely tetragonal, with smooth angles ; leaves ovate or ovate-lanceolate, pubescent; whorls loosely 6-10-flowered, distant; style bifid at apex. ©. S. Native of New Holland, within the tropic. Plectránthus moschátus, R. Br. prod. 506. Lumnitzera moschàta, Spreng. syst. 2. p. 687. Hardly distinct from *M. polystàchya,* except that the leaves are pubescent, the racemes

longer and more loose, the lower teeth of the calyx narrowed, and the style more deeply bifid.

Southern Moschosma. PI. 1 to 2 feet.

3 M. DIMIDIA'TUM (Benth. lab. 24.) stem acutely tetragonal, with smooth angles; racemes elongated; whorls about 10-flowered, glomerate, remotish. 0. S. Native of the west coast of Africa, within the tropics. O'cymum dimidiàtum, Schum. pi. guin. 1. c. p. 41. Very nearly allied to the preceding ; but differs in the larger leaves, longer racemes, smaller flowers, and usually 10-flowered, distant whorls.

Dimidiate Moschosma. PI. 1 to 2 feet.

4 M. OCYMOI'DES (Benth. in Wall. pi. rar. 2. p. IS.) stem tetragonal, with rough angles; whorls loose, 6-flowered. ©. S. Native of the East Indies, in Silhet. Lumnitzera ocymoides, Jacq. 1. c. O'cymum polycladum, Link. enum. 2. p. 119. Habit of *M. polystdchya;* but the leaves are more acutely serrated, hispid above, and canescent beneath. Upper lip of calyx tridentate : teeth ovate : middle tooth the broadest; lower lip bidentate : teeth lanceolate, acute.

Basil-like Moschosma. Fl. July, Sept. Clt. 1823. PI. 1 to *2* feet.

•f *A species doubtful whether belonging to the genus.*

5 M. CE'SIA (Benth. lab. p. *25.)* branches smoothish, terete ; leaves ovate, dentately crenated ; peduncles subverticillate, bracteate at the base. ©. S. Native country unknown. Lumnitzera cae'sia, Spreng. cur. post. 223.

Grey Moschosma. PI. 1 to 2 feet.?

Cult. For culture and propagation see *Ocy'mum,* p. 674.

VI. ORTHOSITHON (from *opQos, orthos,* straight ; and *aupwv, siphon,* a tube; in reference to the straight tube of the corolla.) Benth. in Bot. reg. vol. 15. lab. p. *25.*

LIN. SYST. *Didyndmia, Gymnospérmia.* Calyx ovate-tubular, *5* -toothed; margins of superior tooth, which is ovate, membranous, decurrent, winged, deflexed after florescence. Corolla with a straight or incurved exserted tube, neither gibbous nor refracted; throat equal or rarely inflated, bilabiate ; upper lip 3-4-cleft: lower one quite entire, concave. Stamens 4, declinate ; filaments free, toothless; anthers ovate-reniform, with confluent cells. Style clavately capitate at apex, nearly entire or shortly emarginate; stigmas confluent in the fork, sometimes minute, sometimes capitately thickened. Achenia rugged from minute dots.—Perennial herbs or undershrubs. Racemes simple, usually elongated, rarely ovate-spike-formed ; whorls 6-flowered, distant, loose. Floral leaves bractea-formed, ovate, acuminated, reflexed, usually shorter than the pedicels. Fructiferous pedicels recurved. The chief characters which distinguish this genus are the length of the tube of the corolla, and the capitate apex of the style.

1 O. RUBICU'NDUS (Benth. in Wall. pi. rar. asiat. 2. p. 14.) stems tufted, leafy at the base, branched; leaves oblong-ovate, coarsely toothed, narrowed at the base : lower ones petiolate : superior ones sessile; tube of corolla straight; throat nearly equal, twice as long as the calyx; stamens equal in length to the corolla. %. S. Native of the East Indies. Plectrànthus rubicùnda, D. Don, prod. fl. nep. p. 1J 6. Lumnitzera rubicùnda, Spreng. cur. post. p. 223. Root often tuberous. Stems tetragonal, more or less villous from articulated clammy hairs. Leaves 2-3 inches long, full of glandular dots. Corolla white or pale purple.

Far. a, mollissimus (Benth. lab. p. 26.) leaves clothed with soft villi on both surfaces. 1/. S. Native of Nipaul and Kamaon, Wall. Plectranthus mollissimus, Wall, mss.

Var. j3, canescens (Benth. 1. c.) leaves clothed with short tomentose pubescence. 1(. S. Native of the mountains of Orixa, Roxb. ; and at Segain, in the Birman Empire, Roxb. in Plectranthus tuberòsus, Roxb. mss. O'cymum tuberosum herb. Banks.

Far. y, rígidus (Benth. 1. c.) leaves smoothish, or clothed with very short tomentum. % • S. Native at Nathpur and Monghyr, Hamilt.

Reddish Orthosiphon. PL 1 to 1J foot.

2 O. VIRGA'TUS (Benth. in Wall. pi. rar. 2. p. 14. [illegible] lab. p. 26.) stems tufted at the base ; branches erect, strict; leaves oblong-lanceolate, a little toothed, narrowed at the base, sessile or [illegible] lower ones stand on short petioles ; corolla twice as long about calyx : tube straightish: throat nearly equal; stamens about equal in length to the corolla. 1/. S. Native of East Indies, at Gorakpur, and in the mountains of Morang, Hamilt. Mohun, Jacquemont. Plectrantnu virgatus, Spreng. D. Don, prod. fl. nep. p. 116. Lumnitzera [illegible] syst. cur. post. 223. This species differs from [illegible] in the stems being taller ; in the leaves being [illegible] racemes being shorter and fewer flowered ; in the [illegible] being more remote; in the corollas being smaller ; in the less leafy, and in the whole plant being smoothish.

Twiggy Orthosiphon. PI. 1 foot.

3 O. TOMENTÒSUS (Benth. 1. c.) stem suffruticose, ascending, clothed with tomentose pubescence; leaves [illegible] ovate, cuneated at the base, rounded or subcordate, thickish, both surfaces; clothed with very short tomentose pubescence on both petioles and axils naked ; racemes elongated; corolla [illegible] as long as the calyx : tube incurved a little ; stamens shorter than the corolla. *h* • Native of the East Indies, near Madras, Wight. O'cymum tristè, Rotn. nov. spec. 270. ? Plectranthus tristis, Spreng. syst. 4. 690. Intermediate between *0. viscbsus* and *0. glabrìdus.*

Tomentose Orthosiphon. Shrub.

4 O. PA'LLIDUS (Royle, mss. Benth. in Hook, [illegible] p. 370. lab. p. 708.) glabrous or finely [illegible] toothed, ascending ; leaves ovate, petiolate, bluntly and coarsely toothed, quite entire at the base, cuneated, and running into the petioles; corolla small: tube about equal in length to the throat nearly equal ; stamens shorter than the corolla. Native of the East Indies, on the banks of the Jumna, Cashmere; and the Peninsula. Allied to *O. tomentosus.*

Pale Orthosiphon. PL

5 O. GLABRAVITS (Benth. in Wall. pi. rar. asiat. 2. p. 28.) stems ascending, branched, glabrous ; leaves petiolate, ovate, acute, toothed, rounded or subcordate at the base, smoothish ; corolla incurved a little : tube twice as long as the calyx : throat nearly equal; stamens shorter than the corolla. P? . S. Native of the East Indies, Arabia, Madagascar. O'cymum thymifldrum, Rothj. nov. spec. 269. O'cymum Plectrànthus thymiflòrus, Spreng. syst. 2. p. 690. O'cymum suffruticòsum, Schum. pi. guin. in act. hafn. suppl. Cothonòpsis, Schum. pi. guin. in act. acad. hafn. 4. p. 40. The leaves are rollas small, dark purple. Branches and often purplish, glabrous, or scabrous from minute pin.

Glabrous Orthosiphon. PL 1 to l| foot.

6 O. INCU'RVUS (Benth. 1. c.) stem [illegible] at base ascending; leaves petiolate, oblong, crenated, narrowed at both ends, and clothed with fine pubescence; whorls subsecund; corolla villous, incurved, *3* times longer than the calyx; throat nearly equal; stamens about equal in length to the leaves. 1/. S. Native of the East Indies, in Silhet. [illegible] inches long. Tube of corolla exserted, usually very much incurved : lips spreading, as in *Stdchys* and *Betonica.*

Incurved-flowered Orthosiphon. PL 1 foot.

7 O.. SCA'PIGER (Benth. 1. c.) stems erect, simple, scape"

formed, rising from a thick, creeping, radicant base ; leaves approximate at the base of the stem, petiolate, ovate-oblong, coarsely toothed, narrowed at the base, smoothish ; racemes elongated; corolla about 3 times as long as the calyx : tube straight: throat very wide; stamens hardly longer than the corolla. *11.* G. Native of Nipaul. Stems smoothish. Leaves "early all radical, 3-5 inches long. Corolla blue ; upper lip 4-toothed.

Scape-bearing Orthosiphon. PI. 1 to 2 feet.

8 O. STAMI'NEUS (Benth. 1. c.) stem herbaceous, erect, a little branched; leaves petiolate, ovate, acuminated, coarsely toothed, cuneate and rounded at the base, or the upper ones are subcordate ; racemes loose ; corolla 3 times as long as the calyx : tube erectish : upper lip dilated ; genitals much exserted. %. ?:. Native of the East Indies. O'cymum grandiflorum, Blum. bljdr. p. *SS5.* but not of Lher. Herb smoothish, or clothed with tomentose pubescence. Flowers beautiful white ; upper lip *-toothed. Flowers sometimes lilac.

Loiig-stamened Orthosiphon. PI. 2 to 3 feet.

jf O. CAPITATUS (Benth. lab. p. 29.) stem herbaceous, erect, a "ttle branched ; leaves petiolate, ovate, acuminated, coarsely ot»ed, narrowed at the base ; racemes spike-formed, short, ense, few-flowered ; corolla more or less longer than the ai yx ; genitals much exserted. %. S. Native of the tropical arts of America. Stems with *2* rows of short brown hairs. *f aves 2-3 inches long, with a few short hairs above the rest 8 aorous : floral leaves half stem-clasping. Corollas almost like •°se of 0. *stamineus,* but the segments of the superior lip are narrower.

£«P«'tete-flowered Orthosiphon. PL 1 to 1J foot.

^*iUt.* For culture and propagation see *O'cymum,* p. *674:*

0]VII« HOSLU'NDIA (named by Thonning, in memory of haus Hoslund Smith, a young naturalist, who died of fever on 9,9 Way t0 Aquapim, in Western Africa.) Vahl, enum. 1. p. <!J- Benth. lab. p. 706.

tootkVYST< Corolla *Adynamia, Gymnospermia.* Calyx tubular, 5-wi**k. ringent; upper lip concave. Stamens 4, 2 of ?»ch are fertile. Achenia baccate, within the calyx. Shrubs n:n tetrarrk^ol branches, opposite or verticillate leaves, and ^ a panicles of flowers.

site OI>POSINTA (Beauv. fl. d'ow. 1. p. 53. t. *52.)* leaves oppobran k j Ong"ovate. *fy* • S. Native of Guinea. Shrub much Leav Branches with a villous line between the leaves, enti CS SV eetmScented, *2* inches long, remotely serrated, quite e at the base. Corolla white, twice as long as the calyx.

«P°«te-leaved Hoslundia. Shrub 5 to 6 feet,

late « VERTICILLATA (Vahl, enum. 1. p. 213.) leaves lanceo- * m a whorl, f? . S. Native of Senegal, Dupuis. Branches both T' canesc ent at top. Leaves \\ inch long, tapering to Ca ends> serrated, but entire at base and apex, glabrous above, dots SCeil beneath, and beset with scattered, shining, resinous *Wl icle les s branched than the preceding. Flowers clothed with canescent villi outside.

^or/ec/.leaved Hoslundia. Shrub 4 to 6 feet.

m For culture and propagation see *O'cymum,* p. 674.

snl111, PLECTRA'NTHUS (from *rrX^rpor, plectron,* a cock's bein ; and *apeos> antho»>* a flower 5 in reference to the corolla BenS S?, U rred or Sibbo«s above the base.) Lher. stirp. 1, p. 85. speci ^' P' 29' Plectranthus species of authors. O cymum 68s: i? f Lin- and other authors.-Germanea, Lam. diet. *2.* p. —Oentidia, Lour. coch. p. 369.—I'sodon, Schrad.

in tk V, SYST, *Didyn*mia, Gymnospirmia.* Calyx campanulate ne nonferous state, 5-toothed : teeth equal, or the upper one is largest; increasing in the fructiferous state, sometimes declinate, straight, incurved, or inflated, with equal or variously bilabiate teeth : sometimes erect, tubular, or campanulate, equally 5-toothed. Corolla with an exserted tube, gibbous or spurred above the base, at length declinate, defracted, or straightish ; throat equal, rarely inflated, bilabiate: upper lip 3-4-cleft, lower one entire, usually longer, concave. Stamens 4, declinate, didynamous : lower ones the longest ; filaments free, toothless; anthers ovate, reniform: cells confluent, rarely a little distinct and divaricate. Style shortly bifid at apex : lobes nearly equal, subulate ; stigmas minute, terminal.—Herbs, subshrubs, and shrubs. Whorls of flowers loose, usually cymose, many-flowered, loosely racemose, or panicled.

SECT. I. GERMA'NEA (named after M. de Saint Germain, an amateur, and very distinguished cultivator of plants.) Benth. lab. p. 32. Fructiferous calyx declinate ; upper tooth ovate: the 4 lower ones lanceolate. Corolla spurred above the base.—A shrub, with panicled flowers.

1 P. FRUTICOSUS (Lher. stirp. 1. p. 85. t. 41.) stem shrubby; branches pubescent; leaves petiolate, broad-ovate, subcordate, doubly toothed, smoothish: floral ones bractea-formed; racemes loose, panicled; whorls loosely 6-flowered ; calyx campanulate. T? • G. Native of the Cape of Good Hope. Germanea urticifolia, Lam. diet. 2. p. 682. Corollas blue, elegant. Plant furnished with a few scattered hairs. Leaves 4 inches long.

Shrubby Plectranthus. Fl. June, Sept. % Clt. 1744, Shrub 2 to 4 feet.

SECT. II. COLEOIDES (from *Coleus,* and *idea,* like; plants with the habit of species of *Coleus.)* Fructiferous calyx declinate ; upper tooth ovate: lower ones narrower, and nearly equal: or the lower ones are longer, and subconnate at the base. Corolla gibbous above the base, not spurred, declinate or defracted.—Herbs or shrubs. Flowers racemose or subpanicled.

2 P. VESTITUS (Benth. lab. p. 32.) stem shrubby ; branches densely clothed with rufous villi; leaves petiolate, oblong-elliptic, bluntish, crenulated, cuneated, and quite entire at the base, wrinkled, clothed with fuscous pubescence above, and rufous villi beneath; racemes simple; whorls loose, 6-flowered ; lower teeth of calyx subulate; tube of corolla straight. \/ . S. Native of Madagascar, Bojer. Branches hardly tetragonal.

Clothed Plectranthus. Shrub.

3 P. CANE'SCENS (Benth. lab. p. *33.)* branches clothed with short tomentum; leaves petiolate, cordate-ovate, acute, crenated, clothed with rufous tomentum above, a little wrinkled, canescent beneath, and finely pubescent; upper leaves lanceolate : floral ones bractea-formed ; racemes simple, terminal, exceeding the leaves ; whorls loose, 6-flowered ; calyx campanulate: lower teeth subulate; tube of corolla inflated above, hardly gibbous. 1/. S. Native of Madagascar. Leaves coriaceous, *2-3* inches long.

Canescent Plectranthus. PI. ?

4 P. LONGIFLORUS (Benth. lab. p. 33.) stem nearly simple, densely tomentose ; leaves on long petioles, amply cordate-ovate, acute, coarsely crenated, rather wrinkled, pubescent *on* both surfaces: floral ones bractea-formed; raceme simple, shorter than the leaves ; whorls loose, 6-flowered, approximate ; calyxes campanulate: upper tooth roundish : lower ones subulate; tube of corolla straight. %. S. Native of Madagascar, Bojer. Crenatures of leaves often serrated : floral leaves sessile. Corolla nearly an inch long.

Long-flowered Plectranthus. PI.

5 P. PUNCTATUS (Lher. stirp. 1. p. 87. t. 42.) stem herba-

ceous, erect, thick, pilosely hispid ; leaves on short petioles, ovate, obtuse, crenated, rounded at the base, or subcordate, hispid on the nerves on both surfaces; racemes simple or branched at the base; whorls 6-10-flowered: upper ones approximate ; calyxes hispid, inflated in the fructiferous state : lower teeth lanceolate; upper lip of corolla very short. %. ? S. Native of Abyssinia, Bruce. O'cymum punctatum, Lin. mant. p. 275. Galeopsis maculdsa, Lam. diet. *2.* p. 601. Germanea maculosa, Lam. diet. *2.* p. 691. Germanea punctata, Poir. diet. *2.* p. 763. Stem often spotted. Hairs on the stem and leaves articulated, and often glandular. Leaves *2* inches long. Corollas small, pale blue ; disk of the upper lip lined with purple : lower lip deeply spotted at apex.

Spotted-flowered Plectranthus. Fl. Jan. May. Clt. 1775. PI. 2 feet.

6 P. LESCHENA'ULTII (Benth. lab. p. 34.) stem erect, rather fleshy, smoothish ; leaves on long petioles, oblong, acuminated, bluntly-serrated, cuneately rounded at the base, and quite entire, glabrous : floral ones deciduous ; racemes simple ; whorls loose, many-flowered ; peduncles rather flesjiy, irregularly branched ; lower teeth of calyx ovate-acuminated : middle ones the longest; tube of corolla elongated : throat dilated. ©. S. Native of Java, Leschenault. Allied to *P. cordijolius* and *P. incisus.* Leaves 4-6 inches long, minutely glandular beneath.

LeschenauWs Plectranthus. PL ?

7 P. ROTUNDIFOLIUS (Spreng. syst. *2.* p. 690.) stem procumbent, and rooting at the base; branches erect, thick, smoothish ; leaves petiolate, ovate-roundish, bluntish, crenated, rounded at the base or cuneated, running somewhat down the petioles, quite glabrous, thick, nerved ; floral leaves bractea-formed ; racemes simple ; whorls loose, many-flowered, approximate; calyx campanulate : upper tooth broad-oblong: lateral ones truncate: lower one broad-ovate, connate, shortly acuminated ; corolla declinate: throat scarcely inflated. %. S. Native of the Mauritius and Coromandel. Coleus rugosus, Benth. in Wall. pi. rar. asiat. 2. p. 15. Germanea rotundifolia, Poir. diet. *2.* p. 763. Nepeta Madagascariensis, Lam. diet. 1. p. 712.?__Kurka, Rheed. mal. 11. p. 49. t. 25.? The whole plant, when dried, is beset with minute black glands. Floral leaves minute. Calyx downy. Corollas blue.

Round-leaved Plectranthus. Fl. July, Aug. Clt. 1823. PI. 1 to *2* feet.

8 P. TERNATUS (Sims. bot. mag. t. 2460.) stem erect ; branches clothed with hoary tomentum ; leaves on long petioles, ovate-roundish, acute, coarsely crenated, narrowed a long way at the base, rather fleshy, clothed with fine pubescence above, and canescent beneath ; floral leaves bractea-formed; racemes simple; whorls rather loose, many-flowered, approximate ; calyx campanulate : lower teeth broad-ovate, acute, very short; corolla declinate : throat hardly inflated. 1/. S. Native of Madagascar. Root fibrous, bearing oblong tubercles, for which it is cultivated, as well as the *P. rotundifblius.* Leaves usually 3 in a whorl. Corollas purple.

Terwate-leaved Plectranthus. Fl. Aug. Clt. 1821. PL 1 foot.

9 P. OVATUS (Benth. lab. 709.) plant clothed with fine pubescence; stem herbaceous, erect; leaves on short petioles, ovate, acuminated, crenated, rounded at the base, scabrous above ; floral leaves bractea-formed ; racemes loose, panicled ; whorls equal, usually 10-flowered; fructiferous calyx drooping, ovate, incurved, striated, reticulated, finely pubescent: lower teeth lanceolate, acute. 1£.? S. Native of Arabia Felix, on the mountains. O'cymum gratissimum, Forsk. fl. segypt. p! 110. but not of Lin. This plant differs from the other species contained in this section in the form of the leaves; but the habit is that of *P. cordifolius.* Racemes of *P. Australe.* Flowers of *P. frulicosus,* but the corolla is not spurred.

O^/e-leaved Plectranthus. PL 1 to 2 feet.

10 P. FC^TIDUS (Benth. lab. p. *35.)* stem thick, ym ^ leaves on short petioles, broad-ovate, crenated, truncate . floi base, or cordate, thick, a little wrinkled, very villous whorls ones deciduous ; racemes dense, branched a litue ^ many-flowered, approximate; calyxes villous, ellow®liroat hardly ceous ; tube of corolla defracted in the middle : throat inflated. %. ? S. Native of New Holland, within the t^ at Endeavour river. O'cymum fretidum, Banks, neiu. rufescent. Stem bluntly tetragonal. Floral leaves broacl cordate, acuminated, glabrous above.

Fetid Plectranthus. PL?

11 P. CORDIFOLIUS (D. Don, prod. fl. nep. p. *Villened* clothed with fine pubescence ; stem herbaceous, erect, and fleshy at base; leaves petiolate, broad-ovate, broadly cordate at the base; floral leaves hractea-torm^ cuneated; racemes loose, panicled ; whorls secun ered ; fructiferous calyxes nutant, ovate : lower te late, acuminated; throat of corolla dilated. V«. ^Jlis, the East Indies; Nipaul, Wall.; Himalaya, Koyie. Spreng. syst. 2. p. 69. Benth. lab. *35.* P. divaricatus, in syll. pi. soc. ratisb. 1. p. *66.* flora, 1826. 1. p. mum molle, Ait. hort. kew. ed. 1st. vol. 2. p. *SU-* p. 45. Link, enum. 2. p. 120. P. secundus, Roxb. hort. P. Maypurensis, Roth. nov. spec. p. 271. Rheed. mal. 10. p. 167. t. 84. Root tuberous. ^ inches long. Corollas blue.

Heart-leaved Plectranthus. Fl. July. Clt. 182J.

12 P. suBiNcfsus (Benth. in Wall. pi. rar. asia leave* 16.) smoothish; stem herbaceous, erect, hardly ne petiolate, broad-ovate, deeply toothed, cordate a floral ones bractea-formed, ovate ; racemes lo ovate: little; whorls secund ; fructiferous calyx rather pa ted 5 upper tooth ovate: lower ones ovate-lanceolate, bbolis becorolla 4 times longer than the calyx : tube ratlie neath the base, defracted at the middle : throat ai tle* pin(jgul, %. ? S. Native of the East Indies, near Courtallum, and Ceylon. Nearly allied to *P. cordifolius.*

Rather-cut-\eave& Piectranthus. PL ^Inthed

13 P. CONGE'STU8 (R. Br. prod. 506.) stem cio hoary pubescence ; leaves petiolate, ovate, obtu floral cuneated at the base, thick, wrinkled, villously lowered, P ones minute, deciduous; racemes dense, many- (leC)linat^ nicled ; whorls many-flowered, approximate ; caiy incurved in the fructiferous state, striated, pubes jate 'aCute: tooth ovate, obtuse, not decurrent: lower ones la^eo j ve of corolla about twice as long as the calyx. % tropical New Holland. Racemes spike-formed. Whorls 20-flowered. Flowers minute, on short pecli

Crowded-ftovtered Plectranthus. PL

14 P. ZEYLA'NICUS (Benth. lab. p. *36.)* stem P£roUfle* ascending, thick, pubescent; leaves petiolate, o\a bifrrI- crenated, pubescent: floral ones ovate-roundish, ODU. ously imbricated before the expansion of the flower, elongated, branched a little at the base ; whorls ia usually 10-flowered; calyxes declinate: upper lip « shortly decurrent: lower teeth lanceolate-acute ; c de* longer than the calyx : tube gibbous beneath at tn fracted at the middle : upper lip spreading : l°^ jylacra* ing, stretched out, concave. %. ? S. Native of Oeyio Allied to *P.Justralis;* but differs in the stature, leaves, and size and form of the corolla, &c.

Ceylon Plectranthus. PL *2* to *3* feet. ?

15 P. AUSTRA'LIS (R. Br. prod. p. 506.) stem her erect, pubescent; leaves petiolate, broad-ovate, crenated, rounded at the base, rather wrinkled, P

floral leaves ovate-roundish, deciduous ; racemes elongated, simple; whorls rather loose, usually 10-flowered; calyxes decimate, incurved, striated, and smoothish in the fructiferous ^ate : upper tooth ovate, acuminated, scarcely decurrent: lower jeeth lanceolate, setaceously acuminated ; corolla about 3 lines longer than the calyx: tube rather gibbous at the base, declinate : upper lip spreading : lower one stretched out, concave. £>• <•• Native of New Holland, about Port Jackson. Lindl. Dot- reg. 1098. Leaves 1 to H inch long, truncate at the base, or ^cordate. Corollas pale purple.

Southern Plectranthus. Fl. Aug. Sept. Clt. 182G. PI. *2* to 3 feet.

^ P. PARVIFLORUS (Willd. hort. berol. 1. p. *65.* but not of «r.) stem suffruticose, erect, branched, tomentosely villous, ^«ntly tetragonal; leaves petiolate, broad-ovate, obtuse, crenated, funded at the base or cordate, wrinkled, villous on both surfaces white beneath ; floral leaves ovate-roundish, deciduous; racemes elongated, simple ; whorls rather loose, usually ^ -flowered ; calyxes declinate, incurved in the fructiferous state, striate: upper tooth acuminated, scarcely decurrent : lower teeth lanceolate, setaceously acuminated ; corolla about 3 times as long as the calyx : tube subgibbous at base, declinate \ ^ ' ^' Native of New Holland, within the tropic, and Q th® "mountains about Port Jackson ; and Sandwich Islands, ermanea ifld ; parvifldra, Poir. diet. 2. p. 764. ? P. graveolens, R. F. Prodd. pp. 506. P. paniculatus, Jacq. fragm. p. 62. t. 91. but the flowers are purple or violet, and the whole plant smaller in the more humble stature, in the shrubby stem, in the more villous leaves, and smaller leaves and flowers.

***Shrubby 3 feet. Flowered* Plectranthus, FL June, Aug. Clt, 1805#**

filah 7P, THUNBE/RGII (Benth. lab. p. *37.)* stem procumbent, Quit? 5 leaves Petiolate, roundish, bluntly crenated, fleshy, 4 6 \ 8 arrous: racemes elongated, simple ; whorls loosely ftuct "fwered; floral leaves acute, shorter than the pedicels; tooth US calyx declinate, striated, hardly incurved: upper setaceous, Vate, acute, scarcely decurrent: lateral teeth lanceolate, with ly acuminated ; corolla 5 times as long as the calyx : decurved tube, and an elongated incurved lower lip. Native of the Cape of Good Hope. O'cymum verti- fl Urtl) Lin- suppl. 276. O'cymum racemosum, Thunb. prod. it'j n V P; 96- Allied to *P. Madagascariensis,* but differs from *P.* leaves being glabrous and fleshy. Corolla like that of *Thunb.* , but longer and more slender.

18 pil' Plectranthus. PL procumbent.

ceous MADAGASCARIE'NSIS (Benth. lab. p. *37.)* stem herbalate, rocumoent, villous ; branches ascending ; leaves petiolonffat, ish, obtuse, deeply crenated, very villous ; racemes sesil ple; whorls rather loose, usually 10-flowered, neatl) r membranous, roundish-cuneated, deciduous, villous befructifan labrous above ; calyxes declinate, incurved in the nated US State? striated: upper tooth ovate, hardly acumi" acum ortly decurrent: lower teeth lanceolate, setaceously **nate -T^ ; corolla about 2 tinies as long as the calyX) dedi,,** iddl rather gibbous at the base, and defracted at the Arahii? ?f*? S- Native of Madagascar and Mauritius, and O'cym ocymum auricula, Forsk. mss. in herb. Banks. Sieb Um Madagascariensis, Pers. ench. *2.* p. 135. P. villosus, aea maur exsic no. 152. O'cymum Hadiense, Forsk. fl. Wiff P# 109* P* Forskoe Nlii, Vahl, symb. p. 44. but not of

"fagascar Plectranthus. PL procumbent.

leaves HXRTUS (Benth. lab. P- 380 stem Procumbent» bls Pld 5 Petiolate, ovate, obtuse, crenated, cuneated at the base, wrinkled, hispid ; floral leaves minute; racemes nearly simple; whorls loosely 6-10-flowered; calyxes declinate, incurved and striated in the fructiferous state : upper tooth ovate, acute : lower teeth lanceolate, setaceously acuminated; corolla 4 times longer than the calyx: tube rather gibbous at the base, defracted in the middle. If, ? G. Native of the Cape of Good Hope, Masson. O'cymum hirtum, Banks, herb. Nearly allied to *P. Madagascariensis;* but differs in the smaller, more wrinkled, and more hispid leaves, and in the larger corolla, &c.

Hairy Plectranthus. PL procumbent.

20 P. SIEBE'RI (Benth. lab. p. 710.) stem herbaceous, procumbent, pubescent; leaves on short petioles, ovate, bluntish, cuneated at the base, coarsely crenated, cut a little, thickish, pubescent: floral ones almost wanting; racemes loose, simple ; whorls 6-flowered; calyxes pubescent, declinate in the fructiferous state, rather shorter than the pedicels, incurved, striated : upper tooth roundish, acutish, hardly decurrent: lower lateral ones lanceolate : middle ones setaceous ; corolla twice as long as the calyx. 1/ . ? S. Native of New Holland, within the tropic, Sieber. Root thickened at apex. Lower segment of corolla elongated, concave. Allied to the three preceding species.

Sieber's Plectranthus. PL procumbent.

21 FORSTE'RI (Benth. lab. p. 38.) stem herbaceous, erect,? smoothish ; leaves petiolate, ovate, bluntish, cuneated at the base, remotely crenated, smoothish : floral leaves very minute, or almost wanting; racemes loose, simple; whorls loosely 6-10-flowered ; calyx glabrous, declinate in the fructiferous state, shorter than its pedicel : upper tooth ovate, acute, hardly decurrent : lower lateral teeth lanceolate, acute: middle one setaceous ; corolla minute, hardly twice as long as the floriferous calyx. O. ? S. Native of the New Hybrides ; in the islands of Tanna, Forster. Plant slender, nearly glabrous. Racemes slender.

Forster's Plectranthus. PL 1 foot.

SECT. III. HETEROCA'LYX (from *erepoQyheteros,* variable ; and *KaXvZ, calyx,* a calyx.) Benth. lab. p. 39. Fructiferous calyx declinate, bilabiate; both lips almost quite entire, nearly equal. Corolla gibbous above the base, not spurred, defracted.—Herbs. Flowers racemose.

22 P. ? PALISOTI (Benth. lab. p. 39.) stem erect, pubescent; leaves ovate, obtuse, crenated, rounded at the base, or cordate, pubescent on the nerves on both surfaces : floral leaves bracteaformed ; raceme simple; whorls 6-flowered, remote ; corolla about twice as long as the calyx. 0. S. Native of Tropical Africa. O'cymum monostachyum, P.Beauv. fl. dow. *2.* p. 60. t. 95. f. 1.

Palisot de Beauvois's Plectranthus. PL 1 foot.

SECT. IV. MELISSOIDES (SO called from the plants having the habit of species of *Melissa.)* Benth. lab. p. 39. Fructiferous calyx declinate, bilabiate : upper lip tridentate : lower one bidentate. Corolla spurred above the base.—Herbs, with axillary, few-flowered cymes.

23 P. MELISSOIDES (Benth. lab. p. 39.) stem herbaceous, with rough angles; leaves petiolate, broad ovate, cuneated at the base, nearly glabrous, rough : floral ones conform; whorls axillary, loose, remote; peduncles trifid on both sides; calyx campanulate, glabrous; teeth of calyx all ovate, acute.—Native of the East Indies, in Silhet, Leaves small, scabrous from minute bristles on the nerves.

Melissa-like Plectranthus. PL procumbent. ?

SECT. V. I'SODON (from *HTOS, isos,* equal; and *odovg* DtWoc, *odous odontos,* a tooth; in allusion to the teeth of the calyx being all equal.) Schrad. in Benth. lab. p. 40. Fructiferous

calyx declinate ; teeth all equal, or disposed into two lips ; the upper lip tridentate, and the lower one bidentate. Corolla declinate, or defracted, gibbous above the base, not spurred.—Herbs or under shrubs. Flowers panicled, rarely racemose.

24. P. LANCEOLA'TUS (Bojer. mss. ex Benth. lab. p. 40.) stem erect, pubescent ; leaves oblong-lanceolate, stiff, pubescent, narrowed into the short petioles at the base ; racemes simple ; whorls loose, many-flowered ; calyx campanulate, equal, inflated, and incurved in the fruit-bearing state, with a contracted mouth : teeth equal, short, obtuse, connivent ; corolla 5 times longer than the calyx. ©. ? S. Native of Madagascar, Bojer. Stem tetragonal. Leaves bluntish, irregularly serrated. Tube of corolla slender*

LanceolateAeaved Plectranthus. PI.

25 P. oBLo^GiFÒLius (Wall. pi. rar. asiat. 2. p. 16. Benth. lab. p. 40.) stem herbaceous, ascending, branched, glabrous ; leaves petiolate, oblong, toothed, narrowed at both ends, rather hispid above, glabrous beneath : floral ones and bracteas very minute, or almost wanting ; panicles loose, branched, many-flowered ; calyx hardly bilabiate, bluntly toothed, ovate, and seriated in the floriferous state, but lagenaeform and inflated at the base, and with a contracted mouth in the fructiferous state; corolla 3 times as long as the calyx; stamens shorter than the corolla. *%m1* S. Native of Nipaul. Leaves *2* inches long. Branches of peduncle 3-4-flowered. Calyx glabrous, beset with red glands. Corolla hardly gibbous.

Oblong-leaved Plectranthus. PI. 3 to 4 feet.

26 P. scHROPHULAitioIDES (Wall. pi. rar. asiat. *2.* p. 16. Benth. lab. p. 40.) stem herbaceous, erect, branched, nearly glabrous ; leaves on long petioles, broad-ovate, crenated, rounded at the base, unequally cordate, or subcuneated: floral leaves and bracteas minute; panicles loose; fructiferous calyx declinate, inflated, deeply bilabiate: teeth all obtuse ; corolla about 3 times as long as the calyx, inflated above the gibbosity; stamens exserted. 1/. ? S. Native of Nipaul, and Kamaon. Stem much branched, with pubescent angles. Leaves a hand long, rather hispid above, and glandular beneath, with pubescent nerves. Corolla whitish red, inodorous like the rest of the plant.

Scrophularia-like Plectranthus. PI. 3 to 4 feet.

27 P. WI'GHTII (Benth. lab. p. 41.) stem herbaceous, erect, branched ; leaves petiolate, broad-ovate, or roundish, acuminated, cordate at the base, glabrous on both surfaces : lower floral ones like the others : upper ones and bracteas membranous, roundish-spathulate, shorter than the peduncles and pedicels ; panicles much branched, many-flowered; fructiferous calyx declinate, oblong, incurved, striated, glabrous, with an obliquely bilabiate mouth : teeth nearly equal, ovate ; corolla inflated, declinate above the gibbosity : tube one half longer than the calyx ; stamens exserted. %. ? S. Native of the Peninsula of India ; on mountains about Madura and Tenivelly ; and on Mount Kadrougon, Leschenault. Habit of *P. striatus.* Corolla like that of *P. scrophularioides,* but much smaller. Leaves 1^ inch long, and 2 inches broad, long-acuminated, with bluntly serrated edges.

Wight's Plectranthus. PI. 3 to 4 feet.

28 P. NIGRE'SCENS (Benth. lab. 710.) stem herbaceous, erect, branched ; leaves petiolate, broad-ovate, cordate at the base, rounded or narrowed; panicles or racemes many-flowered; fructiferous calyx declinate, ovate, incurved, striated, deeply bilabiate: upper lip truncate shortly tridentate: lower one bifid, with ovate teeth ; corolla decimate, hardly gibbous above, but with the tube twice as long as the calyx ; stamens exserted. *U* ? S. Native of Ceylon. P. Wightn, *ft,* Benth. lab. p. 41. Plant clothed with clammy articulated hairs.

Blackish Plectranthus. PL 3 to 4 feet.

29 P. STEIA'TUS (Benth. in Wall. pi. rar asiat. - Pl. p. 41.) stem herbaceous, erect, branched, nearly leaves nearly sessile, ovate, acuminated, crenated,, ci the base, stiff, hispid above, and glabrous beneaw, loose, much branched, many-flowered ; calyx sub-bilabiate, with obtuse, nearly equal teeth, incur glabrous, but glandular in the fructiferous state, declinate tube, which is rather gibbous above the b a s at the middle; stamens a little exserted. *U>* Dhoon, Silhet and Nipaul, Wall. ; Mussooree, Royle. *Uey* Jacquemont. Stem sometimes pubescent, ^.ea long, and *Ih* broad.

Striated-c\yxe&* Plectranthus. PL 2 to 3 feet.

30 P. HISPIDUS *(Benth.* in Wall. pi. rar. asiat p. 41.) stem herbaceous, erect, branched, P at the base, nearly sessile, ovate, acuminated, toothed, cunea stiff, hispid above, and pubescent beneath, ana u dular ; panicles loose, much branched, many-no declinate, oblong, bluntly 5-toothed, bilabiate in tne state, hardly incurved, very hispid ; tube ot coroi rather gibbous above the base, straight at the mumi . Native of Silhet. Very nearly allied to *P. striatus.*

Hispid Plectranthus. PL *2* to 3 feet.

31 P. GEEAEDIA%KUS (Benth. in Wall, pi. rar. asiat. p. 42.) stem herbaceous, erect, a little hisp glabrous ; leaves ovate, acuminated, crenated, above, and glabrous beneath, sparingly g sessile, petiolate, narrowed at the base: upper ones cordate at the base : floral ones shorter than uppermost ones and bracteas minute; racemes p hardly branched; cymes loose, slender, many-flowere clinate, oblong, bilabiate, with obtuse teeth, mem glabrous, and hardly glandular in the fructiferous corolla declinate, sub-gibbous above the of the middle. %. ? S. Native of Nipaul and K darra and Deyrah Dhoon, Royle. Hyssopus Don, prod. fl. nep. p. HO. Nearly allied to differs in the smaller stature, larger green leave simple raceme, with a pubescent rachis.

Gerard's Plectranthus. PL 2 to 3 feet.

32 P. COE'TSA (D. Don, prod. fl. nep. p. 42.) stem herbaceous, erect, branched, pubescence ; leaves petiolate, ovate, narrowed at crenated in the middle, rather hispid above, beneath; panicles branched, many-flowered; calyx long, bilabiate, with ovate, acutish, nearly equal tee striated, and clothed with hoary pubescence state, but hardly glandular ; tube of corolla base, defracted at the middle. % %.2 S. Indies, in Nipaul, Kamaon, Simla, Mussooree; on i Donff, in the Birmann Empire ; Japan, and Java, laria Japonica, Burm. nid. p. 130. O'cyinuni cur. post. p. 223. Leaves 2 inches long. Corolla

Coetsa Plectranthus. FL Oct. Clt. 1823. PI.

33 P. MENTiioIDEs (Benth. in Wall. pi. rar. p. 42.) stem herbaceous, erect, branched, clothed wn bescence ; leaves petiolate, ovate, narrowed at coarsely toothed, pubescent on both surfaces, na few-flowered; fructiferous calyx declinate, clothed with hoary pubescence : teeth acutish : upp broadest; corolla sub-gibbous above the base, defracted tube, and an inflated throat; anthers s celled, it. ? S. Native of the East Indies, m parts of the Peninsula. Habit of P. *Coetsa,* but are small and few-flowered, &c.

Mint-like Plectranthus. PL 2 to 3 feet.

34 P. MACR^I (Bentb. lab. p. 42.) stem herbaceous, branched, clothed with rufous villi; leaves petiolate, nearly sessile, ovate, acute, toothed a little, rounded at the base, clothed with sou pubescence on both surfaces : floral ones conforming to the rest; panicles branched, many-flowered; calyx declinate, oblong, sub-bilabiate: teeth nearly equal, ovate ; fructiferous calyx incurved, striated, and villous ; corolla 3 times as long as the calyx : tube gibbous above the base, defracted at the middle ; anthers 2-celled. %. ? S. Native of the East Indies, on the Madura mountains, in the Peninsula; Ceylon. P. rugdsus, Wall. mem 6suSj Benth> in, WalL PL rar, asiat# 2, p# 17* Habit of the *Coetsa,* but more humble, and the stem is decumbent at base, &c.

Wtcrae's Plectranthus. PL 2 to 3 feet.

43 P. RUGOSUS (Wall. pi. rar. asiat. 2. p. 17. Benth. lab. p. 43.) stem shrubby, erect; branches hoary; leaves petiolate, ovate, obtuse, crenulated, rounded at the base, pubescent above, white, clothed with hoary tomentum beneath, reticulately veined; panicles branched, many-flowered ; calyxes declinate, fruit hardly bilabiate : teeth lanceolate, acute, nearly equal; corolla Calyx slightly-incurved, striated, pubescent; tube of corolla gibbous above the base, defracted at the middle. T? . G. Native of the East Indies ; at Choor, &c, Royle ; in Sirmore, Coleman. Ocymum densiflorum, Roth, nov. spec. 275. ? Lumnitzera densiflora, Spreng. syst. 2. p. 687. I'sodon plectranthoides, Schrader. Corolla white, or pale blue, smaller than that of P. *densiflorus.*

Woolly Plectranthus. Shrub 4 to 6 feet.

43 P. RENIFORMIS (Wall. pi. rar. asiat. 2. p. 17. Benth. lab. p. 43.) stem creeping at the base, radicant, ascending, nearly simple, quadrangular; leaves Prolate, ovate-roundish, obtuse, coarsely crenated, rounded at the base, or cordate, hairy on both surfaces, deciduous; raceme loose, nearly simple ; cymes pedunculate; calyx hardly bilabiate, oblong, a little incurved, striated, glabrous : teeth unequal, lanceolate, acute; tube of corolla declinate, gibbous above the base, straight to the middle. Native of Nepaul, Wallich. Stamens, shorter than the corolla. Flowers those of *P. stridtus.*

Creeping Plectranthus. PI. J to 1 foot.

44 P. MONTANUS (Benth. in Wall. pi. rar. asiat. 2. p. 17. Pilous) Stem herbaceous, erect, branched above, tomentosely densely leaves On short Petioles, ovate, obtuse, thick, wrinkled, tomentose ; racemes branched, pyramidately panicled, fructiferous whorls rather distinct, dense, many-flowered ; and bracteas calyx declinate, incurved, tomentose, almost equally India, Nepaul, 5-toothed. ©.? S. Native of the Peninsula of Hindostan, Nundy droog- Superior leaves clothed with rufous tomentum *AfouJ!'''* Panicles almost like those of P. *ternifolius.*

^ ° ^ m Plectranthus. PI. 1 foot.

PYRAMI'DIUM (from 7rvpa/xtc, *pyramis,* a pyramid ; in reference to the disposition of the flowers.) Benth. lab. p. 44. Fructiferous calyx erect, tubular, equally 5-toothed. Corolla rolled above the base, not spurred» defracted,—Herbs.

38 P. *pyramidately* panicled.

P. TERNIFOLIUS (D. Don, prod. fl. nep. p. 117.) plant a wijof tomentose; stem erect, a little branched ; leaves *3* in a whorl, lanceolate-oblong, acuminated, serrated, nearly sessile, at the base, wrinkled ; panicle branched, many-flowered, pyramidal ^• G- Native of Nipaul, Silhet, Kamaon, &c. O'cymum ternifolium, Spreng. cur. post. Stem quadrangular. Corolla very villous on the outside Stamens equal in height to the corolla.

Tej 2 to a*i%*lved Plectranthus. Fl. Aug. Sept. Clt. 1820. PL

SECT. VII. AMETHYSTOIDES (so named from the plant having the calyx of *Amethystea ccerulea,)* Benth. lab. p. 45. Fructiferous calyx erect, campanulate, equally 5-toothed. Corolla gibbous above the base, not spurred, defracted. Flowers loosely panicled.

39 P. AMETHYSTOIDES (Benth. lab. p. 45.) stem erect, branched, pubescent; leaves ovate-rounded, crenated, narrowed a long way at the base, and quite entire ; flowers loosely panicled; fructiferous calyx erect, campanulate, quite glabrous, equally 5-toothed. %. ? G. Native of China, Reeves. Stem tetragonal. Corolla 4 times longer than the calyx. Stamens equal in length to the corolla.

Amethystea-like Plectranthus. PL

40 P. DUBIUS (Vahl, mss. ex Benth. lab. p. 711.) stem erect, branched, pubescent; leaves ovate, crenated, cuneated at the base, or narrowed, wrinkled ; flowers loosely panicled ; fructiferous calyx erect, campanulate, clothed with hoary pubescence, equally 5-toothed. *%.1* G. Native of Japan, Thunberg. This differs from P. *amethystoides* in the narrower, wrinkled leaves, more veiny, and finely pubescent beneath, and, like the calyx, canescent.

Doubtful Plectranthus. PL

41 P. INFLE'XUS (Vahl, mss. ex Benth. lab. p. 711.) glabrous ; stem erect, nearly simple ; leaves ovate, acute, coarsely toothed, narrowed a long way at the base ; raceme loose, few-flowered ; fructiferous calyx erect, campanulate, glabrous, equally 5-toothed. *%.t* G. Native of Japan, Thunberg. This differs from *P. amethystoides* in the narrower leaves, and simple few-flowered raceme.

Inflexed Plectranthus. PL

t *Species doubtful whether belonging to the present genus.*

42 P. SALVIOIDES (Benth. lab. p. 45.) leaves ovate-oblong, crenulated, running into the petioles at the base, and quite entire, pilose on both surfaces, ciliated; stem hoary from reversed pili at bottom, but beset with glandular clammy villi above, as well as the calyxes ; raceme terminal, simple ; bracteas roundish-ovate, on short petioles ; lower lip of calyx (superior?) tridentate : middle tooth the smallest. *%,1* G. Native of the East Indies. O'cymum salvioides, Heyne, in Roth. nov. spec, p. *272.* Lumnitzera salvioides, Spreng. syst. *2.* p. 687. Stem quadrangular, hoary. Calyx nerved, sub-bilabiate. Corolla small, brownish purple, hardly one half longer than the calyx, resupinate, villous outside. The inflorescence and form of corolla is that of *O'cymum,* but the calyx is very different. It is perhaps a species of *Moschosma* or *Perilla.*

Salvia-like Plectranthus. PL

43 P. JAVA'NICUS (Benth. lab. p. 45.) panicles twiggy, leafy; pedicels subumbellate; leaves ovate-oblong, coarsely-toothed, pubescent on both surfaces. %. ? S. Native of Java, in mountain marshes. Elsholtzia Javanica, Blum, bijdr, 825. Calyx tubular, 5-toothed; teeth nearly equal. Lower lip of corolla long, concave, almost quite entire : upper one arched, semi-quadrifid. Stamens inclosed. Anthers 1-celled, naked. Stigma semi-trifid. Perhaps a species of *Geniosporum.*

Java Plectranthus. PL

44 P. NUDIFLORUS (Willd. spec. 3. p. 168.) nectarium gibbous; panicle racemose, naked ; leaves cordate, wrinkled ; superior ones stem-clasping. ©.? S. Native of China. Stem quadrangular, pubescent. Lower leaves petiolate, 2-3 inches long, acuminated, coarsely toothed, glabrous, except on the veins beneath. Calyx bilabiate ; segments linear, subulate. Corolla small, closed, pubescent ; tube refracted, gibbous above.

Naked-flowered Plectranthus. PL i foot.

45 P. NANKINE'NSIS (Spreng. syst. *2.* p. 691.) stem erect, glabrous, branched ; leaves reniform, concave, glabrous, but fringed, on long petioles ; spikes prismatic, axillary, tetragonal; calyx 5-cleft, shining, pilose, 6-nerved : the *3* upper segments obtuse, denticulated : the *2* lower ones subulate and longer ; corolla pilose: upper lip 4-cleft : lower lip larger, entire, incurved, inflexed ; anthers shorter than the corolla. ©. H. Native of China, about Nankin. Dentidia Nankinensis, Lour, coch. p. 369. Plant brownish purple. Anthers 2-lobed. Stigma acute, bifid. Aspect of plant elegant, with the scent and colour of *Melissa crefica;* but the leaves, spikes, calyx, and corolla are different. Perhaps a species of *Anisochilus,* or *jEoll&nthus.*

Nankin Plectranthus. PL 1 foot.

Cult. For culture and propagation see *O'cymum,* p. 674.

IX. CO'LEUS (from *KOXEOQ, koleos,* a sheath ; in allusion to the filaments being connected into.a tube at the base, which sheaths the style.) Lour. coch. p. 372. Benth. lab. p. 47. O'cymum species, Lin. and other authors. Plectranthus species, R. Br. and other authors. Solenostemon, Schum. pi. guin.

LIN. SYST. *Didynamia, Gymnospermia.* Calyx ovate-campanulate, erect, or often declinate or reflexed in the fructiferous state : throat naked, or hispid, 5-toothed: upper tooth ovate, membranous, with the margins rarely decUrrent: lower teeth narrower, all acute, or the lateral ones are ovate-truncate ; the two lowermost ones often combined. Corolla with an exserted, defracted tube, an inflated or equal throat, and a bilabiate limb: upper lip short, bluntly 3-4-cleft : lower one entire, elongated, concave, usually boat-shaped, involving the genitals. Stamens 4, declinate : lower ones the longest; filaments toothless, connected at the base into a tube, which sheaths the style ; anthers ovate, reniform, with confluent cells. Style subulate at apex, equally bifid; stigmas subterminal. Achenia roundish, compressed, smooth.—Herbs annual or perennial at the base, rarely suffruticose. Whorls usually 6-flowered, but often many-flowered, sometimes very dense, and sometimes loose, cyme-formed. Floral leaves bractea-formed, more or less comose at the tops of the racemes before florescence, but afterwards deciduous, rarely subpersistent, reflexed. The monadelphous stamens distinguish this genus from all other of the order.

SECT. I. CALCE'OLUS (from *calceolus,* a slipper.) Benth. lab. p. 49. Whorls 6-10-flowered. Fructiferous calyx reflexed ; throat villous inside.

1 C. SPICA'TUS (Benth. in Wall. pi. rar. asiat. *2.* p. 15. lab. p. 49.) stem procumbent at the base ; branches ascending, beset with spreading pili ; leaves petiolate, obovate, narrowed at the base, fleshy : floral leaves membranous, concave, exceeding the flowers, at length deciduous ; spikes simple, elongated, dense ; whorls 6-10-flowered, approximate ; calyx hispid ; upper tooth of calyx roundish, a little decurrent: lower teeth lanceolate, acute, nearly equal ; lower lip of corolla stipitate, boat-shaped. ©. ? H. Native of the Peninsula of India, on the mountains of Dindygul. Plectranthus canlnus, Roth, nov. spec. *279.* Stem bluntly tetragonal. Leaves entire, or sparingly crenated, *1-2* inches long, pubescent on both surfaces : floral leaves very broad, ciliated, the rest glabrous. Corolla like that of *C. barbatus,* but smaller.

Spicate-fiowered Coleus. PI. 1 to ljfoot.

2 C. BARBATUS (Benth. in Wall. pi. rar. asiat. *2.* p. 15. lab. p. 49.) stem shrubby at the base, ascending, tomentosely hispid; leaves petiolate, ovate, crenated, narrowed at the base, clothed with soft tomentum when young, hispid from striga>; floral leaves membranous, broad-ovate, acuminated, the tops of the racemes, deciduous ; racemes simple, flowered, distant; calyx hispid: upper tooth rent: lower teeth lanceolate, acute, nearly equal; of corolla large, stipitate, boat-shaped, *h* . &. East Indies, in the southern mountains of the *I em* sore, Bangalore, Nipaul, and Kamaon. Plectranthus Willd. spec. 3. p. 169. Sims, bot. mag. Forskce'lii, Poir. diet. 2. p. 764. P ectrantbus barbaj bot. rep. t. 594. Plectranthus comosus, Sims, bot. O'cymum asperum, Roth. nov. spec. 268. rlectrai Spreng. syst. 2. p. 690. Plectranthus, rnonadelphus, hort. beng. p. 45. Corolla beset with white hairs.

Bearded Coleus. Fl. Aug. Nov. Clt. 1806. *V-*

3 C. HE'YNEI (Benth. lab. p. 50.) stem herbacec u* ing, simple; leaves ovate, coarsely serrated, pu ceme terminal, simple ; bracteas ovate-lanceolate filaments connate at the base. ©.?». JNativ Indies. Plectranthus monadelphus, Heyne, msb. monadelphum, Roth, nov. spec. p. 267. Salt, abyss. ? Stem tetragonal, pubescent, i-ea obtuse. Whorls distinct, 6-flowered. Upper roundish-ovate, mucronate, finely crenulated, of the lower lip setaceous, 2 middle ones longer u ones. Lower lip of corolla ovate, concave, crenuw

Heyne's Coleus. PI. \ to 1 foot.

4 C. ZATARHE'NDI (Benth. lab. p. 50.) leaves broad-ovate, acute, crenated, villous, truncate S. Native of Arabia Felix. O'cymum a /atar fl. agypt. p. 109.. Plectranthus crassifohus, Stem sligl 44. Germinea crassif61ia, Poir. diet. 2. p. 764. tetragonal, beset with short bristles. Whorls 12-flowered. Corolla with a violet-colour and a white upper lip. ?

Zaterhendi's Coleus. PI.

SECT. II. AROMA^RIA (SO named from *c arojiiatic the species.) Benth. lab. p. 51. Whorls dense bose, many-flowered. Fructiferous calyx nara y throat naked inside.

5 C. AUOMA'T^US (Benth. in Wall. pi. bot. reg. 1520.) stem shrubby at the base; tosely pubescent, or hispid; leaves petiolate, nated, rounded at the base, or cuneated, very both surfaces, or clothed with white villi; equal in*fc|igth to the calyx ; racemes simple, calyx tonflfese: lower teeth short, lj . G. N& of the East Indies. Plectran Roxb. hort.Vl^g. p. 45. C. Amboin.cus, Plectranthus Amboinensis, Spreng. syst. tranthus crassif51ius, Hort. C. crassifohus, Ben Marrubium album Amboinicum, Rumph. atnb. f. 3. Leaves very fragrant, 1-2 inches long. flowered and more. Tube of corolla about the calyx, defracted at the middle ; throat innateu . little dilated, boat-shaped.

Aromatic Coleus. Fl. Clt. Shrub 2 to 3 feet.

SECT. III. SOLENOSTE'MON (from «*Xij* *<,TwU,V, stemon,* a stamen; in reference to fine combined into a tube at the base.) bentn. loose, many-flowered. Fructiferous calyx deem naked inside.

§ 1. ***Lateral teeth of calyx short, truncate, free from the lower ones, which are elongated and connate beyond the middle,***

6 C. BOJE^XRI (Benth. lab. p. *52.)* stem humble, pubescent; 'eaves petiolate, ovate, obtuse, crenatetl, rounded at the base, or subcordate, hispid on the nerves on both surfaces : floral leaves minute; racemes elongated, simple; whorls loose, usually 10-nowered ; common peduncles and their branches very short; ^flyx pubescent: upper tooth ovate, obtuse, hardly decurrent; w?at of corolla hardly inflated. %. S. Native of Madagascar, ojer. Plectranthus maculatus, Bojer, mss. Mitsa maculata, napm. ex Bojer, mss. Leaves spotted with purple, glandular eneath, Corolla glabrous. Stamens exserted a little.

p Coleus. PI. humble.

lab SCUTELLARIOIDES (Benth. in Wall. pi. rar. asiat. *2.* p. 16. l$e^{)§}$ ^' ^') P*ant nearly glabrous ; stem shrubby at the base ; tli$^{av?s}$ P^{e}tiolate, ovate, shortly acuminated, toothed, rounded at de[, glabrous> or hardly tomentose : floral leaves at length eat[U0US> sborter than the whorls of flowers ; racemes elon-nian- alnd er> a little branched at the base» whorls loosely a ^y~ "owered ; common peduncles almost wanting; pedicels Ca^{l}°Ut ec^{u}l al in length to the short branches ; upper tooth of th^{yx} °Vate» acutish, hardly decurrent: lateral teeth bluntish; InH; ^{o}, COrolla scarcely widened. ©. S. Native of the 0^{lan} Archipelago; Tropical New Holland, and Mauritius. 13o^{ynium} scutellarioides, Lin. spec. p. 834. Burm. fl. ind. p. gr • kirns, hot. mag. 1446. Plectranthus scutellarioides, R. bese? P, 506# Branches bluntly tetragonal, glabrous, or DUK u^{with} fine down- leaves H to *2* inches long, often pur-than t[eneath- Whorls 10-15-flowered. Corolla 5 times longer

i # n Calyx : llPPer lj P Pale 5 lower one blue* *tot^t lariaelike* **Coleus. Fl. July, Aug. Clt. 1764. PI.** *2*

stet^{C,} ACUMINVxus (Benth- **in Linnsea, 6. p. 81. lab. p.** *53.)* deen] *Se* above; leaves petiolate, ovate, long-acuminated, on hmK Serrated> rounde d, or cuneated at the base, puberulous l$_{eav}$ ^{o} surfaces; petioles ciliated with rufous hairs ; floral loosely ^ ^{ther} ^{comos}e, deciduous ; raceme simple ; whorls of $_{c}$ J^{man}y-flowered; common peduncles none ; upper tooth slender. °Vate> obtuse» scarcely decurrent; tube of corolla ^'? S, Native of ^anilla_ Vei T. nearly allied t0 the preceding.

Acuminated-leaved Coleus. PL 2 to 3 feet. ?

olate *INGRATUS (Benth. lab. p. *53.)* pubescent; leaves petibase' °Vatej acuminated, serrately crenated, cuneated at the Waves ^{or}ro Undish, pubescently. villous on both surfaces; floral ^{d}ered ; ^{eciduous} ; racemes simple ; whorls loosely many-flow-Pedicel$^{Or?mon}$ Peduncles almost wanting, with short branches ; rent; ^{t} ^{epn}8^{at}ed ; calyx hispid : upper tooth ovate, not decur-the i^{e} ^{oat} of corolla widened a little.—Native of Java, in ^{in}gratu Si P^{rovinc}es, among the mountains. Plectranthus Petiole* ^{bijdr}- P- 836- The whole P^{lant} is P^{ur}P^{lish} at the *L*«^{pu} ^{axils} P^{ilose}- Whorls distant. Calyx very villous

Corolla like that of ***C. scutellarioides.***

Ungrateful-scented Coleus. PL 2 to 3 feet.

leaves ^{petl0} late J ^rge, broad-ovate, acuminated, coarsely ere-leaves ^{1} ^{3} ^{nded} °r subcordate at the base, rather fleshy ; floral coloured, comose before the expansion of the flowers ; racemes Slmple, elongated; whorls loosely many-flowered; ^{les} and their branches almost wanting ; pedicels re$^{nt?}$ *tt* ; ^{ca}l^{yx} hispid : upper tooth ovate, acute, not decur-of T$^{ir;}$ ^{h} ^{roat} of corolla wide. ©.? S. Native of the Island Allied to^{r} L^{eaves} Pubescent: floral ones almost permanent, ***Grem i*** ^{se}™***ndifldrus,*** **but differs in the i** inflorescence.

Coleus. PI.

11 C. AFRICA'NUS (Benth. lab. p. 54.) stem herbaceous, erect, branched, pubescent; leaves ovate, obtuse, crenated, rounded at the base, running into the petioles, nearly glabrous; racemes elongated ; whorls loose ; cymes many-flowered on both sides ; common peduncles almost wanting, their branches elongated; upper tooth of calyx ovate, membranous, acute, shortly decurrent: lateral teeth minute: lower teeth joined into a membranous, bidentate lip. ©. ? S. Native of the western coast of Africa. Solenostemon ocymoldes, Schum. pi. guin. in act. acad. hafn. 4, p. 45. Leaves *2-3* inches long, and *2* broad ; floral ones bractea-formed, small. Corolla whitish. ?

African Coleus. PL

12 C. ATROPURPU'REUS (Benth. in Wall. pi. rar. asiat. *2.* p. 16. lab. p. *53.)* stem erect, clothed with fine pubescence ; leaves petiolate, broad-ovate, crenated, rounded at the base, clothed with fine pubescence : floral leaves ovate, minute, deciduous ; racemes nearly simple ; whorls quadrifariously cyme-formed ; common peduncles almost wanting, their branches elongated ; pedicels very short; calyx pubescent: upper tooth ovate, acutish, scarcely decurrent: lateral teeth very blunt, equal in length to the upper one : lower ones longer ; throat of corolla dilated. ©. ? S. Native of the Indian Archipelago.

Far. /3, densiflbrus (Benth. lab. p. 54.) leaves hardly purplish ; racemes branched a little; whorls more approximate. ©. S. Native of the Islands of Manilla and Tanna.

Dark-purple-leaved **Coleus. PL**

13 C. PERSOONII (Benth. lab. p. *55.)* stem erect, finely downy ; leaves petiolate, ovate, obtuse, crenated, truncate, or subcordate at the base, wrinkled, clothed with soft villi ; floral leaves deciduous ; racemes simple ; whorls quadrifariously cyme-formed; common peduncles almost wanting on both sides, with elongated branches ; pedicels shorter than the calyxes ; calyx canescent: upper tooth orbicular, concave : lateral ones shorter, very blunt: lower ones lanceolate-setaceous; throat of corolla somewhat dilated. ©.? S, Native of Madagascar, and the Island of Luçon. O'cymum paniculatum, Pers. syn. 2. p. 135. Leaves wrinkled, villous. Racemes canescent. Stamens exserted.

Per soon's Coleus. PL

14 C. MULTIFLORUS (Benth. lab. p. *55.)* stem ascending, villous, pubescent; leaves on long petioles, ovate-oblong, acute, crenately-serrated, cuneated, or narrowed at the base, clothed with soft pubescence ; floral leaves deciduous ; racemes elongated, simple; whorls quadrifariously cyme-formed ; common peduncles almost wanting on both sides, with elongated branches ; pedicels shorter than the calyxes ; calyx clothed with glandular pubescence: upper tooth orbicular, shortly decurrent : lateral ones shorter, very blunt ; corolla with a slender tube, and a sub-inflated limb : lower lip large, very broad, concave. ©. ? S. Native of the Island of Manilla. Habit of *C. acuminatus,* but differs in the leaves being hardly acuminated, in the inflorescence, calyx, and corolla.

Many-flowered **Coleus. PL**

15 C. MACROPHY'LLUS (Benth. lab. p. *55.)* calyx hairy : lower lip trifid, the middle segment the longest, and semi-bifid ; filaments monadelphous at the base ; whorls distinct; peduncles branched; leaves roundish-ovate, acute, unequally and bluntly serrated, scarcely attenuated at the base, quite entire, puberulous on both surfaces. ©. ? S. Native of Java, in humid parts of woods among the mountains. Plectranthus macrophyllus, Blum, bijdr. p. 835. Very nearly allied to *C. ingratus,* but the leaves are purplish beneath.

Large-leaved **Coleus. PL**

16 C. BICOLOR (Benth. lab. p. *55.)* calyx hairy, having the lower lip trifid, the middle segment the longest and semibifid ; filaments monadelphous at the base ; whorls distinct; pedun-

cles ramosely bifid ; leaves unequal, ovate, acuminated, crenated, rounded at the base, or unequally attenuated, and quite entire, puberulous on both surfaces. ©. ? S. Native of Java, at the foot of Mount Salak. Leaves purplish beneath. Allied to *C. macrophýllus.*

Two-coloured-leaved Coleus. PL

17 C. SECUNDIFLORUS (Benth. lab. p. *55.)* plant clothed with fine pubescence ; leaves petiolate, ovate, acuminated, coarsely crenated, roundish, or cordate at the base, wrinkled, rather fleshy; floral leaves deciduous; racemes elongated, simple ; whorls cyme-formed, secund; common peduncles almost wanting on both sides, but with elongated branches; calyxes pendulous, hispid : upper tooth oblcrftg, acute, not decurrent : lateral ones short, ovate, acutish, free : lower ones elongated, acute, combined almost to the top; throat of corolla dilated a little. ©. ? S. Native of the Island of Timor. Allied to *C. grandifldrus,* but differs from it in the inflorescence. Stem bluntly tetragonal.

Secund-fiowered Coleus. PL ?

18 C. BLU'MEI (Benth. lab. p. *56.)* leaves ovate, acuminated, coarsely and bluntly serrated, acute, and quite entire at the base, puberulous on both surfaces ; whorls distinct; pedicels racemose, secund; calyx hairy : lower lip trifid, the middle segments the longest, and semi-bifid ; filaments monadelphous at the base. ©.? S. Native of Java, in gardens. Plectrānthus scutellarioides, Blum, bijdr. 837, but not of Lin. Leaves painted with dark purple spots above.

Blume's Coleus. PL

19 C. LACINIA^TUS (Benth. lab. p. *56.)* leaves ovate, acuminated, jagged, or deeply serrated, acute, and quite entire at the base, puberulous on both surfaces; pedicels branched a little, secund ; calyx hairy : lower lip trifid, the middle segment semibifid, and longer; filaments monadelphous at the base. ©.? S. Native of Java, in gardens. Plectránthus laciniatus, Blum, bijdr. p. *838.* Perhaps a variety of *C. scutellarioides.* Leaves marked with dark purple spots above. Nearly allied to *C. secundiflorus.*

Jagged-lewed Coleus. PL

20 C. GALEA'TUS (Benth. lab. p. *56.)* leaves ovate, acuminated, rounded, or subcordate at the base, acutely and deeply toothed, puberulous on both surfaces ; whorls distinct; pedicels branched; calyx hairy : lower lip trifid, the middle segment longer and bifid ; filaments monadelphous at the base. ©. ? S. Native of Java, in shady, humid, mountainous places. Plectránthus galeatus, Vahl, symb. 1. p. 43. Blum, bijdr. *836.* Stem villous, furrowed. Leaves villous, particularly on the veins beneath. Corolla pubescent. Allied to *C. macrophýllus,* ex Blume.

Galeaie-ftowered Coleus. Fl. July, Aug. Clt. 1820. PL *2 feet.*

§ *2. Lateral teeth of calyx acute, about equal in length to the upper one : lower ones the longest, and combined beyond the middle, and with the lateral ones at the base.*

21 C. MACRŌSTACHYS (Benth. lab. p. 57.) stem pubescent; leaves petiolate, ovate, acuminated, crenately serrated, rounded at the base, hispid above, and on the nerves beneath: floral ones deciduous ; racemes elongated, nearly simple ; whorls remote, loose • common peduncles with the branches and pedicels on both sides, shorter than the fructiferous calyxes ; calyx glabrous, membranous in the fructiferous state: throat naked inside: upper tooth ovate, acute, with revolute edges; corolla with a slender tube, and dilated throat: lower lip elongated, broad, concave © ? S. Native of Java, Commerson. Stem purplish. Leaves minutely glandular beneath; floral ones bracteaformed, concave, ciliated. Whorls 10-15.flowered. and inflorescence of *C. ingrātus.* Calyx and corolla *Malabdrica.*

Long-spiked Coleus. PL

22 C. OVA'TUS (Benth. lab. p. *57.)* stem f^^'scarcely with clammy pubescence above; leaves P base, acuminated, coarsely crenated, rounded or rather hispid above, and glabrous beneath ; floral ous; racemes branched a little; whorls loose, duncles and branches almost wanting ; calyx gw branous, inflated in the fructiferous state : upper with subrevolute edges; corolla with a slender tu dilated throat: lower lip elongated, broad, concave. Native of the Indian Peninsula; Coromandel, nearly allied to the preceding, but much smaller parts. Floral leaves hardly ciliated.

Ovate-leaved Coleus. PL

23 C. MALABA'RICUS (Benth. in Wall. pi. lab. p. *57.)* clothed with fine pubescence; *large,* broad-ovate, shortly acuminated, crenated, cate at the base; floral leaves deciduous; branched; whorls usually 10-flowered, loose; cles almost wanting on both sides, with short ferous calyx deflexed, glabrous, subinflated at the naked inside : upper tooth ovate, acutish ; corolla exserted tube, and a wide throat: lower lip Native of the Peninsula of India, at Travancore, JVI tránthus Malabáricus, Klein, mss. Lower leave* long: floral leaves minute.

Malabar Coleus. PL

24 C. INFLA^TUS (Benth. lab. p. *58.)* glabrous late, ample, ovate, acuminated, toothed, the base, quite entire ; floral leaves deciduous ; race ed a little ; whorls irregularly cyme-formed ; cles almost wanting on both sides: branches alte elongated; pedicels short; fructiferous calyxes brous, inflated, with the throat naked inside : upper lanceolate, acuminated, flat; corolla with an elongai a nearly equal throat: lower lip longer than ©. ? S. Native of Ceylon, Macrae. Allied to Stem rather fleshy. Leaves 1 foot long, with floral ones comose.

Inflated-calyxed Coleus. PL

25 C. MACWI (Benth. lab. p. *58.)* long petioles, ovate, acuminated, rounded or base; floral leaves deciduous; racemes whorls quadrifariously cymose ; common wanting on both sides, with much elongated short pedicels ; fructiferous calyx nutant, flated at the base : throat naked inside : upper acutish, with revolute edges ; corolla with an very wide throat, and an elongated lower lip. of Ceylon, Macrae. Plant clothed with pubescence. Leaves *2-3* inches long. Cjemtai* serted.

Macrae's Coleus. PL

§ 3. *Teeth of calyx* 4 : *lower ones nearly equal, free to base, or hardly combined.*

26 C. GLABRA'TUS (Benth. lab. p. *58)* leaves roundish, serrately crenated, thick, stiff, glabrous, minute, deciduous ; racemes terminal, cle-formed ; whorls loosely cyme-formed ; elongated on both sides, as well as their calyx glabrous, elongated : upper tooth ovate, cone

Wer ones combined at the base, lanceolate-acute. ©. ? S. Native of the Peninsula of India, about Madura, Wight.

Glabrous Coleus. PI. 1 foot. ?

27 C. WioHTii (Benth. lab. p. 58.) stem pubescent; leaves petiolate, ovate, crenated, rounded or subcordate at the base, thick, wrinkled, hispid on both surfaces : floral leaves deciduous ; raceme terminal, simple, panicle-formed; whorls loosely cynie-formed; common peduncle elongated on both sides, as well as its branches; calyxes rather longer than the pedicels, decimate in the fructiferous state, pubescent: upper tooth ovate, flattish : lower ones lanceolate, acute, scarcely connate at the base ; throat of corolla widened; lower lip about 4 times longer than the upper one. ©.? S. Native of the Indian Peninsula, on the Nielgherry mountains.

Wight's Coleus. PI.

lah"8 C- PANICULATUS (Benth. in Wall. pi. rar. asiat. 2. p. 16. . °= -p. 59.) stem procumbent at the base, pubescent; leaves petiolate, broad ovate, deeply toothed, rounded or cuneated at the base, thick, fleshy, hispid: floral ones deciduous ; raceme compound, terminal, panicle-formed ; whorls loosely cyme-formed ; branches mostly peduncles with their branches and pedicels elongated on natural specimens; fructiferous calyx declinate, pubescent: throat lateral, inside: upper tooth ovate, flat: lower lanceolate-subulate, hardly connate at the base ; corolla with an ample throat, and with the lower lip hardly twice as long as the upper one. Dur**. ©. Native of the Indian Peninsula, on the mountains of Travancore. This differs from *C. Wightii* in the broader, thicker, fleshy, more cut leaves, which are cuneated or narrowed at the base, not cordate, &c.

^»«cferf.flowered Coleus. PI.

t *A species not known to which section of the genus it belongs.*

cUneated, TUBEROSUS (Benth. lab. p. *59.)* leaves ovate-crenated, and quite entire at the base, rather scabrous on both surfaces; whorls distinct; pedicels 1-flowered ; calyx hairy; lower lip trifid, the middle segment semi-bifid ; filaments monadelphous at the base. %. ? S. Native of Java, in gardens, p. 372. Plectranthus tuberosus, Blum, bijdr. p. *838.*—Rumph. amb. 5. t. 132. f. 1. ?

ermes-rooted Coleus. PI.

For culture and propagation see *O'cymum,* p. 674.

"\o A^.I S0C HrLUS (from *av«ros, anisos,* unequal ; and calv/' A> alP 5 in reference to the inequality of both lips of p. 59 J corolla0 Wall. pi. rar. asiat. 2. p. 18. Benth. lab. Smi U ', avandula species, Lin. Plectranthus species, Roxb., & and Other authors.

ish, K:1S^T< *Didyndmia9 Gymnospermia.* Calyx ovate, erect- the In blate 5 "Pper lip entire, after florescence lying upon closin one, which is truncate, entire, or shortly 4-toothed, a sol L cal?x- Corolla with an exserted, defracted tube, short 17 at inflated throat, and a bilabiate limb : upper lip Stamlos luntly3-4-cleft: lower lip entire, elongated, concave. tootMe *' decll, nate; lower ones the longest; filaments free, subulate SSJ anthers ovate-reniform, with confluent cells. Style A^,us, at apex> equally bifid; stigmas almost terminal.— bloom or Perennial herbs. Whorls densely imbricate into bricated. Cl id rient Spikes* Floral leaves bractea„formed) im„

P. \vf\ CARNOSUM (Wall. pi. asiat. rar. 2. p. 18. Benth. lab. crenat i Stem erect ? leaves petiolate, ovate-roundish, obtuse, on u ordate at the base, thick, fleshy, tomentosely villous obtu^ 5, Urface85 spikes on long peduncles; floral leaves ovate, be5 lower lip of calyx truncate, quite entire: upper lip ovate, acute, membranous, with ciliated edges. *$* . S. Native of the East Indies, in many places. Lavandula carnosa, Lin. amcen. 10. p. 56. t. 3. Plectranthus carnosus, Smith, in Rees, cycl. vol. 27. Plectranthus strobiliferus, Roxb. hort. beng. p. 45. Plectranthus dubius, Spreng. syst. 2. p. 691. Plectranthus crassifolius, Hortul.—Rheed. mal. 10. p. 179. t. 90. Stem branched, tetragonal, villous. Corolla lilac.

Var. /3, *purpurdscens* (Benth. lab. p. 60.) spikes smoothish, purplish.

Far. y, *glabrum* (Benth. lab. p. 711.) Native of Ceylon. A. glabra, Schrad. ind. sem. hort. goett. 1833. p. 1.

Fleshy Anisochilus. Fl. June, Sept. Clt. 1788. PL 2 feet.

2 A. PALLIDUM (Wall. 1. (5. Benth. 1. c.) stem erect; leaves petiolate, oblong-elliptic, narrowed at both ends, membranous, or hardly fleshy, nearly glabrous ; spikes panicled ; floral leaves lanceolate, acuminated ; lower lip of calyx obliquely truncate, shortly 4-toothed : upper lip lanceolate, acute. *$* . *1* S. ^Native of the Birman Empire, on Mount Taong Dong. Leaves 2-3 inches long, and 1-2 broad, hardly hispid above, and almost glabrous beneath. Spikes pedunculate. Corolla of *A. carnbsum,* but more slender.

Pale Anisochilus. PI. 2 feet.

C6 A. ? POLYSTACHYUM (Benth. in Wall. pi. rar. asiat. 2. p. 19. lab. p. 60.) stem erect, branched; leaves nearly sessile, ovate-oblong, acuminated, serrated, cuneated at the base, clothed with fine pubescence, nerved beneath ;. spikes panicled ; calyx incurved at top, with an obliquely 5-toothed mouth: upper tooth hardly longer than the rest. ©. *1* G. Native of Nipaul, near Hetownrah, in boggy places. Stem bluntly tetragonal, tomentose. Calyx clothed with rufous tomentum. Leaves 2-4 inches long.

Many-spiked Anisochilus. PI.

4 A. DYSOPHYLLOIDES (Benth. 1. c.) stem procumbent at the base; branches ascending, clothed with silky villi ; leaves nearly sessile, oblong-lanceolate, obtuse, quite entire, narrowed at the base; spikes axillary and terminal, pedunculate ; lower lip of calyx minute, truncate : superior one small, acute, deflexed. ©.? G. Native of the Peninsula of India, on the Nielgherry mountains. Habit almost of *Dysophylla rugosa.* Plant clothed with soft, silky, rufescent pubescence. Stamens exserted.

Dysophylla-like Anisochilus, PI. procumbent.

Cult. For culture and propagation see *O'cymum,* p. 674.

XI. (EOLLA'NTHUS (from *atoXXoj, aiollo,* to vary ; and *avdog, anthos,* a flower.) Mart, amcen. bot. monac. 4. Benth. lab. p. 61.

LIN. SYST. *Didynamia, Gymnospermia.* Calyx ovate, campanulate, truncate ; teeth obsolete ; throat naked inside, closed in the fructiferous state, and circumcised at the base. Corolla with an exserted tube, which is decurved beyond the calyx, and somewhat dilated above : limb bilabiate ; upper lip broad, bluntly 4-toothed : lower lip entire, longer, concave. Stamens 4, declinate, didynamous; lower ones the longest; filaments free, toothless ; anthers ovate-reniform, with confluent cells. Style shortly bifid at top ; lobes subulate ; stigmas minute, nearly terminal. This genus is nearly allied to *Anisochllus,* from which it appears to differ only by the calyx.

1 *IE.* SUAVIS (Mart. 1. c. 4. t. 2.) 0 . H. Native of the East Indies. ? Gathered by Martius in the Chinese Gardens at Santa Cruz, in Brasil. Stem obsoletely tetragonal, branched, pubescent. Leaves nearly sessile, obovate, entire, or obsoletely denticulated, narrowed at the base, thickish, pale green, glabrous, marked with impressed dots. Cymes or floriferous branches axillary and terminal, erect, usually trifid, furnished with floral

leaves under the divisions. Flowers secund, lilac. Plant with a sweet odour.

>SWe£-scented (Eollanthus. Fl. July, Aug. Clt. 1825. PL. 1 foot.

Cult. For culture and propagation see *O'cymum,* p. 674.

XII. PYCHNO'STACHYS (from 7n/xvoc, *pychnos,* dense; aed *arraxvQ, stachys,* a spike ; in allusion to the spikes being dense-flowered.) Hook. exot. fl. *2.* t. *202.* Benth. lab. p. 61.

LIN. SYST. *Didynamia, Gymnospermia.* Calyx ovate, nearly equal, with 5 subulately-spinose teeth. Corolla with a defracted exserted tube, and a bilabiate limb ; upper lip 4-toothed: lower one entire, concave. Stamens 4, declinate ; lower *2* the longest; filaments free, toothless ; anthers ovate-reniform, with confluent cells. Style subulate at apex, shortly and equally bifid.—Herbs. Whorls of flowers densely approximate into simple spikes. This genus differs from section *Pyramidium* of *Pleclrdnthus* in the form of the calyx, and in habit.

1 P. CERU'LEA (Hook. I.e.) O. S. Native of Madagascar, Bojer. Stem and branches glabrous, tetragonal. Leaves sessile, oblong-linear, or lanceolate, acute, remotely serrated, narrowed at the base, glabrous, glandular beneath ; floral ones bractea-formed, shorter than the calyx. Spikes dense, terminal, 1-2 inches long. Corollas small, blue.

Z?/w6?-flowered Pychnostachys. Fl. Aug. Clt. 1825. PI. *2* to *3* feet.

Cult. For culture and propagation see *O'cymum,* p. 674.

XIII. PE'LTODON (from *TreXrrf, pelte,* a buckler; and *oSovg ohovroQ, odous odontos,* a tooth ; in reference to the teeth of the calyx being terminated each by a peltate, sub-concave, ciliated, dilated appendage.) Pohl.pl. bras. 1. p. *66.* Benth. lab. p. 62.

LIN. sYst. *Didynamia, Gymnospermia.* Calyx campanulate, equal, 5-toothed; teeth equal, erect, subulate, dilated at top into a peltate, sub-concave, ciliated appendage ; throat bearded ; increasing in the fruit-bearing state, membranous, and a little inflated. Tube of corolla straight, a little inflated, about equal in length to the calycine teeth; limb sub-bilabiate : upper lip bifid, spreading : lower lip trifid, longer and declinate : lateral lobes oblong, spreading : middle one somewhat stipitate, narrowed at the base, transversely somewhat callous, at length oblong, saccate, acute, quite entire, abruptly dejected at the time of expansion. Stamens 4, didynamous: lower ones the longest; filaments free, toothless, glabrous ; anthers ovate-reniform, with sub-confluent cells. Style shortly bifid at apex ; stigmas terminal, or sub-marginal. Achenia roundish, compressed, naked, smooth.—Herbs with the habit of *Hyptis capiāla,* from which they hardly differ, unless by the calyx.

1 P. PUSI'LLUS (Pohl, pi. bras. 1. p. 67. t. 54.) stem humble, nearly simple ; leaves sessile, elliptic, crenated, glabrous, pilose at the nerves; bracteas roundish, or cuneated at the base, pilose, rather exceeding the flowers. %. S. Native of Brazil, in dry pastures in the province of Goyaz, and the South of Brazil. Heads of flowers hemispherical. Corollas white.

Least Peltodon. PI. procumbent, or erectish.

2 P. LONGIPES (St. Hil. mss. ex Benth. lab. p. 63.) stem short, procumbent, nearly simple, glabrous, or pubescent ; leaves sessile, elliptic, crenated, glabrous, or pilose on the nerves ; bracteas rounded, or cuneated at the base, glabrous, or pilose, rather shorter than the flowers. %m ? S. Native of Brazil, about rivulets near Santa porja, in the missions of the Uruguay; and in fields near Cuntiba, m the province of St. Paul. Very nearly allied to *P. pusillus,* but differs in the peduncles being twice as long, in the bracteas being [illegible] shorter, and in the calyxes and corollas being dark purple, not whitisn *y* as in that species.

Long-peduncled Peltodon. PI. procumbent.

S PT iADkANs (Pohl, pi. bras. 1. p. *68.* t. *55.)* stemming, branched, radicant, villous; leaves petiolate, o[illegible] ish, crenated, rounded, or somewhat [illegible] on the nerves on both surfaces ; bracteas crenated in the base. 1/. S. Native of Brazil, in grassy pjce^uth *oi* provinces of Rio Janeiro and Minas Geraes , ai ^^ ^ these provinces. Stem tetragonal, elongatea.. inches long. Inflorescence capitate. Corollas wane.

Rooting Peltodon. PI. creeping.

4 P. TOMENTOSUS (Pohl, pi. bras. 1. p. [illegible] 56#) stem branched, villous; leaves oval, crenated, [illegible] the base, and running into the petioles, puos[illegible] beneath ; outer bracteas cordately auncled, crep[illegible] 1/. ? S. Native of Brazil, in the provinces oi[illegible] Minas Geraes, in dry pastures. Plant [illegible] Stem bluntly tetragonal. Inflorescence capitate, lowish purple.

Tomentose Peltodon. PI. 2 feet, ascending.

Cult. For culture and propagation see *O cymuv,* p. 674.

XIV. MARSYPIANTHUS (from [illegible] purse ; and *avdog, anthos,* a flower; in reference to the shape of the flowers.) Mart. mss. Benth. lab. p. [illegible] species of authors. Clinopodium species: Vahl.

LIN. SYST. *Didynamia, Gymnospermia.* J-aiy [illegible] narrowed at the base, equal, 5-toothed ; teeth equ[illegible] erectly spreading ; throat naked inside. [illegible] Vsub-bilab[illegible] about equal in length to the calycine teeth 5 ^J- [illegible] upper lip bifid; lower one trifid : lateral lobes [illegible] the superior lip, ovate, erectly spreading, nearly [illegible] segment saccate, somewhat stipitate at the base, [illegible] apex, abruptly dejected at the time of florescen[illegible] didynamous, declinate; lower 2 the longest. [illegible] toothless, glabrous ; anthers ovate-reniform, [illegible] fl. iio Sf«l* w^lv hifid at too ; lobes tlaiw [illegible] side, with a membranous, involute, fringed o[illegible] is very closely allied to the capitate flowered spec. but differs in the calyx, and especially by *» [illegible] 64.)

1 M. HYPTOIDES (Mart. mss. Benth. lab. p. [illegible] Native of Tropical America, in various places, a[illegible] Trinidad, Porto Rico, Cayenne, Brazil, ^ ^ *L b e s c e* ^. annual, procumbent, branched, villous, glabrous, P[illegible] more or less petiolate; [illegible] tomentose. Leaves more or less petiolate; [illegible] sessile, roundish-ovate, ovate-lanceolate, lanceo[illegible] acute, or bluntish, serrated or crenated, narrowe[illegible] roundish at the base, rarely subcordate. Heads 6-30-flowered, sessile, or more or ies[illegible] Corolla blue, or purple, hardly exceeding the cal[illegible] Clt. 1gjgg§ *X*

Hyptis-like Marsypianthus. Fl. July, Aug. procumbent.

Cult. For culture and propagation see *Ocymuv* , *y*

XV. HYTTIS (from *hirrtog, hyptios,* [illegible] corolla turned on its back.) Jacq. coll. 1. P. [illegible] et Turp. ann. mus. vol. 7. Benth. lab. £. [illegible] cent authors.—Bystropogon species, Lher. species, Lin. and other old authors. Calyx ovate,

LIN. SYST. *Didynamia, Gymnospermia.*

&c. Stems rising from a woody base. Leaves 2-3 inches long. Corolla small, dirty purple, hardly downy, about equal in length to the tube of the calyx.

Naked-stemmed Hyptis. PL *2* to *3* feet.

8 H. SERI'CEA (Benth. lab. p. 79.) stems simple, clothed with silky wool, almost leafless at top ; leaves nearly sessile, ovate, obtuse, almost quite entire, thick, nerved, clothed with silky wool on both surfaces ; heads globose, densely many-flowered, on short peduncles, racemose ; bracteas subulate, about equal in length to the heads ; calyx tubular, clothed with silky wool, with subulate teeth, which at length spread a» little. 2/. S. Native of the South of Brazil, Sello. Stems many from a perennial base. Leaves approximate towards the middle of the stem, *2* inches long. Corolla exceeding the calyx. Genitals exserted.

Silky Hyptis. PL 2 feet.

9 H. UNCINA'TA (Benth. lab. p. 80.) branches clothed with rufous tomentum ; leaves nearly sessile, ovate-oblong, serrately crenated, roundly cuneated at the base, rather scabrous above, hispid, but clothed with rufous tomentum on the nerves beneath ; heads globose, densely many-flowered, axillary, sessile ; bracteas lanceolate, about equal in length to the heads, subulate and hooked at top ; calyx campanulate, with stiff, subulately awned, hooked teeth. ©.? S. Native of Peru, Ruiz, et Pav. Throat of calyx clothed with rufous wool inside. Corolla rather shorter than the calycine teeth.

Hooked-calyxed Hyptis. PL *2* to 3 feet. ?

10 H. HIRSU[V]TA (H. B. et Kunth, nov. gen. amer. 2. p. 318. t. 161.) branches clothed with rufous hairs ; leaves sessile, or on short petioles, oblong-ovate, cuneated, and narrowed at the base, erosely crenated, wrinkled, villous ; heads sessile, globose, densely many-flowered; bracteas lanceolate, about equal in length to the calyx ; calyx hispid, with lanceolate-subulate, stiff teeth, which at length spread a little ; achenia wrinkled. ©. ? S. Native of New Andalusia, in arid places on Mount Tumiriquiri, Humb. et Bonpl. ; Brazil, in the province of Minas Geraes, &c, Mart. Sello. Branches tetragonal. Heads sessile, or on short peduncles, the whole forming an interrupted raceme. Corolla hispid outside, a little longer than the calyx. Genitals a little exserted.

Hairy Hyptis. PL 2 to 4 feet. ?

SDCT. IV. PLAGIOTIS (from TrXayioc, *plagios,* transverse ; and *ovç VJTOQ, ous otos,* an ear.) Benth. lab. p. 80. Heads axillary, pedunculate, globose, densely many-flowered. Bracteas numerous, adpressed, ovate. Fructiferous calyx inflated at the base, elongated, with an incurved mouth, and short, ovate, unequal teeth. Habit of species unlike the rest.

11 H. ODORA'TA (Benth. lab. p. 81.) stems clothed with rusty tomentum ; leaves on short petioles, oblong-elliptic, crenated, rounded at the base, scabrous above, and tomentose beneath ; heads globose, densely many-flowered, paniculately much branched ; calyx villous, elongated in the fructiferous state, incurved, with an oblique, shortly 5-toothed mouth. *h* - G. Native of Peru, Ruiz, et Pav. A shrub with the habit of a species *of Buddlea.* Leaves 2-3 inches long. Calyx tomentosely hispid. Corolla a little exserted.

Sweet-scented Hyptis. Shrub.

12 H. ULIGINOSA (St. Hil. mss. ex Benth. lab. p. 81.) herbaceous, small, glabrous ; leaves sessile, lanceolate, acute, serrated, cordately stem-clasping at the base; peduncles axillary, simple ; heads small, globose, dense ; bracteas ovate, about equal in length to the heads ; fructiferous calyx inflated at the base, with a contracted, oblique mouth, and very short, unequal teeth. *TJ.* ? S. Native of Brazil, in the province of St. Paul, in boggy parts of woods. Habit of *Gratwla.* Stem nearly simple. Leaves \ to 1 inch long. Lower peduncles shorter than the leaves. Corolla minute.

Bog Hyptis. PI. \ to \ foot.

SECT. V. CY'RTA (from *KVPTOS, cyrtos,* a curve, in allusion to the curved apex of the fructiferous calyx.) Benth. lab. p. 81. Heads axillary, pedunculate, globose, many-flowered. Bracteas numerous, adpressed, subulate. Fructiferous calyx elongated, recurved at top, with subulate-tubular teeth. The first species of this section come very near the second division of *Cephalohyptis;* the four latter only among *anocephalus* in the ripe calyxes being recurved at the tremity." Benth. 1. c.

13 H. RECURVA[N]TA (Poit. ann. mus. 7. p. 8. t. 1.) petioles, stem herbaceous, erectish, villous; leaves on short petioles, wrinkled, ovate, crenated, rounded at the base, or subcordate, glomerate, villous: upper ones small, nearly sessile; inflorescence naked; densely many-flowered, on long peduncles ; receptacle fructiferous bracteas subulate, about equal in length to the calyx ; fructiferous calyx tubular, villous, recurved, with a regular mouth, and subulate teeth. 1/.? S. Native of America, in tropic, in various places. H. macrocephala, Angles of stem acute, rough. Leaves hardly an inch long, calyx purplish. Corolla pale yellow.

Far. frhirsutior (Benth. lab. p. 81.) stem and calyx densely hairy. %. ? S. Native of Brazil, in the Province of Minas Geraes.

Var. y, *grandifolia* (Benth. 1. c.) leaves of the size of those of the species, membranous, and green UK plant. 1/. ? S. Native near Rio Janeiro.

Recurved-calyxed Hyptis. Fl. July. Ut. 1°-

Thu. PALUDOSA (St. Hil. mss. ex Benth. lab. p. 82.) petiolaceous, clothed with soft, silky villi; leaves on short petioles, ovate, acute, serrated, roundly cuneated at the base, denser clothed with soft villi, canescent beneath ; heads globose, many-flowered ; peduncles *2-3* times longer than the heads ; bracteas subulate, adpressed, about equal in length to the calyxes; receptacle naked ; fructiferous calyx tubular, recurved, with a somewhat dilated mouth, and laciniate-subulate teeth. %. ? S. Native of Brazil, in sea-side. Flowers white. Nearly allied to *Jurvata-*

Marsh Hyptis. PI. *2* to 3 feet. ?

15 H. MICROPHY'LLA (Pohl, icon. med. ex Benth. lab. p. 82.) herbaceous, clothed with hoary pubescence ; leaves on short petioles, ovate, crenated, narrowed at the base, *m* times longer than the heads ; receptacle naked; bracteas subulate, about equal in length to the calyxes; fructiferous calyx tomentose, recurved, with a somewhat dilated mouth, and subulate-subulate segments. %*A* S. Native of Brazil, in the provinces of Minas Geraes and St. Paul, in marshy inundated places. Leaves and heads smaller than in the *recurvata,* and the peduncles shorter. Corolla nebulored.

Small-leaved Hyptis. PL *2* to *3* feet, *t*

16 H. DITAEIC/TA (Pohl, icon. ined. p. 8W. herbaceous, divaricate; branches ascending, with hoary pubescence; leaves ear-lanceolate, remotely serrated at top, narrowed a long way at the base, glabrescent beneath; heads globose, densely many-flowered, about equal in length to the peduncle; bracteas subulate, adpressed, about equal in length to the calyx ; receptacle nearly naked ; calyx tubular, subulate-with the mouth at length rather oblique, and the teeth proving %. ? S. Native of Brazil, in fields near rivulets in the province of Goyaz. Stem much branched at the base, leaiy,

27 H. NERVÒSA (Pohl, icon. ined. ex Benth. lab. p. 85.) suffruticose; branches villously hispid; leaves sessile, ovate-roundish, obtuse, crenated, cordately stem-clasping at the base, wrinkled, pubescent above, and clothed with hoary tomentum beneath; heads on long peduncles, globose, densely many-flowered; receptacle nearly naked; bracteas subulate, about equal in length to the head; calyx straightish: teeth subulate, clothed with soft villi, about equal in length to the tube. Jj. S. Native of Brazil, in the province of Minas Geraes, between Estiva and Rio de Prata.

NervedAeaved Hyptis. Shrub.

28 H. CANDIDA (Pohl, icon. ined. ex Benth. lab. p. 85.) suffruticose; branches clothed with white tomentum; leaves sessile, ovate, bluntish, crenated, cordately stem-clasping at the base, wrinkled, canescent above, but clothed with white tomentum beneath; heads on long peduncles, globose, densely many-flowered; receptacle nearly naked; bracteas subulate, about equal in length to the head; calyx nearly straight: teeth subulate, clothed with soft villi, about equal in length to the tube. *2. S. Native of Brazil, between Rio Jequitinhonha and Barreros, in the province of Minas Geraes.

Whitened Hyptis. Shrub.

29 H. MOLLI'SSIMA (Benth. lab. p. 85.) suffruticose; branches elongated, villous; leaves sessile, ovate-roundish, acutish, crenated, cordately stem-clasping at the base, nervosely wrinkled, clothed with very soft villi on both surfaces; peduncles longer than the leaves; heads globose, densely many-flowered; bracteas subulate, equalling the head; receptacle naked; calyxes nearly straight: teeth subulate, clothed with soft villi, rather longer than the tube. ^ • S. Native of Brazil, in the province of Minas Geraes, &c, in hedges and cultivated plaots. Stem woody at base. Branches almost simple, tetragonal. Corolla obscure violet, shorter than the calycine teeth.

Very soft Hyptis. Shrub 4 to 5 feet.

30 H. ARGUTA (Pohl, icon. ined. ex Benth. lab. p. 86.) suffruticose? tall; branches densely clothed with rufous villi; leaves petiolate, broad-ovate or roundish, sharply toothed, thick, wrinkled, densely villous on both surfaces; heads on long peduncles, globose, densely many-flowered; receptacle naked; bracteas subulate, equal in length to the head; calyx nearly straight: teeth subulate, clothed with very soft villi, about equal in length to the tube. J?. S. Native of Brazil, in pastures of deserts at Rio Parahybuna, in the province of Minas Geraes. This species differs from its nearest allies, in the more densely villous, larger leaves.

Sharp-toothed-leaved Hyptis. Shrub.

31 H. RUGÒSA (Benth. lab. p. *86.)* stem shrubby; branches pubescently villous; leaves on short petioles, ovate-roundish, acute, sharply and serrately crenated, rounded or cordate at the base, wrinkled, clothed with short rufous villi on both surfaces; heads on long peduncles, globose, densely many-flowered; bracteas subulate, about equal in length to the head; calyx nearly straight: teeth subulate, clothed with soft villi, rather longer than the tube. h_c. S. Native of Brazil, on Serra das Carancas, in the province of Minas Geraes, &c. Leaves 6-9 lines long, usually 3 in a whorl, thick, hard.

Wrinkled-leaved Hyptis. Shrub *2* feet.

32 H. CUNEATA (Pohl, icon. ined. ex Benth. lab. p. *86.)* suffruticose?; branches erect, tomentosely pubescent; leaves on short petioles, obovate, broadly crenated, narrowed at the base, stiff, rather scabrous above, reticulated beneath, and clothed with rufous pubescence; heads globose, on long peduncles; receptacle naked; bracteas subulate, equalling the head; calyx straight: teeth subulate, clothed with soft villi, about equal in length to the tube. J?. S. Native of Brazil, in deserts at Rio Parahybuna, in the province of Minas Geraes.

Cuneate-haved Hyptis. Shrub. , , 86.)

33 H. LIPPIOI^DES (Pohl, icon. ined. ex Benth. J[aD]'I[ves on shrubby?; branches clothed with rufous tornenturn, ubesc ^ short petioles, ovate, crenated, rounded at the base, v[ ] above, but reticulated and clothed with rufous torne[ ] neath, rigid; heads on long peduncles, globose[ ] flowered; receptacle naked; bracteas subulate[ ] head; calyx nearly straight: teeth subulate, cic[ ] villi, about equal in length to the tube. *2. [ ] Brazil, in the province of Goyaz. Nearly a^ [ ] with the habit of//, *nervosa;* but the [ ] tiolate, and ovate at the base, and not cordately sten[ ]

Lippia-like Hyptis. Shrub. [ ]

34 H. SELAGINIFOLIA (Mart. mss. ex Benth. [ ] shrubby; branches subfasciculate, stiff, nearly [ ] leaves small, nearly sessile, linear, acute, [ ] rowed at the base, stiff, glabrous, smooth; [ ] duncles, globose, densely many-flowered; [ ] bracteas subulate, equalling the head; [ ] subulate, soft, villous, about equal in length to the [ ] Native of Brazil, in the province of Minas [ ] heads like those of *H. rugbsa,* but the form of the [ ] distinct.

Selago- leaved Hyptis. Shrub.

35 H. PEDUNCULÀRIS (Benth. lab. p. 87.) [ ] remote, sessile, lanceolate, obtuse, serrated, [ ] base, rather coriaceous, glabrous above, shining[ ] neath, clothed with fine down; heads on [ ] bose, densely many-flowered; receptacle nearly [ ] teas subulate, equal in length to the heads; [ ] straight: teeth subulate, clothed with soft villi, au[ ] length to the tube. %. ? S. Native of Brazil, [ ] of Minas Geraes, in grassy fields at Serro [ ] Tepico, &c. Stem nearly simple. Leaves 2 me[ ] shorter than the internodes. Peduncles twice as [ ] leaves. Calyx tubular.

Long-peduncled Hyptis. PL 1 to *2* feet. [ ]

36 H. ? BIDENTVTA (Pohl, icon. ined. ex uei[ ] herbaceous?; branches erect, strict, clothed wi[ ] tose pubescence; leaves on short petioles, ia[ ] sharply and doubly serrated, cuneate at the [ ] wrinkled, pubescent on both surfaces, °Y "lobose, densely tomentum beneath; heads on long peduncles, fe[ ] many-flowered; receptacle naked; bracteas [ ] equal in length to the head; fructiferous calyx [ ] little recurved: teeth subulate, clothed with so[ ] shorter than the tube. 1/. ? S. Native of [ ] of deserts at Rio Parahybuna, in the province oi [ ] Habit of *H. incha,* but the fructiferous [ ] curved. Perhaps belonging to this or the prece[ ]

***Trvice-toothedAeaved* Hyptis. PL *2* to 3 feet.** Benth. lab. p. [ ]

37 H. INCI^SA (St. Hil. et Mart. mss. w — [ ] nearly glabrous, or clothed with clammy P[ ] procumbent at the base, ascending; leaves on [ ] ovate or lanceolate, acute, irregularly and deep[ ] dulated, roundedly cuneated at the base, stift, [ ] on both surfaces; heads on long peduncles, go [ ] many-flowered; receptacle naked; bracteas subula[ ] the heads; calyx nearly straight: teeth [ ] about equal in length to the tube. %. ? [ ] in the province of Minas Geraes, on Serro [ ] *pedunculàris,* but differs in the leaves. Leave[ ] long, and, like the peduncles, are often 3 in a wnc[ ]

CW-leaved Hyptis. PL procumbent. [ ]

38 H. LÒNGIPES (St. Hil. mss. ex Benth. lab. p[ ] ticose, nearly glabrous^ or clothed with tomentost *y*

near Paracatu, in the province of Minas Geraes. Habit of *Bupthdlmum aqudticum.* Corolla pale purplish violet.

Velvety Hyptis. PI. 1 to *2* feet.

48 H. ORIGANOI'DES (Pohl, icon. ined. ex Benth. lab. p. 91.) suffruticose, procumbent, clothed with adpressed pubescence ; leaves oblong-ovate, obtuse, crenated, narrowed a short way into the petioles at the base; heads semiglobose, densely many-flowered, on short peduncles ; receptacle villous ; bracteas lanceolate-linear, about equal in length to the head ; calyx very villous : teeth subulate, shorter than the tube. f? . S. Native of Brazil, in the province of Goyaz, on the tops of the mountains called Chapado do Serra San Marcos, and elsewhere in the same province. Allied to *H. velutina,* but differs in being less woolly, and in the stem being procumbent, &c.

Marjoram-like Hyptis. Shrub procumbent.

49 H. DICTYOI'DEA (Pohl, icon. ined. ex Benth. lab. p. 91.) branches stiff, panicled above, clothed with hoary villi ; leaves on short petioles, oval, obtuse, crenately toothed, roundly cuneated at the base, scabrous above, reticulated beneath, and lacunosely wrinkled, pubescent on the nerves : upper ones acute, canescent beneath ; heads pedunculate, semiglobose ; receptacle woolly; bracteas ovate-lanceolate, villous, equalling the heads ; calyx villous : teeth subulate, stiffish, villous, rather shorter than the tube. J? . ? S. Native of Brazil, at Fazenda Dios and Caldas ; and on Serra San Felix, in the province of Goyaz.

Net-like Hyptis. Shrub. ?

50 H. ADAMA'NTUM (St. Hil. mss. ex Benth. lab. p. 91.) suffruticose, the whole plant velvety from silky hairs; leaves sessile, oval, acute, a little toothed, rounded at the base; heads semiglobose, densely many-flowered, on short peduncles; fbceptacle villous ; bracteas lanceolate, acute, about equal in length to the head ; calyx clothed with woolly villi: teeth short, lanceolate-subulate. J? . S. Native of Brazil, in the province of Minas Geraes, in the diamond district, on the banks of the rivulet called Corrego Novo. Leaves hardly half an inch long. Corolla rose-coloured.

Diamond-district Hyptis. Shrub 2 to 2| feet.

51 H. CJERU^LEA (St. Hil. mss. ex Benth. lab. p. 91.) herbaceous ; stems procumbent, branched, villous ; leaves small, numerous, sessile, ovate, obtuse, crenated, cordate at the base, wrinkled, pubescent; heads semiglobose, densely many-flowered ; peduncles rather longer than the heads; bracteas lanceolate-linear, recurved, equal in length to the head ; receptacle woolly ; calyx very villous ; teeth short, subulate. %. ? S. Native of Brazil, in the province of Minas Geraes, on the mountain called Serra da Canastra. Herb much branched, humble, procumbent. Corollas blue.

Blue-Lowered Hyptis. PI. procumbent.

52 H. ALPE'STRIS (St. Hil. mss. ex Benth. lab. p. 92.) herbaceous ; stems ascending or erect, sparingly branched, clothed with rufous villi; leaves numerous, sessile, ovate-oblong, obtuse, crenated, cordately stem-clasping at the base, reflefted, wrinkled, clothed with velvety pubescence ; heads semiglobose, densely many-flowered ; peduncles about equal in length to the heads ; bracteas lanceolate-linear, equalling the head; receptacle woolly; calyx very villous, with short subulate teeth. }/. .? S. Native of Brazil, in humid grassy places near Serra da Canastra, in the province of Minas Geraes. All parts of the plant are larger than in *H. ccerillea* and *H. gratiolce-*

fol Al$_V$ Hyptis. PL elongated.

53 H. GRATIOL*:FOLIA (St. Hil. mss. ex Benth. lab. p. 92.) herbaceous ; stems erect, branched at the base ; branches twiggy, clothed with rufous villi; leaves small, numerous, sessile, ovate-obtuse, crenated, cordate at the base, wrinkled, clothed with rufous pubescence; heads semiglobose, densely many-flowered; peduncles equal in length to *e heads, receptacle woolly ; bracteas lanceolate-linear, rather longer than the head, recurved at top; receptacle woolly; calyx villous. teeth subulate, about equal^ in length to the tube of the Native of Brazil, in elevated plains in the * ^ 3 " ^ stature, province of Minas Geraes. Very like *H.* ' ^ J ," ine teeth leaves, and heads, but differing in the *TM*TM*TM?^A cobeing longer. Heads few, approximating into a

TyV Gratiolalike Hyptis. PL *2* to *S* feet. ? p- w.)

54 H. GOYAVE'NSIS (St. Hil. mss. ex ^ ' *T branches* herbaceous or suffruticose? ascending or ed, densely villous ; leaves sessile, ovate-elliptic, cordate at the base, wrinkled, villous; heals densely-many-flowered ; peduncles shorter than bracteas linear, straight, equalling the heads, recep calyx very villous : teeth short, subulate. »22- of the province of Goyaz. Plant with a hard or shrubby base, azure blue, downy. Differs from *H. ^rulea in* leaves and leaves and habit; and from *H. crenata* in the mutic short calycine teeth.

Goyaz Hyptis. Shrub 1 foot.

55 H. OVA^TA (Pohl, icon. ined. ex Benth. lab. herbaceous, erect, stiff, villous; leaves sessile, crenated, cordate at the base, reticulately wrinkle> tomentose pubescence on both surfaces ; neaa very densely many-flowered, on short peduncles; villous ; bracteas lanceolate at the base, and are, calyxes, very villous; teeth of calyx long-subulate %!?&. Native of Brazil, between Allegres ana in the province of Minas Geraes. Differing from /*• the broader smoother leaves, &c.

Owite-leaved Hyptis. PI. 1 to *2* feet. ?

56 H. CRENATA (Pohl, icon. ined. ex Benth. herbaceous ; stem erect, stiff, villous ; leaves ovate, obtuse, crenated, rounded at the base, surfaces, reticulately wrinkled ; heads many-flowered; receptacle woolly; bracteas base, long-subulate at apex, exceeding the calyxes, ly villous, with villous subulate teeth, which are than the tube. ? S. Native of Brazil, in Minas Geraes, Goyaz, and Bahia, &c. A very species, beset with long spreading hairs clothed with rusty tomentum. It is distinguis- nearest ally, *H. catrulea,* by the bracteas ending late points.

CrenaledAe&ved Hyptis. PI. 1 foot.

57 H. TURNERIEFOLIA (Mart. mss. ex Benth. suffruticose; branches pubescent; leaves lanceolate, obtuse, a little crenated, rounded at date, clothed with soft adpressed villi, pale beneath globose, densely many-flowered, on short toolly ; bracteas lanceolate-linear, equal m length calyx very villous at top : teeth subulate, shorter F? .S. Native of Brazil, in the province of Serro Frio, &c. Habit of *Puhcfna dyssenter* rather tomentose beneath. Corolla hardly calyx, white : the upper lip marked with purple.

Turnera-leaved Hyptis. Shrub 1 to *2* feet. .

58 H. ASTEROI^DES (St. Hil. mss. ^ B ^ ' f ^ , with reerect, lanceolate, obiuse, crenated, cordate at; tne volute edges, wrinkled, villous; heads densely many-flowered; bracteas lanceolate-siiDi equal in length to the head; receptacle woolly,

—Procumbent or divaricate herbs, with the heads of flowers on long peduncles.

68 H. SIDERI'TIS (Mart. mss. ex Benth. lab. p. 97.) herbaceous, procumbent; branches ascending, very pilose ; lower leaves petiolate: rameal ones nearly sessile, ovate, acute, sharply serrated, rounded or cordate at the base, stiff, green on both surfaces, and pilosely hispid ; heads few, pedunculate, globose, densely many-flowered ; bracteas equal in length to the heads ; receptacle naked; calyx hispid, with 5-10 unequal, subulate, stiff, divaricate teeth. *%.1* S. Native of Brazil, in the province of Minas Geraes, in places which are inundated during the winter. Herb pale green. Corolla violaceous, twice as long as the calyx.

Sideritis-Yke Hyptis. PI. procumbent.

69 H. LOBATA (St. Hil. mss. ex Benth. lab. p. 97.) herbaceous, procumbent, pilosely pubescent; leaves broad-ovate, acute, sinuately lobed, crenated, cordate at the base, green on both surfaces ; heads on long peduncles, globose, densely many-flowered ; bracteas about equal in length to the head ; receptacle naked; calyx hispid, with *5-6* nearly equal, subulate, stiff, pubescent teeth, which are shorter than the tube. *if.*. ? S. Native of Brazil, in pastures near San Joze, in the province of St. Paul. Stems usually rooting at the nodi. Leaves like those of *Althce[K]a hirsuta :* floral ones sessile. Corolla blue. Odour fetid.

Lobed-leaved Hyptis. PI. procumbent.

70 H. LAGENA'RIA (St. Hil. mss. ex Benth. lab. p. 98.) herbaceous ; branches ascending, nearly glabrous; leaves petiolate, ovate, acuminated, acute, doubly toothed, rounded at the base, green, pubescent; heads pedunculate, panicled, nearly globose, densely many-flowered ; receptacle naked ; bracteas about equal in length to the head; calyx glabrous, with subulate teeth, which are shorter than the tube. %. ? S. Native of Brazil. Bracteas, as well as the teeth of the calyx, generally hooked at top. Calyx usually 5-toothed.

2[illegible]-shaped-calyxed Hyptis. PL ascending.

SECT. XI. CEPHALOHY'PTIS (from *KecpaXri, kephale,* a head; and *Hyptis,)* Benth. lab. p. 98. Heads semi-globose, or at length globose, densely many-flowered. Bracteas numerous, adpressed, ovate, lanceolate, linear, rarely subulate. Receptacle glabrous, rarely villous. Calyx campanulate or tubular, straight, glabrous, pubescent, or villously hispid, never woolly: teeth subulate or lanceolate at the base, rarely very short and obtuse. Corolla exceeding the calyx a little.—Herbs or subshrubs, with axillary, pedunculate, or nearly sessile heads of flowers.

§ 1. GNIDUEFOLIA (from *Gnidla and folia;* in reference to the leaves resembling those of the genus *Gnid'ia.)* Benth. lab. **p. 98.** ***Leaves small, quite entire, cordate at the base, with revolute edges. Fructiferous heads globose, villous. Bracteas ovate, or lanceolate.***

71 H. IMBRICATA (Pohl, icon. ined. ex Benth. lab. p. 98.) branches erect or ascending, twiggy, pilose; leaves sessile, erect, adpressed to the stem, imbricate, with revolute ciliated [illegible] glabrous; heads globose, densely many-flowered ; peduncles father shorter than the leaves ; bracteas ovate acute stiff, rather longer than the head; calyx campanulate hispid, glabrous at the base, with subulate villous teeth, which at length spread. *v.* S. Native of Brazil, in the provinces of Ooyaz and Minas Geraes. Corolla with the *2* upper segments red, the lower one rose-coloured and the lateral ones yellowish. Receptacle glabrous.

Imbricate-leaved Hyptis. PI. ascending.

72 H. DITASSOI[N]DES (Mart, mss. ex Benth. lab. p. 99.) suffruticose; branches villous; leaves small, sessile, numerous, spreading, very blunt, quite entire, with revolute edges, stem-clasping at the base, blistered, and quite glabrous one-nerved, and villous beneath; heads densely globose, flowered, on very short peduncles; bracteas lanceolate, calyx nearly glabrous at the base, elongated, with [illegible] of subulate teeth. I?. S. Native of Brazil, in the Minas Geraes, on Serro Frio. Habit of *Pen*a* or Receptacle very pilose.

Ditassa-like Hyptis. Shrub.

§ 2. LAVANDULACEAE (So called from [illegible] those of Lavender.) Benth. lab. p. 99. *Leaves [illegible] the base, and quite entire, a little toothed at tap- ite entire, a little tooth. linear heads globose, villous. Bracteas lanceolate, or linear.*

73 H. LiNARiofDEs (Pohl, icon. ined. ex Benth. lab. p. 99.) suffruticose; branches erect, strict, tall, somewhat [illegible] leaves sessile, linear, almost quite entire, clothed [illegible] pubescence ; heads nearly globose, densely many-flowered, on long peduncles ; bracteas lanceolate, clothed with [illegible] turn : exteror ones exceeding the head ; receptacle naked; calyx villous, with subulate, erect, [illegible] which are about equal in length to the tube. [illegible] in fields. Brazil, in the provinces of Goyaz and Minas Cjerae, [illegible] Corollas white, spotted with purple. Very [illegible] larger and *H. strictissima,* and only differs in the heads being more villous, &c.

Linaria-like Hyptis. Shrub. [illegible] jab. p. *99*)

74 H. STRICTISSIMA (Pohl, icon. ined. ex Benth. lab. [illegible] suffruticose ; branches erect, strict, tall, clothed [illegible] pressed pubescence; leaves sessile, linear, almost [illegible] narrowed at the base, clothed with fine hoary [illegible] heads nearly globose, densely many-flowered, on [illegible] cles; bracteas linear : exterior ones about equal [illegible] the head; receptacle naked; calyx tubularly campanulate, [illegible] lous : teeth subulate, erect, one half shorter than [illegible] S. Native of Brazil, in the provinces of Goyaz [illegible] the mountains called Chapada do Serra San Marcos.

Very-strict Hyptis. Shrub. [illegible] 1 b, p. *l*

75 H. DENSIFOLIA (Pohl, icon. ined. ex Benth. lab. [illegible] suffruticose; branches erect, clothed with short [illegible] bescence; leaves sessile, oblong, quite entire, or [illegible] top, narrowed at the base, veiny, nearly glabrous, with fine tomentose pubescence; heads globose, [illegible] flowered, on long peduncles; bracteas lanceolate [illegible] longer than the heads, obtuse ; receptacle naked [illegible] larly campanulate, villous: teeth subulate, erect, [illegible] than the tube. T?. S. Native of Brazil, in V^/from Goyaz and Minas Geraes. Habit of *H. hnarioides,* it appears to differ only in the broader leaves.

***Dense-flowered* Hyptis. Shrub.**

76 H. VERONIC^FOLIA (Pohl, icon. ined. ex Benth. lab. p. 100.) stem procumbent, pubescent ; leaves sessile, ovate, toothed at top, rounded at the base, crenated, nearly glabrous on both surfaces; heads on long peduncles, nearly glabrous, densely many-flowered ; bracteas lanceolate, obtuse, [illegible] in length to the head ; receptacle naked ; calyx tubular, teeth subulate, erect, one half shorter than the tube. Native of Brazil, in the province of Goyaz, at *w* San Sebastian.

Speedwell-leaved Hyptis. PI. procumbent.

§ 3. PEDUNCULOS^ (so called from the heads being supported by long peduncles.) Benth. lab. p. 100. *Heads of flowers*

leaves petiolate, oblong-lanceolate, acuminated, irregularly serrated, narrowed at the base, a little wrinkled, pubescent on both surfaces; heads at length globose, densely many-flowered, on short peduncles, subcorymbose at the tops of the branches; bracteas lanceolate, acuminated, about equal in length to the calyxes ; calyx campanulate : teeth lanceolate at the base, rigidly and subulately awned. %. S. Native of Brazil, in the province of Entre Rios, Parker; in humid pastures from San Joze, in the province of Rio Grande to Santa Borja, in the missions of the Uruguay, &c. Stem acutely tetragonal. Leaves 1-3 inches long. Corolla white, hardly exceeding the calyx. Nearly allied to *H. radiata.*

Burdock Hyptis. Pl. *2* to 3 feet. ?

87 H. INVOLUCRA'TA (Benth. lab. p. 103.) herbaceous, erect, glabrous, or clothed with fine down ; leaves sessile, elliptic or lanceolate, acute, serrated, cordate at the base ; peduncles longer than the heads ; heads serniglobose, densely many-flowered ; bracteas broad-lanceolate, acute, much exceeding the head ; receptacle naked ; calyx campanulate, pubescent: teeth subulate, equalling the tube in length. %.? S. Native of Mexico, at Saltepec, Karwinski. Nearly allied to *H. capilata* and *H. radiata.*

Involucrated-headed Hyptis. Pl. *2* to 3 feet. ?

88 H. LAPPULA'CEA (Mart. mss. ex Benth. lab. p. 104.) herbaceous, ascending, glabrous or pubescent; leaves petiolate, oblong-ovate, acute, serrated, cuneated at the base, or narrowed ; pedurcles longer than the heads; heads semiglobose, densely many-flowered; bracteas lanceolate or linear, equal in length to the head ; fructiferous calyx campanulate: teeth subulate, stiff, longer than the tube. 1/. S. Native of Brazil, in marshy parts of woods, in the provinces of St. Paul and Rio Janeiro.

Lappula-like Hyptis. Pl. 2 to 3 feet. ?

89 H. RAMOSA (Pohl, icon. ined. ex Benth. lab. p. 104.) erect, glabrous; leaves petiolate, oblong-ovate, deeply serrated, or irregularly and sinuately toothed, quite entire at the base, cuneated or narrowed ; peduncles longer than the heads, which are densely many-flowered ; bracteas lanceolate-linear, obtuse, exceeding the head ; calyx tubularly campanulate : teeth lanceolate, subulate, stiff, shorter than the tube. 1/. S. Native of Brazil, at Fazenda Allegres, in the province of Minas Geraes.

Branched Hyptis. Pl. *2* to 3 feet. ?

90 H. INAM^NA (Benth. lab. p. 104.) herbaceous, erect, glabrous; leaves nearly sessile, broad-ovate, bluntish, crenated, cuneately narrowed at the base; heads few, on long peduncles, globose, densely many-flowered; bracteas lanceolate, obtuse, equal in length to the heads ; receptacle naked ; calyx glabrous, tubular : teeth lanceolate-subulate, shorter than the tube. %. S. Na'tive of Brazil, in fields at Rio Doce, Maximilian.—An inelegant plant, with the habit of *Verbesina.*

Inelegant Hyptis. PL *2* to 3 feet.

91 H. CAPITATA (Jacq. icon. rar. 1. t. 114.) herbaceous, erect, nearly glabrous; leaves petiolate, oblong-ovate, deeply serrated, quite entire at the base, and cuneated or narrowed, glabrous on both surfaces, or hispid from a few pili; peduncles longer than the heads, which are globose and densely many-flowered ; bracteas ovate-lanceolate or linear, shorter than the fructiferous heads; receptacle naked ; fructiferous calyx elongated, tubular, truncate : teeth subulate, strict at length, shorter than the tube. %• S. Native of America, and of Mexico, West India Islands, &c.; also in Manilla, ex Cham. Poit. ann mus. 7. p. 464. t. 27. f. 1. Chnopodium capitatum, Swartzl prod. fl. ind. occ. p. 88. Chnopodium rugdsum, Lin. spec. *$22.* ex Jamaica.—Sideritis, &c, feloan. hist. jam. 1. p. 174. t. 109. f. 2. Stem bluntly tetragonal. Corollas white, tinged with red. T 1 rit 1714. Shrub

Capitate-flowered Hyptis. Fl. June, July. Ut. *in 3* to 4 feet. stem nearly

92 H. BRE'VIPES (Poit. ann. mus. 7. p. joiate> ovate-glabrous at the base, pubescent above ; leaves P d. at oblong or lanceolate, acute, irregularly , rarely <* the base, rather hispid above, nearly the both surfaces; peduncles shorter, or hardly on heads, which are globose, and densely ^any-Howe , calyx pU. lanceolate-linear, acute, exceeding the longer than bescent, truncate : teeth erect, subulate strict, ratne the tube. %. S. Native of tropical America, bomid Rio Janeiro, Philippines,. Manilla, Celebes, esseq- by the sides of rivers or rivulets. H. globifera, p. 207. ? H. acuta, Benth. in Linnaea, 6. p. *M-* hardly nal ; angles hairy. Heads size of cherries. longer than the calyx, white. stiffer,

Far. /3 ; plant more glabrous ; calycine teen H. more blunt/ %. S. Native of Demerara and radiata, H. B. et Kunth, nov. gen. amer. 2. p- pi. *t*

Short-pedunclcd Hyptis. Fl. June, Aug. to 3 feet. *r n 77-*

93 H. GAUDICHAU'DI (Benth. in Linnsea, pube s- 100.) herbaceous, erectish, glabrous, or ciotnea gerrat e-crescence : leaves petiolate, ovate, acute, base, or *f* nated, or a little cut, rounded or cuneated at near ly gia- upper ones are narrowed, rather hispid above, an brous beneath ; peduncles rather shorter than trie lanceolate, are globose and densely many-flowered; brao about equal in length to the head ; calyx r tubular : teeth linear, erect, much shorter than the S. Native of Brazil, in grassy places at Kio Jan *H. capitala,* but smaller.

Gaudichaud's Hyptis. PI. 1 to 2 feet.

94 H. LANCEOLA'TA (Poir. diet, suppl. entire which base; peduncles shorter than the heads of oblong globose and densely many-flowered; outer bra lanceolate, bluntish, longer than the head ; true smoothish, elongated, truncate: teeth than the tube. 7/.S. Native of Brazil, in Maran

Lanceolate-leaved Hyptis. PI. 2 to 3 feet.

95 H. LONGIFOLIA (Pohl, icon. ined. ex Benth. stem erect, pubescent; leaves petiolate oblong- glabr minated, irregularly toothed, narrowed at tne than above, and rather villous beneath ; peduncles heads, which are densely many-flowered ; bracre ceeding the heads ; calyx tubularly campanulate. late, longer than the tube. %. ? S. Native of province of Goyaz, at Rio Trahiras, and on &err Hardly distinct from *H. lacustris.*

Long-leaved Hyptis. PI. 2 to 3 feet. ?

96 H. LANCE*F6LIA (Schum. pi. gum. m acaa *35.)* stem herbaceous, pubescent; leaves on sbor long-lanceolate, acutish, coarsely serrated, nanr basi, and quite entire ; peduncles shorter than the are globose and densely many-flowered ; braetea obtuse, about eqfial in length to the head ; calyx inflated : teeth lanceolate-subulate, stiff, erect. of tropical Africa, in marshes about the Garnbm- cumbent at the base. Peduncles h.sp.dly villous. pubescent. Probably the same as *H. lacusir* • bluntly tetragonal.

Lance-leaved Hyptis. PI.

H. LACUSTRIS (St. Hil. mss. ex Bentli. lab. p. 107.) glabrous; leaves petiolate, oblong-lanceolate, or the lower ones ovate, acuminated, irregularly serrate-crenated, narrowed at the base, glabrous on both surfaces; peduncles longer than the heads, which are globose and densely many-flowered; bracteas lanceolate, obtuse, about equal in length to the head; fructiferous calyx membranous: teeth linear, shorter than the tube; upper tooth the broadest. %. ? S. Native of Brazil, in water, in the province of St. Paul; and in humid places near Lake das Couchas, in the province of Rio Grande do Sul. Habit *of H. lanceolata.* This species approaches the section *Plagiotis,* in having the calycine teeth being the longest.

Hyptis. PI. 2 to 3 feet.?

H. HOMALOPHYLLA (Pohl, icon. ined. ex Benth. lab. p.) clothed with rufous hairs; leaves on short petioles, oblong or oblong-lanceolate, obtuse, cuneated or narrowed at the base, crenated, wrinkled, villous; heads on short peduncles, semiglobose, densely many-flowered; bracteas lanceolate, falling the calyx; fructiferous calyx tomentose, elongated, inflated at the base: teeth very short, lanceolate, acute. % ? S. Native of Brazil, in elevated fields in the province of Minas Geraes, &c. Allied to *H. hirsuta.* Corolla white, spotted with purple.

Hyptis. PI. 1 to 1J foot.

H. BRACHYODONTES (from *ppaxvg, brachys,* short; and *ovovQ, wovTos, odous odontos,* a tooth; in allusion to the short calycine teeth) Benth. lab. p. 107. *Heads semiglobose, and cam*, hardly globose. Bracteas ovate or lanceolate. Calyx Panulate, with short, ovate, obtuse teeth.*

H. OBTUSIFLORA (Presl, mss. ex Benth. lab. p. 107.) suffruticose; branches clothed with adpressed pubescence; leaves ovate or oblong-lanceolate, bluntish, crenated, narrowed at the base, hispid on both surfaces, or at length glabrous; peduncles shorter than the heads, which are nearly globose and densely many-flowered; bracteas ovate, striated, equalling the Hairs. % S. Native of Peru, on Mount Huanuco, Haenke. Rufescent on the younger branches and lower surfaces of the leaves *fir*. Corolla hardly exceeding the calyx.

flowered Hyptis. Shrub.

H. ARKERI (Benth. lab. p. 108.) stem pubescent at top, leaves sessile, oblong-elliptic, or oblong-linear, acute, serrated, narrowed at the base, nerved, nearly glabrous. Peduncles longer than the leaves; heads globose, rather many-flowered; bracteas lanceolate, linear, obtuse, of Demonger than the head 5 calyx glabrous. %. ? S. Native Fruct. erara. Peduncles pubescent. Leaves an inch long. per?us calyx elongated, inflated at the base.

Hers Hyptis. PI. *2* to 3 feet. ?

od XYLODONTES (from *ZvXov, xylon,* wood; and *OZOVQ OZOV-* being. ?*Usodontos* a tooth; in allusion to the teeth of the calyx *flower,* and rather spiny.) Benth. lab. p. 108. *Heads of very* Semt *globose. Bracteas lanceolate or linear, subulate or base* of A *Pex- Cahjx campanulate: teeth lanceolate at the* ulate, *stiff, glabrous, usually somewhat spinose.*

ceous. ? RADIANTA (Willd. spec. *S.* p. 84.) glabrous, herbaceous; leaves petiolate, ovate-lanceolate, acuminated, crenated, manvfl at the base, or narrowed; heads globose, densely tu$e ered, pedunculate; bracteas oblong-lanceolate, obS. *N an the head; teeth of calyx rather spinose. 1^. ? Carols ? of the southern parts of North America, as of vox, Louisiana, and Mexico, at the Hacienda de La Laguna. Poit. ann. mus. 7. p. 466. t. 27. f. 2. Clinopodium rugosum, Lin. spec. 822.—Dill. hort. elth. 1. p. 88. t. *75.* fig. *86.* Stem acutely tetragonal. Leaves 1-3 inches long. Allied to *H. angustifblia* and *H. capitata.* Corolla pale purple. ?

Rayed Hyptis. Fl. June, July. Clt. 1690. PI. 4 to 5 feet.

H. RUBIGINOSA (Benth. lab. p. 108.) suffruticose; branches divaricate, clothed with rubiginose tomentum; leaves on short petioles, ovate-oblong, very blunt, serrately crenated, cuneated at the base; heads semiglobose, densely many-flowered, on short peduncles; outer bracteas broad-ovate, rather exceeding the head; calyx villous, with stiff teeth. J? . S. Native of Brazil, in the provinces of Goyaz and Minas Geraes, &c, in fields. Leaves \\ inch long, pubescent above, and tomentose beneath, and rusty like the whole plant. Corolla white, spotted with purple.

Rusty Hyptis. Shrub 2 to 2| feet.

H. LUTESCENS (Pohl, icon. ined. ex Benth. lab. p. 109.) herbaceous, procumbent ?, clothed with rusty villi; leaves on short petioles, ovate, obtuse, serrately crenated, cuneated at the base, rather scabrous above, and clothed with rufous pubescence beneath; heads semiglobose, densely many-flowered, on short peduncles; bracteas ovate-lanceolate, rather exceeding the head; calyx nearly glabrous, with stiff teeth, which are equal in length to the tube. %. ? S. Native of Brazil, in the provinces of Goyaz, Minas Geraes, and Bahia. Very nearly allied to *H. rubiginosa.*

Var. ft, hirsuta (Benth. lab. p. 712.) heads numerous, axillary, on short peduncles. 1/ . ? S. Native of Rio Grande.

Yellowish Hyptis. PI. procumbent.

H. AFFINIS (Benth. lab. p. 109.) erect,? clothed with rufous tomentum; leaves on short petioles, ovate, bluntish, narrowed at the base, wrinkled; heads semiglobose, densely many-flowered: superior ones panicled; peduncles rather shorter than the heads; bracteas ovate, acute, about equal in length to the heads; calyx villous, with stiff teeth, which are glabrous at top. %. ? S. Native of Peru. Ruiz, et Pav. and Tafalla. Allied to *H. rubiginosa.*

Allied Hyptis. PI. 2 to 3 feet. ?

H. FERRUGINOSA (Pohl, icon. ined. ex Benth. lab. p. 109.) plant ascending, clothed with dense rubiginose tomentum; leaves on short petioles, roundish, very blunt, crenated, truncate at the base or cordate, very thick, wrinkled, hispid above and tomentose beneath; heads semiglobose, densely many-flowered: lower ones pedunculate: upper ones nearly sessile; outer bracteas ovate, acute, shorter than the calyxes; calyx villous, with stiff erectish teeth. %. ? S. Native of Brazil, in the province of Goyaz, at Rio Pillocas. Allied to *H. rubiginosa.*

Ferruginous Hyptis. PI.

H. LUCIDA (Pohl, icon. ined. ex Benth. lab. p. 109.) shrubby, glabrous; leaves nearly sessile, oval, acutish, scarcely toothed, cuneately rounded at the base, coriaceous, stiff, shining above and veiny beneath: floral ones equal in length to the head; heads ovoid, at length semiglobose, densely many-flowered; bracteas lanceolate, stiff, equalling the heads; calyx villous, with stiff, nearly glabrous teeth. J? . S. Native of Brazil, in the province of Goyaz, at Serra Chrystais.

Shining Hyptis. Shrub.

H. PROTEOIDES (St. Hil. mss. ex Benth. lab. p. 110.) shrubby ? erect, stiff; branches clothed with short rufous tomentum; leaves on very short petioles, broad-ovate, obtuse, crenated, roundly subcordate at the base, coriaceous, stiff, shining above, pubescent on the veins beneath; heads few, subcorymbose, pedunculate, semiglobose, densely many-flowered; bracteas lanceolate, and are, as well as the calycine teeth, stiff

and glabrous. T?. S. Native of Brazil. Leaves 1 to lj inches long. Corolla very villous outside.

Protea-like Hyptis. Shrub.

108 H. CORDATA (Pohl, icon. ined. ex Benth. lab. p. 110.) herbaceous, clothed with rufous villi; leaves nearly sessile, ovate-roundish, very blunt, crenated, roundly subcordate at the base, wrinkled, scabrously hispid above, and clothed with rufous villi on the nerves beneath; heads pedunculate, semiglobose, densely many-flowered; bracteas lanceolate, quite entire, equalling the head; calyx nearly glabrous, with erectish stiff teeth. %.? S. Native of Brazil.

Cordate-leaved Hyptis. PL

109 H. REMOTA (Pohl, icon. ined. ex Benth. lab. p. 110.) herbaceous, tall, clothed with short rufous villi; leaves on short petioles, broad-ovate, very blunt, crenated, roundly cuneated at the base, wrinkled, scabrous above, and clothed with rufous villi at the nerves beneath; heads pedunculate, semiglobose, densely many-flowered, somewhat proliferous; bracteas ovate, quite entire, acute, equalling the head; calyx villous at the base, with erectish, stiff, glabrous teeth. %. S. Native of Brazil, in the province of Minas Geraes, on Serra Santa Isabel, at Paracatu. Perhaps only a variety of *H. cordata.*

Remote Hyptis. PI.

110 H. VILLOSA (Pohl, icon. ined. ex Benth. lab. p. 110.) herbaceous ? densely clothed with rufous villi; leaves sessile, roundish, very blunt, crenated, roundedly cordate at the base, very thick, wrinkled, scabrously hispid above, but clothed with rufous villi beneath; heads semiglobose, densely many-flowered, pedunculate; outer bracteas broad-ovate, foliaceous, toothed, exceeding the calyx; calyx villous, with stiff, nearly glabrous teeth. %. ? S. Native of Brazil, in the province of Goyaz.

Var. /3, reticuBta (Pohl, 1. c.) stem more humble, the leaves more reticulately wrinkled, and the heads larger. 1/. ? S. Native of the province of Minas Geraes, at Padrocino.

Villous Hyptis. PL *2* feet.

111 H. ORBICULATA (Pohl, icon. ined. ex Benth. lab. p. 111.) herbaceous, clothed with rufous villi; leaves sessile, rounded, very blunt, roundly cordate at the base, wrinkled, scabrously hispid above, and pubescent beneath; heads sessile, nearly globose, densely many-flowered; bracteas ovate-lanceolate, quite entire, equalling the head; calyx nearly glabrous, with stiff erect teeth. 2£.? S. Native of Brazil, in the province of Goyaz, on the summits of the mountains called Chapada do Serra San Marcos.

***Orbicular-leaved* Hyptis. PL**

112 H. NIGRESCENS (Pohl, icon. ined. ex Benth. lab. p. 111.) herbaceous, procumbent ? blackish, pubescent; leaves sessile, ovate, obtuse, crenated, cordate at the base, scabrous on both surfaces, lacunosely wrinkled beneath, and pubescent on the nerves; heads few, on very short peduncles, semiglobose, densely many-flowered; outer bracteas ovate, obtuse, wrinkled, shorter than the head: inner ones lanceolate, obtuse, longer than the head; calyx villous, with stiff teeth. %. S. Native of Brazil, in the province of Goyaz, between Rio Corumba and Rio San Marcos.

Blackish Hyptis. PL procumbent. ?

113 H. COMPLICATA (St. Hil. mss. ex Benth. lab. p. 111.) shrubby; branches clothed with long silky pili; leaves numerous, sessile, broad-roundish, obtuse, a little crenated, cordately stem-clasping at the base, complicate, stiff, rather scabrous above, and lacunosely veined beneath; heads few, nearly sessile, semiglobose, densely many-flowered; bracteas lanceolate, acute, equalling the head; calyx pilose at the base, with stiff teeth, which are at length somewhat recurvedly spreading, *h.* S. Native of Brazil, in the province of Minas Geraes, in fields near Sabara. Habit of *H. rotundifblia,* but very different in the form of the leaves, &c.

Complicate-leaved Hyptis. Shrub.

114 H. ROTUNDIFOLIA (Benth. lab. p. 111.) shrubby, clothed with villous tomentum; leaves Prolate, stiff, ish, .crenated, rounded at the base, much globose, brous, rather villous on both surfaces; sigiate; densely many-flowered, pedunculate: "PP villous at the bracteas linear, longer than the calyxes; calyxve*) veaiy base, with stiff teeth, which are at length spreading. *. S. Native of Brazil, in the X d, densely Goyaz and Minas Geraes, &c. Shrub much branched, leafy. Leaves generally 3-4 in a whorl. Corolla n* than the calyx.

***Roundleaved* Hyptis.** Shrub 1 to *2\ feet.* shruD-

115 H. MONTICOLA (Mart. mss. ex »??) J; all, P by; branches clothed with rubiginose villi; leaves coriaceous, late, ovate, obtuse, crenated, cuneated at the rufous rather scabrous above, and reticulated and cioth pubescence beneath; peduncles about equal in ie*d de- leaves, stiff; heads semiglobose, densely ^ " ^ b u l a r, viU°«s teas lanceolate, stiff, equalling the head; W*. of Brazil !n at the base, with short stiff teeth. *? . S. Mati m the provinces of Rio Janeiro, Minas ^eraes, a sandy places. Shrub much branched. Corolla pale Calycine teeth at length somewhat recurved.

Mountain Hyptis. Shrub 5 to 6 feet.

116 H. TRICEWA (St. Hil. mss. ex Benth. J ^ ^ a t suffruticose; branches twiggy, villous; elliptic, obtuse, crenated, cuneately-rounded at ceous, scabrous above, and clothed with rufous neath; peduncles equa lni engit t the leaves; bose, densely many-flowered; bracteas lanceolate, lin g the head; cal y x tubular, villous, with stiff

*2 . S. Native of Brazil, on Serra da Caraca, the of Minas Geraes. Allied to *H. monticola;* bu elongated and less branched; the leaves larger * the calycine teeth shorter.

Three-headed Hyptis. Shrub *2* to 3 feet.

117 H. CONFERTA (Pohl, icon. ined. ex Benth. late, erect, tall, clothed with rubiginose tomentum; ovate-elliptic, obtuse, crenated, cuneated at tne scabrous above, but clothed with rubiginose heads pedunculate, large, semiglobose, densely bracteas ovate, quite entire, foliaceous, head; calyx villous, with stiff, rather spreading Native of Brazil, in the provinces of Goyaz and Leaves 3-4 inches long. Corolla very villous, with rose-colour. /./•#• *10)*

Cro?vded-ftowere& Hyptis. Shrub 4 to 6 feet.

118 H. ALUTVCEA (Pohl, icon. ined. ex Benth. herbaceous, erect or ascending, humble, villous, sessile, oval, obtuse, crenated, cuneated at tne u scabrously hispid above, villous beneath; heads o eles, large, hemispheric, densely many-flo exc ding the head; lanceolate, outer ones calyx villous with stiff erect teeth. %. ? S. Native of Brazil, in the provinces of Goyaz and Minas Geraes. *don humilis.* Leaves *2* inches long. Corolla pale

Tanned Hyptis. PI. \ foot.

119 H. FERRUGINEA (Benth. lab. p. 113.) with rufous tomentum; leaves nearly sessile, obion* crenated, cuneated at the base, wrinkled; heads glo many-flowered, rather panicled; peduncles longer heads; bracteas ovate, acute, equalling the «eaa teeth stiff. %. ? S. Native of New Spain, Mocjno

Stem bluntly tetragonal. Leaves 2-3 inches long. Bracteas densely villous.

Rusty Hyptis. PI.

120 H. XANTHIOCE'PHALA (Mart. mss. ex Benth. lab. p. 113.) herbaceous, ? erect, or ascending, quite glabrous; leaves on short petioles, ovate, serrated, roundly cuneated at the base, coriaceous, quite glabrous on both surfaces, shining above; peduncles stiff, compressed, longer than the leaves; heads semi-globose, densely many-flowered; bracteas ovate-lanceolate, stiff, the inner ones cuneated, a little serrated; calyx woolly at base, with stiff, glabrous teeth. %. ? S. Native of Brazil, in fields in the province of Minas Geraes, in the Diamond district. Heads size of those of *H. conferta* and *H.ferruglnea.*

Yellow-headed Hyptis. PI.

130 H. ANOMALA (Benth. lab. p. 113.) branches clothed with rough pubescence; leaves petiolate, ovate, obtuse, crenated, base rounded, or cuneated, wrinkled, tomentose beneath; heads semi-globose, densely many-flowered, on short peduncles, panicled at the tops of the branches; bracteas ovate, stiff, about equal in length to the calyxes; calycine teeth subulately awned. 1/. ? S. Native of the South of Minas Geraes. Stems many feet high, bluntly tetragonal. Leaves petiolate; bracteas tomentose. Calyx villous. Genitals a little exserted.

Hyptis. PI. tall.

132 H. CASPITOSA (St. Hil. mss. ex Benth. lab. p. 118.) stem numerous, erect, beset with rufous hairs; leaves sessile, ovate, bluntish, coarsely and unequally serrated, rounded at the base, marrowed, rather coriaceous, nerved, nearly glabrous; bracteas semi-globose, densely many-flowered, on long peduncles; lanceolate, exceeding the head; calyx vilious: teeth ovate and subulately awned at apex. %. ? S. Native of Brazil, in the province of St. Paul, and in the South, among bushes, and in fields. Stem nearly simple, tetragonal, calvous. Leaves 1 inch long. Corolla pale red, rather shorter than the calyx: teeth.

Hfted Hyptis. PI. 1 foot.

Sect. XII. POLYDESMIA (from πολυς *polys,* many; and δεσμη, a bundle; in reference to the many heads of flowers.) Heads of flowers nearly sessile, rarely on racemes (or panicles) numerous, disposed in paniculately branched flowered, rarely in simple racemes, dense, sometimes many-times pressed, or irregularly sub-globose, and sometimes few-flowered. Bracteas numerous, adpressed, ovate, lanceolate, or lanceolate, rarely linear. Fructiferous calyx sometimes setaceo mto a cylindrical tube which is truncate at apex, with the short, rarely obsolete teeth, sometimes (in some of the late, with ovoid heads) tubularly campanulate, with lanceolate teeth, or unequal. Tube of corolla generally exserted.—Herbs or shrubs, usually many-flowered.

133 H. VESTITA (Benth. lab. p. 114.) stem shrubby; branches clothed with floccose tomentum: leaves petiolate, roundish, obtuse, or hardly acuminated, erosely crenated, truncate at the base, very much wrinkled, villous on both surfaces; heads sessile; whorls approximate, racemose; racemes panicled; bracteas ovate, or lanceolate, obtuse, equalling the calyxes; fructiferous calyx tubularly inflated, glabrous, with a truncate mouth, and obsolete teeth: throat naked inside. 1} • S. Native of Brazil, in woods in the provinces of Minas Geraes and St. Paul, &c. Shrub many feet high. Branches bluntly tetragonal. Corolla blue, glabrous. Genitals exserted. In Brazil the plant is called *Erm de Santa Anna, Ervo do Pa*, where it is used as a vulnerary.

134 H. DUPLICATO-DENTATA (Pohl, icon. ined. ex Benth. lab. p. 114.) shrubby; branches rather tomentose; leaves petiolate, ovate, bluntish, erosely crenated, rounded or cuneated at the base, scabrous above, and clothed with hoary tomentum beneath; heads sessile; whorls approximate, fasciculately racemose; racemes panicled; bracteas lanceolate, obtuse, thick, tomentose, exceeding the calyxes a little; fructiferous calyx tubularly inflated, villous, with a truncate mouth, and short, unequal, or obsolete teeth. \. S. Native of Brazil, in the provinces of Minas Geraes and Goyaz, in open parts of woods.

Far. (3, virescens (Pohl, 1. c.) ^ • ^- Native of Minas Geraes, at Manuel Pareira.

***Doubly-toothed-leaved* Hyptis. Shrub.**

125 H. ALTHÆFOLIA (Pohl, icon. ined. ex Benth. lab. p. 115.) shrubby; branches clothed with floccose tomentum; leaves petiolate, broad-ovate, bluntish, erosely crenated, truncately cordate at the base, wrinkled, tomentose on both surfaces; heads sessile; whorls approximate, fasciculately racemose; racemes panicled; bracteas lanceolate, thick, tomentose, exceeding the calyxes; fructiferous calyx tubularly inflated, glabrous, with an obsoletely or irregularly toothed mouth: throat naked inside. T?. S. Native of Brazil, in the province of Minas Geraes, in humid places. Allied to the two preceding.

***Althcea-leaved* Hyptis. Shrub.**

126 H. BARBATA (Schranck, in densk. bot. gesell. regensb. 2. p. 52. Benth. lab. p. 115.) stem shrubby; branches tomentose; leaves petiolate, broad-ovate, acuminated, deeply toothed, truncate at the base, thick, wrinkled, clothed with soft villi; heads sessile; whorls loose, approximate, somewhat racemose; racemes panicled; bracteas ovate, acute, equalling the calyxes; calyx tomentose, campanulate, with a truncate mouth, and strict, subulate teeth, which are equal in length to the tube. T?. S. Native of Brazil. Habit of //. *vestita,* but the tomentum is softer, and lower surfaces of the leaves rather silky.

Bearded Hyptis. Shrub.

127 H. OBVALLATA (Spreng. ex Benth. lab. p. 115.) stem shrubby; branches tomentose; leaves on short petioles, ovate, acutish, erosely crenated, truncately cordate at the base, thick, much wrinkled, tomentose on both surfaces; heads sessile; whorls distinct, fasciculately racemose; racemes panicled; bracteas numerous, ovate-lanceolate, acute, 2-3 times longer than the calyxes; calyx villous, with a truncate mouth, and subulate, strict teeth, which are about equal in length to the tube. T2. S. Native of Brazil, in the province of Goyaz, and in the South. Allied to *H. vestita* and *H. barbata.* Corolla pubescent.

Environed Hyptis. Shrub.

128 H. CARPINIFOLIA (Benth. lab. p. 115.) stem shrubby; branches clothed with rufous villi; leaves sessile, ovate-roundish, obtuse, or acuminated, toothed, cordate at the base, coriaceous, nearly glabrous above, rugosely veined beneath, tomentose, at length glabrous; heads sessile; whorls approximate, distinct, fasciculately racemose; racemes panicled; bracteas ovate-lanceolate, acuminated, exceeding the calyxes; fructiferous calyx tubular, glabrous, with a truncate, ciliated mouth, and subulate, strict teeth, which are about equal in length to the tube. T?. S. Native of Brazil, in the provinces of Goyaz, Minas Geraes, &c.; and of Peru, in dry fields and hills. Corolla blue, downy outside. Branches bluntly tetragonal. Odour very aromatic.

Hornbeam-leaved Hyptis. Shrub *S* to 5 feet.

129 H. AQUATICA (Pohl, icon. ined. ex Benth. lab. p. 116.) shrubby; branches beset with spreading hairs; leaves nearly sessile, ovate-oblong, bluntish, toothed, cordate at the base, coriaceous, nearly glabrous above, rugosely veined beneath, and tomentose, but at length glabrous; heads sessile; whorls approximate, distinct, fasciculately racemose; racemes somewhat panicled; bracteas ovate-lanceolate, subulately acuminated, ex-

ceeding the calyxes ; fructiferous calyx tubular, with a truncate ciliated mouth, and subulate, unequal, strict teeth. T? . S. Native of Brazil, in the province of Minas Geraes, at Rio da Prata. Nearly allied to the preceding.

Water Hyptis. Shrub 3 to 4 feet. ?

130 H. A'UIDA (St. Hil. mss. ex Benth. lab. p. 116.) branches erect, twiggy, beset with spreading pili; leaves sessile, ovate-lanceolate, acute, serrated, roundedly cordate at the base, glabrous, scabrous above ; floral leaves broad-heart shaped ; heads sessile; whorls equal, interruptedly racemose ; racemes simple, or a little panicled ; bracteas ovate, bluntish, coloured, about equal in height to the calyxes; calyx tubular, with linear, unequal teeth, which are shorter than the tube. f? . S. Native of Brazil, in dried up marshes in the southern deserts of the province of Minas Geraes. Corollas pale purple.

Arid Hyptis. Shrub 2 to 3 feet.

131 H. VIOLA'CEA (Pohl, icon. ined. ex Benth. lab. p. 116.) branches erect, twiggy, villous at apex, at length glabrous; leaves nearly sessile, ovate-lanceolate, or ovate, acute, doubly serrated, rounded at the base : or the lower ones are cordate, very scabrous on both surfaces, green, coriaceous; heads nearly sessile ; whorls secund, interruptedly racemose ; racemes short, simple, or a little panicled ; bracteas ovate, acutish, membranous, coloured, exceeding the calyxes a little ; calyx tubular, nearly glabrous, with subulate teeth. *fy* • ? S. Native of Brazil, in the province of Goyaz, at Trahiras.

Violaceous-flowered Hyptis. Shrub.

132 H. GLOMERA'TA (Mart, ex Schranck, in syll. pi. bot. ratisb. 2. p. *55.)* branches clothed with fine pubescence ; leaves on short petioles, or sessile, ovate-oblong, or lanceolate, acutish, serrated, rounded at the base, pubescent on both surfaces; heads nearly sessile, ovoid-globose, few-flowered ; whorls interruptedly racemose ; raceme elongated, a little panicled ; bracteas ovate, acute, twice as long as the calyxes ; calyx tubular, nearly glabrous, with lanceolate, acute teeth, which are about 3 times shorter than the tube. J?. S. Native of Brazil, in the provinces of Minas Geraes, and Goyaz, and the South, in humid places. Stem herbaceous, ? bluntly tetragonal, usually purplish. Corolla hardly exceeding the calyx, pubescent outside.

Glomerate-flowered Hyptis. PI. ?

133 H. PAUCIFLORA (Pohl, icon. ined. ex Benth. lab. p. 117.) herbaceous, pubescent; leaves petiolate, ovate, bluntish, serrated, rounded at the base, or cordate, clothed with soft hairs above, and nearly glabrous beneath, and somewhat canescent; heads ovate-globose, few- flowered, pedunculate, racemose ; raceme elongated, loose; bracteas broad-ovate, membranous, a little coloured, longer than the calyxes ; calyx tubular, membranous, nearly glabrous, with lanceolate, acute teeth, which are shorter than the tube. *%.* S. Native of Brazil, in the province of Goyaz. Leaves like those of *//. pectinata,* and the heads like those of *H. glomerata,* but smaller, few-flowered, and pedunculate.

Few-flowered Hyptis. PI.

134 H. FOLIOSA (St. Hil. mss. ex Benth. lab. p. 117.) shrubby ; ? branches ascending, clothed with rufous villi; leaves on short petioles, broad-ovate, obtuse, crenated, rounded at the base, or cordate, green on both surfaces, and clothed with viscid pubescence, or villous ; racemes sub-secund, leafy, somewhat panicled ; bracteas ovate-lanceolate, exceeding the calyxes • calyx tubular, with lanceolate, erect, acute teeth. fc . ? g' Native of Brazil. Leaves 1-2 inches long.

Leafy Hyptis. Shrub 1 to 2 feet.

135 H. PETR^A (St. Hil. mss. ex Benth. lab. p. 117.) shrubby ; branches erect, tomentose; leaves petiolate, ovate, obtuse, crenated, cuneated at the base, wrinkled, clothed " j * *J rufous tomentum on both surfaces ; heads ovoid, few-no bracon short peduncles, crowded into a short, dense raceme alyxes ; teas ovate-lanceolate, acute, coloured, exceeding the c ^ ect calyx tubular, nearly glabrous, with lanceolate, acute, Minas teeth. P?. S. Native of Brazil, in the province ot ^ Geraes, in the western desert, among rocks near 1 aioo red jsbj slender, naked at the base. Bracteas and calyxes glandular. Racemes sub-secund.

Rock Hyptis. Shrub. R , ja b. p.

136 H. SUBROTU'NDA (Pohl, icon. ined. ex, bentn. 118.) shrubby ; branches erect, twiggy, clothed with nn ^ nate a, cence; leaves small, sessile, oval-rounded, ob * use, ve iny, broadly rounded at the base, obtuse, stiff, coriaceou J^J^ ; green on both surfaces, rather scabrous: floral on simple heads ovoid, few-flowered, racemose ; racemes nearly j bracteas coloured, lanceolate, acutish, ciliated, exceed calyxes; fructiferous calyx tubular, with a trunca the prohardly toothed mouth. F? . S. Native of Brazil, in vince of Goyaz, at Pontefeite.

Roundish-leaved Hyptis. Shrub. p 118.)

137 H. LYTHROIDES (Pohl, icon. ined. ex Benth. ^ { ^ 88S * shrubby; branches erect, twiggy, pubescent; * ea ^ s us on both sile, oval, obtuse, rounded at the base, rather scabrous surfaces, and clothed with rufous pubescence: £ bracteas few-flowered, racemose; raceme elongated, simp ^ ca lyx; lanceolate, acute, coloured, pubescent, longer thai ^ calyx tubularly campanulate, with a truncate *vaout* tube late teeth, ? which are about equal in length to the zend ^ Ag ua Native of Brazil, in the province of Goyaz, at ^ Fria. Differs from *H. subrotunda* in the calyx.

Lythrum-like Hyptis. Shrub. 1 u p, 118.)

138 H. PARVIF6LIA (Pohl, icon. ined. ex Benth. w ht • r leaves shrubby ; branches erect, twiggy, finely P ubes(* at the base, small, petiolate, oval, toothed at top, narrowec ith surfaces, quite entire, stiff, coriaceous, veiny, green on D few-fevered* rather scabrous : floral ones similar; heads ovoid, eOjate-linear» racemose; raceme nearly simple ; bracteas lan the caly* ^ ' coloured, clothed with adpressed villi, longer than ated jlarjly. fructiferous calyx tubular, with a truncate, ciu ro ' vjnCe ot toothed mouth. J? . S. Native of Brazil, in the p Goyaz. Nearly allied to *H. subrotunda.*

Small-leaved Hyptis. Shrub. ,. p. U*V

139 H. RUBICI/NDA (Pohl, icon. ined. ex Benth. i ^ g peti- branches nearly glabrous, with scabrous angles; ^^ cl sne * olate, broad-ovate, shortly acuminated, doubly * er tor n cohose ately rounded at the base, scabrous above, ar 7 ca cis circoid beneath, and more particularly on the nerves ; mo ^ , lnae few-flowered, on short peduncles, paniculately race g; ca ly* teas lanceolate, coloured, twice as long as the ca y^ teeb tubular, with a truncate mouth, and setaceous,^ jja tive ^ which are about equal in length to the tube. *?. *'JUIL^S Oe^eb, Brazil, in several places of the province ot w to % inC hes The whole plant generally purplish. Leaves lg long.

Reddish Hyptis. PI. U to 2± feet. n 9 .) *W*

140 H. MURICA'TA (Schott, mss. ex Benth. lab. p. us ; le ^es baceous ; ? stem nearly glabrous, with scabrous ang cunea teiy petiolate, broad-ovate, acuminated, doubly serrate ti- - labrous rounded at the base, rather scabrous above, and ne a y beneath ; heads depressed, nearly globose, few-flow ^^ cmen sessile ; whorls secund : upper ones approximate ' xeue jj og the remote ; bracteas broad-ovate, acute, villous, e h ^ trUt] C» te calyxes; fructiferous calyx tubular, pubescent, wit er than the mouth, and strict, setaceous teeth, which are short

with hoary tomentum beneath ; heads small, few-flowered, racemose ; peduncles equalling the heads ; racemes strict, elongated, panicled ; bracteas ovate-lanceolate, acuminated, somewhat exceeding the calyxes; calyx pubescent, with a truncate mouth, and strict, setaceous teeth, which are rather shorter than the tube. *11.* ? S. Native of Brazil, in the province of Goyaz, at Villa Boa. Allied to *H. polystdchya,* but more green, and less tomentose, and the heads much smaller.

Small-flowered Hyptis. Pl.

146 H. SPICATA (Poit. ann. mus. 7. p. 474. t. 28. f. *2.)* branches nearly glabrous, with scabrous, prickly edges; leaves petiolate, ovate, acute, unequally serrate-crenated, roundedly cuneated at the base, nearly glabrous on both surfaces, or pubescent above; heads semi-ovoid, loosely racemose; peduncles equal in length to the fructiferous heads; racemes panicled; bracteas ovate, rather membranous, one-half shorter than the fructiferous calyx ; calyx glabrous, elongated in the fructiferous state, inflated at the base, with a truncate mouth, and strict, setaceous teeth, which are shorter than the tube. *$* . S. Native of Tropical America, on the east coast, from Mexico to the provinces of Minas Geraes, and Cisplatin in Brazil; also of St. Domingo, Martinica, Mariane Island, &c. Nepeta mutabilis, Rich, in act. soc. hist. nat. par. Leaves 1-2 inches long. Corollas small, violaceous.

Afyicate-flowered Hyptis. Fl. July, Aug. Clt. 1820. Pl. 4 to 6 feet.

147 H. ROSTRATA (Salzm. pi. bras. exs. ex Benth. lab. p. 121.) branches glabrous, with rough, prickly angles; leaves petiolate, ovate, acute, unequally serrate-crenated, roundly cuneated at the base, glabrous ; heads globose at the base, loosely racemose ; peduncles rather shorter than the fructiferous heads ; bracteas ovate, membranous, glabrous, 3-4 times shorter than the fructiferous calyxes; fructiferous calyx glabrous, inflated at the base, long-beaked, with a truncate mouth, and short, setaceous, strict teeth. *$* . S. Native of Brazil, in shady places near Bahia. Stems branched. Whorls distant, secund.

Beaked-G'Ayxed Hyptis. Pl. 4 to *5* feet.

14S H. TENUIFLORA (Benth. lab. p. 121.) branches bifariously pubescent, with smooth angles; leaves petiolate, ovate, acute, unequally serrated, roundly cuneated at the base, glabrous ; heads ovoid, few-flowered, loosely racemose ; peduncles twice as long as the fructiferous heads ; racemes panicled : bracteas ovate, membranous, one-half shorter than the fructiferous calyxes; fructiferous calyx glabrous, elongated, inflated at the base, with a truncate mouth, and strict, setaceous teeth, which are much shorter than the tube. *$^* S. Native of Brazil, Leandro di Sacramento. Allied to *H. spicata.*

Thin-flowered Hyptis. Pl. *3* to 4 feet. ?

149 H. EXPANSA (Pohl, icon. ined. ex Benth. lab. p. 122.) nearly glabrous ; angles of branches roughish ; leaves petiolate, ovate, acuminated, unequally serrated, cuneated at the base, rather hispid above and on the nerves beneath ; heads ovoid, few-flowered, loosely racemose ; peduncles shorter than the fructiferous heads ; racemes divaricately panicled ; bracteas ovate, acute, membranous, ciliated ; fructiferous calyxes nearly glabrous, scarcely longer than the bracteas, with a truncate mouth, and strict, setaceous teeth, which are one-half shorter than the tube. *X.* ? S. Native of Brazil. Allied to *H. spicata,* but differs in the shorter calyxes, and longer teeth, &c.

Expanded Hyptis. PL ?

150 H. DUBIA (Pohl, icon..ined. ex Benth. lab. p. 122.) pubescent ; angles of branches smooth ; leaves *on* short petioles, ovate, acute, doubly crenated, cuneated at the base, scabrously hispid above, and pubescent on the veins beneath, wrinkled ; heads ovoid, few-flowered, racemose; peduncles very short; racemes a little branched ; bracteas lanceolate, acuminated,

longer than the fructiferous calyxes, pubescent, ciliated; calycine teeth setaceous, strict, one-half longer than the tube. %. ? S. Native of Brazil, in the province of Minas Geraes, at Rio Abaite. Allied to *H. exptinsa,* but is less branched, and more villous, and the bracteas are narrower and longer.

Doubtful Hyptis. PL ?

SECT. XIII. MESOPH^NRIA (from *fieaog, mesos,* the middle; and or^cupa, *sphaira,* a globe ; in reference to the heads of flowers being semi-globose.) Benth. lab. p. 122. Heads rather loose, few-flowered. Bracteas sometimes minute, or scarcely any, sometimes subulate, about equal in length to the calyxes. Calyxes nearly sessile in the heads, obliquely campanulate in the fructiferous state, with a truncate mouth, and subulate, strict teeth ; the throat closed inside by hairs, or more or less ciliated, with 5 fascicles of hairs, which are disposed between the teeth. Tube of corolla inclosed, or a little exserted.—Herbs, rarely shrubs, for the most part pilose. Heads pedunculate : lower ones rarely all from the axils of the leaves : cauline ones conforming, solitary, or in fascicles : the superior ones usually disposed into a loose panicle.

151 H. PLECTRANTHOÏDES (Benth. lab. p. 122.) stem herbaceous, erect, clothed with long hairs, with smooth angles ; leaves on very short petioles, broad-ovate, or roundish, obtuse, crenately serrated, rounded at the base, or subcordate, pilose; heads few-flowered, loosely racemose, pedunculate; racemes loose, panicled; bracteas lanceolate, acute, shorter than the calyxes, villous : teeth equalling the tube. 1/. ? S. Native of the South of Brazil, Sello. Stem generally purplish. Leaves an inch long. Corolla twice as long as the calyx. Stamens exserted.

***Plectranthus-like* Hyptis. PL**

152 H. PU^MILA (Pohl, icon. ined. ex Benth. lab. p. 122.) herbaceous, humble, erect; stem beset with spreading pili; leaves on very short petioles, broad-ovate, roundish, serrately crenated, rounded, or subcordate at the base, green, pilose ; heads loosely few-flowered, pedunculate, racemose; bracteas loose, subulate, shorter than the calyxes; fructiferous calyx sessile : throat villous inside. 1/. ? S. Native of Brazil, in the province of Goyaz, on Serra de Chrystais. Very nearly allied to *H. communis,* but smaller, and more pilose, and the leaves are broader.

Dwarf Hyptis. PL \ foot.

153 H. COMMUNIS (St. Hil. mss. ex Benth. lab. p. 123.) herbaceous, humble, glabrous, or more or less villous; leaves on short petioles, rounded, ovate, or^blong, crenated, cuneated, or narrowed at the base ; heads loosely few-flowered, pedunculate, racemose ; bracteas loosely subulate; calyxes sessile, villous : throat woolly inside. 1/. S. Native of Brazil, in the province of Minas Geraes, in elevated fields, and among rubbish on the mountains. H. flabellata, Pohl, icon. ined. Stems often rooting at the base. Corolla blue, nearly glabrous outside.

Common Hyptis. PL £ to 1 foot.

154 H. FRUTICOSA (Salzm. pi. bras, exsic. ex Benth. lab. p. 123.) branches divaricate, tomentose while young; leaves on short petioles, ovate, obtuse, crenated, cuneated at the base, much wrinkled, pale beneath ; peduncles solitary, axillary, longer than the leaves ; heads loosely few-flowered, nearly globose ; bracteas loose, subulate ; fructiferous calyx rather gibbous above the base, with an oblique, villous mouth, and spreading teeth. *? . S. Native of Brazil, in the provinces of Bahia, Minas Geraes, in fields and woods. Corolla blue, scarcely pubescent, equalling the calycine teeth. Genitals inclosed

Shrubby Hyptis. Shrub 4 to 6 feet.

155 H. MELISSOÏDES (H. B. et Kunth, nov. gen. amer. 2. p. 320.) suffruticose; branches clothed with rufous v.lhi; l« ^ short petioles, ovate, acute, serrately crenated, roundea tum base, villous above, and densely clothed with hoary . W "e" ^ beneath ; peduncles very short, axillary, usually twin, many-flowered, rather loose, secund; bracteas min„l r' throat ceous ; calyx pubescent, ovate, strict in the ripe sta • ^ ^ villous inside : teeth short, setaceous, villous. I? • °- on the of Tropical America, in bushy places in New Granada, ^ banks of the river Juanambu. Shrub much brancne made. Corolla white, downy.

Melissa-like Hyptis. Shrub 4 to 6 feet.

156 H. PILOSA (Benth. lab. p. 124.) branches ratherj ^ leaves petiolate, ovate, acute, serrulated, cordate tbe leaveS; rather canescent; peduncles rather longer than. seta. heads 6-10-flowered, nearly globose; bracteas "V"^^ equal, ceous ; fructiferous calyx much increased, 0^ate tu adth of the truncate, very hairy: teeth shorter than the bre on inch calyx. ^. S. Native of Peru, Pavon. Leaves long.

Pilose Hyptis. Shrub.

157 H. SUAVEWNS (Poit. ann. mus. par. /. P broad-2.) stem herbaceous, erect, pilose; leaves pet bag e: upper ovate, sinuately serrated ; lower ones cordate at tn ones rounded, or cuneated, pubescent, villous, or d d b t villous o f peduncles rather shorter than the few-flowered neau or 2-3-together in the axils, racemose ; racerTles £ vill bracteas minute, setaceous ; mouth of calyx tru ^ £10 ©. S. Native of Tropical America, from Me Janeiro, Peru ; also of several of the West ma &c. Philippines, Manilla, Moluccas, about Madras, J. Ballota suaveolens, Lin. spec. 815. Jacq. hort. vni • fl t. 42. Bystropdgon suaveolens, Lher. sert. an S ; R pr. i Plumieri, Poitt ann. mus. 7. p. 473. H. ebracteata, Ait. hort. kew. ed. 2. vol. 3. p. 391. Bystropogon Blum, bijdr. p. 824.?—Plum. icon. t. 163. f. ti^ 257. t. 18. f. 3.—Sloan, hist. 1. p. 171. *' fla' blue, annual, branched. Leaves 1-2 inches long, t^roi ^ % w

Sweet-scented Hyptis. Fl. July, Aug. Clt. lo 6 feet.

158 H. GRAVE^OLENS (Salzm. pi. bras, exsic ex p. 125.) stem herbaceous, erect, rather P llose, rrated, angles ; leaves petiolate, ovate, acute, sinuately ser at the base, wrinkled, clothed with clammy P ubeSC tjian surfaces; peduncles axillary, many times longer flowered fascicles : superior ones irregularly panicle minute. 0. S, Native of Brazil, on the- sea heavy an* Bahia. Nearly allied to *H. suaveolens.* Odour aromatic.

Heavy-scented Hyptis. PL 4 to 6 feet.

159 H. UMBROSA (Salzm. pi. bras, exsic. ex 125.) stem herbaceous, erect, villous, with scabrous nearly naked axils; leaves petiolate, broad-ova- gularly serrated, or deeply lobed, rounded at the pilose above, pale and pubescent beneath, or at than peduncles axillary, filiform, sub-fasciculate, rnuci the loose, 3-10-flowered heads; bracteas minute, calyx pubescent: mouth villous. ©. S. Native pi woods near Bahia ; also very common in the prov Janeiro, Minas Geraes, Goyaz, and St. Paul, in and of Peru, at Huanuco and Tarma, Mathews. Schranck, in syll. pi. ratisb. 2. p. *56.1* Nearly *viscida,* but the hairs are less clammy. Corollas *DI*

Shaded Hyptis. PL

160 H. POLYA'NTHA (Poit. ann. mus. 7. p. herbaceous, erect, pubescently villous; the axils very pi leaves petiolate, ovate, acutish, irregularly crenate-serratea,

or cordate at the base, scabrous from pili above, and clothed with white tomentum beneath; panicle ample; peduncles filiform, much longer than the loosely 5-20-flowered heads; bracteas minute, setaceous ; calyx pubescent, with a villous mouth. ©•?S. Native of Peru, near Quito, Loxa, and Gonzanama. tfystrop6gon sidsefolium, Lher. sert. angl. 19.? Herb sweet-scented. Leaves U to 2 inches Ions. Corollas minute, pubescent, violaceous.

Many-flowered Hyptis. Fl. July, Aug. Clt. 1819. PL 4 to 6 feet.

cloth 11H\LILACINA (Schiede, et Deppe, in Linnsea, 5. p. 101.) lifc. W*lb ^soft pubescence; leaves petiolate, ovate, or el- clothed with "Ptic, acute, doubly serrated, cuneated at the base, or narrowed, Pubescent above, canescently tomentose beneath ; heads loosely jew-nowered, axillary, opposite, pedunculate, small ; bracteas Oose, setaceous, scarcely shorter than the calyx ; calyx villous, .*ate, with spreading, subulately acuminated teeth. ©.? S. native of Mexico, about Jalapa, &c, among bushes. Nearly pllled to the preceding, but differs in the leaves and calyx, &c. Corolla lilac, puberulous.

^ac-flowered Hyptis. PL 2 to 3 feet.

32fr? URTICOIDES (H. B. et Kunth, nov. gen. amer. 2. p. u0 stem herbaceous, erect, downy, with rather rough angles; Aves Petiolate, ovate, acute, serrated, cuneated at the base, «ner hispid above, and pubescent beneath ; heads loosely few-cem on lonS peduncles, disposed in secund, panicled ra-mes 5 bracteas minute, setaceous; calyx pubescent, with a ^1]ous mouth. ©.? S. Native of Mexico, at the foot of i oun l Macultipec, near Jalapa. Branches tetragonal. Corol-£ mi nute. An intermediate species between *H. polydntha* and **• *pectincita.*

***ettk-like* Hyptis. PL**

8i. 68. H' RACEMULOSA (Mart. mss. ex Benth. lab. p. 126.) sm £erbaceous, erect, clothed with rufous pubescence, with r m 1 / ngles; leaves petiolate, ovate, acute, doubly serrated, aba at the base> and running into the petioles, rather villous ove, and clothed with rufous tomentum beneath; cymes capi-sec *, ew-flowered, on very short peduncles, disposed in sub-cWl ^ axillary racemes; bracteas minute, setaceous; calyx tha u With rufous tomentum: mouth villous: teeth shorter Min in tUbe# ®<S- Native of Brazil, in the provinces of Hah, aes aml R>o Janeiro, in elevated pastures and woods, distinct ol y^chya9 but the bracteas and calyxes are very purple ex a Pale Violet> 6X St# Hil<> pale red> SpOtted Wkh FU u JF"S« PL 2 to *S* feet.

Ben?u ; LAMHF6LIA (Weinm. in syll. pi. ratisb. 1. p. 226. ex cordat P, 127,) stem branched> Pilose> radicant; leaves pili, ate-ovate, acuminated, crenately toothed, scabrous from short petlolate> whitish beneath; heads axillary, pedunculate, head n the internodes ; bracteas setaceous, equalling the s usN Ve of Brazil Stem acutely tetragonaL Leaves 2i. % inch i ^nes long. Heads size of peas. Corolla small, white, spotted Wltn violet.

^^-*nettle-leaved* Hyptis. PL procumbent.

frolECT, XIV- PECTINA^RIA (from *pecten,* a comb; so called ro^m pectinatej unilateral cymes.) Benth. lab. p. 127. Cymes --- nrst a most capitate, but at length elongated, unilateral, and Pectinate. Bracteas loose, setaceous. Calyxes nearly sessile, a 7 7 in the fructiferous state, with strict, setaceous teeth, i^eA hroat closed by villi inside- r>

127 \ i PECTINATA (Poit. ann. mus. 7. p. 474. Benth. lab. *'\) glabrous, or downy; leaves petiolate, ovate, crenately-serrated, rounded at the base, pale beneath ; cymes many-flowered, rather loose, paniculately racemose, at length elongated and incurved; bracteas shorter than the calyxes ?; teeth of calyx shorter than the tube. %. S. Native of Tropical America, common in cretaceous, sandy places from Mexico to Rio J neiro; Peru ; most of the West India Islands ; Guinea ; Madagascar ; East Indies, at Madras ; Arabia, at Sennaar, Bove. Mentha perilloides, Lin. syst. ed. 13. p. 445, but not of others. Nepeta pectinata, Lin. spec. 799. Bystropogon pectinatum, Lher. sert. angl. p. 19. Nepeta aristata, Rich, act. soc. hist. nat. par. p. 110. Brotera Persica, Spreng. in Lin. trans. 6. p. 151. t. 4. Hyptis Persica, Poit. ann. mus. 7. p. 471. Ballota disticha, Rodsch. obs. p. ti5. Meyer, esseq. p. 209, but not of Lin. Ballota suaveolens, Rodsch. bald. diar. fasc. 28. p. 79. ex Meyer, 1. c. but not of Lin. Hyptis racemdsa, Zucc. m act. acad. taur. ? Bystropogon coarctatum, Thonn. et Schum. in act. acad. hafn. 4. p. 34. Stem rather woody at the base. Leaves variable in form and size. Corolla small, pale purple, or yellow, spotted with purple.

Pectinate Hyptis. FL year. Clt. 1776. " PL 2 to *5* feet.

SECT. XV. MENTHIDIUM (SO called from the habit of the species being that of Mentha, or Mint.) Benth. lab. p. 128. Flowers sessile, or on short pedicels, disposed usually in many-flowered whorls. Bracteas minute, or hardly any, or loose and setaceous. Calyx campanulate, equal; throat naked inside. Corolla hardly exceeding the calyx.—Herbs often panicled at apex.

166 H. PULEGIOIDES (Pohl, icon. ined. ex Benth. lab. p. 128.) herbaceous, procumbent at the base ; branches ascending, clothed with adpressed pubescence; leaves on short petioles, lanceolate, acute, serrated, narrowed at the base, wrinkled, very villous : floral ones conform, smaller ; whorls all distinct, and globose, densely many-flowered; bracteas subulate, shorter than the calyx; calyx tubular, with a villous base, and lanceolate, subulate, erect, short teeth. %. ? S. Native of Brazil, in the province of Minas Geraes, at Fazenda do Pari. This species is intermediate between the present section and sect. *Apodbtes.*

***Penny-Royal-like* Hyptis. PL ?**

167 H. A^BIDA (H. B. et Kunth, nov. gen. amer. 2. p. 319.) shrubby, clothed with floccose wool; leaves nearly sessile, ovate, obtuse, or the upper ones are subulately acuminated, crenated, roundly cuneated at the base, wrinkled; whorls loose, globose, distinct; racemes sub-panicled ; bracteas short, setaceous; fructiferous calyx nearly globose, densely woolly : teeth very soft, setaceous, about equal in length to the tube. *?• S. Native of Mexico, at Lake Cusco, in the valley of St. Jago, and near Valladolid. Corollas hardly longer than the calyx.

Whitish Hyptis. FL July, Aug. Clt. 1824. Shrub 2 to *3* feet.

168 H. PUBE'SCENS (Benth. lab. p. 129.) suffruticose, clothed with tomentose pubescence ; leaves nearly sessile, oblong, acutish, serrated, rounded at the base, a little wrinkled, pale beneath ; whorls small, globose, many-flowered, remote ; racemes panicled ; bracteas short, setaceous ; calyx villous : teeth stiff, subulate, equalling the tube, at length spreading in a stellate manner. Pj • S. Native of New Spain. Branches bluntly tetragonal. Corolla a little longer than the calycine teeth.

Pubescent Hyptis. Shrub.

169 H. MOCINIANA (Benth. lab. p. 129.) suffruticose, pubescent; leaves on short petioles, cordate-ovate, doubly serrated, whorls globose, many-flowered, distinct, racemose; racemes panicled ; bracteas short, setaceous ; calyx villous : teeth stiff, subulate, glabrous, twice as long as the tube, spreading

in a stellate manner. ^ . ? S. Native of New Spain, Moçino et Sesse. Plant clothed with rubiginose pubescence. Leaves 1 to 1| inch long. Corolla shorter than the calycine teeth.

Moçino's Hyptis. Shrub.

170 H. SPINULOSA (Benth. lab. p. 129.) suffFruticose, clothed with fine pubescence ; leaves petiolate, ovate, acuminated, serrulately crenated, cordate at the base; whorls globose, many-flowered, distinct, racemose ; racemes panicled ; bracteas short, setaceous ; calyx ovate, pubescent: teeth stiff, subulate, glabrous, shorter than the tube, spreading in a stellate manner. J? . S. Native of New Spain, Moçino et Sesse. Stem clothed with rufous pubescence.

Spinulose-calyxed Hyptis. Shrub.

171 H. STELLULA'TA (Benth. lab. p. 129.) herbaceous; branches clothed with rusty villi; leaves on short petioles, ovate, acute, serrately crenated, rounded at the base, wrinkled, villous; racemes panicled ; whorls densely globose; bracteas small, setaceous; calyx ovate, villous, with subulate, stellately spreading teeth. ©.?S. Native of Mexico, at Cuernavaca and Toluco, Berlandier. Corolla pubescent, hardly longer than the calyx.

>$7fl7T?/-calyxed Hyptis. PI. 4 to 5 feet.

172 H. SCOPA'RIA (Poit. ann. mus. 7. p. 475. t. 31. f. 2.) shrubby; branches glabrous, with prickly angles ; leaves on short petioles, linear, obtuse, quite entire, or a little denticulated, glabrous; whorls loose, remote, 2-10-flowered; calyx nearly glabrous, with ovate, erect, obtuse teeth. *? . S. Native of Porto Rico and St. Dominica. Saturèia Americana, Poir. diet. 6. p. 571. Saturèia Condae'a, Juss. ex Poir. I.e. Corolla glabrous, hardly exceeding the calyx. Leaves minutely glandular.

Broom Hyptis. Fl. June, Aug. Clt. 1825. Shrub.

173 H. VERTICILLA'TA (Jacq. icon. rar. *2.* t. 113.) suffruticose ; branches erect, pubescent or pilose; leaves on short petioles, lanceolate, acute, serrated, roundly narrowed at the base, clothed with fine pubescence; whorls rather loose, many-flowered, distinct, racemose; calyx ovate, glabrous, with erect, ovate-lanceolate teeth. ^ . S. Native of Mexico, on waysides near Papantla ; and of St. Dominica. Stachys pàtens, Swartz, nov. gen. et spec. p. *88.* Angles of stem smooth. Leaves 1-2 inches long. Corolla white, tinged with red, hardly exceeding the calyx.

Whor led-flowered Hyptis. Shrub *3* to 4 feet.

174 H. FASCICULA'TA (Benth. lab. p. 130.) herbaceous, glabrous, or clothed with fine down ; leaves petiolate, ovate, acute, serrated, a. little wrinkled, green on both surfaces ; racemes elongated, panicled ; whorls loose, many-flowered; bracteas minute, setaceous; fructiferous calyx inclosed, glabrous : teeth ovate, acute, much shorter than the tube. *1(..* ? S. Native of Brazil, near habitations, in humid places in the provinces of Minas Geraes, Rio Janeiro, &c.; and of Buenos Ayres, at Parano. Corollas minute, purplish.

Fascicled-i\owered Hyptis. PI. 1 to 3 feet.

175 H. FASTIGIA'TA (Benth. lab. p. 130.) herbaceous, ascending ; leaves petiolate, ovate, acute, doubly serrated, rounded at the base, green above and villous, but clothed with hoary pubescence beneath; racemes fastigiately panicled; whorls loose, few-flowered; bracteas minute, setaceous; fructiferous calyx increased, glabrous: teeth ovate, acute, much shorter than the tube. %. ? S. Native of Brazil, Sello. Nearly allied to the preceding.

Fastigiate-fiowered Hyptis. PI. 1 to 3 feet.?

176 H. ERIOCA'LYX (St. Hil. mss. ex Benth. lab. p. 131.) herbaceous; stem ascending, clothed with rufous tomentum ; leaves petiolate, ovate, serrately crenated, wrinkled at the base, villous above, and clothed with rufous tomentum beneath; cymes elongated, panicled; whorls loose, few-flowered; teas minute, setaceous ; fructiferous calyx wooiiy, ^ ^ teeth ovate, acute, much longer than the tube. W- of Brazil, in the province of Minas Geraes, at the r 1 Simeon Pareira. Habit of *H. fasciculate,* but the are different.

Woolly-calyxed Hyptis. PI. , , p. isl.)

177 H. VEPRETORUM (Mart. mss. ex p^nth J* shrubby ; leaves petiolate, small, ovate, obtuse, so nated, rounded at the base, rather coriaceous, above, but pale and reticulated beneath; with secund, axillary; fructiferous calyx short, ovate-lanceolate teeth. J? . S. desert fields between Minas Novas and K10 in the province of Minas Geraes. Branches downy, exceeding the calyx a little.

Bramble Hyptis. Shrub.

178 H. VESICULOSA (Benth. lab. p. 131.) stem clothed with fine rusty tomentum ; leaves on long-elliptic, acute, cuneated at the base, crenulately clothed with hoary tomentum beneath; whorls rather secund, distinct, racemose ; racemes minute; fructiferous calyx campanulate, inflated, veiny, with a contracted mouth, and short setaceous S. Native of Guayaquil, Tafalla. Leaves like *dlea salvijolia,* 4-6 inches long and \\ broad. calyx size of a pea, bladdery.

Bladdery-calyxed Hyptis. Shrub.? IQI ^shrubby*

179 H. CA'LIDA (Mart. mss. ex Benth. lab. p. branches pubescent; leaves on short petioles, blunt, a little crenated, wrinkled, canescent minute ; cymes sessile, loose, approximate into a branched raceme; calyxes pedicellate, tubular, truncate mouth, and subulate, strict teeth, than the tube. P2. S. Native of Brazil, in the Minas Geraes, at Serro Frio. Branches 10-15-flowered. This species is intermediate *Menthidium* and sect. *Pectinaria.*

Hot Hyptis. Shrub.

SECT. XVI. BUDDLEIOIDES (from *Buddlea,* Plants with the habit of species of that genus.; *132.* Cymes pedunculate, capitate, many-flowered, panicled. Bracteas minute. Calyxes almost campanulate, with short teeth and naked throat corolla exserted, tomentose outside.—Tall habit of species of *Buddlea.*

180 H. MEMBRANA'CEA (Benth. lab. p. 132.) ed with rufous tomentum ; leaves petiolate, roundly cuneated at the base, very rough above, with rufous tomentum beneath ; fascicles of flowers late, loose, numerous, many-flowered, on short pedicels, urceolate, clothed with rufous very short equal teeth. I? . S. Native 'of Brazil, in vinceof Minas Geraes; and south of Brazil, in woods. bluntly tetragonal. Achenia compressed, girded oy broad membranous wing. Leaves 4-5 inches long.

Membranous-wlnged-seeded Hyptis. Shrub 7 to

181 H. TAFA'EL* (Benth. lab. p. 132.) shrubby tose; leaves petiolate, oblong-lanceolate, cordate at wrinkled above, shining and glabrous, and clothed hoary tomentum beneath; fascicles of flowers pedun loose, many-flowered, panicled ; calyxes on short p

"^S^^u^^JtiSiL ¥2? *MhUhe* > Of tus, fabl,d to haveTen c t d mo *S I t^* of CoCy" fit of jealousv.) *Lin sT%o* 713 S *Wrpine in a* W gen. p.' 113. ed Us'ter I*7 T ^ no* 967* Benth. lab. p. 168. 'V, ?, roUrn_)nstl- 89-

Lm. SYST. *Didynamia, Gymnospirmia* Calw. 1 or tubular, 5-tootl.ed, equal, or sub-bilabaJ7?I canipa,n«late. villo»s inside. Corolla with an indo id t f T "akett> or late, nearly equal, 4-cleft **tunh** • „„ * !u-'and a ^arnpanu- filaments glabrous, naked; anthers *2-* Style shortly bifid; segments bearing the stigmas at ~..... Achenia dry, smooth.—Herbs. Whorls usually many-flowered, sometimes all remote in the axils of the leaves, sometimes approximate into terminal spikes, with the superior floral leaves biactea-formed.—The European mints, as is generally the case with plants which are very———— in highly civilized and long cultivated countries, especially aquatic plants, vary much in appearance; and the repeated attempts by different authors in different countries to reduce these incoostant and ephemeral variations to so many species, have thrown so much confusion into this difficult genus that it is now almost impossible to clear up the chaos thus produced, e:x Benth.

* *Throat of corolla naked inside.*

1 M. LAVANDULA'CEA (Willd. enum, p. 609.) canescent; leaves sessile, lanceolate-linear, quite entire, clothed with hoary tomentum on both surfaces ; spike dense ; calyxes clothed with white tomentum. *If.. U.* Native of Spain ; on Mount Sinai, Bov6; and of the Cape of Good Hope. M. lavandulajfolia, Pers. ench, %. p. 119, Stem erect, branched. Leaves 1| to *2* inches long. Spikes solitary, conical at first, but at length somewhat interrupted at the base. Bracteas subulate* Corollas purple. ? Whorls many-flowered.

Lavender-like Mint. Fl. July, Aug. Clt. 1823. PI. 1 to *2* feet.

2 M. *VXCJCHA* (Wiild, enum. p. G09.) stem humble, panicied; leaves nearly sessile, ovate-cordate, a little toothed, clothed with hoary tomentum on both surfaces; spikes numerous, short; calyxes clothed with villous tomentum. %. H. Native of Greece, and probably of Persia and Arabia, M. spicata, Forsk. in herb. Vahl. M. Crética, and M. Persica, Hortul. Stems ascending. Spikes hardly an inch long, panicied. Whorls 8-fiWered. Corolla twice as long as the calyx, downy outside, purple. *1*

Hoary Mint. Fl. July, Aug. Clt. 1790. PI. A foot.

3 M, TOMENTOSA (D'Urv. mem. soc. Lin. par- 1. p. 323. but not of Borkh.) canescent; stem erect, or ascending, tall; leaves st-ssile, lanceolate, or ovate-lanceolate, irregularly serrated, somewhat refiexed, plicate, undulately curled, clothed with white tomentum on both surfaces; spikes elongated, cylindrical, interrupted at tbe base, somewhat panicied ; calyx clothed with tomentose pubescence. J/. H. Native of Crete, Syria ; Greece, at fountains in the Island of Seym, D'Urviile; Persia, near Teheran. Stems erect, rarely **procumbent** at the base, or ascending. Leaves roundish, or cordate at the base. Spikes numerous. 3-4 inches long, or more. Whorls distinct, many-flowered. Bracteas subulate. Corolla purple, ? downy outside. Fertile stamens exserted.

Tomentose Mint. Pi. 2 to *3* feet.

4 M. SAIYCINA (BiircJj. cat. geo.pl. afr.austr. 1372. Benth. **lab** p 1 70.) canescent; stem erect; leaves petiolate, lanceolate-linear, almost entire, nearly glabrous above, and hoary beneath ; spik- 9WH-1 a. G. Native of the Cape *<%**$ «. Cpensis, Thunb prod, p. 95. ? Leaves size and ^ t]108e *SM. lavanddacca,* but are nearly glabrous above.

'«"««-y-lcaved Mentha. Pi- . t p. X9)

5 M. RO*IEAVA (Benth. in Wall. pl- rar. as.at.j- P ^ plant dothed with w|me tomentum; leaves p e j' inter, oblong, unequally sedated; spikes elongate*, •»» _nipted «* '£ base. V R Native of M ^ f l i * and at Simlah. Habit U M-sylvestris, var. luspicia- distinct, numerous, sinfaH globose , lower ones lenw • ers minute, nearly sessili'. Corollas small, stamens about equal in leiigth to the corolla.

»»oyle* Mint. PI. 1 uflg feet.

6 *M.* SVLVK'STRIS (Lin. spec. 804.) stem erect:;; eav - mbesceat above, or sessile, ovate-lanceolate, tose, but clothed with w or interrupted at the ba conically cylin with villous tomentum, Native of Asia, and places common. Spi the varieties interrupte d at the base. Corolla purplish, pubescent outside. Fertile stamens exserted.

Var. a, mollissima Benth. lab. p. 171.) leaves clothed with soft white tomentum on both surfaces. H. Native of Greece, Dalmatia, Spain, Canary Island, Cashmere; also of England, and Germany. M. mollissima, Borkh. M. incana, Sole herb7"'s^ btlt rar- cens. Roth, catalect. 2. p. 46. M. Chalepénsis, Mill. dict. no, 10.

Var. 0, candicans (Benti lab. 171.) Iea«!J clOjjative short, hoary tomentum on the same countries and pla^^ Crantz. austr. p. *330.* M. paliiL dicaos, Rchb. icon. bot. 10. p. 28^ btda, Rehb. icon. bot. 10, p. 28- t. *9b%>g*

Var 7> glabrata* (Benth. lab. p. 1-71.) leaves brous above, pubescent and rather ho;«Ltf beneat... Native of Britain, South *of* Sweden, • Germany, France, Portugal, **Italy,** na, Caucasus, aioena,vt ^apt-y.joo.. . ^r *oy* ——, „„ „ Rosani, Tenore, fl. nap. append. 5. p. 18." syll p. 281. M. Eisenstadtiana, Nees.

Jar 6 mdgarh (Benth. 1. c.) leaves pubescent above, rather wrinkled, clothed with soft white tomentum beneath. %. H. native in the same countries and places with var. y. M. candrans, M.li. diet. M. villosa, Sole, menth. brit. t. I. & 2. M. sylvestris, *a,* Srmth, in Lin. trans. 5. p. 179. engl. bot. t. **68«i** M- graussima, Willd. spec. 3. p. 75. M. Niltaca, Willd. spec. 3. p. 7G. but not of Vahl. M. longifolia, Hub's, **aogl.** p. J»L M. tomentosa, Borkh. M. **hybrid*,** Schleich. pl. exsic. cart. 1. no.*55.* ? M. reflexifolia, Opiz, in bot. zeit. 1824. *2.* p. *Mo. M.* suavis, Hoffm. ? ex Smith, in Rees' cycl. vol. *23.* but not of Juss, M. Wierzbeckiana, Opiz, 1. c. ? M. oblonga, Opiz, 1. c. M. Ratisbonensis, Opb, I. c.

Var. t, nemordsa (Benth. lab. p. 171.) leaves ovate-oblong, ^^ien and pulieu pubescent above, and clothed with loose, white toraentum beneath. %. H. Native of Catalonia, Italy, and probably of Germany; Ceylon, Macrae; Brazil, St. Hilaire. M. nemorosa, Willd. spec. 3. p. 75. M. sylvestris, Sole, mentli. brit. t. 3. Oed. fl. dan. 484. M. sylvestris, S, Smith, engl.

Lin. M. Nillaca, Jacq. hort. vind. 3. p. 46. t. 87. but not of Vahl. M. serótina, Tenore, fl. nep. t. 156. syll p. 281. M. "irta, lieck. fl. fr. 220. ex Fresen. syii. pi. raueo.*^ bably of Willd. *M.* dumet6rum, Schultes, ? ex Hchb

exc p. 310. M. gratissima, Wigg. prim. fl. hols. 43. ex Roth, ent> fl* germ. 2. pt. 2. p. 6. M. sapida, Tausch. ? ex Rchb. fl. |e ".?- *xc- P. 310. M. Halleri, Gmel. fl. bad. 2. p. 594. ? ex ttcnb.fl.germ.exe. p. 310. M. sylvestris, nemordsa, Rchb. lcon.bot.10.p. 28. t. 984.

«r- ?, *urticcefblia ;* stem divaricately branched; spikes «e i p Native, interrupted; whorls few-flowered, distinct. %. H P. 2«* °/ NaPles, M- urticaefolia, Tenor, fl. nap. t. 157. syll. syll. p. 284. ^' origan°^es, Tenor, fl. nap. prod. app. 5. p. 19. Prof ar* 7i ° r ^ a (Bentn-]ab. p. 172.) leaves undulately curled, hen °UJ! toohed, rather rugose, clothed with white tomentum „Jj V* H. Native of many parts of Europe, and in tithe M, undulata> Willd. enum. p. 608. Nees. pi. med. «r a !?Su*e. M'. velutina, Lejeune. M. dulcissima, Dumort R £n. • b% p. 48.? M. enspa, Tenore, fl. nap. 2. p. 29. folP ^on> tf 50- M« serotina, Tenore, syll. p. 281.? M. menT Piz> eX Fresen- syll- Pl- soc- ratisb- 2- P- 22G- M- t0" lU 0sa, H oppe, et Hornsch. ex Rchb. fl. germ. exc. p. 310. nan markii> Tenore, fl. nep. prod, append. 5. p. 19. syll. fl. RcM *- 282, exc^us ive of the syn. of Schrad. M. emarginata, hot iA lCOn, bot* 1O, P- 27. t. 979. M. undulata, Rchb. icon. p> 27- u 98o-

feet or Horse Mint> FL July» Aug- Britain- PL l to 2 sessil M. ROTUNDIFOLIA (Lin. spec. *825.)* stem erect; leaves above ° ^ate„roundisn» crenated, wrinkled, pubescently hairy coni n clothed with loose white wool beneath ; spikes dense, out E cylindrical ; calyxes hairy. %. H. Native through- Sibe Uro Pe> Africa in the region of the Mediterranean, and of Mad lSj amon g rubbish by way sides, and in ditches ; also of escarTrf / nd Nortl) America, in like situations, but probably Smith gardens ; plentiful in some parts of Britain. 2, p 0 en S K bot- 7. t. 446. M. macrostachya, Tenore, fl. nep. 379 f t% 56# syll# P* 2S2- M- neglecta, Tenore, fl. nap. 2. p. 78 lv n 57# f, 1# ex syJl- 281- M- ^ragrans, Presl. del. prag. p. ^ buss prod. fl. sic. 2. p. *88.* M. rugosa, Lam. fl. fr. 2. p' 23o Roth< catal- 2- P- 65- ex Fresen- syJl- Pl- soc- ratisb- 2- c- St M\suaveolens> Ehrh. beitr. *7.* p. 149. ex Fresen. 1. obtUs Gm Pamcled by a few branches at top. Leaves usually stamens G> roundish cordate at the base. Corollas whitish. Sterile exserted.

Round-leaved Mint. Fl. July, Sept. Britain. PI. 1 to 2 feet.

sile, ov PR^TENSIS (Sole> menth. brit. t. 17.) leaves nearly ses- P^hesc ate„-anceo^ate> or oblong, serrated, glabrous, or finely smaller TM, &S ^* as ^e erect stem: ^ora^ ^eaves sim^ar» but the wh i SU^er^or ones broad-lanceolate, about twice as long as calyx S wnorls all remote, globose; pedicels glabrous ; North Ca m Panulate> with hairy teeth. %. H. Native of the but h ii Europe 5 in England in ditches and watery places, apnar & ly spontaneous, Sole ; Sweden, in cultivated places, edf gd Wild< M* rubra> Huds- an g L ex Fries» nov, fl* suec* brit t "i?" 179> but not of Smitn- M- gentilis» Sole> menth. in £in' 1 Smitn> engl. bot. 7. t. 449. M. gracilis, y, Smith, branch 5# p* 210> Stem PurPlish red» with short> erect Cauli 6S l' g*abrous> or furnished with a few spreading hairs, ben* fU eaves deep green, or reddish, glabrous above, but paler roll! Wlh a few hairs on the veinS* W1?orls denSe* Co" inclo ^^ Sla brous, or pubescent outside. Stamens all Style exserted.

9 IU Mint, Fl- July> Aug- Britain. PL 1 to 2 feet, pub SUAXyis (Guss. pi. rar. p. 387. t. *66.)* clothed with soft rouJTT 06, or Villi ; leaves Petiolate> ovate> acute> serrated» Unceol at the base, pale beneath, or hoary : floral leaves small, late, or conforming to the lower cauline ones ; whorls distinct: lower ones remote ; upper ones disposed in a cylindrical spike. *11.* H. Native of the South of France, Italy, and Sicily. M. pubescens, Willd. enum. p. 608. ? M. divaricata, Lag. ? M. balsamea, Willd. enum. p. 608. ? M. hirta, Willd. enum. 1. c. Link, enum. 2. p. 105. M. pubescens, Rchb. icon. bot. 10. p. *27. t.* 978. M. glomerulata, Jan. M. Langii, Geiger, pharm. bot. 1832. and Nees, pi. med. with a figure. Leaves more or less canescent beneath. Stem usually decumbent at the base, branched ; branches ascending, rarely erectish. Leaves like those of *M. Piperita,* but soft: upper ones exceeding the whorls. Corolla red, hardly exceeding the calyx. Stamens inclosed. Style exserted.

Sweet Mint. Fl. July, Aug. Clt. 1S04. PI. 1 to 2 feet.

10 M. VIRTDIS (Lin. spec. 804.) stem erect; leaves nearly sessile, ovate-lanceolate, unequally serrated, and are, as well as the stems, glabrous : floral ones all bractea-formed, rather longer than the whorls, and are, as well as the calyxes, hairy, or glabrous; spikes cylindrical, loose ; whorls approximate, or the lower ones or all are distant. %. H. Native of the temperate parts of Europe, among rubbish ; in England and Scotland, France, &c.; also at the Cape of Good Hope, and North and South America, but probably has been carried thither from Europe. Sole, menth. brit. t. *5.* Nees, pi. med. with a figure. Smith, engl. bot. t. 2424. Fl. dan. 1876. M. verticillata, Feuill. chil. p. 42. t. 28. M. spicata, Crantz, austr. *328.* M. ocimiodora, Opiz. M. brevispicata, Lehm. sem. hort, hamb. 1828. M. balsamea, Rchb. fl. germ. exc. p. 309. ? but not of Willd. M. Isevigata, Willd. enum. p. 609. N. Niliaca, Vahl, symb. 3. p. *75. M.* Pudlna, Hamilt. ex Benth. in Wall. pi. rar. 1. p. 29. M. tenuis, Michx. fl. bor. amer. 2. p. 2. Stature, habit, and form of leaves that of *M. sylvestris*^ but is easily distinguished from that species by the stems and leaves being constantly quite glabrous. Spikes usually hairy, but sometimes also glabrous. Corollas purplish. There are several species of Mint cultivated in gardens for culinary purposes, but principally spearmint. The young leaves and tops of it are used in spring salads, and form an ingredient in soups. They are also employed to give flavour to certain dishes, as peas, &c, being boiled for a time, and then withdrawn, in the manner of garlic. The leaves have a warm, roughish, bitter taste, and a strong, not unpleasant smell. Their virtues are stomachic and carminitive. The culture of spearmint is the same as that for peppermint, which see. In order to have young leaves and tops all the summer, cut down some advanced stalks every month, when young shoots will be produced; and to have dried balm for winter, permit others to complete their growth, and come into blossom. Dry the crop thus gathered in the shade, and afterwards keep it in small bundles, (fig. 76.)

FIG. *76.*



Far. /3, *angustifolia* (Lag. ex Benth. lab. p. 174.) leaves narrow. %. H. M. tenuifblia, Opiz, ex Rchb. fl. germ. exc. p. 309. M. Lejeunii, Opiz, ex Rchb. 1. c. M. Michelii, Rchb. icon. bot. 10. p. 27. t. 981.

Var. y, *crispa* (Benth. lab. p. 174.) leaves curled. 1/. H. M. crispata, Schrad. ex Willd. enum. 608. Nees, pi. off. with a figure. M. Harcynica, Röhl, deutch. fl. M. crispa, Roth, tent. fl. germ. 1. p. 248. but not of Lin. M. cordifolia, Opiz,

Tourn. inst. t. 89. Lin. gen. no. 36. Schreb. gen. no. 44. . p. 111. ed. Usteri, p. 134. Benin, lab. p. 185.

SYST. *Didndria, Monogjnia.* Calyx caropanulate, equal, 4-5-toothed; throat naked inside. Corolla hardly exceeding the calyx, campamlate, equal, 4-eleft. Superior stamens wanting, or sterile, filiform, capitellate, shorter than the corolla : inferior fertile exserted, **fertile,** distant; anthers 2-celled : cells parallel, rather distinct. Style somewhat equally bifid at top ; stigmas subulate, terminal. Achenia dry, smooth, **with** thickened margins, trigonal, truncate at apex, attenuated at the base. Herbs. Leaves acutely toothed or pinnatifid: floral ones similar to the rest, exceeding the verticils. Flowers in many-flowered, axillary. Interior **bracteas** minute: outer ones sometimes exceeding the calyxes in the inferior whorls. Flowers small, sessile. This genus is nearly allied to *Mentha,* but differs from it in **the** stamens being sterile or ***wanting,*** and in the achenia being obliquely thinned on the margin.

1 L. VIRGINICUS (Lin. spec. p. 30.) nearly glabrous; stem erect, somewhat tetragonal at the base; leaves oblong-elliptic, narrowed at both ends, deeply toothed; calyx, 4-toothed : teeth ovate, obtuse, nearly equalling the calyx. %. H. Native of North America, in watery places from New England to Carolina, Virginia, &c. L. Europaeus, Pursh, fl. amer. sept. 1. p. 16. Michx. fl. bor. amer. 1. p. 14. but not of Lin, L. bracteatus, Mubl, ex Link, jabrb. 1-3. p. 55. L, Americanus, Muht. ex Bart. fl. phil. 1. p. 12. Stolons not seen. Stem glabrous, acutely tetragonal. Leaves very variable, glabrous. Corollas white.

Far, a, ***dissielui*** (Benth. lab. p. 187.) leaves usually pinnatifid. If.. H. Native principally of the northern region of North America. L. exaltatus, Elliott, bot. car. 1. p. 187. **but** not of Lin. L. **heterophyllus,'** Eah'n, mcd. fl. 2. p. 28.

*Far. (S, **vulgaris*** (Benth. lab. p. 187.) leaves generally sinuated. *X.* H. Native of the middle region of North America, *h.* sinuatus, Elliott, bot. car. 1. p, 187. L, vulgaris, Nutt. gen. amer. 1. p. 15.

Far. y, angustlfblius (Benth. Jab, p. 187.) leaves for the most part linear, and almost quite entire. If,. H. Native of the southern region of North America. L. angustjfolius, Nutt. gen. amer. 1. p. 15. L. longifolius, Rafin. med. fl. %, p. 28. L. Pennsylvanicus, Muhl. ex Rafin. I. c, L. pauciflorus, Rafin. 1. c. ?

Simiated4co.ved Water- Horehound. PL 1 to 2 feet.

7 L. AUSTRA'LIS (R. Br. prod. p. 500. Benth, lab. p. 716.) stem erect, quite glabrous, or hispid from a few pili; leaves almost sessile, oblong-lanceolate, narrowed at both ends, sharply toothed, quite glabrous above or on both surfaces, shining or pubescent beneath ; whorls many-flowered; calyx 5-toothed: teeth, as well as the bracteas, very acute ; rudiments of sterile stamens capitate; achenia shorter than the tube of the calyx. %.. H. Native of Eastern Siberia; China; **New South Wales,** at Port Jackson ; and on the south coast of New Holland ; also of Van Diemen's Land. L. Europaj'us, y, argutus, Benth, lab. p. 186. L, lucidus, Turcz. mss. This species differs from *L. Europafus* besides habit, in the rudiments of sterile stamens being present; and it is also very nearly allied to Z. *sinuhtus;* but differs in habit, almost sessile leaves, and in the calyxes and bracteas being very acute.

Southern Water-Horehound. Fl. July, Aug. Clt. 1823. PI. 1 to 3 feet.

i' a : paleaceous ar ilius.) Blum, hijdr. p. 840. Benth. lab. p. 643.

Lin. syst. *Didynamia, Gymnospermia.* Calyx larger than the corolla, sub-bilabiate; upper lip erect, ovate; lower one a little le fthorter, i = longer than the calyx, spreading, bind. Corolla ar rec-t, emargfnate; tubular; ;imb bilabiate; upper lip short, " lip senn'iri and concave. Stamens lower nearly equal, ascending; •ntlu;rs I-celkdt, Aehenia 4, inc;. in the permanent calyx, crowded •. *a* paleai —Herbs vi rbs HHfeed leaves, which an opposite, b tticillatet- soft pubescence. Flowers •teal, spicate, terminal. •! tiie I. A. BRACHYSIPHON (Blum. bijdr. p. 841.) spike cylind ibOB. dense-flowered; bracteas many-flowered; leaves obovate-obl -.teas I-flowered, higlandular' *ii* t;;c base irssifi- ; - *&h-* edges of rivulets about Linga Jattie in the prov !£.? S, Natm the Dense-flowered Achyrospermum. Pl. J to 1 foot. • unt Bur;u 2 A. PAUCIFLORUS (Blum. bijdr. 841.) spike io \ to I Toot.?'" I-flowered, higlandular' *ii* t;;c base irssifi- ; - *&h-* quite entire at the base. U. ? S, Natm the higher woods, in humid places on M unt Bur;u Phlomis-like Achyrospermum. Pl. J to 1 foot. 3 A. FRUTICOSUM (Benth. lab. p. 643.) shrubby, with pubescent branches; leaves ovate, obtuse, broadly crenated, rounded at the base, minutely glatuUilar belies th, on cuneated winged petioles; whorls 6-lowered, disposed in ! oose terminal spikes. Shrubby Achyrospermum. Pl. 3 to 4 feet. Cult. •adagascar, JLynll, Bojer. Sipbx p For culture and propagation, oe *H< a,* p. 856. ^ y x pu Ascent, w ith a n >ii th, Co- Wiffj twice as brig as die calyx, of a splendent •urn. Shrub.

H (iui ;.\uv (nairi'd in onour B»rt., resident at Kamaon.) Wall, to tin tram. 13.. I. IS- 6 (l, suuincurvedj almost equally 5- rl inside. Corolla with a;, • a in- b;~ • Jr ! *Mv&e,* a dilated throat, and a bila- : /' (l'n-: lip erect, entire, flatwise ; lower or te entire Jobt-si Stamens 4, *«ynamoug, !- . longest; filnmt'iits viaked *it* the ^?s p ffl;:: :ls at length diifiMncate. •^y^ about e<jaally bifid at cop; lobes fibula te, stignaatifer oils bran* Achenia oblong, dry, smooth, drawn out into a mem- ,i v a r t0 V-- -Twining orscandent, usuaDy tomentose.not pilose Ma] ; ., W >or1s ioose, axillary, or approximating into a termi- " , I'! e* Kracteas minvjte. Corollas scarlet. • • (Wall. I.e. ftinr. fl- *r,:ip.* 1. p. IS. t. ^) leaves, nearly glabrous, roughish, canescent from line tomertfetm while young, as well as the calyxes: calydne* teetli ovate, obi use; upper lip of •rolla ovate. *t,* . ^ *G.* Native of Nipafct Hfts- tingia scandens, R. «b,'? HoimaJcioidia ffiindens, Sweet. ? Leaves ovate, acuminated, 2-4 i^-slong. WborJs ftw-fiowej inches long, which is tetal ! tim T t i n g i n u , a S P ^ : • i s t e # a l ! , s o m „ Cor M P o S e d [i n short axiUary «cemutes. Cslyx- tose. "2 scarlet, twice the^length of the calyx.

hLTr' P^ffira (Bentb. Jab. p. 644,) young leaves and ea- **** *ff.^S.* Native of «osainsthan. ^^feMlowered ColqahouinB. Shrub twining.

4 L ^EMIT. (Wall. tent. 3. nap. 1. p. 14. pi. s«aL rar. 3. p. ;"-; under Burface? of leaves, stems, and calyxes clothed »,whii i m . ^ i y i , ; t l e t e e t h ovate, obtuse; upper lip cor olla ovate. !;.^G. Native efKftBiaon, Wall. Corollas •ittle s(«a i^. t|ian ^^ 'oi a coccJ^^ but the habit is similar.

Clothed Colquhounia. Shrub twining.

3 C. VELUTINA (Wall. pl. rar. asiat. 1. p. 65, and 8. p. 43, t. 268.) stems, leaves, and calyxes clothed with velvety pt bescence; calycine teeth i?ro;irf-!a: upper ii corolla,, (iblflhg. H. ^ S. Native of Ava, on Mount r) Don g. This differs from b : . preceding by the calyx being one half smaller, in the corolla being more exserted, with *a* VT),: throat, and in the colour being • ai^ge, dotted with b red, not scarlet.

Elegant Colquhounia. Shrub twining.

Cult. These elegant and curious shrubs are well fitted for ornamenting rafters in greetiboosts or stoi es. A light rich soil wii] answer thern well, or one cb&iposcd of eq al parts of loam, sand, and pear; and younc cuttings will strike root readily in the sam« kind of earth qntler a* hand-glass-i^ft a *fttle* botioni heal.

Ttibe'X.

PRAS1 E Æ (the genera contained in t his tribe agree with *Prduum* in ;'• e characters given below.) Benth. lab. p 646. Caly .< nearly eepal. Corolla bilaiiiiite, Stamens 4, ascending, didynainons ; lower ones the longest, Ad:eui;i (K'siiy, r; ther bacc.

Oil, COMPHOSTE'MMA (from ye^oe and *vrqt)* •". a crbwn; it) reference to ti. corolla being inikttd above the middle.) Wall. pi. J 13. *Benih.* lab. ;

I, ffjWJj panulateor tubi:i ar, nearl', eqital, 5-toi naked ipside. Coi :la wi it a stnit^ht which is: fxanimlafe inside, I u=d above the middle, bila- biate ; lips nearly eq«nl; upper one erect, entire, archill ; lower lip sp reading tri it. Stamens 4, ascending «ndt-r tbe upper lip, late lobes stigmas minute, Achenia fleshy.—Perennial herbs i-.si!ally simple ti or with tilt stems procumbent *and* rootin; generally an or to

1 G. STROD;;. Will. 1. c. DeniJi. i wrinkle ; whorls crowded into a terminal spike or and axillary ; Sowil I broad ovate, exceeding the otlyxts : ealys soft iomentum, with o- times as long as the calyx. %.. S. Xative of the Barman Em • pirfc, at Meong; Prom*;, and on Mount Taong Dong. Stems •, erect. Coulitie leaves 6-10 inches long, aiid 3-(> broad. Corollas yejloiv, pubescent outside ; tulw exceeding the calyx, hardly incurved.

$trvlde-&\iikc Gomphostemma. PI. I to 3 feet.

2 G, vi'mm- (Wall, 1. c. Bemh. 1, c.) stem erect; leaves elliptic-ovate, flaccid, rather hispid abo\ e and pabesieent her eath; whorls few-flowered, crowded into a short terminal spike; floral leaver brae tea-for rued, broad-ovate, exceeding the calyxes ; calyx campanulatc, cloihed with soil villi: teeth lanceolate; Cir. twice as lwig as the calyx. %. *S.* Native of the Purraan Empire, in the pvovit, *oy.* Very nearly allied to *C . strobi- Ilium,* but of mort: humble stature. Leares pale green. ': • few-flowered. Calyx large.

Green tiomphostemnta, 1

Rich. calycer. Ibid. Sur un famille des plantes dites les Calycerées, 4to. Paris, 1821.

Rich. in ann. mus. Ibid. See Ann. mus.

Rich. in mem. mus. Ibid. See Mem. mus.

Rich. class. Richard (Achille). Eléments de botanique, 1 vol. 8vo. Paris, 1819.

Rich. hydr. } Ibid. Monographie du genre Hydrocotyle, 8vo.
Rich. hydrocot. } Bruxelles, 1820.

Rich. med. bot. } Ibid. Botanique médicale, 1 vol. 8vo. Paris, 1823.
Rich. (Mich.) in bot. med. }

Rich. mem. soc. hist. nat. par. Ibid. See Mem. soc. hist. nat. par.

Rich. in ann. sc. nat. Ibid. See Ann. sc. nat.

Rich. in ann. mus. Ibid. See Ann. mus.

Rich. in journ. phys. Ibid. See Journ. phys.

Rich. in mem. mus. Ibid. See Mem. mus.

Richards. in Frankl. journ. } Richardson (John). Flora of the Polar regions, forming an appendix to Capt. Franklin's journey to the shores of the Polar Sea, 1819-1822, 1 vol. 4to. London, 1823.
Rich. in Richards. in Frankl. }
journ. append. }
Richards. in Frankl. narr. journ. }

Risso, hist. orang. Risso (A.). Histoire naturelle des orangers, 2 vols. 4to.

Risso, in ann. mus. Ibid. See Ann. mus.

Riv. irr. } Rivinus (Aug. Quirinus). Ordo plantarum
Riv. mon. irr. } flore irregulari monopetalo, 1 vol. fol. Leipsig, 1690.

Riv. tetr. irr. }
Riv. irr. tetrap. } Ibid. Ordo plantarum flore irregulari tetrapetalo, 1 vol. fol. Leipsig, 1690.
Riv. tetrap. }

Riv. pent. }
Riv. irr. pent. } Ibid. Ordo plantarum flore irregulari pentapetalo, 1 vol. fol. Leipsig, 1699.
Riv. pentap. irr. }
Riv. pent. irreg. }

Rob. icon. Robert (Nicolas). Icones plantarum, fol. Paris, 1701.

Rodrig. in Log. elench. madr. Rodriguez (Jos.). See Log. elench. hort. madr.

Rochel. del. pl. rar. bannat. Rochel (Anton.). Pflanzen Umrisse aus dem südlichen Karpath des Bannats, 1 vol. 8vo. 1820.

Roem. neog. Roemer (John Jacq.). Neues Magazin für die Botanik, 1 vol. 8vo. Zurich, 1794.

Roem. arch. Ibid. Archiv für die Botanik, 3 vols. 4to. Leipsig, 1796-1805.

Roem. coll. Ibid. Collectanea ad rem botanicam spectantia, 1 vol. 4to. Zurich, 1809.

Roem. script. bot. } Ibid. Scriptores de plantis hispanicis, lusitanicis, et brasiliensibus, 1 vol. 8vo. Nurnberg, 1796.
Roem. script. bra. et hisp. }

Roem. eur. } Ibid. Flora Europæa, 10 fasc. 8vo. Norem-
Roem. fl. eur. } berg, 1797-1803.

Roem. et Schultes, syst. Ibid. et Schultes (F. A.). Systema vegetabilium, 7 vols. 8vo. Stutgard, 1817-1835, continued, vols. 8 and 9 by Schultes alone, and vol. 7 by Schultes, filius.

Roem. et Schultes, mant. Ibid. Mantissa ad systema vegetabilium.

Roep. euph. germ. Roeper (John). Enumeratio euphorbiarum quæ in Germania et Pannonia gignuntur, 4to. Göttingen, 1824.

Roep. flora. Ibid. See flor. bot. zeit.

Rohde, in Schrad. journ. Rohde (Mich.). See Schrad. journ.

Rohl. deutschl. fl. Röhling (John Christ.). Deutschlands Flora, 3 vols. 8vo. Frankfort, 1812-1816.

Rohr, nat. gesch. Von Rohr (Jul. Bern.). Naturmässige Geschichte der von sich selbst wild, &c., 1 vol. fol. Leipsig, 1732.

Rohr, in act. soc. hist. nat. hafn. Ibid. See Basth. act. hafn.

Roland. in act. holm. Rolander (Dan.). See Act. holm.

Rose. scit. Roscoe (William). Monandrian plants of the order Scitamineæ, 1 vol. fol. Liverpool, 1828.

Rose. in Lin. trans. Ibid. See Lin. trans.

Roth, beitr. Roth (Alb. Wilh.). Beitrage zur Botanik, 2 theil. 8vo. Bremen, 1782-1783.

Roth, abhand. } Ibid. Botanische Abhandlungen und Beobachtungen, 4to. Nuremberg, 1787.
Roth, abh. }

Roth, tent. fl. germ. Ibid. Tentamen floræ germanicæ, 3 vols. 8vo. Leipsig, 1788-1801.

Roth, cat. }
Roth, cat. bot. } Ibid. Catalecta botanica, 3 vols. 8vo. Leipsig, 1797-1805.
Roth, catalect. }

Roth, bemerk. Ibid. Botanische Bemerkungen, 8vo. Leipsig, 1807.

Roth, neu. beytr. Ibid. Neue Beytrage zur Botanik, 1 vol. 8vo. Frankfort, 1802.

Roth, spec. } Ibid. Novæ plantarum species præsertim
Roth, nov. spec. } Indiæ orientalis, 8vo. Halberstadt, 1821.

Roth, enum. pl. phan. germ. } Ibid. Manuale botanicum peregrinatoribus botanicis accommodatum, sive prodromus enumerationis plantarum phanogamarum in Germania sponte nascentium. Leipsig, 1800.
Roth, fl. germ. }

Roth, in ann. bot. Ibid. See Ann. bot.

Rottb. pl. rar. Rottboell (Christ. Finn.). Descriptiones plantarum rariorum programma, 4to. Copenhagen, 1770.

Rottb. descr. rar. Ibid. Descriptiones et icones plantarum rariorum, &c., 1 vol. Copenhagen, 1773.

Rottb. pl. hort. prog. Ibid. Plantas horti universitatis programma, 1 vol. 8vo. Copenhagen, 1775.

Rottb. pl. ser. Ibid. Descriptiones plantarum rariorum surinamensium, fol. Copenhagen, 1776.

Rottb. in act. hafn. } Ibid. See Act. hafn.
Rottb. in nov. act. hafn. }

Rottb. in coll. hafn. Ibid. See Coll. soc. med. hafn.

Rottl. in Willd. spec. Rottler (Rev. Dr.). See Willd. spec.

Rottl. in nov. act. berol. } Ibid. See Neu schrift. ges.
Rottl. in act. act. nat. cur. berol. } nat. freund. berol.

Rottl. et Willd. in nov. act. nat. cur. berol. Ibid. et Willdenow. See Neu schrift. ges. nat. freund. berol.

Roxb. swait. Roxburgh (William). Description of a new species of Swietenia, 4to. London, 1778.

Roxb. hort. beng. } Ibid. Hortus bengalensis, or, a catalogue,
Roxb. cat. } &c., 1 vol. 8vo. Calcutta, 1814.
Roxb. cat. calc. }

Roxb. cor. } Ibid. Plants of the coast of Coromandel, pub-
Roxb. coromand. } lished under the direction of Sir Joseph Banks, 3 vols. fol. 1795.

Roxb. in Beats. St. Hel. } Ibid. Alphabetical list of plants seen
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Zanon. hist. } C. Monti, 1 vol. fol. Bologna, 1742.

Zannich. hist. } Zannichelli (John Hier.). Istoria delle piante
Zannich. venez. } che nascono ne' lidi intorno a Venezia, 1 vol. fol. Venice, 1735.

Zanted. comm. brix. Zantedeschi (Aug.). In Commentarii academiæ brixianæ, 1813-1814-1818.

Zea, in act. acad. matr. Zea (Franc. Ant.). See Cav. ann. sc.

Zorn. icon. Zorn (Barthol.). Icones plantarum medicinalium, centuriæ, 8vo. Nurnberg, 1778-1784.

Zucc. cent. obs. }
Zucc. obs. }
Zucc. obs. crit. } Zuccagni (Attilio). Observationes botanicæ
Zucc. obs. bot. } in horto florentino, &c. Florence, 1806.
Zuccag. obs. }

Zuccagni, in Roem. coll. Ibid. See Roem. coll.

Zucc. coral. Zuccarini (J. G.). Monographiæ der Americanischen Oxalis-Arten, 4to. Munich.

Zucc. fl. mon. Ibid. Flore des environs de Munich, 1 vol. 12mo. 1825.

Zucc. in abhand. acad. wiss. }
Zucc. in act. acad. mon. } Ibid. See Abhand. akad. wiss.
Zucc. in act. acad. monach. }

Zucc. in act. acad. taur. Ibid. See Mem. acad. taur.

Zucc. in Schult. mant. Ibid. See Schult. mant.

THE END.

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Shrubby Tetradenia. Shrub.
Cult. For culture and propagation see *Eriope*, p. 708.

XXII. COLEBROO'KIA (named in honour of Henry Thomas Colebrooke, F.R.S., F.L.S., &c., an accomplished botanist.) Smith, exot. bot. 2. p. 111. Benth. lab. p. 165.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, equal, 5-parted, plumose, pappous at maturity, adhering to the achenia. Corolla with the tube equalling the calyx: the limb very short, nearly equal, 4-cleft: upper lobe emarginate. Stamens 4, equal, distant; filaments very short; anthers nearly sessile, 2-celled: cells parallel. Disc of ovarium equal, glandless. Style deeply bifid: lobes subulate, stigmatiferous in the upper part.—Shrubs, densely clothed with whitish or subrufous woolly tomentum. Leaves petiolate, 4-6 inches long, oblong-elliptic, crenulated; lower floral leaves similar, but smaller: upper ones bractea-formed, imbricate before florescence. Spikelets 1-3 inches long, pedunculate, panicled. Cymes of whorls distinct, head-formed, dense, sessile, involucrated by bracteas which are connate at the base. Flowers small, white. Corolla tubular, contracted in the middle.

1 C. oppositifòlia (Smith, exot. bot. 2. p. 111. t. 115.) branches, leaves, and spikes opposite. ♄. S. Native of Nipaul and Kamaon. Elsholtzia oppositifòlia, Poir. suppl. 5. p. 663. (fig. 75.)

FIG. 75.



Opposite-leaved Colebrookia. Fl.? Clt. 1820. Shrub 3 to 4 feet.

2 C. ternifòlia (Roxb. corom. 3. p. 40. t. 245.) branches, leaves, and spikes 3 in a whorl. ♄. S. Native of the East Indies, among the Carnatic mountains, Roxb. Leaves more tomentose, and on shorter petioles than the first species, and the spikelets are more dense.

Tern-leaved Colebrookia. Clt. 1823. Shrub 3 to 4 feet.
Cult. For culture and propagation see *Eriope*, p. 708.

XXIII. PERI'LLA (meaning unknown to us.) Lin. gen. 578. Benth. lab. p. 166.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, nearly equal at the time of florescence, 5-cleft, nutant after florescence, and bilabiate: upper lip dilated, trifid: middle tooth the smallest: lower lip bifid; throat naked inside. Corolla almost equalling the calyx, nearly equal; limb shortly 5-cleft. Stamens 4, nearly equal, distant, erect, equalling the corolla; anthers 2-celled: cells parallel, at length diverging, or sub-divaricate. Style deeply bifid; stigmas terminal. Achenia dry, smooth.—An herb, with the inflorescence almost of the genus *Moschósma*, and with the flowers disposed in axillary and terminal secund spikes.

1 P. ocymoìdes (Lin. gen. 578. Sims, bot. mag. 2395.) ⊙. H. Native of Silhet, Kamaon, Nipaul, and Ava. *Ocymum* Lin. spec. p. 832. *Melissa máxima*, Arduin. spec. frutéscens, 2. p. 28. t. 13. Méntha perilloìdes, Lam. dict. 4. p. 112. but not of Lin. Stem pilose, bluntly tetragonal. Leaves petiolate, 2-4 inches long, ovate, acuminated, coarsely serrated, cuneated at the base, or narrowed into the petiole, green on both surfaces, pilose on the veins. Racemes shorter than the leaves. Corolla minute, white.

Basil-like Perilla. Fl. July, Aug. Clt. 1770. Pl. 1 to 3 feet.
Cult. Sow the seeds in the open ground, where the plant will thrive without any further care.

XXIV. ISA'NTHUS (from ισος, *isos*, equal; and ανθος, *anthos*, a flower; in allusion to the corolla being regular, not bilabiate.) Michx. fl. bor. amer. 2. p. 3. Benth. lab. p. 166.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, equal, 10-nerved, deeply 5-toothed; throat naked inside. Corolla hardly exceeding the calyx, with a short, straight tube, and a campanulate limb: lobes 5, equal, roundish, spreading. Stamens 4, nearly equal, distant, erect, about equal in length to the corolla; anthers 2-celled: cells parallel, or at length diverging. Style shortly bifid at apex: lobes subulate; stigmas terminal. Achenia dry, obovate, reticulated, lacunosely wrinkled.—A herb with the habit and inflorescence of *Saturèia hortènsis.*

1 I. caroli'nus (Michx. fl. bor. amer. 2. p. 4. t. 30.) ⊙. H. Native of North America, in Pennsylvania, Maryland, and Virginia, Nutt.; Carolina and Kentucky, Michx.; at St. Louis, Drummond. Trichostèma brachiàta, Lin. spec. 884. Plant erect, branched, rather viscid; branches pubescent, or pilose. Leaves on short petioles, oblong-elliptic, narrowed at both ends, with quite entire, or sub-sinuated edges, 3-nerved, green on both surfaces, glabrous, but usually pubescent, or pilose. Peduncles solitary, axillary, 1-flowered, shorter than the leaves, usually bibracteate under the calyx. Corollas like those of *Méntha*, pale blue.

Blue-flowered Isanthus. Fl. July, Aug. Clt. 1818. Pl. ½ to 1 foot.
Cult. The seeds should be sown in spring in a peat border, where the plants will flower and produce seed if the summer prove warm.

XXV. PRE'SLIA (named in honour of C. B. and J. S. Presl, of Prague, brothers; authors of "Flora Sicula, Diliciæ Pragenses, &c.") Opiz, in bot. zeit. 1824. 1. p. 322. Benth. lab. p. 167. but not of Mart.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx ovate, equal, 4-toothed; teeth awned; throat rather villous inside. Corolla equal, with an inclosed tube, and a 4-parted limb; lobes equal, entire. Stamens 4, equal, distant, erect; filaments glabrous; anthers 2-celled: cells parallel. Style bifid at top; lobes nearly equal, bearing the stigmas at apex. Achenia oblong, smooth, dry.—A bog herb, with the habit of *Saturèia*, and the inflorescence of *Méntha verticillàta.*

1 P. Cervi'na (Fresen. in sylt. pl. soc. ratisb. 2. p. 288.) ♃. H. Native of Middle and South Europe, in bogs and ditches; as of the South of France, Spain, and Portugal. Méntha cervìna, Lin. spec. 807. Méntha punctàta, Mœnch. Pulègium cervìnum, Mill. dict. no. 3. Pulègium angustifòlium, Riv. mon. irr. t. 23. f. 2. Préslia glabriflòra, Opiz, in bot. zeit. 1824. 1. p. 323. Préslia villiflòra, Opiz, l. c. Herb prostrate, glabrous. Leaves sessile, linear, or linear-lanceolate, obtuse, quite entire, green on both surfaces, dotted, somewhat fascicled in the axils. Whorls many-flowered, dense, distant, rather shorter than the floral leaves. Corollas pale purplish, about twice as long as the calyxes.

Stag Preslia. Fl. June, Aug. Clt. 1684. Pl. prostrate.
Cult. This plant will grow freely in most soils, and is readily increased by division. It requires a little protection in severe frost.

XXVI. ME'NTHA (Mentha of Pliny. Μινθη, *Minthe*, of Theophrastus. From a nymph of that name, daughter of Cocytus, fabled to have been changed into mint by Proserpine in a fit of jealousy.) Lin. gen. no. 713. Schreb. gen. no. 967. Juss. gen. p. 113. ed. Usteri, p. 127. Tourn. inst. t. 89. Benth. lab. p. 168.

LIN. SYST. *Didynàmia, Gymnospérmia.* Calyx campanulate, or tubular, 5-toothed, equal, or sub-bilabiate; throat naked, or villous inside. Corolla with an inclosed tube, and a campanulate, nearly equal, 4-cleft limb: upper segment broader, and nearly entire, or emarginate. Stamens 4, equal, erect, distant; filaments glabrous, naked; anthers 2-celled: cells parallel. Style shortly bifid; segments bearing the stigmas at apex. Achenia dry, smooth.—Herbs. Whorls usually many-flowered, sometimes all remote in the axils of the leaves, sometimes approximate into terminal spikes, with the superior floral leaves bractea-formed.—The European mints, as is generally the case with plants which are very common in highly civilized and long cultivated countries, especially aquatic plants, vary much in appearance; and the repeated attempts by different authors in different countries to reduce these inconstant and ephemeral variations to so many species, have thrown so much confusion into this difficult genus that it is now almost impossible to clear up the chaos thus produced, ex Benth.

* *Throat of corolla naked inside.*

1 M. LAVANDULA'CEA (Willd. enum. p. 609.) canescent; leaves sessile, lanceolate-linear, quite entire, clothed with hoary tomentum on both surfaces; spike dense; calyxes clothed with white tomentum. ♃. H. Native of Spain; on Mount Sinai, Bové; and of the Cape of Good Hope. M. lavandulæfòlia, Pers. ench. 2. p. 119. Stem erect, branched. Leaves 1½ to 2 inches long. Spikes solitary, conical at first, but at length somewhat interrupted at the base. Bracteas subulate. Corollas purple.? Whorls many-flowered.

Lavender-like Mint. Fl. July, Aug. Clt. 1823. Pl. 1 to 2 feet.

2 M. INCA'NA (Willd. enum. p. 609.) stem humble, panicled; leaves nearly sessile, ovate-cordate, a little toothed, clothed with hoary tomentum on both surfaces; spikes numerous, short: calyxes clothed with villous tomentum. ♃. H. Native of Greece, and probably of Persia and Arabia. M. spicàta, Forsk. in herb. Vahl. M. Crética, and M. Pérsica, Hortul. Stems ascending. Spikes hardly an inch long, panicled. Whorls 8-flowered. Corolla twice as long as the calyx, downy outside, purple.?

Hoary Mint. Fl. July, Aug. Clt. 1790. Pl. ½ foot.

3 M. TOMENTÒSA (D'Urv. mem. soc. Lin. par. 1. p. 323. but not of Borkh.) canescent; stem erect, or ascending, tall; leaves sessile, lanceolate, or ovate-lanceolate, irregularly serrated, somewhat reflexed, plicate, undulately curled, clothed with white tomentum on both surfaces; spikes elongated, cylindrical, interrupted at the base, somewhat panicled; calyx clothed with tomentose pubescence. ♃. H. Native of Crete, Syria; Greece, at fountains in the Island of Scyra, D'Urville; Persia, near Teheran. Stems erect, rarely procumbent at the base, or ascending. Leaves roundish, or cordate at the base. Spikes numerous, 3-4 inches long, or more. Whorls distinct, many-flowered. Bracteas subulate. Corolla purple,? downy outside. Fertile stamens exserted.

Tomentose Mint. Pl. 2 to 3 feet.

4 M. SALI'CINA (Burch. cat. geo. pl. afr. austr. 1372. Benth. lab. p. 170.) canescent; stem erect; leaves petiolate, lanceolate-linear, almost entire, nearly glabrous above, and hoary beneath; spikes cylindrical. ♃. G. Native of the Cape of Good Hope. M. Capénsis, Thunb. prod. p. 95.? Leaves size and form of those of *M. lavandulàcea*, but are nearly glabrous above.

Willowy-leaved Mentha. Pl.

5 M. ROYLEA'NA (Benth. in Wall. pl. rar. asiat. 1. p. 20.) plant clothed with white tomentum; leaves petiolate, ovate-oblong, unequally serrated; spikes elongated, slender, interrupted at the base. ♃. H. Native of Deyra Dhoon, Royle; and at Simlah. Habit of M. sylvéstris, var. hispida. Whorls distinct, numerous, small, globose: lower ones remote. Flowers minute, nearly sessile. Corollas small, whitish. Fertile stamens about equal in length to the corolla.

Royle's Mint. Pl. 1 to 2 feet.

6 M. SYLVE'STRIS (Lin. spec. 804.) stem erect; leaves nearly sessile, ovate-lanceolate, or oblong, pubescent above, or tomentose, but clothed with white tomentum beneath; spikes dense, or interrupted at the base, conically cylindrical; calyx clothed with villous tomentum. ♃. H. Native throughout Europe, North of Asia, and Canary Islands, in ditches and boggy places common. Spikes usually dense, obtuse, but in some of the varieties interrupted at the base. Corolla purplish, pubescent outside. Fertile stamens exserted.

Var. α, mollíssima (Benth. lab. p. 171.) leaves clothed with soft white tomentum on both surfaces. ♄. H. Native of Greece, Dalmatia, Spain, Canary Island, Cashmere; also of England, and Germany, but rare. M. mollíssima, Borkh. M. incàna, Sole herb. Sm. M. sylvéstris, Smith, in Rees' cycl. vol. 23. M. canéscens, Roth, catalect. 2. p. 46. M. Chalepénsis, Mill. dict. no. 10.

Var. β, cándicans (Benth. lab. p. 171.) leaves clothed with short, hoary tomentum on both surfaces. ♃. H. Native in the same countries and places with var. α. M. cándicans, Crantz. austr. p. 330. M. pállida, Nees. M. sylvestris cándicans, Rchb. icon. bot. 10. p. 28. t. 982. M. sylvéstris álbida, Rchb. icon. bot. 10. p. 28. t. 983.

Var. γ, glabràta (Benth. lab. p. 171.) leaves almost glabrous above, pubescent and rather hoary beneath. ♃. H. Native of Britain, South of Sweden, Denmark, throughout Germany, France, Portugal, Italy, Spain, Sicily, Greece, European Russia, Tauria, Caucasus, Siberia, Cape of Good Hope, Teneriffe, &c. M. Rosàni, Tenore, fl. nap. append. 5. p. 18. syll. p. 281. M. Eisenstadtiàna, Nees.

Var. δ, vulgàris (Benth. l. c.) leaves pubescent above, rather wrinkled, clothed with soft white tomentum beneath. ♃. H. Native in the same countries and places with var. γ. M. cándicans, Mill. dict. M. villòsa, Sole, menth. brit. t. 1. & 2. M. sylvéstris, α, Smith, in Lin. trans. 5. p. 179. engl. bot. t. 686. bad. M. gratíssima, Willd. spec. 3. p. 75. M. Niliaca, Willd. spec. 3. p. 76. but not of Vahl. M. longifòlia, Huds. angl. p. 221. M. tomentòsa, Borkh. M. hybrida, Schleich. pl. exsic. cent. 1. no. 55.? M. reflexifòlia, Opiz, in bot. zeit. 1824. 2. p. 525. M. suàvis, Hoffm.? ex Smith, in Rees' cycl. vol. 23. but not of Juss. M. Wierzbeckiàna, Opiz, l. c.? M. oblónga, Opiz, l. c. M. Ratisbonénsis, Opiz, l. c.

Var. ε, nemoròsa (Benth. lab. p. 171.) leaves ovate-oblong, green and pubescent above, and clothed with loose, white tomentum beneath. ♃. H. Native of Catalonia, Italy, and probably of Germany; Ceylon, Macrae; Brazil, St. Hilaire. M. nemoròsa, Willd. spec. 3. p. 75. M. sylvéstris, Sole, menth. brit. t. 3. Oed. fl. dan. 484. M. sylvéstris, δ, Smith, engl. fl. 3. p. 73. M. rotundifòlia, Sole, menth. brit. t. 4.? but not of Lin. M. Niliaca, Jacq. hort. vind. 3. p. 46. t. 87. but not of Vahl. M. serótina, Tenore, fl. nep. t. 156. syll. p. 281. M. hirta, Beck. fl. fr. 220. ex Fresen. syll. pl. ratisb. 229. and probably of Willd. M. dumetòrum, Schultes,? ex Rchb. fl. germ.

exc. p. 310. M. gratíssima, Wigg. prim. fl. hols. 43. ex Roth, tent. fl. germ. 2. pt. 2. p. 6. M. sápida, Tausch. ? ex Rchb. fl. germ. exc. p. 310. M. Hallèri, Gmel. fl. bad. 2. p. 594. ? ex Rchb. fl. germ. exc. p. 310. M. sylvéstris, nemorósa, Rchb. icon. bot. 10. p. 28. t. 984.

Var. ζ, *urticæfólia*; stem divaricately branched; spikes slender, interrupted; whorls few-flowered, distinct. ♃. H. Native of Naples. M. urticæfólia, Tenor. fl. nap. t. 157. syll. p. 283. ? M. origanoides, Tenor. fl. nap. prod. app. 5. p. 19. syll. p. 284.

Var. η, *crispa* (Benth. lab. p. 172.) leaves undulately curled, profoundly toothed, rather rugose, clothed with white tomentum beneath. ♃. H. Native of many parts of Europe, and in gardens. M. undulàta, Willd. enum. p. 608. Nees. pl. med. with a figure. M. velutina, Lejeune. M. dulcíssima, Dumort floral. belg. p. 48. ? M. crispa, Tenore, fl. nap. 2. p. 29. Rivin. mon. t. 50. M. serótina, Tenore, syll. p. 281. ? M. foliósa, Opiz, ex Fresen. syll. pl. soc. ratisb. 2. p. 226. M. tomentósa, Hoppe, et Hornsch. ex Rchb. fl. germ. exc. p. 310. M. Lamárkii, Tenore, fl. nap. prod. append. 5. p. 19. syll. fl. nap. p. 282. exclusive of the syn. of Schrad. M. emarginàta, Rchb. icon. bot. 10. p. 27. t. 979. M. undulàta, Rchb. icon. bot. 10. p. 27. t. 980.

Wild, or Horse Mint. Fl. July, Aug. Britain. Pl. 1 to 2 feet.

7 M. rotundifólia (Lin. spec. 825.) stem erect; leaves sessile, ovate-roundish, crenated, wrinkled, pubescently hairy above, and clothed with loose white wool beneath; spikes dense, conically cylindrical; calyxes hairy. ♃. H. Native throughout Europe, Africa in the region of the Mediterranean, and of Siberia, among rubbish by way sides, and in ditches; also of Madeira and North America, in like situations, but probably escaped from gardens; plentiful in some parts of Britain. Smith, engl. bot. 7. t. 446. M. macrostáchya, Tenore, fl. nap. 2. p. 30. t. 56. syll. p. 282. M. neglécta, Tenore, fl. nap. 2. p. 379. t. 157. f. 1. ex syll. 281. M. frágrans, Presl. del. prag. 78. ex Guss. prod. fl. sic. 2. p. 88. M. rugósa, Lam. fl. fr. 2. p. 420. Roth. catal. 2. p. 65. ex Fresen. syll. pl. soc. ratisb. 2. p. 230. M. suavèolens, Ehrh. beitr. 7. p. 149. ex Fresen. l. c. Stem panicled by a few branches at top. Leaves usually obtuse, roundish cordate at the base. Corollas whitish. Sterile stamens exserted.

Round-leaved Mint. Fl. July, Sept. Britain. Pl. 1 to 2 feet.

8 M. prate'nsis (Sole, menth. brit. t. 17.) leaves nearly sessile, ovate-lanceolate, or oblong, serrated, glabrous, or finely pubescent, as well as the erect stem: floral leaves similar, but smaller: superior ones broad-lanceolate, about twice as long as the whorls; whorls all remote, globose; pedicels glabrous; calyx campanulate, with hairy teeth. ♃. H. Native of the North of Europe?; in England in ditches and watery places, but hardly spontaneous, Sole; Sweden, in cultivated places, apparently wild. M. rúbra, Huds. angl. ex Fries, nov. fl. suec. ed. 2d. p. 179. but not of Smith. M. gentílis, Sole, menth. brit. t. 15. Smith, engl. bot. 7. t. 449. M. grácilis, γ, Smith, in Lin. trans. 5. p. 210. Stem purplish red, with short, erect branches, glabrous, or furnished with a few spreading hairs. Cauline leaves deep green, or reddish, glabrous above, but paler beneath, with a few hairs on the veins. Whorls dense. Corolla purplish, glabrous, or pubescent outside. Stamens all inclosed. Style exserted.

Meadow Mint. Fl. July, Aug. Britain. Pl. 1 to 2 feet.

9 M. sua'vis (Guss. pl. rar. p. 387. t. 66.) clothed with soft pubescence, or villi; leaves petiolate, ovate, acute, serrated, rounded at the base, pale beneath, or hoary: floral leaves small, lanceolate, or conforming to the lower cauline ones; whorls distinct: lower ones remote: upper ones disposed in a cylindrical spike. ♃. H. Native of the South of France, Italy, and Sicily. M. pubéscens, Willd. enum. p. 608. ? M. divaricàta, Lag. ? M. balsámea, Willd. enum. p. 608. ? M. hírta, Willd. enum. l. c. Link, enum. 2. p. 105. M. pubéscens, Rchb. icon. bot. 10. p. 27. t. 978. M. glomerulàta, Jan. M. Lángii, Geiger, pharm. bot. 1332. and Nees, pl. med. with a figure. Leaves more or less canescent beneath. Stem usually decumbent at the base, branched; branches ascending, rarely erectish. Leaves like those of *M. Piperita*, but soft: upper ones exceeding the whorls. Corolla red, hardly exceeding the calyx. Stamens inclosed. Style exserted.

Sweet Mint. Fl. July, Aug. Clt. 1804. Pl. 1 to 2 feet.

10 M. víridis (Lin. spec. 804.) stem erect; leaves nearly sessile, ovate-lanceolate, unequally serrated, and are, as well as the stems, glabrous: floral ones all bractea-formed, rather longer than the whorls, and are, as well as the calyxes, hairy, or glabrous; spikes cylindrical, loose; whorls approximate, or the lower ones or all are distant. ♃. H. Native of the temperate parts of Europe, among rubbish; in England and Scotland, France, &c.; also at the Cape of Good Hope, and North and South America, but probably has been carried thither from Europe. Sole, menth. brit. t. 5. Nees, pl. med. with a figure. Smith, engl. bot. t. 2434. Fl. dan. 1876. M. verticillàta, Feuill. chil. p. 42. t. 28. M. spicàta, Crantz, austr. 328. M. ocimiodòra, Opiz. M. brevispicàta, Lehm. sem. hort. hamb. 1828. M. balsámea, Rchb. fl. germ. exc. p. 309. ? but not of Willd. M. lævigàta, Willd. enum. p. 609. N. Niliaca, Vahl, symb. 3. p. 75. M. Pudína, Hamilt. ex Benth. in Wall. pl. rar. 1. p. 29. M. ténuis, Michx. fl. bor. amer. 2. p. 2. Stature, habit, and form of leaves that of *M. sylvéstris*, but is easily distinguished from that species by the stems and leaves being constantly quite glabrous. Spikes usually hairy, but sometimes also glabrous. Corollas purplish. There are several species of Mint cultivated in gardens for culinary purposes, but principally spearmint. The young leaves and tops of it are used in spring salads, and form an ingredient in soups. They are also employed to give flavour to certain dishes, as peas, &c., being boiled for a time, and then withdrawn, in the manner of garlic. The leaves have a warm, roughish, bitter taste, and a strong, not unpleasant smell. Their virtues are stomachic and carminitive. The culture of spearmint is the same as that for peppermint, which see. In order to have young leaves and tops all the summer, cut down some advanced stalks every month, when young shoots will be produced; and to have dried balm for winter, permit others to complete their growth, and come into blossom. Dry the crop thus gathered in the shade, and afterwards keep it in small bundles. (fig. 76.)

FIG. 76.



Var. β, *angustifólia* (Lag. ex Benth. lab. p. 174.) leaves narrow. ♃. H. M. tenuifólia, Opiz, ex Rchb. fl. germ. exc. p. 309. M. Lejeúnii, Opiz, ex Rchb. l. c. M. Michèlii, Rchb. icon. bot. 10. p. 27. t. 981.

Var. γ, *crispa* (Benth. lab. p. 174.) leaves curled. ♃. H. M. crispàta, Schrad. ex Willd. enum. 608. Nees, pl. off. with a figure. M. Haregnica, Röhl, deutsch. fl. M. crispa, Roth. tent. fl. germ. 1. p. 248. but not of Lin. M. cordifólia, Opiz,

ex Fresen. in syll. pl. soc. ratisb. 2. p. 232. *M. hortènsis*, Opiz, in syll. pl. soc. ratisb. 2. p. 227.

Green Mint, or Spearmint. Fl. July, Aug. Britain. Pl. 2 feet.

11 M. PIPERI'TA (Lin. spec. 805.) leaves petiolate, ovate-oblong, acute, serrated, roundly crenated at the base, and are, as well as the stems, glabrous; spikes loose, obtuse, short, interrupted at the base; pedicels and calyxes glabrous at the base, with hispid teeth. ♃. H. Native of the North of Europe, spontaneous; and cultivated throughout Europe, Egypt, Asia, North and South America. Smith, engl. bot. t. 687. Nees. pl. off with a figure. Woodv. med. bot. 169.—Zorn. icon. t. 56.—Petiv. brit. t. 81. f. 10.—Ray. syn. t. 10. f. 1. *M. piperita officinàlis*, Sole, menth. brit. t. 7. *M. piperita vulgàris*, Sole, herb. but hardly of menth. brit. t. 8. *M. glabràta*, Vahl. symb. 3. p. 75. *M. Kahirina*, Forsk. fl. ægypt. *M. balsâmea*, Willd. enum. p. 608.? Stem branched, reddish, quite glabrous, or with a few spreading hairs. Petioles usually ciliated. Spikes reddish. Calyxes purplish. Corolla purple, or red. This species, the peppermint, is almost entirely for distillation, for which it is extensively cultivated in low, rich, soft, marshy lands, especially such as can be irrigated or flooded. It is sometimes also cultivated in gardens for its young green tops and leaves, for the purposes of spearmint. The leaves have a strong, rather agreeable smell, and a pungent, aromatic taste, somewhat resembling that of pepper, and accompanied with a peculiar sensation of coldness. Its predominant constituents are essential oil and camphor, both of which rise in distillation, and are combined in what is called oil of peppermint. Peppermint is principally used as a carminitive and antispasmodic. The distilled water is a domestic remedy for flatulent colic, and the essential oil is often given with advantage in doses of a few drops in cramps of the stomach.

Culture. All the species of *Méntha*, as well as the present, are raised by the same methods, viz. by parting the roots, by offset young plants, and by cuttings of the stalks. By the roots—This is performed in spring and autumn. Having some full roots from any established beds, divide them as expedient, and drawing drills, with a hoe about 2 inches deep and 6 inches asunder, place the roots in the drills moderately close, and earth them over to an equal depth. By offsets—In the spring procure these from established plants, and dibble them in rows 6 inches asunder. By cuttings of the young stalks—In May, June, or advanced summer, taking the opportunities of showery weather, cut these into lengths of 5 or 6 inches, and plant the cuttings by dibble, 6 inches apart, inserted half way into the earth.

Subsequent Culture. Propagated in any of the above methods the plants set in spring or summer will come into use the same year. Water new plants till they take root. Keep them clean from weeds. At the end of autumn cut away any remaining stems, at which season, or in the spring, spread a little loose earth thinly over the beds.

Taking the crop. "For culinary use or salads, gather both when the young green tops are from one inch to 6 inches in length, and in their advanced growth throughout the summer. When nearly full grown in June, July, or August, or beginning to flower, gather a store for winter, spread the heads thinly in some dry place, shaded from the sun, to be well dried, then, tied in bunches, house the store. When desired for distillation let them attain full growth coming into flower, then cut and use the heads immediately. Peppermint being principally used for distillation, should stand in the ground until they begin to flower, being then in the highest perfection. Cut in dry weather, and tie the bundles, and carry under cover ready for immediate use. Cut full grown stalks close to the bottom. It is best to cut as soon as the dew is off in the morning, for in the afternoon, and especially during bright sunshine, the odour of the plant is found to be much diminished."

New Plantation. All the species continue by the roots many years, but when the plants grow weakly make a fresh plantation in time.

Forcing spearmint. Mint in a young green state may be obtained all winter, and early in spring, by planting some roots in a gentle hot-bed, or in pits, or shallow pans, to be plunged therein. Plant the roots pretty thickly, and earth over an inch and a half deep; or some roots thus planted in pots or boxes may be placed in a stove. Plant for succession every 3 weeks, as forced roots soon decay.

Var. β, ? subhirsùta (Benth. lab. p. 176.) leaves hairy on the nerves beneath, and on the petioles. ♃. H. Native of England, in Norfolk, at a lake called Saha, Smith; and near Bath, Sole. *M. hirsùta*, β, Smith, herb. *M. piperita sylvéstris*, Sole, menth. brit. t. 24. *M. hirta*, Willd. enum. 608.? *M. pinétum*, Nees, ex Rchb. fl. germ. exc. p. 309.

Pepper Mint. Fl. Aug. Sept. Britain. Pl. 1 to 2 feet.

12 M. ETTICA'TA (Ehrh. beitr. 7. p. 150.) leaves petiolate, ovate, broadly rounded at the base, or subcordate, and are, as well as the stem, glabrous, or the petioles are ciliated; whorls few, approximate into an oblong head, or the lower one is loose and remote; pedicels and calyxes glabrous. ♃. H. Native of England, in watery places in Cheshire, North Wales, and near Bedford, Smith, probably spontaneous. *M. nigricans*, Mill. dict. no. 12. *M. odoràta*, Sole, menth. brit. t. 9. Smith, in Lin. trans. 5. p. 192. engl. bot. t. 1025. *M. adspérsa*, Mœnch. menth. 379. ex Willd. spec. 3. p. 79. This is intermediate between *M. piperita* and *M. aquàtica*. Corollas reddish purple.

Bergamot Mint. Fl. July. Aug. Britain. Pl. 1 foot.

13 M. AQUA'TICA (Lin. spec. p. 805.) stem beset with reflexed hairs; leaves petiolate, ovate-serrated, rounded at the base, or sub-cordate, rather hispid on both surfaces, or villous; lower floral leaves like the others: upper ones bractea-formed; whorls few, all, or only 2 or 3 of the upper ones, disposed into globose or oblong heads: upper terminal one often remote from the lower ones; calyxes tubular, and are, as well as the pedicels, villous. ♃. H. Native of Europe, and Asiatic Russia, very common in watery places and ditches; and now occurs almost in every part of the globe, but has probably migrated from Europe. Sole, menth. brit. t. 10, 11. *M. palústris*, Mill. dict. no. 11. *M. hirsùta*, Smith, in Lin. trans. 5. p. 193. engl. bot. 7. p. 447. *M. pedunculàta*, Pers. ench. 2. p. 119. Poir. dict. suppl. 3. p. 663. *M. pyramidàlis*, Tenore, fl. nap. p. 33. t. 35. *M. acùti-serràta*, Opiz, ex Fresen. in syll. pl. soc. ratisb. 2. p. 226. *M. nigréscens*, Weihe, ex Fresen. l. c. *M. bugulæfòlia*, Weihe, l. c. *M. brachiàta*, Weihe, l. c. *M. aurita*, Weihe, l. c. *M. origanoides*, Lejeune, fl. spa. *M. pubéscens*, Willd. enum. 608.?—Riv. mon. t. 49. Corollas purplish red. The upper head of flowers is always terminal, while the stem of *M. arvénsis* is always indeterminate.

Var. α, nemorósa (Fries, nov. fl. succ. ed. 2d. p. 183.) stem and peduncles beset with short, reflexed hairs; hairs of the leaves few and scattered, of the calyx short and spreading; whorls few, all globosely capitate, or the lower one remote. ♃. H. Native of Britain, Sweden, France, Portugal, Spain, Germany, Italy, Sicily, Greece, Caucasus, Siberia, Azores, Madeira, Cape of Good Hope, Brazil, and North America. *M. capitàta*, Opiz. *M. intermèdia*, Host, fl. austr. 2. p. 141. *M. purpùrea*, Host, fl. austr. 2. p. 141. *M. citràta*, Rchb. icon. bot. 10. p. 26. t. 977. but hardly of Ehrh.

Var. β, hirsùta (Willd. enum. p. 610.) more villous: whorls as in var. α, but usually larger. ♃. H. Native of the same

countries as var. α. M. hirsùta, Lin. mant. p. 81. Hook. fl. lond. 5. t. 166. M. dùbia, Vill. dauph. 2. p. 358. M. ripària, Schreb. M. Weiheàna, Opiz. M. nepetoìdes, Lejeune, fl. spa.? M. dumetòrum, Schult.? Origanum vulgàre, Fl. dan. t. 638.

Var. γ, *crispa* (Benth. lab. p. 177.) leaves plicately curled, lacerately toothed, on short petioles; inflorescence of the preceding. ♃. H. In gardens. M. crispa, Lin. spec. 805. Nees, pl. off. with a figure.

Var. δ, *subspicàta* (Benth. lab. p. 177.) villous; whorls numerous: upper ones subspicate; lower ones remote: floral leaves almost all conforming to the cauline leaves. ♃. H. Native of Britain, &c. M. hirsùta, var. ε, Smith, engl. fl. 3. p. 79. M. piperìta, γ, Smith, engl. fl. 3. p. 77. M. paludòsa, Sole, menth. brit. t. 22. M. palùstris, Sole, menth. brit. t. 6. bad. M. rivàlis, Sole, in herb. M. ballotæfòlia, Opiz. M. subspicàta, Weihe. M. pyramidàlis, Tenore, fl. nap. 2. p. 93. t. 85. M. palùstris plicàta, Rchb. icon. bot. 10. p. 26. t. 976.

Water Mint. Fl. July, Aug. Britain. Pl. 1 to 2 feet.

14 M. ARVE'NSIS (Lin. spec. 806.) stem beset with retrograde pili or villi, or nearly glabrous; leaves petiolate, ovate or oblong, rounded at the base, cuneated or narrowed: floral ones all conforming to the cauline ones, exceeding the flowers: uppermost ones almost sterile; whorls all globose, many-flowered, remote; bracteas lanceolate-subulate, about equal in length to the tubular or campanulate calyxes. ♃. H. Native of Europe, and North and Middle Asia, very common; but very rare in the region of the Mediterranean; in shady places by the sides of ditches, in bogs and all moist soils; plentiful in Britain. M. gentilis, Lin. spec. p. 805. This is a very polymorphous plant. Corollas red or purplish. Stamens sometimes exserted, but usually inclosed.

Var. α, *sativa* (Benth. lab. p. 178.) calyxes subcylindrical, and are, as well as the pedicels, hairy; leaves more or less villous. ♃. H. M. rivàlis, Sole, menth. brit. t. 20. M. sativa, Smith, in Lin. trans. 5. p. 199. engl. bot. t. 448. M. hirsùta? verticillàta, Smith, engl. fl. 3. p. 79. M. aquàtica, Ill. sativa, Fresen, in syll. bot. ratisb. 2. p. 235. M. aquàtica, β, verticillàta, Fries, nov. fl. suec. ed. 2d. p. 183. M. verticillàta, Mill. dict. no. 17. and of many other authors. M. acutifòlia, Smith, in Lin. trans. 5. p. 203. engl. bot. t. 2415, with narrower leaves. M. palùstris, Mœnch. meth. p. 380. ex Fries, l. c. M. pilòsa, Spreng. pl. min. cogn. pug. 2. p. 69. ex Fries, l. c. M. dùbia, Schreb. but not of Vill. M. crenàta, Becker, fl. fr. 225. M. villòsa, Becker, l. c. 225.? M. origanifòlia, Host, fl. austr. 2. p. 142. M. tortuòsa, Host, fl. austr. 2. p. 142. M. maculàta, Host, fl. austr. 2. p. 143. M. serótina, Host, fl. austr. 2. p. 143. M. nemoròsa, Host, fl. austr. 2. p. 144. M. longifòlia, Host, fl. austr. 2. p. 144. M. latifòlia, Host, fl. austr. 2. p. 145. M. elàta, Host, fl. austr. 2. p. 146, with the leaves more villous and white, and rather woolly beneath. M. virùhula, Host, fl. austr. 2. p. 147. M. ovalifòlia, Opiz. M. Speckmoseriàna, Opiz. M. cærùlea, Opiz. M. plicàta, Opiz. ex Rchb. fl. germ. exc. p. 307. M. argùta, Opiz. ex Rchb. M. Ròthii, Nees, ex Rchb. l. c. M. obtusàta, Opiz. ex Rchb. l. c. M. melissæfòlia, Lejeune, ex Rchb. l. c. M. gentilis, Rchb. icon. bot. 10. p. 26. t. 974.

Var. β, *Smithii*; calyx subcylindrical, villous; pedicels glabrous; leaves very villous. ♃. H. M. sativa, Smith, engl. fl. 3. p. 78. t. 1788. M. rubra, Sole, menth. brit. t. 19. bad.

Var. γ, *nítida*; calyx subcylindrical, villous; pedicels glabrous; stems and leaves almost glabrous. ♃. H. M. gentilis, α and β, Smith, in Lin. trans. 5. p. 208. M. aquàtica, suavifòlia, Fries, nov. fl. suec. ed. 2d. p. 184. M. sativa, Becker, fl. fr. 223. M. nummulària, Schreb. fl. erl. M. Badénsis, Gmel. M. nítida, Host, fl. austr. 2. p. 149. M. montàna, Host, fl. austr. 2. p. 145. M. sylvàtica, Host, fl. austr. 2. p. 149. M. rotundàta, Opiz, in bot. zeit. 1824. 2. p. 525.? M. rùbra ocymiodòra, Rchb. icon. bot. 10. p. 26. t. 975.

Var. δ, *rùbra* (Benth. lab. p. 179.) calyx cylindrical; pedicels, stems, and leaves glabrous, reddish. ♃. H. M. rùbra, Smith, in Lin. trans. 5. p. 205. engl. bot. t. 1413.

Var. ε, *agréstis*; calyx campanulate; pedicels rather villous; stem and leaves villous. ♃. H. M. gentilis, γ, and M. arvénsis, β, Smith, herb. M. arvénsis agréstis, and rivàlis, Sole, herb. M. lamiifòlia, Host, fl. austr. 2. p. 144.? M. ocymoìdes, Host, fl. austr. 2. p. 148.? M. pùmila, Host, fl. austr. 2. p. 150.

Var. ζ, *vulgàris* (Benth. lab. p. 179.) calyx campanulate, villous; pedicels glabrous; stem and leaves villous. ♃. H. M. arvénsis, Sole, menth. brit. t. 12. Smith, in Lin. trans. 5. p. 218. engl. bot. t. 2119, and of many other authors. M. agréstis, Sole, menth. brit. t. 14. Smith, engl. fl. 3. p. 87. engl. bot. t. 2120. M. gentilis, Mill. dict. no. 15, and of many German authors. M. Austriaca, Jacq. fl. austr. 5. p. 14. t. 430. All. pedem. 1. p. 18. t. 75. f. 2. M. pilòsa, Wallr. ann. bot. 75. M. palùstris, Mœnch. meth. 380. ex Poir. suppl. 3. p. 662. M. melissæfòlia, Host, fl. austr. 2. p. 144. M. suavèolens, Host, fl. austr. 2. p. 146. M. stachyoìdes, Host, fl. austr. 2. p. 146. M. multifìora, Host, fl. austr. 2. p. 147. M. tenuifòlia, Host, fl. austr. 2. p. 147. M. Carinthìaca, Host, fl. austr. 2. p. 149. M. divaricàta, Host, fl. austr. 2. p. 150. M. vàrians, Host, fl. austr. 2. p. 150. M. prostràta, Host, l. c. 2. p. 151. M. làxa, Host, l. c. 2. p. 151. M. parviflòra, Host, l. c. 2. p. 152. M. polymórpha, Host, l. c. 2. p. 152. M. diffùsa, Lejeune, fl. Spa. ex Frésen. syll. pl. ratisb. 2. M. parvifòlia, Opiz. ex Fresen. l. c. M. villòsa, Becker, fl. fr. M. procúmbens, Thuill. fl. par. 288. M. intermèdia, Nees, ex Rchb. fl. germ. exc. p. 308. M. Dalmática, Tausch. in syll. pl. ratisb. 2. p. 349. M. arvénsis, Rchb. icon. bot. 10. p. 24. t. 968. M. arvénsis lanceolàta, Rchb. icon. bot. 10. p. 24. t. 968. M. arvénsis, pariætariæfòlia, Rchb. icon. bot. 10. p. 25. t. 970. M. arvénsis agréstis, Rchb. icon. bot. 10. p. 25. t. 971. M. arvénsis plicàta, Rchb. icon. bot. 10. p. 25. t. 972. M. acutifòlia, Rchb. icon. bot. 10. p. 25. t. 973.

Var. η, *grácilis*; calyx campanulate, villous; pedicels glabrous; stem and leaves almost glabrous. ♃. H. M. gentilis, Smith, in Lin. trans. 5. p. 208. engl. bot. t. 2118. M. grácilis, Sole, menth. brit. t. 16. M. grácilis, α, Smith, in Lin. trans. 5. p. 210. M. sativa, Sole, menth. brit. t. 21. M. variegàta, Sole, menth. brit. t. 10. M. pulebélla, Host, fl. austr. 2. p. 148. M. Austriaca, Host, l. c. 2. p. 150. but not of Jacq. M. gràta, Host, l. c. 2. p. 152. M. atrovirens, Host, l. c. 2. p. 152. M. resinòsa, Opiz. M. parviflòra, Schultes, ex Rchb. fl. germ. exc. p. 307.

Var. θ, *glàbra* (Benth. lab. p. 179.) calyx campanulate; pedicels, stem, and leaves quite glabrous. ♃. H. M. glàbra, Sole, herb. M. præcox, Sole, menth. brit. t. 13. M. rùbra, Smith, herb. M. gentilis, Host, fl. austr. 2. p. 241. and of many other authors.

Var. ι, *crispa* (Benth. lab. p. 180.) leaves undulately curled, and lacerately toothed; calyxes and leaves glabrous. ♃. H. M. sativa, Nees, pl. med. with a figure. M. crispa of many authors.

Corn-field, or Wild Mint. Fl. July, Sept. Britain. Pl. ½ to 2-3 feet.

15 M. CANADE'NSIS (Lin. spec. 806.) prostrate or ascending, nearly glabrous, or densely clothed with spreading hairs; leaves petiolate, oblong-elliptic, narrowed a long way at both ends: floral ones similar to the rest: upper ones lanceolate-linear, almost sterile; whorls all globose, many-flowered, remote; bracteas lanceolate-subulate, about equal in length to the calyxes,

which is tubularly campanulate. ♃. H. Native of North America, on the mountains, and on the banks of rivulets; North-west coast, Canada, near New York, Pennsylvania; also of China, Sir G. Staunton.

Var. α, villòsa (Benth. lab. p. 181.) plant densely hairy. ♃. H. M. Canadénsis of authors.

Var. β, glabràta (Benth lab. p. 181.) plant nearly glabrous. ♃. H. M. borcàlis, Michx. fl. bor. amer. 2. p. 2.

Canadian Mint. Fl. July, Aug. Clt. 1800. Pl. 1 foot.

16 M. Lapponica (Wahl. fl. lapp. p. 161. t. 10.) stem beset with retrograde asperities; leaves petiolate, oblong, serrated, narrowed at the base, glabrous: floral ones similar to the others; whorls all remote, few-flowered; pedicels glabrous; calyxes rough, with obtuse teeth. ♃. H. Native of Lapland, in humid sandy places at the river Kemen; also of Kamtschatka. Very nearly allied to *M. Canadénsis, β, glabràta*. Corollas rose-coloured. Stamens exserted.

Lapland Mint. Pl. 1 to 1½ foot.

17 M. lanceola'ta (Benth. lab. p. 181.) stem clothed with adpressed, reflexed hairs; leaves lanceolate, acute, serrated, narrowed at the base into the petioles, roughish above and glabrous beneath: floral ones similar to the rest: upper ones twice as long as the whorls; whorls all remote, many-flowered; calyx tubular, clothed with adpressed villi, with acute teeth. ♃. S. Native of Ceylon, Macrae. Stem a little branched, tetragonal. Nearly allied to *M. Canadénsis*.

Lanceolate-leaved Mint. Pl. 1 to 2 feet.

18 M. Dahu'rica (Fisch. mss. ex Benth. lab. p. 181.) stem erect, nearly simple; leaves on short petioles, ovate-lanceolate, quite glabrous: floral ones similar to the others; whorls few, remote, loosely globose; calyx tubular, nearly glabrous, with obtuse teeth. ♃. H. Native of Dahuria. Lepechínia clinopodiòlia, Willd. hort. berol. under no. 21. Horminum clinopodiòlia, Pers. ench. 2. p. 132. Stem tetragonal. Leaves quite entire, or remotely serrated. Calyx villous inside. This differs from all the European tubular-calyxed species, in the calycine teeth being obtuse.

Dahurian Mint. Fl. July. Aug. Clt. 1818. Pl. ½ to 1 foot.?

* * *Throat of calyx villous inside.*

19 M. mollis (Benth. lab. p. 182.) stem much branched, twining? pilosely woolly; leaves petiolate, ovate-roundish, acute, somewhat serrated, pubescent above, and clothed with white tomentum beneath: floral ones similar; whorls all remote, globose, many-flowered; calyx clothed with white hairs; throat villous inside. ♃. S. Native of tropical America; frequent on elevated plains near Quito, Riobamba, Nuevo, and Cuenca; Peru, and near Santa Fe de Bogota. Bysteropògon mòlle, H. B. et Kunth, nov. gen. amer. 2. p. 317. Leaves about an inch long. Corolla scarcely longer than the calyx. Stamens inclosed. Style exserted.

Soft Mint. Pl. twining.?

20 M. Pule'gium (Lin. spec. p. 807.) stem much branched, prostrate; leaves petiolate, ovate; whorls all remote, globose, many-flowered; calyx hispid, bilabiate: throat villous inside. ♃. H. Native throughout Europe, in ditches and bogs, and other humid places; as in England, Sweden, France, Germany, Spain, Portugal, Italy, Greece; also of Caucasus, near Lenkoran, and about Valparaiso; also of North America. Sole, mentb. brit. t. 28. Smith, engl. bot. t. 1026. Nees, pl. med. with a figure. Woodv. med. bot. t. 171. M. exigua, Lin. spec. 806. Smith, icon. ined. t. 38. Pulègium latifòlium, Bauh. pin. 222. Pulègium erèctum, Mill. dict. no. 2. Pulègium vulgàre, Mill. dict. no. 1.—Sabb. hort. rom. 3. t. 49.—Riv. mon. t. 23. f. 1. Stems and leaves glabrous, or finely pubescent. Corollas pale purple. The name is derived from *pulex*, a flea, because the plant is supposed to drive away fleas by its smell.

Var. β, tomentòsa; stem and leaves densely villous. ♃. H. Native of Portugal, Spain, about Montpelier, Sicily, Naples, Algiers, South of Tauria, Teneriffe. M. tomentòsa, Smith. in Rees' cycl. M. tomentélla, Hoffm. et Link, fl. port. 1. p. 73. M. Gibraltárica, Willd. enum. 611. M. pulegioides, Rchb. Pulègium tomentéllum, Presl. fl. sic. 36. Pennyroyal is indigenous to places subject to inundations. It is used in different branches of cookery, also for distilling Pennyroyal-water. In its sensible qualities it is warm, pungent, and aromatic, somewhat similar to *Spearmint*, but less agreeable, and is seldom used. The plant is said to thrive best in a strong clayey moist soil.

Flea Mint, or Pennyroyal. Fl. Aug. Sept. Britain. Pl. prostrate.

21 M. Requie'ni (Benth. lab. p. 182.) small, creeping, quite glabrous; branches filiform, ascending; leaves petiolate, orbiculate, quite glabrous, somewhat bilabiate: throat villous inside. ♃. H. Native of Corsica, Requien. Thymus parviflòrus, Req. in ann. sc. nat. Audibértia, Benth. Stem diffuse at the base, much branched. Leaves almost quite entire. Flowers 2-6 in each whorl; pedicels longer than the calyx. Corolla and odour that of *M. Pulègium*.

Requien's Pennyroyal. Pl. creeping.

† *Species hardly known.*

22 M. grave'olens (Presl, fl. sic. p. 36.) spikes panicled, cylindrical; flowers sessile; calyx pubescent; bracteas linear-setaceous, twice as long as the calyxes; stem erect, branched, tomentose; leaves cordate-oblong, mucronate, remotely serrated, pubescent, clothed with greyish tomentum beneath. ♃. H. Native of Sicily. Perhaps referrible to *M. pyramidàlis*.

Strong-scented Mint. Pl. 2 to 3 feet.?

23 M. angustifòlia (Host, fl. austr. 2. p. 148.) whorls of flowers approximate; leaves linear-lanceolate, flat, hairy; pedicels hispid; stamens shorter than the corolla. ♃. H. Native of Austria, about Vienna, in humid parts of woods. Stem humble, purplish, roughish from bristles, simple or branched. Leaves denticulated above the middle. Bracteas ciliated. Pedicels hispid. Calyx campanulate, hairy. Corolla purplish, hairy outside.

Narrow-leaved Mint. Pl. humble.

24 M. Numi'dica (Poir. suppl. 3. p. 662.) leaves lanceolate, somewhat serrated, glabrous, nerved, dotted beneath; stem erect, much branched; whorls pedunculate, subcorymbose. ♃. H. Native of the north of Africa, near the ruins of the town of Tabrarca. Plant glabrous. Leaves petiolate. Corolla rather hairy. Stamens exserted. Perhaps a species of *Micromèria*.

Numidian Mint. Pl.

25 M. Java'nica (Blum. bijdr. p. 826.) flowers capitate; leaves lanceolate, distantly serrated from the middle to the apex, puberulous on both surfaces; stem obversely hairy; stamens exserted. ♃. S. Native of Java, in humid places, as at Buitenzorg, and in bogs near Tugu. Said by Blume to be nearly allied to *M. acutifòlia*. Perhaps the same as *M. lanàta*, or a var. of *M. arvénsis*.

Java Mint. Pl.

Cult. Most of the species delight in a moist soil; but they will also grow in a dry soil. Being all creeping rooted plants, they are readily increased by slips of the roots.

XXVII. LYCO'PUS (from λυκος, *lukos*, a wolf; and πους, *pous*, a foot; so called probably from the form of the leaves.)

Tourn. inst. t. 89. Lin. gen. no. 36. Schreb. gen. no. 44. Juss. gen. p. 111. ed. Usteri, p. 124. Benth. lab. p. 185.

Lin. syst. *Diándria, Monogýnia.* Calyx campanulate, equal, 4-5-toothed; throat naked inside. Corolla hardly exceeding the calyx, campanulate, equal, 4-cleft. Superior stamens wanting, or sterile, filiform, capitellate, shorter than the corolla: lower 2 a little exserted, fertile, distant; anthers 2-celled: cells parallel, rather distinct. Style somewhat equally bifid at top; stigmas minute, terminal. Achenia dry, smooth, with thickened callous edges, trigonal, truncate at apex, attenuated at the base. —Coarse marsh or bog herbs. Leaves acutely toothed or pinnatifid: floral ones similar to the rest, much exceeding the flowers. Whorls dense, usually many-flowered, axillary. Interior bracteas minute: outer ones sometimes exceeding the calyxes in the inferior whorls. Flowers small, sessile. This genus is nearly allied to *Méntha*, but differs from it in the superior stamens being sterile or wanting, and in the achenia being callously thickened on the margin.

1 L. Virgi'nicus (Lin. spec. p. 30.) nearly glabrous; stem stoloniferous at the base; leaves oblong-elliptic, narrowed at both ends, remotely toothed; calyx 4-toothed: teeth ovate, obtuse; rudiments of sterile stamens wanting. ♃. H. Native of North America, in humid places from New England to Carolina, Michx.; near St. Louis, and at the river Saskatchawan, near Cumberland House Fort, Drummond. Root often tuberous, creeping. Leaves 1-2 inches long, on short petioles, usually purplish beneath. Whorls small. Corolla a little longer than the calyx, white.

Var. β, pauciflòrus (Benth. lab. p. 185.) ♃. H. Native at Lake Mistassins, &c., Michx. L. uniflòrus, Michx. fl. bor. amer. 1. p. 14. L. pùmilus, Vahl, enum. 1. p. 211.

Virginian Water-Horehound. Fl. Aug. Sept. Clt. 1760. Pl. 3 feet.

2 L. macrophy'llus (Benth. lab. p. 185.) stem erect, firm, bluntly tetragonal; leaves large, petiolate, ovate, long-acuminated, coarsely and sinuately toothed, narrowed at the base, glabrous; whorls many-flowered; calyx irregularly 4-5-toothed: teeth ovate, obtuse; rudiments of sterile stamens wanting? achenia equalling the calyx. ♃. H. Native of North-west America, at the straits of Juan de Fuca, Scouler. L. Virgínicus, β, quercifòlius, Pursh, fl. amer. sept. 1. p. 16.? Stem pubescent. Leaves glabrous, 3-4 inches long. Corollas white.

Long-leaved Water-Horehound. Fl. Aug. Sept. Clt. 1700.? Pl. 1 to 3 feet.

3 L. obtusifòlius (Michx. ex Vahl, enum. 1. p. 212.? Benth. lab. p. 185.) stem erect, firm, almost simple; leaves sessile, oblong-elliptic, deeply serrated, roundly narrowed at the base; whorls many-flowered; calyx irregularly 5-toothed; achenia hardly shorter than the calyx; rudiments of sterile stamens almost wanting. ♃. H. Native of North-west America, in flats along the Red River, Douglas; at the river Saskatchawan, near Carlton House Fort, Drummond, Hudson's Bay, Michx. Habit of *L. Virgínicus*. Teeth of leaves acute or bluntish. Corolla rather longer than the calyx, white.?

Blunt-leaved Water-Horehound. Pl. 1 to 2 feet.

4 L. Europæ'us (Lin. spec. p. 30.) stolons none; stem erect, branched; leaves petiolate, ovate-oblong, sinuately toothed or pinnatifid; whorls many-flowered; calyx acutely 5-toothed; rudiments of sterile stamens wanting; achenia rather shorter (rarely) the tube of the calyx. ♃. H. Native throughout Europe and the north of Asia, in humid watery places by the sides of ditches and rivers; plentiful in Britain. Smith, engl. bot. t. 756. Fl. dan. 1081. Svensk, bot. t. 262. Curt. lond. vol. 1. with a figure. L. vulgàris, Pers. ench. 1. p. 24. L. palústris, Lam. fl. fr. 2. p. 430. ill. t. 18. L. aquáticus, Mœnch. —Petiv. brit. t. 32. f. 5. Root creeping. Stem acutely tetragonal, glabrous, as well as the leaves. Corolla white, equalling the calycine teeth, with a tinge of red. Cattle appear not to touch this herb. It dyes black, and gives a permanent colour to linen, wool, and silk. Gypsies are said to stain their skin with it.

Var. β, pubéscens (Benth. lab. p. 186.) stem bluntly tetragonal; and are, as well as the more nerved leaves, pubescent, and the calycine teeth are a little longer. ♃. H. Native of England.

European Water-Horehound. Fl. July, Aug. Britain. Pl. 1 to 4 feet.

5 L. rube'llus (Mœnch. suppl. p. 446. ex Wenderoth, in syll. pl. soc. ratisb. 1. p. 88.) stolons creeping; stem erectish, humble, pubescent; leaves petiolate, ovate, narrowed at the base, deeply toothed, pubescent; calyx 5-toothed: teeth lanceolate, acute; rudiments of sterile stamens wanting. ♃. H. Native of Virginia, Wenderoth. This species differs from *L. Europæ'us* in the stolons being long and leafy, and in the stem being hardly half a foot high.

Reddish Water-Horehound. Pl. ½ to 1 foot.

6 L. sinua'tus (Elliott, car. 1. p. 187.) stem erect, acutely tetragonal, nearly glabrous; leaves petiolate, oblong-lanceolate, narrowed at both ends: lower ones pinnatifid: middle ones sinuately toothed: upper ones linear, almost quite entire; whorls many-flowered; calyx 5-toothed, acute; rudiments of sterile stamens capitate; achenia shorter than the tube. ♃. H. Native of North America, in watery places common, from the river Saskatchawan to Canada, Virginia, &c. L. Europæ'us, Pursh, fl. amer. sept. 1. p. 16. Michx. fl. bor. amer. 1. p. 14. but not of Lin. L. bracteàtus, Muhl. ex Link, jahrb. 1-3. p. 55. L. Americánus, Muhl. ex Bart. fl. phil. 1. p. 12. Stolons not seen. Stem glabrous, acutely tetragonal. Leaves very variable, glabrous. Corollas white.

Var. α, dissèctus (Benth. lab. p. 187.) leaves usually pinnatifid. ♃. H. Native principally of the northern region of North America. L. exaltàtus, Elliott, bot. car. 1. p. 187. but not of Lin. L. heterophýllus, Rafin, med. fl. 2. p. 28.

Var. β, vulgàris (Benth. lab. p. 187.) leaves generally sinuated. ♃. H. Native of the middle region of North America, L. sinuàtus, Elliott, bot. car. 1. p. 187. L. vulgàris, Nutt. gen. amer. 1. p. 15.

Var. γ, angustifòlius (Benth. lab. p. 187.) leaves for the most part linear, and almost quite entire. ♃. H. Native of the southern region of North America. L. angustifòlius, Nutt. gen. amer. 1. p. 15. L. longifòlius, Rafin. med. fl. 2. p. 28. L. Pennsylvánicus, Muhl. ex Rafin. l. c. L. pauciflòrus, Rafin. l. c.?

Sinuated-leaved Water-Horehound. Pl. 1 to 2 feet.

7 L. Austra'lis (R. Br. prod. p. 500. Benth. lab. p. 716.) stem erect, quite glabrous, or hispid from a few pili; leaves almost sessile, oblong-lanceolate, narrowed at both ends, sharply toothed, quite glabrous above or on both surfaces, shining or pubescent beneath; whorls many-flowered; calyx 5-toothed: teeth, as well as the bracteas, very acute; rudiments of sterile stamens capitate; achenia shorter than the tube of the calyx. ♃. H. Native of Eastern Siberia; China; New South Wales, at Port Jackson; and on the south coast of New Holland; also of Van Diemen's Land. L. Europæ'us, γ, argùtus, Benth. lab. p. 186. L. lùcidus, Turcz. mss. This species differs from *L. Europæ'us* besides habit, in the rudiments of sterile stamens being present; and it is also very nearly allied to *L. sinuàtus*; but differs in habit, almost sessile leaves, and in the calyxes and bracteas being very acute.

Southern Water-Horehound. Fl. July, Aug. Clt. 1823. Pl. 1 to 3 feet.

8 L. exalta'tus (Lin. fil. suppl. p. 87.) stem erect, branched, tall; leaves petiolate, ovate-oblong, pinnatifid; whorls many-flowered; calyx acutely 5-toothed; rudiments of sterile stamens capitate; achenia about equal in length to the calycine teeth. 4. H. Native of the east of Europe, and Middle Asia; as of Hungary, Siberia, Himalaya, Bithynia, Italy, France, &c., in humid or watery places. Sibth. et Smith. fl. græc. t. 12.—Sabb. hort. rom. 3. t. 64. but not of the more recent authors. L. pinnatífidus, Pall. fl. ross. 2. t. 1. Stem acutely tetragonal, glabrous or pubescent. Leaves glabrous or pubescent. Corollas white, smaller than those of *L. Europæ'us*.

Exalted Water-Horehound. Fl. July, Aug. Clt. 1739. Pl. 4 to 6 feet.

N.B.—What is *L. intermèdius*, Schrad.?

Cult. Coarse marsh plants of easy culture, but of no beauty. They will grow in any kind of soil, but prefer one moist; and are readily propagated by dividing at the root.

XXVIII. MERIA'NDRA (from *μερος, meris*, a part; and *ανηρ ανδρος, aner andros*, a male; in allusion to the superior stamens being abortive, rarely one of them fertile.) Benth. in bot. reg. vol. 15. lab. p. 188. Sálvia species, Roth. and Roxb.

Lin. syst. *Diándria, Monogýnia.* Calyx ovate, bilabiate: upper lip concave, entire, or with 3 very short teeth: lower lip bifid; throat naked inside. Corolla having the tube equal in length to the calyx; and the limb equally 4-cleft; lobes flat: upper lobe entire or emarginate. The 2 lower stamens fertile, erect, distant: the two superior ones usually abortive, rarely with one or the other fertile, conforming to the lower ones; anthers 2-celled: cells separate, stipitate, equal, pendulous; with a short linear connective, which is articulated with the filament at the middle, and erect on both sides. Style nearly equally bifid at top.—Shrubs with racemose or spicately panicled flowers. Habit of *Sálvia*, but the form of the corolla and direction of the stamens are that of *Menthoideæ*; and *M. strobilífera* is not unlike *Elshóltzia* in habit.

1 M. strobili'fera (Benth. in Wall. pl. asiat. rar. 1. p. 29. lab. p. 188.) branches densely clothed with floccose tomentum; whorls spicate: lower ones rather remote; floral leaves bracteaformed, ovate-lanceolate, disposed in 4 rows. ♄. F. Native of the East Indies, among the mountains, in the province of Sirmore, Wall.; Himalaya, at Syen, and below Simlah, Royle. Leaves on short petioles, oblong-lanceolate, 2-4 inches long, obtuse, crenulated, rather villous above, and woolly beneath: floral ones entire. Flowers about the size of those of *Elshóltzia*. Odour ungrateful.

Strobile-bearing Meriandra. Shrub 2 to 3 feet.

2 M. Bengale'nsis (Benth. l. c.) stem nearly glabrous; branches canescent; whorls remote, racemosely panicled. ♄. S. Native of Bengal and Coromandel. It is cultivated in the gardens of India, and used for the purposes of sage. It has also been found in Abyssinia, where it is also probably a native. Sálvia Bengalénsis, Roxb. fl. ind. 1. p. 146. Sálvia dianthèra, Roth. nov. spec. p. 18. Sálvia Abyssínica, R. Br. append. to Salt. abyss. Leaves very like those of *Sálvia officinàlis*, 2-3 inches long, petiolate, oblong-lanceolate, obtuse, crenulated, rounded or truncate at the base, green above and canescent beneath: floral ones small. Flowers about the size of those of *Thymus serpyllum*. Taste and odour of leaves stronger than that of sage, Roxb. The whole plant exhales an odour like that of camphor when rubbed, Wall.

Bengal Meriandra. Shrub 4 to 6 feet.

Cult. For culture and propagation see shrubby species of *Sálvia*, p. 729.

Tribe III.

MONA'RDEÆ (the plants contained in this tribe agree with the genus *Monárda* in the characters given below.) Benth. lab. p. 190. Corolla bilabiate. The 2 superior stamens abortive, or if fertile, bearing linear connate anthers. The 2 lower stamens fertile, ascending; anthers linear, sometimes with opposite, confluent, contiguous cells, therefore apparently 1-celled, sometimes dimidiate, free or connate behind; connective linear, articulated in the filament, bearing a fertile cell at top, truncate behind, or usually drawn out, filiform and clavate, or bearing another cell, which is sometimes difformed and empty, and sometimes fertile.

XXIX. SA'LVIA (from *salvo*, to save; so called on account of the healing qualities of sage.) Lin. gen. no. 39. Schreb. gen. no. 50. Gærtn. fruct. t. 66. Tourn. inst. t. 88. Juss. gen. p. 111. ed. Usteri, p. 125. Benth. lab. p. 190. Hormínum, Schárea, and Æthiopis, Tourn. inst. and other authors. Schradèria and Júngia, Mœnch.—Stenarrhèna, D. Don, prod. fl. nep.—Leùnia, Llave and Lexarza, pl. mex.

Lin. syst. *Diándria, Monogýnia.* Calyx ovate, tubular, or campanulate, bilabiate: upper lip entire or tridentate: lower one bifid: throat naked inside. Corolla with an inclosed or exserted tube, which is equal, ventricose, or widened, sometimes furnished with a ring of hairs inside, sometimes naked, or sometimes furnished with 2 teeth or processes on the lower side at the base: limb bilabiate: upper lip erect, rarely spreading, straight or falcate, entire or emarginate: lower lip spreading, shorter or longer, with the lateral lobes oblong or roundish, spreading, reflexed, or twisted erectly, the middle lobe usually the broadest, entire or emarginate. Rudiments of superior stamens wanting, or small and club-shaped: lower 2 always fertile, inserted near the throat of the tube; filaments short, horizontal, rarely erect, articulated with the anther at top, and usually drawn out beneath the articulation, rarely almost continuous. Anthers dimidiate; connective elongated, linear, articulated transversely with the filament, ascending under the upper lip of the corolla, and bearing at the top a linear, adnate, or versatile fertile cell, and deflexed or erect behind, and sometimes bearing another smaller cell, which is either fertile or difformed, and empty; free, but usually combined together, or connate in various ways. Disk of ovarium glanduliferous in front. Style ascending, bifid at top: lobes sometimes subulate, equal, or the superior one is longest, and sometimes the lower one or both are rounded, dilated, and flattened. Stigmas for the most part minute, terminal, or in the larger part running along the lobes of the style. Achenia ovoid-triquetrous, dry, glabrous, usually very smooth.—This very extensive genus is very variable in habit.

Sect. I. Eu'sphace (from *ευ, eu*, well; and *σφακος, sphakos*, sage; this section is supposed to contain the true species of the genus.) Benth. in Hook. bot. misc. 3. p. 372. lab. p. 207. Calyx campanulate: upper lip tridentate: lower one bifid: teeth all acute, and hardly increasing at maturity. Tube of corolla wide, a little exserted, furnished with a ring of hairs inside: upper lip erect; lateral lobes of lower lip reflexedly spreading: middle lobe broad, emarginately bifid, with the segments a little reflexed. Connective stretched out behind, bearing a difformed, empty, rarely somewhat polliniferous cell, almost connected at the extremities.—Herbs, rarely shrubs, natives of the region of the Mediterranean. Leaves entire or pinnate.

1 S. Cre'tica (Lin. spec. p. 33.) shrubby; stem clothed with white wool; floriferous branches clothed with white pubescence; leaves petiolate, entire, oblong-linear, narrowed at the base, wrinkled: lower ones clothed with white wool beneath: floral leaves sessile: uppermost ones deciduous; racemes a little branched; whorls many-flowered; calyx membranaceous, coloured, striated, pubescent, with subulately acuminate teeth; tube of corolla exserted; connective very short behind, and bearing an empty cell. ♄. H. Native of Candia. Schreb. nov. act. nat. cur. 479. t. 3. D. C. pl. rar. hort. gen. not. 4. 9. t. 3. S. tenuifòlia, Riv. mon. irr. 59. t. 128. S. officinàlis, var. angustifòlia, Link. Corollas violet. Very nearly allied to *S. officinàlis*; and differs principally in the very narrow leaves and long petioles.

Cretan Sage. Fl. June, Aug. Clt. 1760. Shrub 1 foot.

2 S. lavandulæfòlia (Vahl, enum. 1. p. 222.) shrubby, clothed with white tomentum; leaves petiolate, entire, oblong-lanceolate, narrowed at the base, wrinkled, clothed with white tomentum on both surfaces; floral leaves sessile: uppermost ones deciduous; calyx tubularly campanulate, membranaceously coloured at apex, striated, pubescent: teeth all nearly equal, subulately acuminated; tube of corolla exserted; connective stretched out behind, bearing anthers at both ends, the hind cells empty and connate. ♄. S. Native of Spain, on arid hills. S. rosmarinifòlia, Hortul. ex Roem. et Schultes, syst. 1. p. 200. S. tenuior, Desf. ex Roem. et Schultes, mant. 1. p. 200. S. Hispanòrum, Lag. gen. et spec. nov. diagn. 3. Very nearly allied to *S. officinàlis*; and differs principally in being canescent; in the leaves being narrower; in the racemes being slender; in the whorls being loose and fewer-flowered; and in the calyxes being smaller, and hardly bilabiate. Corollas violet.

Lavender-leaved Sage. Shrub.

3 S. officina'lis (Lin. spec. p. 34.) stem shrubby, clothed with white tomentum; floriferous branches clothed with tomentose pubescence; leaves petiolate, entire, oblong, narrowed or roundish at the base, wrinkled: lower ones clothed with white wool beneath: floral leaves sessile, ovate, acuminated, membranous at the base, striated; racemes almost simple; whorls many-flowered, distinct; calyx membranaceously coloured, striated, pubescent: teeth all subulately acuminated; tube of corolla exserted; connective stretched out behind, bearing anthers at both ends: hind cells empty, connate. ♄. H. Native of the south of Europe, in dry places; as of Spain, south of France, Piedmont, Naples, Dalmatia. Woodv. med. bot. t. 38.? S. grandiflòra, Tenore, fl. nap. prod. append. 5. p. 3. syll. p. 16. but not of Ettling. S. chromática, Hoffm. nasehtr.? S. papillòsa, Hoffm. nasehtr. 1. p. 58.? S. Hispánica, &c., Besl. cyst. ord. 8. fol. 1. f. 19. 2. Leaves 1 to 1½ inch long: upper floral ones coloured. Corolla downy outside, larger or smaller, purple, blue, or white. There are several varieties of this species; one with variegated leaves, another with narrow leaves, and a third with small leaves, &c. The leaves of this and some other species are used in stuffing and sauces for many kinds of luscious and strong meats, as well as to improve the flavour of various articles of cookery. The decoction called sage-tea is usually made from one variety, the *Small-leaved green*, or *Sage of virtue*; but any of the other varieties are equally fit for this purpose. Sage has a peculiar aromatic smell, and a warm aromatic taste, with some degree of bitterness and astringency. In its effects, sage agrees with other aromatics. It is stimulant, carminative, and tonic. The best preparation for these purposes is an infusion of the dried leaves, drunk as tea. With the addition of a little lemon-juice, it proves a useful diluting drink in febrile disorders, being sufficiently agreeable to the palate.

Varieties are as follow: 1. The common or red. 2. The green. 3. The small-leaved green, or Sage of Virtue. 4. The broad-leaved, or balsamic. The red is the principal sort in culinary use, having the most agreeable and fullest flavour: the green is the next in estimation with the cook; but the small-leaved is generally preferred to those to eat as a raw herb, and for decoctions; while the broad-leaved or balsamic kind is most efficacious in a medical way, and is also a tea herb. However, any of the sorts may be occasionally used for those alternate purposes.

Cult. All the varieties may be propagated by slips or cuttings of the young shoots taken from March to June; but most successfully in May and June, by detaching the young shoots of the same year. The outward shoots are to be preferred: slip or cut them off 5 or 6 inches long, slipping off the under leaves, and preserving the top leaves, and water them. They will soon take root freely, especially the young shoots planted in May and June. In the advancing growth, if they spindle up into flower-stalks, pinch or cut that part down; that the plants may shoot out full and stocky from the bottom in close bushy growth for use the same year. In gathering sage for use, cut or slip off the young side and top shoots neatly; and be careful not to strip too close, especially towards winter, and during that season. In July, and the rest of the summer, it is usual to gather some of the young top growth to dry for winter. Keep the plants in regular bushy heads, by cutting away disorderly growths, and the decayed flower-stalks in autumn. Keep them clear from weeds; and sometimes loosen the earth about the plants with a hoe, garden trowel, or small spade, in spring and autumn. Make a fresh plantation once in two, or three, or four years, or as may be necessary by the plants becoming naked, stubby, and dwindling.—*Abercrombie.*

Officinal or Common Sage. Fl. June, July. Clt. 1597. Shrub 1 to 2 feet.

4 S. crassifòlia (Desf. arb. 1. p. 134. but not of Smith.) stem shrubby, clothed with white wool; floriferous branches clothed with tomentose pubescence; leaves petiolate, ovate, obtuse, somewhat cordate at the base, erosely crenated, wrinkled, pubescent: those of the sterile branches undulately curled, and clothed with white wool on both surfaces: lower floral leaves green: upper ones membranous, deciduous; racemes simple; whorls many-flowered, distant; calyx membranous, coloured, striated, pubescent: teeth all lanceolate, acute; tube of corolla a little exserted; connective stretched out behind, antheriferous at both ends: hind cells empty, connate. ♄. H. Native of the South of Europe. This is probably only a variety of *S. officinàlis*, differing in the shape and larger size of the leaves, &c.

Thick-leaved Sage. Fl. June, July. Clt. 1804. Shrub 1 to 2 feet.

5 S. grandifòlia (Ettling, salv. no. 2.) stem shrubby, clothed with white wool; floriferous branches clothed with tomentose pubescence; leaves entire, petiolate, ovate, acute, broadly rounded at the base, or cordate, wrinkled, pubescent: lower ones woolly beneath: floral leaves herbaceous, or the upper ones are membranaceous at the base, ovate, acute; racemes nearly simple; whorls 6-10-flowered, distinct; calyx membranaceous, coloured, striated, hispid: teeth all acute; tube of corolla exserted; connective stretched out behind, antheriferous at both ends: hind cells empty, connate. ♄. H. Native of Tauria, in stony, exposed places on the mountains, and of the Levant. Jacq. fil. ecl. fasc. 4. p. 55. t. 36. S. tomentòsa, Mill. dict. no. 2. S. officinàlis, Pall. ind. taur. p. 134. but not of Lin. S. màjor, &c. Besl. cyst. ord. 8. fol. 1. f. 11. Leaves 3-4 inches long, and 1½ to 2 broad, green above, and canescent beneath, pubescent on both surfaces, but not woolly. Corollas large, blue.

Var. β, minor (Benth. lab. p. 210.) plant more humble; leaves smaller, and more hoary, and always broadly rounded, or cordate at the base.

Great-flowered Sage. Fl. June, Sept. Clt. 1816. Shrub 2 to 3 feet.

6 S. conyzoides (Benth. lab. p. 210.) stem shrubby, rather woolly at the base; floriferous branches clothed with tomentose pubescence; leaves petiolate, usually interruptedly pinnate, wrinkled, clothed with white wool beneath: terminal segment large, oblong-lanceolate, narrowed at the base, with 1-2 lateral segments on each side, which are oblong-lanceolate, and rounded at the base; floral leaves bractea-formed, deciduous; racemes elongated; whorls many-flowered, remote; calyx rather membranous, coloured, striated, pubescent: teeth all subulately acuminated; tube of corolla exserted; connective stretched out behind, antheriferous at both ends: hind cells empty, connate. ♄. H. Native of the South of Europe; ? and occurs in French gardens under the names of *S. triloba*, *S. interrúpta*, and *S. officinàlis foliis pinnatis*. S. aurita, Schultes, obs. bot. p. 10. ? but not of Thunb. Corollas blue, or purple.

Confused Sage. Fl. June, July. Clt. ? Shrub 1 to 2 feet.

7 S. triloba (Lin. fil. suppl. 88.) stem shrubby, and is, as well as the branches, clothed with white wool; leaves petiolate, ovate, obtuse, wrinkled, thick, clothed with white wool beneath, cordate at the base, auriculated, or with 1 or 2 additional, roundish-ovate, small, distinct segments; floral leaves membranous, deciduous; racemes short, somewhat panicled, clammy; whorls 6-10-flowered, distinct; calyx tubularly campanulate, striated, villous, clammy: teeth all ovate, acutish; tube of corolla exserted; connective stretched out behind, antheriferous at both ends, the hind cells empty, approximate, free. ♄. H. Native of the region of the Mediterranean, on dry, exposed hills; as of Sicily, Calabria, Grecian Archipelago, Syria, &c. Sibth. et Smith, fl. græc. 1. p. 13. t. 17. S. subtriloba, Schranck, in syll. pl. soc. ratisb. 2. p. 58.? S. Clûsii, Jacq. hort. schœnbr. 2. p. 37. t. 195.? S. marrubioides, Vahl, enum. 1. p. 223. a garden monstrosity, having the whorls axillary. S. baccifera, Ettling. salv. p. 4. S. Sipylea, Lam. ill. gen. 1. p. 68. S. fruticòsa, Mill. dict. no. 5. S. auriculàta, Mill. dict. no. 9. S. quinquéloba, Riv. mon. irr. t. 131. Leaves 1 to 1½ inches long, seldom entire, but usually furnished with 1-2 segments at the base. Calyx purplish. Corolla reddish violet, glabrous outside.

Three-lobed-leaved Sage. Fl. June, Aug. Clt. 1596. Shrub 2 to 3 feet.

8 S. interrúpta (Schousb. beob. mar. 7. t. 1.) stem shrubby; branches clothed with clammy villi; leaves petiolate, irregularly pinnate, wrinkled, clothed with white tomentum beneath: terminal segment large: the lateral ones 1-2 pairs, ovate-oblong, rounded at the base, with other small, rounded segments between these; floral leaves membranous, deciduous; racemes simple; whorls about 6-flowered, remote; calyx tubularly campanulate, striated, clothed with clammy villi: teeth all acute; tube of corolla exserted; connectives stretched out behind, antheriferous at both ends, the hind cells empty, and rather connate. ♄. H. Native of the North of Africa, in the southern provinces of Morocco. Jacq. fragm. 61. t. 90.? Sweet, fl. gard. 2. t. 169. Hairs on the plant glanduliferous. Leaves 4-6 inches long, with the petioles; segments crenulated. Raceme 1-2 feet long. Corolla showy, white, with a tinge of blue: upper lip downy outside. This species occurs in gardens under the names of *S. rosæfólia* and *S. pinnàta*.

Interrupted-leaved Sage. Fl. April, Sept. Clt. 1798. Shrub 3 to 4 feet.

9 S. sinuata (Sibth. et Smith, fl. græc. 1. p. 14. t. 18.) branches clothed with clammy villi; leaves petiolate, irregularly pinnate; segments unequal, ovate-oblong, rounded at the base, villous on both surfaces, hardly canescent beneath: floral leaves membranous, deciduous; racemes simple; whorls about 6-flowered, remote; calyxes drooping, tubularly campanulate, striated, clothed with clammy villi; teeth all acutish; tube of corolla exserted, recurvedly ascending, connective stretched out behind, antheriferous at both ends, the hind cells empty, and rather connate. ♄. H. Native of Greece, on the declivities of mountains frequent. Petioles ciliated. Leaves almost like those of *S. interrúpta*. Corollas blue.

Ringent-flowered Sage. Shrub 1 to 2 feet.

10 S. pinnata (Lin. spec. p. 39.) stem herbaceous, erect, pilose; leaves pinnate, with 3-4 pairs of petiolate, ovate, or deeply crenated, wrinkled, villous leaflets; racemes simple; whorls about 6-flowered, remote; floral leaves and bracteas membranous, ovate, acuminated, shorter than the calyxes, deciduous; calyx urceolate, truncate, pilosely woolly: teeth all short, acute; tube of corolla much exserted; connective stretched out behind, antheriferous at both ends, the hind cells empty, approximate, free. ♂. H. Native of the South and East of Europe; as of Spain, and the Levant; also of Arabia. The whole plant is clothed with long, white hairs, and short, clammy villi. Leaves smaller than those of *S. interrúpta*, and the segments more numerous. Corolla above an inch long, purple, showy.

Pinnate-leaved Sage. Fl. July. Clt. 1731. Shrub 1 to 2 feet.

11 S. incarnata (Vahl, enum. 1. p. 226. but not of Cav., but probably of Ettling, salv. no. 15.) stem herbaceous, erect, pilose; leaves pinnate, with 2-3 pairs of almost sessile, ovate, crenated, wrinkled, villous leaflets; racemes simple; whorls 2-6-flowered, remote; floral leaves membranaceous, ovate, acuminated, shorter than the calyx, deciduous; calyx campanulate, pilosely woolly: teeth all ovate, acute; tube of corolla deflexed, equalling the calyx; connective stretched out behind, antheriferous at both ends, the hind cells empty, free. ♃. H. Native of the Levant. Habit of *S. pinnàta*, but the flowers are different. It differs from *S. rosæfólia* in the erect stem and bracteas. Corollas large, flesh-coloured.

Flesh-coloured-flowered Sage. Pl. 1 to 2 feet. ?

12 S. rosæfólia (Smith, icon. ined. 1. p. 5. t. 5.) stem procumbent at the base; branches ascending, pubescent; leaves pinnate, with 2-3 pairs of petiolate, oblong leaflets, which are narrowed at both ends, villous above, and pubescent beneath; floral leaves ovate-lanceolate, coloured, about equal in length to the calyxes; racemes short; whorls 2-3-flowered, distinct; calyx coloured: teeth all acute. ♃. ? ♄. ? H. Native of Armenia, Levant, Persia. S. orientàlis, Mill. dict. no. 8.? Petioles ciliated. Leaves 3 inches long. Calyx almost like that of *S. officinàlis*. Corollas, calyxes, and bracteas purple. There is a variety of this having lanceolate leaflets, the ultimate ones confluent, ex Vahl.

Rose-leaved Sage. Shrub procumbent.

13 S. bracteata (Russ. nat. hist. Alep. 2.) stem herbaceous, erect, pubescent; leaves pinnate, with 2-3 pairs of sessile, oblong, acute, crenately serrated leaflets, which are narrowed at the base, and tomentosely villous on both surfaces: floral leaves very broad, ovate, acuminated, quite entire, permanent, clasping the flowers, longer than the calyxes; racemes simple; whorls usually 10-flowered, remote; calyx sessile, with villous lips: teeth all lanceolate; tube of corolla inclosed. ♃. H. Native of Syria, near Aleppo, Russel.—Plukn. alm. p. 185. t. 194. f. 6. Leaves 2-4 inches long. Floral leaves membranaceous, whitish, like those of *S. Sclárea*. Whorls dense. Corolla purplish.

Bracteate-flowered Sage. Pl. 1 to 1½ foot.

14 S. scabiosæfòlia (Lam. journ. hist. nat. no. 14. p. 44. t. 27.) stem shrubby; branches diffuse, pilosely woolly; leaves pinnate: leaflets usually twin, entire, bifid, or pinnate, oblong, or linear, acute, quite entire; racemes simple; whorls 6-10-flowered, distinct: floral leaves permanent, lanceolate, ovate, or ovate-roundish, acuminated; calyx ample, striated, villous: teeth all ovate, acute; tube of corolla a little exserted; connective stretched out behind, dilated, antheriferous at both ends, the hind cells empty, and connate. ♄. H. Native of Tauria, Caucasus, and Armenia. Mirb. ann. mus. 15. t. 15. f. 2. S. vulnerariæfòlia, Willd. spec. 1. p. 149. S. Hablizièna, Willd. in Schrad. journ. bot. 1. p. 289. t. 2. Jacq. fil. eclog. 1. p. 9. t. 1. Sims, bot. mag. t. 1429. S. scabiòsa, Pers. euch. 1. p. 29. S. Taúrica, Habl. phys. beschr. taur. p. 207. S. pinifòlia, Pall. ind. taur. Stem pilose, or woolly, almost glabrous above, and often purplish. Leaves numerous, sometimes almost glabrous, but usually canescent and pilose, with 3-4 pairs of segments, which are usually twin, or by threes, but opposite, and therefore apparently somewhat verticillate. Corolla beautiful, large, white. There is a variety of this with usually very narrow, almost glabrous leaves, and with the whorls all 6-flowered, and sometimes 10-flowered and more. There are also varieties differing in the size and form of the floral leaves. The *S. Hablizièna* is a more hairy plant, with broader leaflets than that called *S. scabiosæfòlia* in the gardens, whose leaflets are narrower and nearly glabrous.

Scabious-leaved Sage. Fl. Aug. Clt. 1795. Shrub diffuse.

Sect. II. Hymenósphace (from ὑμην, *hymen*, a membrane; and σφακος, *sphakos*, sage; in reference to the dilated, membranaceous lobes of the lower lip of calyx.) Benth. in Hook. bot. misc. 3. p. 373. lab. p. 214. Calyx campanulate: upper lip 2-3-cleft: lower one bifid; lobes all nearly equal, and becoming dilated, membranaceous, and veiny after florescence. Tube of corolla ample, furnished with a *ring* of hairs inside; upper lip rather falcate, compressed, and the lateral lobes of the lower lip spreading. Connective drawn out behind, and bearing a difformed, empty cell, somewhat connected at the extremities.—Shrubs, rarely herbs, usually hoary. Habit of the last section, especially those species natives of the region of the Mediterranean and the Canary Islands. The Cape species are more woody.

15 S. Linkia'na (Roem. et Schultes, syst. mant. 1. p. 182.) herbaceous; ? branches ascending, tomentose; leaves pinnate, with 2-3 pairs of *sessile*, oblong-lanceolate, bluntish, crenated leaflets, which are narrowed at the base, wrinkled, pubescent above, and clothed with soft villi beneath; floral leaves broad-ovate, obtuse, entire, equal in length to the calyxes; racemes simple; whorls many-flowered; calyxes on short pedicels, villous, with coloured lips; lobes all ovate, roundish; tube of corolla a little exserted; hind cells of anthers connate. ♃. ? H. Native of the Levant. S. pilántha, Link, enum. 1. p. 10. Corolla blue: upper lip pilose.

Link's Sage. Fl. July, Aug. Clt. 1823. Pl. 2 to 3 feet.

16 S. acetabulòsa (Vahl, enum. 1. p. 227.) stem suffruticose, ascending, pilose; lower leaves pinnate, with 1-2 pairs of leaflets; upper leaves entire, oblong, obtuse, very much wrinkled, villous on both surfaces, canescent beneath: lower floral ones like the rest, but the upper ones are membranous, and about equal in length to the calyxes; racemes simple; whorls about 10-flowered; calyx ample, hispid, with coloured lips: upper lip entire. ♄. H. Native of the Levant. Very nearly allied to *S. Moluccèllæ*, but differs in the leaves being pinnate, and the calyxes hispid. Corolla glabrous.

Acetabulose Sage. Shrub ascending.

17 S. Hydra'ngea (D. C. herb. ex Benth. lab. p. 717.) canescent; leaves pinnate, with 3-4 pairs of oblong, obtuse, quite entire, pubescent leaflets; floral leaves small, deciduous; whorls 6-10-flowered; calyx large, glabrous, coloured: upper lip sinuated: lobes of lower lip ovate-roundish; corollas hardly exserted. ♄. ? H. Native of Persia, Olivier. Flowers similar to those of the last. Leaves not wrinkled.

Hydrangea Sage. Shrub. ?

18 S. pomi'fera (Lin. spec. p. 34.) shrubby: branches clothed with hoary tomentum; leaves petiolate, ovate-oblong, obtuse, rounded at the base, or somewhat cordate, with crenulated, undulately curled margins, wrinkled, hoary; floral leaves shorter than the calyxes: upper ones and bracteas membranous, deciduous; racemes a little branched; whorls about 6-flowered, distinct; calyx ample, pubescent at the base, a little striated, with coloured lips: upper lip very broad, almost entire, or sinuated: lobes of the lower lip obovate-roundish, obtuse, mucronulate; tube of corolla ample, a little exserted; hind cells of anthers difformed, rather connate. ♄. H. Native of the Levant, Grecian Islands, Palestine, and Syria. Sibth. et Smith, fl. græc. 1. p. 12. t. 15.—Tourn. itin. t. 92. S. frugifera, Etding, salv. no. 5. S. crispa, Riv. mon. irr. t. 125. Calyxes nearly sessile. Corollas bluish-violet, 1½ inch long, glabrous, or downy outside, with sometimes a white spot on the lower lip. Sterile stamens clavate at top.

Apple-bearing Sage. Fl. July, Aug. Clt. 1699. Shrub 2 to 3 feet.

19 S. calycina (Sibth. et Smith, fl. græc. 1. p. 13. t. 16.) shrubby; branches erect, clothed with hoary tomentum; leaves petiolate, ovate, obtuse, cuneated, rounded, or subcordate at the base, crenulated, flattish, wrinkled, hoary; floral leaves shorter than the calyxes: upper ones and bracteas membranous, deciduous; racemes short, branched a little; whorls 2-6-flowered, remote; calyx ample, striated at the base, pubescent: upper lip entire, sinuated, or ending in 3 small points: lobes of the lower lip obovate, cuneated; tube of corolla ample, hardly exserted; hind cells of anthers difformed, sub-connate. ♄. H. Native of Greece, in several parts. S. peregrina, Rauw. gesn. ed. Schmidel, 1. t. 12. f. 103. Very nearly allied to *S. pomifera*, but differs in the shorter, broader leaves, and larger flowers, &c. Corollas reddish violet.

Large-calyxed Sage. Fl. July, Aug. Clt. 1823. Shrub.

20 S. multicau'lis (Vahl, enum. 1. p. 225.) tomentose; leaves subcordate-oblong, very blunt, crenated; calyx hairy; bracteas lanceolate; stem herbaceous. ♃. H. Native of the Levant. Stems many, leafy at the base, and, like the whole plant, clothed with hoary tomentum, but pilose above among the whorls. Leaves petiolate, wrinkled. Whorls distant, 6-flowered. Bracteas shorter than the calyxes. Calyx large, campanulate, veiny, membranaceous, with rounded segments. It appears to differ from *S. calycina* in the stems being humble and herbaceous, in the cauline leaves being smaller, and the floral ones lanceolate.

Many-stemmed Sage. Pl. ½ foot.

21 S. Moluccoi'des (Benth. lab. p. 216.) stem herbaceous, erect, pubescent; leaves on long petioles, ovate, obtuse, crenated, cordate at the base, much wrinkled, pubescent on both surfaces, canescent while young: floral ones shorter than the calyxes: upper ones and bracteas membranous, deciduous; racemes elongated, simple; whorls remote, 6-10-flowered; calyxes almost sessile, striated at the base, pubescent, ample; upper lip minute, tridentate; lobes of the lower lip very blunt. ♃. H. Native of Syria, near Aleppo. This species differs from *S. calycina* in the leaves being more wrinkled, hardly

tomentose, in the racemes being nearly a foot long, and in the fructiferous calyxes being as large as those of *S. Moluccélla læ'vis*. Stems creeping at the base.

Molucella-like Sage. Pl.?

22 S. au'rea (Lin. spec. p. 38.) stem shrubby; branches clothed with hoary tomentum; leaves petiolate, ovate-roundish, obtuse, quite entire, or sinuated, coriaceous, hoary; floral leaves sessile, villous, permanent; racemes short, a little branched; whorls 2-flowered, approximate; calyx ample, villous, with coloured lobes: upper lip almost quite entire, broad-rounded: lobes of the lower lip ovate-roundish; tube of corolla hardly exceeding the calyx; connective short, somewhat deflexed and dilated behind, bearing a small, empty cell. ♄. G. Native of the Cape of Good Hope, and Algoa Bay. Curt. bot. mag. t. 186. Mirb. ann. mus. 15. t. 15. f. 7. Walth. hort. t. 15. S. colorâta, Lin. syst. p. 71.? but not of Vahl. S. Africàna, &c. Commel. hort. 2. p. 183. t. 92. The whole plant clothed with white tomentum. Corolla beautiful, golden yellow. Leaves ½ an inch long, or hardly an inch.

Golden-flowered Sage. Fl. April, Nov. Clt. 1731. Shrub 3 to 4 feet.

23 S. Africa'na (Lin. spec. p. 38.) stem shrubby, panicled at top; branches canescent; leaves nearly sessile, ovate-oblong, obovate, or cuneated, acute, quite entire, or sinuately toothed, narrowed at the base, nearly glabrous above, and white beneath, coriaceous, stiff: floral leaves and bracteas broad-ovate, almost permanent; racemes a little branched; whorls 2-6-flowered, distant; calyx hispid: upper lip nearly entire, broad-roundish: lobes of the lower lip ovate, acute; tube of corolla hardly exceeding the calyx; connective short, and dilated behind, bearing an empty cell. ♄. G. Native of the Cape of Good Hope. Commel. hort. 2. p. 181. t. 91. Mill. fig. t. 225. f. 1. S. colorâta, Vahl, enum. 1. p. 230. S. integérrima, Mill. fig. t. 225. f. 2. dict. no. 12. S. barbâta, Lam. ill. 1. p. 72. Branches purplish. Leaves variable, often green above, but constantly white beneath. Corolla violaceous. There are several slight varieties of the species.

African Sage. Fl. April, July. Clt. 1731. Shrub 2 to 3 feet.

24 S. paniculâ'ta (Lin. mant. p. 25. and p. 511.) stem shrubby; branches scabrous, nearly glabrous; leaves petiolate, obovate, acute, a little toothed, coriaceous, green on both surfaces, scabrous beneath; floral leaves ovate, membranous, deciduous; racemes paniculately branched; whorls 2-flowered, distant; calyx scabrous: upper lip entire, rounded: lobes of the lower lip ovate, acuminated; tube of corolla hardly equalling the calyx in length; connective short, and dilated behind, bearing an empty cell. ♄. G. Native of the Cape of Good Hope. S. chamæelæágnea, Berg. cap. 1. p. 3. S. minor, &c. Breyn. cent. 1. p. 169. t. 85. Shrub purplish. Leaves ½ an inch long. Corolla purplish violet, a little larger than those of *S. Africàna*.

Panicled-flowered Sage. Fl. June, Aug. Clt. 1758. Shrub 2 to 4 feet.

25 S. denta'ta (Ait. hort. kew. 1. p. 37.) stem shrubby, glabrous; leaves linear, fascicled, remotely-toothed, nearly glabrous; floral leaves and bracteas ovate, much shorter than the calyxes, permanent; racemes short, simple; whorls 2-6-flowered; calyx ample, pubescent: upper lip sinuate, somewhat 3-toothed; lobes of the lower lip ovate, bluntish; tube of corolla equalling the calyx; connective short, and dilated behind, bearing an empty cell. ♄. G. Native of the Cape of Good Hope. S. rigida, Thunb. prod. fl. cap. 1. p. 96. Corollas purplish violet, smaller than those of *S. Africàna*.

Toothed-leaved Sage. Fl. Dec. Jan. Clt. 1774. Shrub ½ to 1 foot.

26 S. ni'vea (Thunb. prod. p. 96.) leaves lanceolate, quite entire, clothed with white tomentum; branches divaricate. ♄.? G. Native of the Cape of Good Hope. S. lanceolàta, Lam. ill. 1. p. 72. Branches and branchlets decussate, tetragonal, tomentose at top. Leaves petiolate, acute, a little wrinkled, an inch long, bearing other leaves in the axils. Flowers opposite, or somewhat panicled at the top of the branchlets. Calyxes hairy. Corolla purple. Distinguished from *S. áurea* by the lanceolate, white leaves.

Snowy Sage. Shrub 2 to 3 feet.

27 S. Canarie'nsis (Lin. spec. p. 38.) stem shrubby, clothed with white tomentum; leaves petiolate, lanceolate, hastately-triangular, wrinkled, almost glabrous: floral leaves ovate-lanceolate, exceeding the calyxes, membranous, coloured; calyx incurvedly campanulate: upper lip sinuated, somewhat 3-lobed: lobes of lower lip obtuse, mucronate; tube of corolla wide, inclosed; connective somewhat dilated behind, bearing an empty cell. ♄. G. Native of the Canary Islands; also of Sicily. Sclárea tomentòsa, Mill. dict. no. 13. Schradèria hastàta, Mœnch. meth.—Trew. pl. rar. 2. p. 17. t. 19. Corollas purple.

Canary Island Sage. Fl. June, Sept. Clt. 1697. Shrub 3 to 6 feet.

Sect. III. Drymo'sphace (from δρυμος, *drymos*, a forest; and σφακος, *sphakos*, sage; probably in reference to the species inhabiting woods.) Benth. in Hook. misc. 3. p. 373. lab. p. 218. Calyx tubular, or campanulate; upper lip almost entire, truncate, or with 3 very short teeth. Tube of corolla exserted, furnished with a ring of hairs inside; upper lip falcately compressed; lateral lobes of the lower lip spreading. Connective drawn out behind, bearing an empty, difformed cell, somewhat connected at the extremities.—European, or Asiatic green, rather clammy herbs. Leaves usually large, hastately cordate. Corollas yellow, rarely blue.

28 S. glutinòsa (Lin. spec. p. 37.) stems herbaceous, erect, clammy, pilose; leaves petiolate, ovate-oblong, acuminated, cordately sagittate at the base: floral ones ovate, acuminated, shorter than the calyxes; racemes simple; whorls distant, loose, 6-flowered; calyx tubular: upper lip truncate, entire, somewhat recurved; corollas gaping, 3 times as long as the calyx. 4. H. Native of Europe, and middle Asia, in woods and other shady places; as of Spain, South of France, Switzerland, Italy, South of Germany, South of Russia, Tauria, Caucasus, &c.—Sabb. hort. rom. t. 3. Mirb. ann. mus. 15. t. 15. f. 11. Riv. mon. irr. t. 35. Sclárea glutinòsa, Mill. dict. no. 11. Lobus jàvis, Besl. syst. ord. 8. fol. 4. f. 1. Plant clammy. Lower leaves large, glabrous, or clothed with clammy pubescence. Corollas pale yellow.

Clammy Sage. Fl. June, Sept. Clt. 1769. Pl. 2 to 3 feet.

29 S. nubi'cola (Wall. ex Benth. in Wall. pl. rar. asiat. 1. p. 68. lab. p. 219.) stem herbaceous, erect, villous; leaves petiolate, ovate-lanceolate, crenated, pubescent on both surfaces: lower ones hastately cordate at the base: upper ones rounded, or narrowed at the base: uppermost and floral ones sessile, ovate, acute, quite entire; racemes a little branched; whorls loose, few-flowered, remote; calyx campanulate, villous: upper lip entire, and toothed: the lower lip acute; corolla 3 times as long as the calyx: hind cells of anthers empty, connected. 4. H. Native of Kamaon and Sirinaghur, Wall.; in the valley of Cashmere, and at Kidarkonta, Royle; Simlah, Jacquemont. Sweet, fl. gard. 2. t. 140. Corollas yellow, smaller than those of *S. glutinòsa*.

Cloud Sage. Fl. Oct. Clt. 1823. Pl. 3 feet.

30 S. hi'ans (Royle, ex Benth. in Hook. bot. misc. 3. p. 373. lab. p. 219.) stem herbaceous, erect, villous; leaves on long petioles, broad ovate, broadly and cordately sagittate at the base: floral leaves ovate, acuminated, shorter than the calyxes; racemes branched a little; whorls 6-flowered; calyx campanulate, striated, coloured, clammy: upper lip entire, truncate; lower lip longer, with ovate, acute teeth; corolla gaping, 3 times as long as the calyx; bind cells of anthers somewhat connected, empty. ♃. H. Native of the valley of Cashmere, Royle. Allied to *S. glutinosa*. Corolla showy, blue. Connective short behind.

Gaping-flowered Sage. Pl. 2 to 3 feet.?

31 S. campanula'ta (Wall. ex Benth. in Wall. pl. rar. asiat. 1. p. 67. lab. p. 220.) stem herbaceous, ascending, hairy; leaves large, on long petioles, ovate, acute, deeply crenated, cordate at the base, rather hispid on both surfaces: floral leaves ovate, acute, shorter than the calyxes; racemes a little branched; whorls about 6-flowered, remote; calyxes on short pedicels, amply campanulate, truncate, villous: upper lip very short, nearly entire, and toothed: lobes of the lower lip broad ovate, acute; corolla one-half longer than the calyx; tube of corolla inclosed; connective free behind, and bearing an empty cell. ♃. H. Native of Nipaul, on Gosainsthan. Leaves 4 to 6 inches long, and about the same in breadth. Racemes short. Corollas, according to Wallich, similar to those of *S. nubicola*.

Campanulate-calyxed Sage. Pl. 1 to 2 feet.

Sect. IV. Hormi'num (from *ὁρμαω, hormao*, to excite; in reference to the stimulating qualities of the plant.) Benth. in Hook. bot. misc. 3. p. 378. lab. p. 220. Calyx tubular: upper lip truncate, somewhat 3-toothed. Tube of corolla widened under the throat, or ventricose, without any ring of hairs inside: upper lip straight, concave, or falcate, compressed: lateral lobes of the lower lip oblong, erect, a little twisted; middle lobe spreading, roundish. Connective deflexed behind, abruptly dilated, connected, and callous at the extremity.—Herbs natives of the region of the Mediterranean.

32 S. vi'ridis (Lin. spec. p. 34.) stem herbaceous, erect, villous; leaves petiolate, ovate-oblong, rounded at the base, obtuse, crenated, villous: superior ones ovate-cordate: floral leaves very broad, acute, permanent, rather longer than the calyxes, becoming gradually smaller as they ascend; racemes simple; whorls distant, usually 6-flowered; calyx villous, reflexed in the fructiferous state, and plicately striated: teeth of the lower lip lanceolate, acute; corolla hardly a third part longer than the calyx, with an almost inclosed tube. ☉. H. Native of Europe, Africa, and Asia, in the region of the Mediterranean, in dry, stony, or gravelly places; Barbary, Spain, Italy, Dalmatia, Greece, Tauria, Caucasus, &c. Jacq. icon. rar. 1. p. 2. t. 4. Desf. fl. atl. 1. p. 20. t. 1. Sibth. et Smith, fl. græc. 1. p. 15. t. 19. Rchb. icon. bot. c. 6. p. 23. t. 581. S. Spielmánni, Scop. del. ins. 3. p. 31. t. 15. Jacq. fil. ecl. 1. p. 25. t. 15. Rchb. icon. bot. c. 6. p. 23. t. 552. but not of Willd. S. truncàta, Willd. enum. 1. p. 34. Horminum viride, Mœnch. meth. p. 377. Horminum comâ viridi, Tourn. inst. 178. Stem sparingly branched. Leaves 1-2 inches long. Corollas small, blue. Bracteas green.

Var. β, *violàcea*; flowers violaceous, or bluish. ☉. H. Plant more robust than the species.

Green-topped Clary. Fl. July, Aug. Clt. 1759. Pl. ¼ to 1 foot.

33 S. Horminum (Lin. spec. p. 34.) stem herbaceous, erect, villous; leaves petiolate, oval-oblong, rounded at the base, or cuneated, obtuse, crenated, villous: superior ones ovate-cordate: floral leaves very broad, acute, permanent, rather longer than the calyxes: uppermost ones membranaceously dilated, coloured, comose; racemes simple; whorls distant, about 6-flowered; calyx pubescent, reflexed in the mature state, and plicately striated: teeth of the lower lip lanceolate, acute; corolla one-half longer than the calyx, with an inclosed tube. ☉. H. Native of Europe, Africa, and Asia, in the region of the Mediterranean, at the edges of fields, and in bushy places; as of Barbary, Greece, Italy, Dalmatia, Syria, Tauria. Sibth. et Smith, fl. græc. 1. p. 15. t. 20. S. colorâta, Thore, chl. land. p. 17. Horminum sativum, Mill. dict. no. 5. Horminum colorâtum, Mœnch. meth. p. 376.—Plenck. icon. 20.—Lob. icon. t. 555. —Gesn. fasc. 17. t. 11. f. 21.—Buxb. cent. t. 39. f. 2. There are two varieties of this, the *Purple-topped Clary*, and the *Red-topped Clary*, the bracteas in the one being purple, and in the other red, for which they are cultivated in gardens.

Clary, Purple, and Red-topped. Fl. June, July. Clt. 1596. Pl. 1 to 1½ foot.

34 S. Forsköhlei (Lin. mant. p. 26.) stem herbaceous, clothed with rather clammy villi; lower leaves petiolate, large, ovate, repandly crenated, auricled at the base, or lobed, villous; cauline leaves few, nearly sessile: floral leaves broadly ovate, acuminated, permanent, much shorter than the calyxes; racemes elongated, nearly simple; whorls 2-6-flowered, distant; teeth of lower lip of calyx lanceolate, acute; corolla twice as long as the calyx, with an exserted tube: upper lip emarginately bifid. ♃.? H. Native of the Levant, Forsk.; in woods on Mount Olympus in Bithynia; and about Belgrad, near Constantinople, Sibthorp. Sims, bot. mag. t. 988. Willd. hort. berol. t. 20. Sibth. et Smith, fl. græc. 1. p. 16. t. 21. S. bifida, Forsk, fl. arab. p. 202. Stem leafy at base, and nearly naked at top. Lower leaves 3-4 inches long, subcordate at the base. Calyx usually coloured at top, clothed with clammy pubescence. Corollas violaceous, similar to Sect. I. *Eusphace*: lower lip variegated; middle lobe deflexed, emarginately bifid.

Forskæl's Sage. Fl. June, Aug. Clt. 1800. Pl. 1½ foot.

35 S. miltiorhi'za (Bunge. enum. pl. chin. p. 50.) stem herbaceous, erect, pilose; leaves petiolate, pinnate, with 3-7 petiolate, ovate, crenated leaflets: the ultimate leaflet larger or bifid; floral leaves bractea-formed; racemes simple; whorls many-flowered, loose; calyx campanulate: upper lip acute, entire: lower one shortly bidentate; corolla about 3 times as long as the calyx: tube a little exserted, obliquely annulate inside: upper lip falcate, compressed: middle lobe of lower lip fringed; connective rather dilated behind. ☉.? ♃.? G. Native of the north of China, in shady mountains at Zui-wey-schin and Ssi-jui-ssy, Bunge. Habit of *S. Forskæ'lei*. Root vermilion-coloured. Leaves large, hispid, green above and paler beneath. Calyxes coloured, rather clammy. Corollas blue, clothed with clammy pubescence outside. This species differs from the present section in the upper lip of corolla being *entire*; and in the inside of the tube of the corolla being annulate from both the present section and sect. *Æthiopis*.

Red-rooted Sage. Pl. 2 to 3 feet.

Sect. V. Æthi'opis (so called from *S. Æthiopis* being a native of Ethiopia.) Benth. in Hook. bot. misc. 3. p. 373. lab. p. 222. Calyx campanulate or tubular; upper lip tridentate: teeth erect: middle tooth very small. Tube of corolla widened under the throat or ventricose, without any ring of hairs inside: upper lip falcate, compressed; lateral lobes of lower lip oblong, erectish, and a little twisted: middle lobe spreading, roundish, usually concave, emarginate, crenulated. Connective deflexed behind, abruptly dilated, callous and connected at the extremity.—Herbs, natives of the region of the Mediterranean, and the mountains of Middle Asia. Leaves and lower parts of stem usually clothed with white wool. Floral leaves permanent, erect, clasping the whorls, rarely rather

longer than the peduncles. Panicle divaricately branched, rarely almost simple.

36 S. Índica (Lin. spec. p. 37.) stem erect, rather hairy; leaves petiolate, ovate or oblong, acute, a little toothed, broadly cordate at the base, glabrous; floral leaves ovate-cordate, reflexed; racemes simple; whorls 6-flowered, remote; calyxes sessile, campanulate, inflated after florescence; corolla 3 times as long as the calyx. ♃. H. Native of India, Lin., but probably of the mountains of Persia or Arabia. Jacq. hort. vind. 1. p. 33. t. 78. Curt. bot. mag. t. 395. Sclárea Índica, Mill. dict. no. 9.—Mor. hist. 3. sect. 11. t. 13. f. 16. Stem angular, glabrous, or beset with clammy hairs. Lower leaves 3-5 inches long: floral ones shorter than the calyxes. Corollas variegated: lower lip yellow and blue; the upper lip purple, size of those of *S. argéntea*. Calyx clothed with clammy pubescence.

Indian Clary. Fl. May, July. Clt. 1731. Pl. 3 to 4 feet.

37 S. commuta'ta (Benth. lab. p. 222.) stem erect, hispidly pilose; leaves petiolate, ovate, obtuse, erosely crenated, cordate at the base, thick, tubercularly wrinkled, hispid and green on both surfaces; floral leaves hardly longer than the peduncles; raceme dense, spike-formed; calyx campanulate, hispid; corolla about twice as long as the calyx. ♃.? H. Native of Syria or Italy. S. Dominica, Lin. spec. p. 35. but not of Swartz. and other authors. S. Syríaca, Gouan. herb. but not of Lin. Cauline leaves very numerous, and smaller than in other species of the present section, hardly 1½ inch long.

Changed Clary. Pl.?

38 S. Syría'ca (Lin. spec. p. 36.) stem nearly glabrous, panicled at top, and clothed with tomentose pubescence; leaves petiolate, ovate, obtuse, erosely crenated or deeply toothed, cordate at the base, green on both surfaces, much wrinkled, pubescent; floral leaves broad-ovate, concave, permanent, one half shorter than the calyxes; racemes panicled; whorls distant, 2-6-flowered; calyx campanulate, tomentose; corolla one half longer than the calyx, with an inclosed tube. ♃. H. Native of the Levant, Persia, and Palestine; Syria, near Aleppo. Sclárea Syríaca, Mill. dict. no. 5. Horminum Syríacum, Bauh. pin. p. 238. Allied to *S. oderàta*; but differs in the leaves being green on both surfaces, and the form of the leaves is that of *S. praténsis*. Corollas white.

Syrian Clary. Fl. July. Clt. 1759. Pl. 2 to 3 feet.

39 S. odora'ta (Willd. enum. p. 43.) stem suffruticose, clothed with white wool at the base, but panicled and glabrous at top; leaves petiolate, ovate-lanceolate, acuminated, irregularly crenate-toothed, cordate at the base, wrinkled, clothed with white tomentum on both surfaces; upper ones sessile; floral leaves shorter than the pedicels, permanent; racemes panicled, loose; whorls remote, 2-flowered; calyx campanulate, striated, pubescently hairy; corolla about 3 times as long as the calyx. ½. F. Native near Bagdad. Jacq. fil. ecl. fasc. 2. p. 26. t. 16. S. álbida, Jacq. obs. 10. no. 73. S. argéntea, Hortul. but not of Lin. Branches tetragonal. Leaves 3 inches long, and 1 to 1½ broad. Flowers on short pedicels, about the size of those of *S. sclárea*. Corollas white: lower lip yellowish in the middle.

Sweet-scented Clary. Fl. July. Clt. 1804. Shrub 2 to 3 feet.

40 S. candidí'ssima (Vahl, enum. 1. p. 278.) stem erect, clothed with white tomentum; leaves petiolate, ovate, obtuse, sinuately toothed, cordate at the base, thick, wrinkled, densely clothed with white tomentum on both surfaces; floral leaves broad, acuminated, concave, permanent, rather shorter than the calyxes; racemes branched; whorls 6-10-flowered: upper whorls abortive; calyx campanulate, villous; tube of corolla equal in length to the calyx. ♃. S. Native of Armenia, and the Island of Cyprus. S. crassifólia, Sibth. et Smith, fl. græc. 1. p. 19. t. 26. Corollas white, with a yellow lip, size of those of *S. sclárea*. Leaves smaller than those of *S. argéntea*. Root creeping.?

Very-white Clary. Fl. June, Aug. Clt. 1820. Pl. 1 to 2 feet. ?

41 S. scla'rea (Lin. spec. p. 38.) stem erect, villous; leaves petiolate, ample, ovate, erosely crenated, cordate at the base, wrinkled, hoary: upper ones stem-clasping: floral leaves very broad, acuminated, concave, membranous, coloured, exceeding the flowers, permanent; racemes panicled; whorls distant, about 10-flowered; calyx campanulate, striated, pubescently hispid: teeth somewhat spinosely acuminated; corolla twice as long as the calyx: tube inclosed. ♂. H. Native of the south of Europe, in the region of the Mediterranean; as of the south of France, north of Italy, Naples, Sicily, Dalmatia, Grecian Islands, Tauria, Caucasus, &c. Sibth. et Smith, fl. græc. 1. p. 18. t. 25. St. Hil. pl. fr. t. 2. 47. Mirb. ann. mus. 15. p. 210. f. 2. S. Simsiána, Roem. et Schultes, syst. mant. 1. p. 2520. Lindl. bot. reg. 1003. S. bracteàta, Sims, bot. mag. t. 2320. Sclárea vulgáris, Mill. dict. no. 1.—Ludw. ect. t. 171.—Plenck, icon. 21.—Blackw. t. 122. Lob. icon. 556.—Mor. hist. 3. sect. 11. t. 16. f. 1. Stem clammy. Leaves 8-9 inches long, and 4-5 broad: floral leaves membranous, white at the base, and red at top, comose. Corolla white, tinged with purple. In the cultivated specimens the leaves are more glabrous than in the wild specimens.

This plant is called *Orvale* by the French; *Scharlach-kraut* by the Germans; *Schlarea* by the Italians; and *Clary* by the English. The leaves are sometimes used in soups, though many dislike its scent. Its flowers are used for a fermented wine; and the whole plant is, like sage, esteemed medicinal. *Clary* is reared from seed, and sometimes from cuttings and slips. A small bed will supply most families; and if raised from seed, a quarter of an ounce will suffice for a seed-bed to be transplanted from 2 feet by 2. Sow in the last fortnight of March or the course of April, in any bed or border thinly, and rake in the seed. In summer, when the plants are advanced 2 or 3 inches, transplant a portion of the strongest from 12 to 18 inches apart, to allow competent room for the leaves to spread, when they will be fit for use the same year, and in continuation through winter until the following spring and summer. In the spring allot some old plants to run up into stalks, these will yield ripe seed in autumn.

Common *Clary*. Fl. July, Sept. Clt. 1562. Pl. 3 to 4 feet.

42 S. serótina (Lin. mant. p. 511.) stem beset with glandular villi; leaves petiolate, ample, ovate, deeply crenated, rounded at the base, wrinkled, pubescent: superior ones sessile, cordately stem-clasping: floral ones very broad, acuminated, concave, permanent, exceeding the calyxes; racemes panicled; whorls distant, 6-10-flowered; calyx tubular, cylindrical, striated: teeth all erect and spiny; corolla hardly one half longer than the calyx: tube inclosed. ♂. H. Native of Egypt, Persia; and of Syria, near Aleppo. Jacq. icon. rar. 1. p. 2. t. 7. S. Ægyptíaca, Lin. mant. p. 26. S. Abyssínica, Lin. fil. suppl. p. 88. ex Steud. Márum Ægyptíacum, Vesling, fl. aegypt. p. 75. t. 76. Horminum suavèolens, Mœnch, meth.—Mor. hist. 3. sect. 11. t. 16. f. 2. Plant hispid from spreading glandular hairs in all parts, rarely glabrous. Lower leaves 4-5 inches long. Floral leaves green or white at the base, ciliated. Calyx glabrous, or ciliated with long glandular hairs. Corollas white, glabrous outside.

Spiny-calyxed Clary. Fl. June, July. Clt. 1789. Pl. 1 to 2 feet.

43 S. Palæsti'na (Benth. lab. p. 718.) stem clothed with glandular hairs; leaves petiolate, oblong, somewhat pinnate or

pinnatifid, wrinkled, villous: lobes erosely toothed, very blunt; floral leaves bractea-formed, very broad, acuminated, concave, permanent, shorter than the calyxes; racemes panicled; whorls distant, about 6-flowered; calyx tubular, striated: teeth all erect and spiny; corolla about twice as long as the calyx. ♂. H. Native of Palestine, in corn-fields, Bove. S. Sinàica, Delile, mss. Habit, inflorescence, and flowers, like that of *S. spinòsa*; but differs from that species in the form of the leaves.

Palestine Clary. Pl. 1 to 2 feet.

44 S. Tingita'na (Ettling, salv. p. 30.) stem herbaceous, beset with glandular hairs; leaves petiolate, ample, ovate, deeply crenated, somewhat cordate at the base, much wrinkled, villous: superior ones stem-clasping; floral leaves very broad, acuminated, concave, permanent, rather shorter than the calyxes; racemes panicled; whorls distant, 6-10-flowered; calyx campanulate, plicately striated, hispidly ciliated: teeth all somewhat spiny: the middle tooth of the lower lip obsolete; corolla twice as long as the calyx. ♂. H. Native of the north of Africa, about Tunis; and of Spain, near Cadiz. S. coarctàta, Vahl, enum. 1. p. 277. S. fœ'tida, Lam. ill. 1. p. 69. Horminum Tingitànum, Riv. mon. irr. 1. t. 62. Allied to *S. spinòsa*; but differs in the broader leaves, cordate at the base, and more wrinkled, &c. The whole plant is beset with long spreading, and short glandular hairs. Corolla dirty white: lower lip yellowish, crumulated: upper lip tinged with blue.

Tangier Clary. Fl. July. Clt. 1796. Pl. 1 to 3 feet.

45 S. pras'cox (Vahl, enum. 1. p. 274.) leaves ovate-oblong, rather repand, smooth, rather pilose; bracteas cordate, veiny, acuminated, length of calyx. ♃.? H. Native of the north of Africa. Nearly allied to *S. Tingitàna*. Stem erect, pilose. Lower leaves 3 inches long, petiolate: superior ones sessile, ovate, acute. Teeth of calyx cuspidate, but not spiny. Corolla size of that of *S. Sclàrea*: upper lip villous: lower lip concave.

Early Clary. Pl. 2 to 3 feet.

46 S. Æthiopis (Lin. spec. p. 39.) stem erect, clothed with white wool; lower leaves petiolate, narrowed at the base: cauline leaves cordate, stem-clasping, all deeply toothed, and much wrinkled, densely clothed with white wool on both surfaces: floral leaves very broad, acuminated, permanent, concave, equalling the calyxes, woolly; racemes panicled; whorls 6-10-flowered, distinct; calyx campanulate, woolly: teeth all subulately spinose, spreading; corolla twice as long as the calyx, with an inclosed tube. ♂. H. Native of Europe, Africa, and Asia, in the region of the Mediterranean, in arid fields and dry sterile places; south of France, Piedmont, Naples, Sicily, Austria, Hungary, Podolia, Greece and Syria, Tauria and Caucasus.—Herb panicled at top. Corollas white: upper lip pubescent, often reddish. This plant in a wild state is from ½ to 1 foot in height, but in the cultivated state it grows from 3-5 feet in height. Jacq. fl. austr. 3. p. 7. t. 211. Sclàrea lanàta, Moench. meth. p. 374. Sclàrea Æthiopis, Mill. dict. no. 2. Æthiopis, Besl. syst. 2. ord. 8. fol. 3. f. 1.

Var. β. laciniàta; leaves jagged.—Barrel. icon. p. 24. t. 188.

Var. γ. papillòsa; leaves woolly beneath, and papillosely wrinkled above.—Sabb. hort. rom. p. 5. t. 3.

Ethiopian Clary. Fl. May, June. Clt. 1570. Pl. 1 to 4 feet.

47 S. compre'ssa (Vahl, enum. 1. p. 275.) stem erect, villous; lower leaves petiolate, rounded at the base: superior ones cordately stem-clasping, all ovate, and erosely toothed, wrinkled, rather woolly on both surfaces; floral leaves very broad, obtuse, permanent, concave, coloured, ciliated, equalling the calyxes; racemes panicled; whorls 6-10-flowered: the upper whorls abortive; calyx campanulate, membranous coloured, pubescent: teeth of lower lip of calyx obtuse; corolla one half longer than the calyx. ♂.? H. Native of the Levant. Vent. cels. t. 59. Very nearly allied to the preceding; but differs principally in the floral leaves and blunt mutic calycine teeth, and in the upper whorls being abortive. Bracteas and floral leaves purplish at top. Corollas white.

Compressed Clary. Fl. May, June. Clt. 1822. Pl. 2 feet.?

48 S. argen'tea (Lin. spec. 38.) stem erect, villous; radical leaves petiolate, and the lower cauline leaves sessile, ample, ovate, cuneated at the base, sinuately lobed, erose, woolly, wrinkled: floral leaves very broad, acuminated, concave, permanent, pilose, equalling the calyxes; racemes panicled; whorls 6-10-flowered, remote: the upper ones abortive; calyx campanulate, striated, villous; calycine teeth all rather spiny; corolla about 3 times as long as the calyx, with an inclosed tube. ♂. H. Native of Europe and Africa, in the region of the Mediterranean, in corn-fields; as of Barbary, Portugal, Algarves, Sicily, Naples, Greece, &c. Jacq. hort. schœnbr. 1. p. 4. t. 6. Sibth. et Smith, fl. græc. 1. p. 20. t. 27. S. pyramidàlis, Petagna, inst. bot. 2. p. 54. S. candidissima, Guss. prod. fl. sic. 1. p. 16. and of other Sicilian authors. Hoffm. et Link. fl. port. 1. p. 151. t. 20. but not of Vahl. S. Atlántica, Pers. ench. 1. p. 29. S. pátula, Desf. fl. atl. 1. p. 25. S. Æthiopis, Brot. fl. lus. 1. p. 18. but not of Lin. Sclàrea argéntea, Mill. dict. no. 15.—Mirb. ann. mus. 15. t. 15. f. 4. Allied to *S. spinòsa* and *S. Tingitàna*. Radical and lower cauline leaves 6-8 inches long, and 4-6 broad, clothed with loose white wool on both surfaces. Panicle ample. Corollas showy, bluish-white: lower lip yellowish.

Silvery Clary. Fl. May, July. Clt. 1759. Pl. 2 to 3 feet.

49 S. verbascifòlia (Bieb. fl. cauc. 3. p. 24.) stem erect, clothed with clammy villi; lower leaves petiolate, ample, ovate, cordate at the base, sinuately lobed, erose, thick, much wrinkled, hardly woolly above, but clothed with white tomentose wool beneath; floral leaves very broad, acuminated, concave, permanent, villous, about equalling the calyxes; racemes subpanicled; whorls 2-6-flowered, approximate, distinct: the upper ones abortive; calyx campanulate, striated, clothed with clammy villi; calycine teeth all acute, but scarcely spiny; corolla twice as long as the calyx. ♃. H. Native of Caucasus and Iberia, on sterile parts of mountains; Persia, in the province of Azarbaudgan. S. candidissimum, Bieb. fl. cauc. 1. p. 21. but not of Vahl. Very nearly allied to *S. argéntea*, but differs in the more humble stature, in the leaves being cordate at the base, not narrowed, &c. Corollas white.

Mullein-leaved Clary. Fl. May, July. Clt. 1823. Pl. 1 to 2 feet.?

50 S. Broussone'tii (Benth. lab. p. 227.) stem erect, clothed with rather clammy villi; leaves petiolate, ample, ovate, obtuse, sinuately crenated, cordate at the base, thick, much wrinkled, green, and nearly glabrous above, clothed with white tomentum beneath, and the veins with clammy pubescence; floral leaves ovate-lanceolate, acuminated, concave, green, hispid, permanent, rather longer than the calyxes; racemes panicled; whorls usually 6-flowered, distinct; calyx campanulate, hispid; teeth of upper lip ovate, acute; corolla scarcely twice the length of the calyx. ♃.? H. Native of Teneriffe, or the north of Africa, Broussonet. This is a very distinct species from *S. verbascifòlia*; the leaves are larger, and destitute of wool on the upper surface; the panicle is more dense and more branched, and very villous; the floral leaves narrower, and the flowers smaller.

Broussonet's Clary. Pl.?

51 S. Moorcroftia'na (Wall. ex Benth. in Wall. pl. rar. asiat. 1. p. 67. Benth. lab. p. 228.) stem erect, woolly at the base, but clothed with clammy villi at top; lower leaves on long petioles, ample, ovate, erosely crenated, narrowed at the base,

wrinkled, villous above, and clothed with white wool beneath; floral leaves very broad, acuminated, concave, permanent, equalling the calyxes; racemes panicled; whorls remote, about 6-flowered; calyx campanulate, striated, clothed with rough villi; calycine teeth all subulately mucronate; corollas 3 times as long as the calyx, with an exserted tube. ♂. ? H. Native of the Himalaya; in Luddak, Moorcroft; in the valley of Cashmere; and in Kinaour and Kidarkonta, Royle. Allied to *S. argéntea*; but differs in the leaves being on long petioles, less cut, hardly woolly above, but densely clothed with subfloccose wool beneath, &c. Corolla violaceous. ?

Moorcroft's Clary. Pl.

52 S. lana'ta (Roxb. fl. ind. 1. p. 147.) stems tufted, woolly at the base; leaves oblong-lanceolate, obtuse, entire, minutely crenulated, narrowed a long way at the base, much wrinkled, loosely clothed above, but densely beneath with white wool; floral leaves very broad, acuminated, concave, permanent, equalling the calyxes; racemes almost simple, clothed with clammy villi; whorls remote, about 10-flowered; calyx campanulate, with acute teeth; corolla twice as long as the calyx, with the tube rather exserted. ♃. ? S. Native of Himalaya; on the tops of the alps of Kamaon and Sirmore, and Mussooree; and common throughout the whole of the range. Wall. pl. rar. asiat. 2. p. 11. t. 116. S. càna, Wall. cat. no. 2145. S. integrifòlia, Hardw. in asiat. res. 6. p. 349. Stenarhèna lanàta, D. Don, prod. fl. nep. p. 111. Stems woody at the base, numerous. Leaves 3-4 inches long. Flowers size of those of *S. Æthiopis*. Corolla downy outside, purple.

Woolly Clary. Pl. 1 to 2 feet.

53 S. phlomoi'des (Asso, arrag. p. 158. t. 4.) stems tufted, clothed with white wool at the base; leaves oblong-linear or lanceolate, acute, entire, or the lower ones are sinuately lobed, narrowed a long way at the base, much wrinkled, clothed with white wool on both surfaces; floral leaves very broad, acuminated, concave, permanent, longer than the calyx; racemes nearly simple, clothed with clammy villi; whorls remote; calyx campanulate: teeth of lower lip lanceolate, acuminated; corolla about 3 times as long as the calyx: the tube a little exserted. ♂. H. Native of Spain, plentiful among the mountains of Arragon, about Siguenza. Ruem. script. pl. hisp. et lus. 10. t. 1. f. 1. Stems clothed with clammy hairs at top. Corollas almost glabrous outside, size of those of *S. Sclárea*.

Phlomis-like Clary. Fl. May, June. Clt. 1805. Pl. 1 to 2 feet.

54 S. cane'scens (Meyer, verz. pflanz. p. 86.) stems woolly at the base; leaves lanceolate-oblong, entire or sinuately-lobed, narrowed a long way at the base, wrinkled, loosely clothed above, but densely beneath with white wool; floral leaves very broad, acuminated, concave, permanent, rather shorter than the calyxes; racemes branched, clothed with clammy villi; whorls remote; calyx tubularly campanulate; teeth of lower lip lanceolate, acuminated; corolla about 3 times longer than the calyx, the tube a little exserted. ♂. ? H. Native of Caucasus, among rocks towards the river Anticeta; and near Natzana, Meyer. This is very nearly allied to *S. phlomoides*; but differs in being taller and more slender; in the racemes being branched; in the flowers being fewer and smaller, &c.

Canescent Clary. Pl. 2 to 3 feet. ?

55 S. ceratophyl'lea (*Lin. spec.* p. 39.) stem clothed with white wool at the base; lower leaves deeply pinnatifid, with linear, obtuse, sinuately subpinnatifid lobes, much wrinkled, clothed with loose wool on both surfaces; superior leaves nearly entire: floral leaves very broad, acuminated, concave, permanent, longer than the calyxes; racemes panicled; whorls about 6-flowered, distant, the upper ones abortive; calyx campanulate, with lanceolate-setaceous, rather spiny teeth; corolla twice as long as the calyx, the tube inclosed. ♂. H. Native of the Levant; Syria, near Aleppo, Persia, &c. *S. exasperata*, Cav. ann. hist. nat. 3. p. 113. t. 17. icon. 6. p. 38. t. 558. Sclárea ceratophýlla, Mill. dict. no. 8.—Kniph. cent. 4. t. 78.—Mor. hist. 3. p. 393. sect. 11. t. 13. f. 6. The lower part of the stem and leaves are clothed with loose wool. Lower leaves 7-8 inches long: floral leaves green, clammy. Corolla yellowish-white or cream-coloured.

Buckhorn-leaved Clary. Fl. July, Aug. Clt. 1690. Pl. 2 to 3 feet.

† *Doubtful species, probably belonging to the present section.*

56 S. grave'olens (Vahl, enum. 1 p. 273.) stem shrubby; branches tetragonal, very villous; leaves petiolate, cordate, wrinkled, crenated, villous, hoary beneath: lower ones somewhat sinuated: floral leaves cordate; spikes branchy; whorls approximate, 6-flowered; calyx campanulate. ♄. F. Native of Egypt. Bracteas attenuated, shorter than the calyxes, glabrous above. Galea of corolla linear-falcate, pilose.

Strong-scented Clary. Shrub.

57 S. va'ria (Vahl, enum. 1. p. 273.) herbaceous; leaves petiolate, cordate, unequally crenated, obtuse, wrinkled, clothed with hoary tomentum beneath, as well as the stems, but rather villous above; whorls 6-flowered; bracteas cordate, acuminated, length of calyxes; calyx, bracteas, and peduncles hoary; calycine teeth subulate. ♃. H. Native of Armenia. Leaves 3-4 inches long. Corolla small, a little longer than the calyx.

Various Clary. Pl.

Sect. VI. Plethióspace (from πληθος, *plethos*, multitude; and σφακος, *sphakos*, sage; so called from the section containing the *S. sylvéstris*, or common wild sage.) Benth. lab. p. 280. in Hook. bot. misc. 3. p. 378. Calyx ovate: upper lip concave above, bisulcate, with 3 very short conniving teeth: lower lip bifid, with acute teeth. Tube of corolla widened or ventricose under the throat, without any ring of hairs inside: upper lip concave, or falcately compressed; lateral lobes of lower lip obusually concave, emarginate, and crenulated. Connective deflexed behind, abruptly dilated, callous and connate at the extremity.—European, African, and North Asiatic herbs. Leaves usually erosely toothed or cut. Racemes elongated, simple, or virgately panicled.

58 S. bi'color (Desf. in Fourer. journ. de decouv. 1792.) stem erect, a little branched, clothed with clammy pubescence: lower leaves petiolate, ample, ovate, deeply toothed, pinnatifid or palmately lobed; middle leaves petiolate, ovate-lanceolate, acuminated, deeply toothed: superior leaves sessile, lanceolate, all cordate at the base, and clothed with clammy pubescence: floral leaves ovate-lanceolate, acuminated, reflexed; racemes a little branched, elongated; whorls distant, 6-flowered; calyxes pedicellate, campanulate, striated, clothed with clammy hispid hairs: teeth all subulate; corolla 3 times longer than the calyx; the tube equalling the calyx; stamens exserted. ♃. H. Native of the north of Africa; and of Spain, in Andalusia. Sims. bot mag. t. 1774. Desf. fl. atl. 1. p. 22. t. 2. Jacq. hort. schœnbr. 1. p. 4. t. 7. S. crassifòlia, Cav. hort. matr. descr. p. 10. Jacq. fragm. p. 47. t. 60. This is a very beautiful and distinct species, allied to *S. Austriaca*. Stems tetragonal. Radical leaves usually palmately pinnatifid. Racemes 1 to 2 feet long, many-flowered. Corollas larger than those of *S. Austriaca*: upper lip bluish-violet, spotted with white: lower lip yellow.

Two-coloured-flowered Sage. Fl. June, July. Clt. 1793. Pl. 2 to 3 feet.

59 S. Algeriè'nsis (Desf. fl. atl. 1. p. 23. t. 8.) stem branched, hairy; lower leaves ovate-oblong, crenated, running into the petioles: middle and upper leaves few, sessile, usually quite entire; whorls 2-6-flowered, distinct; calycine teeth setaceous, spiny; bracteas reflexed. ♃. H. Native of Algiers, near Maiane. Calyxes nutant. Corollas blue, size of those of *S. pratènsis*. This species is said to differ from *S. bicolor*, in the stem being hairy; in the leaves being ovate-oblong, crenated, not erose, and sinuately toothed, ex Desf.

Algiers Sage. Pl. 2 to 3 feet.?

60 S. latifòlia (Vahl, enum. 1. p. 271.) stem rather pilose, branched at top; lower leaves petiolate, oblong, attenuated at the base: upper ones sessile, cordate; racemes clothed with clammy villi; whorls remote, 4-flowered; calyx campanulate, striated, villous, with setaceous teeth; bracteas cordate, acuminated, glabrous inside, one half shorter than the calyxes. ♃. H. Native of Tangiers. Stems purplish. Upper leaves sessile, 2-3 inches long, very blunt, attenuated at the base, veiny, villous. Pedicels very short. Corolla much larger than the calyx. Very nearly allied to *S. Algeriènsis*; but differs in the leaves being remotely toothed, and the seeds larger, &c.

Broad-leaved Sage. Pl.

61 S. ibanè'nsis (Vahl, enum. 1. p. 269.) stem erect, branched, clammy and hispid; leaves petiolate, ample, ovate, deeply toothed, cordate at the base, hispid: upper leaves lanceolate-linear: floral leaves ovate, acuminated, reflexed; racemes elongated, a little branched; whorls 6-flowered, distant; calyxes shorter than the pedicels, amply campanulate, striated, hispid: teeth all short and stiff; genitals hardly exserted. ♃. H. Native of Spain, Schousboe. Leaves a hand long. Corollas size of those of *S. Sclàrea*, pubescent outside. Pedicels clothed with clammy villi.

Unpleasant Sage. Pl. 2 to 3 feet.?

62 S. Austrì'aca (Lin. syst. veg. p. 69.) stem erect, nearly naked, pubescent; radical leaves petiolate, broad-ovate, erosely toothed, cordate, rounded or cuneated at the base, wrinkled, glabrous above and pubescent beneath: cauline leaves few; floral leaves ovate, acuminated, ciliated, about equal in length to the calyxes; racemes a little branched; whorls about 6-fluwered: lower ones distant: upper ones approximate; calyxes nearly sessile, campanulate, very pilose; corolla 3 times as long as the calyx, the tube a little exserted. ♃. H. Native of Lower Austria, Hungary, Transylvania, Moldavia; frequent in Tauria, and Caucasus. Jacq. fl. austr. 2. p. 8. t. 112. Lindl. bot. reg. t. 1019. S. Sclàrea, Crantz, austr. p. 236. but not of Lin. Sàlvia distans, Pohl, ex Steud. nom. 725. Sclàrea distans, Mœnch. meth. Stems bluntly tetragonal. Radical leaves 3-4 inches long; cauline ones 2 inches long, pinnatifid. Corolla cream-coloured, beset with clammy pili outside, size of that of *S. pratènsis*.

Austrian Sage. Fl. June, Jul. Clt. 1776. Pl. 2 to 3 feet.

63 S. limba'ta (Meyer, verz. pflanz. p. 86.) stems erect, almost naked, pubescent; radical leaves petiolate, broad-ovate, entire, erosely toothed, cordate at the base, very much wrinkled, green, and rather hairy on both surfaces; cauline leaves few, sessile; floral leaves ovate, acuminated, shorter than the calyx; racemes branched; whorls 2-6-flowered, distant; calyxes nearly sessile, broadly campanulate, rather hispid; corolla about thrice as long as the calyx, the tube a little exserted; genitals exserted. ♃. H. Native of Caucasus, in dry stony places on the Talusch mountains. Very nearly allied to *S. Austriaca*; but differs in the leaves being shorter, more wrinkled; in the racemes being fewer-flowered; in the calyx being more broadly campanulate, and hardly hairy.

Limbate Sage. Pl. 2 to 3 feet.?

64 S. ceratophylloi'des (Lin. mant. p. 26.) stem ascending? villous; leaves oblong, deeply pinnatifid, with oblong-lanceolate, deeply toothed lobes, much wrinkled, glabrous: superior leaves nearly sessile; floral leaves ovate, acute, one half shorter than the calyxes; racemes elongated, branched a little; whorls remote, 2-6-flowered; calyxes pedicellate, campanulate, hispid; teeth of lower lip lanceolate, acute; corolla twice as long as the calyx: the tube exserted a little. ♃.? H. Native of the region of the Mediterranean; on arid hills of Calabria; and south of Sicily. Corollas of *S. pratènsis*, but smaller, larger than those of *S. nerbenàca*, violaceous or blue.

Stag-horn-like-leaved Sage. Fl. June, May. Clt. 1771. Pl. 1 to 2 feet.

65 S. prate'nsis (Lin. spec. p. 35.) stems erect, almost simple, pubescent; radical leaves petiolate, oblong-ovate, obtuse, crenated, or cut, cordate at the base, bullately wrinkled, glabrous above, with the petioles and nerves pubescent beneath; cauline leaves few, sessile: uppermost ones lanceolate, acuminated: floral leaves cordate-ovate, shorter than the calyxes, rather reflexed; racemes clammy, nearly simple; whorls 6-flowered, distant; calyxes nearly sessile, campanulate, clothed with clammy villi; corolla 3 times longer than the calyx, the tube equal in length to the calyx; genitals exserted. ♃. H. Native of Middle and South Europe, in dry, grassy fields, and by waysides; as of Britain, France, Spain, Portugal, Germany, Italy, Greece, Caucasus, Sweden, Russia. Smith, engl. bot. t. 159. S. agréstis, Lin. amœn. acad. 3. p. 399.? S. hæmatòdes, Lin. spec. p. 35. S. Barrelièri, Tenor. fl. nap. 1. p. 9. t. 2. Schranck, hort. mon. 1. t. 5. S. Tenòrii, Spreng. syst. 2. p. 65. Sweet. brit. fl. gard. 1. t. 26. S. rubicùnda, Wenderoth. S. virgàta, Sav. bot. etrusc. 2. p. 4. ex Tenore, syll. p. 17. but not of Jacq. S. variegàta, Waldst. et Kit. ex Willd. enum. 1. p. 36. S. tricolor, Hortul.—Berg. phyt. 2. t. 95.—Blackw. t. 258.—Plenck, icon. t. 22. This species is variable in height and pubescence, but the flowers are always large, usually blue, rarely reddish, or white. Racemes simple, or furnished with a few small branches. Root thick. Leaves in the more southern varieties more or less spotted with red.

Meadow Sage. Fl. May, June. Britain. Pl. 2 to 4 feet.

66 S. nemorò'sum (Andrz. in Bess. enum. fl. volh. 3. & 40.) stem erect, almost simple, pubescent; radical and lower cauline leaves petiolate, ovate, doubly crenated, deeply crenated at the base, wrinkled, glabrous on both surfaces, or pubescent on the nerves and petioles beneath; cauline leaves few, sessile, broadly ovate-cordate, acute; floral leaves roundish-cordate, shorter than the calyxes, at length reflexed; racemes almost simple, clammy; whorls 6-flowered, remote; calyxes almost sessile, campanulate, striated, clothed with clammy villi; corolla about 3 times longer than the calyx: tube equal in length to the calyx; genitals almost inclosed. ♃. H. Native of Altaia, in fields at the river Tscharysch; and in the Kirghisean Steppe at the river Nura Ledeb; and in the valley of Cashmere, Royle. Corollas blue. This species differs from *S. pratènsis* in the leaves being smaller, less wrinkled, and more entire, the lower ones on longer petioles, the whorls more remote, and the flowers about half the size.

Bush Sage. Pl. 1 to 3 feet.

67 S. Lusita'nica (Jacq. fl. eclog. 1. p. 57. t. 38. exclusive of the syn. of Vahl and Poir.) stem erect, pilose, clammy; radical leaves petiolate; cauline leaves few, stem-clasping, all triangularly ovate, truncate at the base, somewhat cordate, acute, deeply toothed, much wrinkled, glabrous above, and villous beneath; floral leaves ovate, acuminated, equalling the calyxes; racemes branched; whorls 6-flowered, distant; calyxes nearly sessile, campanulate, striated, hispid, rather veiny; corolla about twice as long as the calyx, with an inclosed tube. ♃. H. Native of Spain and Portugal. Sclàrea Lusitànica, Mill. dict. no.

3.? This species is very nearly allied to *S. praténsis*, *S. dumetòrum*, and *S. virgàta*. It has the small flowers of the two latter species, and the branching panicle of *S. virgàta*. Corollas blue.

Portugal Sage. Fl. June, July. Clt. 1819. Pl. 1 to 2 feet.

68 S. virga'ta (Ait. hort. kew. ed. 1st. vol. 1. p. 39.) stem erect, branched, pubescently villous; radical leaves petiolate, amply ovate, cordate at the base: lower cauline leaves on short petioles, ample, ovate-oblong, rounded or cordate at the base: upper cauline ones more sessile, and smaller: uppermost ones cordately stem-clasping, acuminated, all erosely crenated, wrinkled, almost glabrous above, and pubescent on the nerves beneath, or hispid; floral leaves ovate, acuminated, somewhat reflexed, shorter than the calyxes; racemes branched, elongated; whorls 6-flowered, distant; calyxes pedicellate, campanulate, striated, clothed with clammy villi; corolla twice as long as the calyx, with an inclosed tube. ♃. H. Native of Italy, about Rome, and in fields on Mount St. Angelo. Jacq. hort. vind. 1. p. 14. t. 37. S. Tiberìna, Mauri, ex Requien. S. Gargánica, Tenore, ind. sem. hort. neap. 1829. syll. p. 18. S. cadùca, Horn. hort. hafn. 1. p. 30. S. gigantèa, Desf. cat. hort. par. 2. p. 68. S. Pyrenàica, Lin. spec. p. 36. S. grandidentàta, Lehm. ind. sem. hort. hamb. 1. p. 29.? S. amplexicaùlis, Lam. ill. 1. p. 68.? S. rùbra, Spreng. cur. post. 17. S. Caucásica, Schranck, in syll. pl. soc. ratisb. 2. p. 58. S. affìnis, Spreng. ex Steud. nom. S. Bauhìni, S. Barrelièri, S. quercifòlia, S. Taúrica, and S. Taurìna, Hortul.—Riv. mon. irr. t. 68. Corollas white, pale red, or pale blue. This species differs from *S. praténsis* in the large panicle, in the elongated, few-flowered racemes, in the larger leaves, and smaller flowers. The calyxes and floral leaves are clammy, and hardly coloured.

Twiggy Sage. Fl. June, Nov. Clt. 1756. Pl. 2 to 4 feet.

69 S. rugòsa (Thunb. prod. fl. cap. p. 97.) stem ascending, very villous; leaves petiolate, ovate, or oblong-lanceolate, obtuse, erosely toothed, cordate at the base, bullately wrinkled, pubescent on both surfaces; floral leaves ovate-cordate, acute, rather shorter than the calyxes; racemes a little branched; whorls 6-10-flowered, remote; calyx campanulate, striated, clothed with clammy villi; corolla twice as long as the calyx, the tube equalling the calyx. ♃. G. Native of the Cape of Good Hope. Corollas white, tinged with red. This species differs from *S. dísermas* in the form of the leaves, large and widely campanulate calyxes, and in the corollas being white.

Wrinkled-leaved Sage. Fl. July, Aug. Clt. 1775. Pl. 1 o 2 feet.

70 S. viscòsa (Jacq. misc. 2. p. 328. icon. rar. 1. p. 2. t. 5.) stem erect, clothed with clammy pubescence; leaves petiolate, broad-ovate, crenulated, sub-sinuated, cordate at the base, wrinkled, rather villous on both surfaces, clammy: superior leaves sessile: floral leaves rounded, half the length of the calyxes; racemes elongated, branched; whorls remote, usually 3-flowered; calyx campanulate, clothed with clammy villi; corolla 3 times as long as the calyx, the tube exserted. ♃. H. Native of Spain, Italy, &c. All parts of the plant are clothed with clammy pubescence. Stems with few leaves at top. Radical leaves 8 inches long, and 4-5 broad: cauline ones becoming gradually smaller as they ascend. Corolla 8-9 lines long, violaceous, glabrous outside. Allied to *S. virgàta*.

Clammy Sage. Fl. June, July. Clt. 1778. Pl. 2 to 4 feet.

71 S. dise'rmas (Lin. spec. p. 36.) stems procumbent at the base; branches ascending, and clothed with clammy villi; lower leaves petiolate: superior ones nearly sessile, all oblong-lanceolate, erose, rounded at the base, or cordate, clothed with clammy villi on both surfaces: floral leaves broad-ovate, acute, about equal in length to the calyxes; racemes a little branched; whorls 6-10-flowered, remote; calyx ovate-tubular, clothed with clammy villi, striated; lower calycine teeth lanceolate, acute; corolla exceeding the calyx but little, the tube equalling the calyx. ♃. H. Native of the Cape of Good Hope. Horminum dísermas, Mœnch. meth. Allied to *S. verbenàca* and *S. clandestìna*. Corollas white.

Two-glumed Sage. Fl. July. Clt. 1778. Pl. 1 foot.?

72 S. Sibthórpii (Smith, fl. græc. 1. p. 17. t. 22.) stem erect, rather panicled at top, villous; radical leaves petiolate, ample: superior leaves sessile, all ovate, coarsely and doubly crenated, a little cut, glabrous above, wrinkled, villous beneath: floral leaves roundish, acuminated, rather coloured, shorter than the calyxes; racemes elongated, brachiate, branched, rather canescent; whorls numerous, distinct, 6-10-flowered; calyx tubularly campanulate, villous; lower calycine teeth lanceolate, very acute; corolla hardly twice as long as the calyx, the tube exserted. ♃. H. Native of Europe, in the region of the Mediterranean, in grassy places, and by way-sides; as of Greece, South of Podolia, Bulgaria, about Smyrna, Tauria, &c.; also in the valley of Cashmere, Royle. S. campéstris, Bieb. fl. cauc. 1. p. 20. and 3. p. 22. Rchb. icon. bot. 6. p. 21. t. 529. S. Hyspánica, Andrz. in Bess. enum. pl. pod. 3. S. móllis, Jacq. fil. ecl. 1. p. 56. t. 37.? exclusive of the syn. of Host. S. amplexicaúlis, S. Barrelièri, S. Caucásica, S. Taurica, and S. virgàta, &c. Hortul. Very nearly allied to *S. sylvéstris* and *S. virgàta*; it differs from the first in the less leafy, more villous stem, and more ample leaves, which are 6-9 inches long, and 3-4 broad; and from the latter in the whorls being more numerous and more approximate, in the calyx being larger, and in the floral leaves being membranous and coloured.

Sibthorp's Sage. Pl. 1 to 3 feet.

73 S. sylve'stris (Lin. spec. p. 34.) stem erect, panicled at top; lower leaves petiolate: superior ones sessile, all oblong-lanceolate, crenated, rounded, or usually cordate at the base, wrinkled, glabrous above, and paler and pubescent beneath, or canescent; floral leaves orbicular, acuminated, coloured, about equal in length to the calyxes, imbricated before florescence, but afterwards a little reflexed; racemes elongated, a little branched; whorls 6-10-flowered, distinct; calyx ovate-tubular; corolla twice as long as the calyx, the tube equalling the calyx. ♃. H. Native of East and middle Europe, and middle Asia, in grassy fields; Spain, South of France, Sicily, Naples, Germany, Austria, Hungary, Bohemia, Greece, Persia, Tauria, and Caucasus, Siberia, &c. Jacq. fl. austr. 3. p. 7. t. 212. Rchb. icon. bot. 6. p. 20. t. 527. S. nemorósa, Lin. spec. p. 35. Poit. et Turp. fl. par. t. 35.? Rchb. icon. bot. 6. p. 19. t. 526. S. desérta, Schangin, in Led. cat. hort. dorp. 1824. p. 6. Rchb. icon. bot. 6. p. 21. t. 528. S. Valentìna, Vahl, enum. 1. p. 268. S. clàta, Host, fl. austr. 1. p. 34, and probably of Tenore, syll. p. 18. S. amplexicaúlis, Lam. ill. 1. p. 68.? S. alpéstris, S. aspérula, and S. Taurìna, Hortul. Sclàrea punctàta, Mœnch. meth. Sclàrea sylvéstris, Mill. dict. no. 7. Sclàrea nemorósa, Mill. dict. no. 6. Sclàrea Syriaca, Mill. dict. no. 5. This species is very variable in height and villosity, but with a very distinct habit. Leaves 2-4 inches long. Corollas purplish violet.

Wild Sage. Fl. June, Oct. Clt. 1759. Pl. 1 to 3 feet.

74 S. re'nouia (Vahl, enum. 1. p. 281.) stem erect, villous; lower leaves petiolate: upper ones sessile, all oblong-lanceolate, obtuse, doubly crenated, rather cordate at the base, wrinkled, pubescent; floral leaves orbicular, acuminated, about half as long as the calyxes, permanent, reflexed; racemes a little branched, rather nutant at apex; whorls 6-10-flowered, distinct; calyx tubular, pubescent; corolla twice as long as the calyx, the tube a little exserted. ♃. H. Native of Transylvania, and

Podolia. * S. betonicæfòlia, Ettling, salv. 49. S. Cremenecénsis, Bess. enum. pl. volh. p. 40. This species differs from *S. nùtans* in the stem being leafy, in the leaves being narrower, and on shorter petioles, the racemes few, elongated, and loose, and the flowers larger, &c. Corollas violaceous, larger than those of *S. sylvéstris*.

Pendulous-racemed Sage. Pl. 1 to 2 feet.?

75 S. pu'tans (Lin. spec. p. 30.) stem pubescent, nearly naked; leaves all radical, or nearly so, on long petioles, ovate-oblong, doubly crenated, sub-cordate at the base, wrinkled; floral leaves orbicular; racemes short, on long peduncles, paniced, drooping at the time of flowering; whorls about 6-flowered, approximate; calyxes reflexed, pubescent; corolla twice as long as the calyx, the tube equalling the calyx. ♃. H. Native of the East of Europe, Podolia, and Galicia, Hungary, and Transylvania, Siberia, Tauria, and Caucasus, &c. Waldst. et Kit. pl. hung. 1. p. 63. t. 62. Sims, bot. mag. 2496. S. acutifòlia, Lam. ill. 1. p. 68?. S. péndula, Besser. fl. galic. but not of Vahl. S. hastàta, Ettling, salv. 46. Vahl, enum. 1. p. 280. S. betonicæfòlia, Ettling, salv. p. 49. Bieb. fl. cauc. 1. p. 23.—Kniph. cent. 7. t. 79.—Nov. act. petrop. 1. p. 378. t. 14. Stems nearly simple. Lower leaves 3-4 inches long, glabrous above, and pubescent beneath. Racemes spike-formed, 1-2 inches long. Corolla violaceous, 4-5 lines long. Stamens inclosed.

Drooping-racemed Sage. Fl. June, Aug. Clt. 1780. Pl. 1 to 3 feet.

76 S. sclarεoi'des (Brot. fl. lus. 1. p. 17. phyt. 3. t. 2.) stems erect, almost simple, pilose; radical leaves petiolate, oblong-ovate, obtuse, crenated, or a little cut, cordate at the base, bullately wrinkled, glabrous above, but the petioles and nerves are pilose beneath; cauline leaves few, sessile: upper ones lanceolate, acuminated: floral leaves cordate-ovate, shorter than the calyxes, a little reflexed; racemes clammy, nearly simple; calyxes nearly sessile, campanulate, clothed with clammy villi; corolla hardly twice as long as the calyx, the tube equalling the calyx. ♃. H. Native of the South of Europe, as of Portugal, and Italy. S. Lusitánica, Poir. dict. 6. p. 606. but not of Jacq. S. elongàta, Spreng. pug. pl. min. cogn. 1. p. 43. S. bullàta, Schousb. ex Vahl. enum. 1. p. 265. This species differs from *S. praténsis* in the flowers being smaller. Habit of *S. clandestina*, but the leaves are very distinct. Corollas violaceous.

Clary-like Sage. Fl. July, Aug. Clt. 1804. Pl. 1 to 2 feet.

77 S. nubicau'lis (Vahl, enum. 1. p. 266.) stems erect, nearly naked, clothed with hoary villi; leaves all radical, or nearly so, petiolate, oblong-linear, or lanceolate, acute, erosely toothed, somewhat cordate at the base, bullately wrinkled, glabrous above, canescent and sub-villous beneath; floral leaves ovate-roundish, shorter than the calyxes, a little reflexed, permanent; racemes simple, or branched; whorls 6-flowered, distant; calyxes nearly sessile, campanulate, striated, clothed with clammy villi; corolla about twice as long as the calyx. ♃. H. Native of Arabia. S. Abyssinica, Lin. fil. suppl. p. 88.? but not of other authors. S. Merjàmie, Forsk. fl. arab. p. 10. Nearly allied to *S. bullàta*, but differs in the narrower, more wrinkled, erosely toothed leaves.

Naked-stemmed Sage. Pl. 1 to 2 feet.?

78 S. verbena'ca (Lin. spec. p. 35.) stem erect, pubescent, or villous; leaves broad-ovate, or oblong, crenated, wrinkled, glabrous: lower ones on long petioles, narrowed at the base: superior ones broader, sessile, cordate at the base; floral leaves ovate-roundish, acuminated, villous, permanent, rather shorter than the calyxes, reflexed after florescence; racemes elongated, simple, or a little branched; whorls remote, about 6-flowered; calyx ovate, hairy; corolla one-half longer than the calyx, the tube equalling the calyx. ♃. H. Native of North and middle Europe; as of Britain, North of France, Sweden, Denmark, Germany, Italy, European Russia, about Constantinople, Tauria, and Caucasus, &c. Smith, engl. bot. t. 154. Curt. lond. 6. t. 1. S. Spielmánni, Willd. enum. p. 38. but not of Scop. S. Spielmanniàna, Bieb. fl. cauc. 1. p. 21. S. Illyrica, Schultes, obs. bot. 8. S. micrántha, Desf. cat. hort. par. but not of Vahl. S. horminoides, Pourr. act. toul. 3. p. 327. S. Byzantìna, and S. heterophylla, Hortul. Horminum verbenàceum, Mill. dict. no. 1. Mor. hist. sect. 11. t. 14. f. 33. Leaves 3-4 inches long, 1-2 broad. Corollas blue, rarely white, size of those of *S. Horminum*. The herb and flowers prove very aromatic when rubbed. The seeds produce a great quantity of mucilage when moistened, whence they become serviceable for removing extraneous matter from the eyes. If put under the eye-lashes for a few moments the tears dissolve their mucilage, which envelopes any sand or dust, and brings it out. Hence some old authors has called the plant *Oculus christi*, and others of our own country have derived our English name *Clary* from the same circumstance.

Var. β, oblongifòlia (Benth. lab. p. 240.) leaves oblong, crenated, hardly cut. ♃. H. Cultivated in gardens. S. oblongàta, Vahl, enum. 1. p. 256. S. betonicæfòlia, Lam. ill. 1. p. 70. but not of Ettling.

Var. γ, ? incìsa (Benth. l. c.) leaves broad-ovate, cut: lobes ovate, acute, approximate. ♃. H. Native of France, about Toulouse. This is probably a variety of *S. clandestina*.

Vervain Sage, or Clary. Fl. June, Oct. Britain. Pl. 1 to 2 feet.

79 S. clandesti'na (Lin. spec. p. 36. but not of his herb.) stem herbaceous, erect, pubescent, or villous; leaves ovate-oblong, deeply toothed, or pinnatifid, wrinkled, glabrous: lower ones petiolate, narrowed at the base, truncate, or sub-cordate; floral leaves ovate-roundish, acuminated, villous, permanent; racemes simple, or a little branched; lower whorls remote: upper ones approximate, about 6-flowered; calyx ovate, hairy; corolla twice as long as the calyx. ♃. H. Native of the South of Europe, and North of Africa; and Madeira, in dry places, and by way sides; Spain, Portugal, South of France, Sardinia, Dalmatia, Syria, Caucasus, &c. S. verbenàca, Vahl, enum. 1. p. 255. Rchb. icon. bot. 6. p. 17. t. 523. S. verbenacioìdes, Brot. fl. lus. 1. p. 17. S. polymórpha, Hoffm. et Link, fl. port. 1. p. 149. t. 19. Rchb. icon. bot. 6. p. 18. t. 524. f. 719. S. acutàta, Link, et Brot. phyt. lus. p. 116. S. obtusàta, Link, et Brot. l. c. S. parviflòra, Link, et Brot. l. c. but not of Vahl. S. clandestinoìdes, Link, jahrb. 3. p. 169. S. præcox, Savi, fl. pis. 1. p. 22. Lois. not. 6. but not of Vahl. S. pallidiflòra, St. Amans. fl. agen. 10. S. collìna, Lowe, prim. fl. mad. p. 19. S. variàbilis, var. Lois. fl. gall. ed. 2d. vol. 1. p. 16. S. oblongàta, Rchb. icon. bot. 6. p. 16. t. 521. but not of Vahl. S. micrántha, Desf. cat. hort. par. ex Rchb. l. c. but not of Vahl. S. Viviàni, Spreng. in Sieb. pl. apul. et calab. ex Rchb. l. c. Corollas pale blue or pale purple. This is a very variable plant, very nearly allied to *S. verbenàca*, but is always much smaller, with the leaves crowded at the bottom of the stem, narrower, and more deeply cut.

Var. β, multìfida (Benth. lab. p. 241.) leaves deeply pinnatifid, with ovate-oblong lobes. ♃. H. S. multìfida, Sibth. et Smith, fl. græc. 1. p. 17. t. 23. Rchb. icon. bot. 6. p. 18. t. 524. f. 720. S. clandestìna, Vahl, enum. 1. p. 256. Rchb. icon. bot. 6. p. 18. t. 525. S. laciniàta, Willd. enum. suppl. p. 2. , S. crìsa, Desf. cat. hort. par. p. 68. Poir. suppl. 5. p. 49. S. ceratophylloìdes, Willd. enum. 1. p. 297. ex Rchb. l. c. but not of Lin.—Horminum, &c. Barrel. icon. 24. t. 200.

Clandestine Sage. Fl. May, Aug. Clt. 1739. Pl. ½ to 1 foot.

80 S. contravérsa (Tenore, syll. fl. nap. p. 18.) stem pubescent, or villous; leaves oblong, deeply pinnatifid, with *oblong-linear, very blunt, deeply crenated lobes*, bullately wrinkled, rather pilose on both surfaces, with revolute margins; lower leaves petiolate: superior ones sessile: floral leaves roundish, acuminated, villous, *scarcely shorter than the calyxes*; racemes branched; whorls 6-10-flowered: lower ones remote; *superior ones approximate*; *calyx ovate, clothed with long* hairs; corolla shorter than the calyx, or a half longer. ♃. H. Native of the region of the Mediterranean; as of Spain, Calabria, *Cyprus, Syria; Egypt, in the Great* Syrtus; also of the Cape of Good Hope. S. clandestìna, Lin herb. but not of his spec. p. 36. Sibth. et Smith, fl. græc. 1. p. 18. t. 24. S. lanìgera, Poir. suppl. 5. p. 48. Habit of *S. clandestìna*, but more humble and more branched: the leaves more deeply cut, lobed almost to the midrib. Corolla pale purple.

Var. β, grandiflòra (Benth. lab. p. 719.) corolla more than twice as long as the calyx. ♃. H. Native near Jaffa, in the sand by the sea-side, *Bové*.

Twisted Sage. Pl. ½ to ¾ foot.

81 S.? desérti (Decaisne, in ann. sc. nat. par. 1834. 2. p. 248.) plant suffruticose, hoary; branches divaricate, pubescent; leaves small, few, oblong, petiolate, crenated, bullately wrinkled, with reflexed margins, clothed with hoary pubescence; floral leaves small: uppermost ones very small; whorls 2-6-flowered, distant; calyx ovate-campanulate, beset with very long hairs: teeth all nearly equal, or the upper one is smaller. ♄. G. Native of the desert of Sinai, Bové. Habit of *S. contravérsa* and *S. Ægyptiaca*.

Desert Sage. Shrub.

82 S. Núbia (Ait. hort. kew. ed. 1st. vol. 1. p. 42. but not of other authors.) stem erect, villous, canescent; lower leaves on long petioles: superior ones sessile, or cordately stem-clasping, all oblong-ovate, or lanceolate, obtuse, or acuminated, irregularly crenated, or erose, cordate at the base, much wrinkled, clothed with fine pubescence above, and hoary tomentum beneath, or rather woolly; racemes very villous, dense, branched; whorls 6-flowered, approximate; calyx ovate, clothed with soft, hair-like wool; corolla about twice as long as the calyx. ♃. H. Native of Abyssinia. Habit of *S. verbenàca*. Leaves almost like those of *S. sylvéstris*. Racemes like those of *S. contravérsa*, but more branched, and more dense, and the stem is taller.

Nubian Sage. Fl. June, July. Clt. 1784. Pl. 2 to 3 feet.?

† *Doubtful species, probably belonging to the present section.*

83 S. Barrelie'ri (Ettling, salv. p. 46. ex Vahl, enum. 1. p. 269.) stem erect, leafy; leaves petiolate, hairy, lustately 7-lobed: middle lobe lanceolate, acute, all unequally serrated; bracteas small, ovate, ciliated, acute; whorls 6-flowered; calyx villous, 5-toothed. ♃. H. Native of Spain.

Barrelier's Sage. Pl. 1 to 2 feet.

84 S. parviflòra (Vahl, enum. 1. p. 268. Labill. pl. syr. var. dec. 4. p. 13. t. 7.) stems erect, hoary; leaves cordate, oblong, veiny, wrinkled, greenish grey, crenated, villous beneath: upper ones sessile; flowers pedicellate; whorls 2-6-flowered; bracteas cordate, ovate, acute, hardly the length of the calyxes; calyx tomentose, rather hoary, one-half shorter than the corolla; stamens inclosed. ♃. H. Native of Syria, near Damascus, and on the mount called Dgebel-cher. Corollas rather tomentose, yellowish. Nearly allied to *S. Núbia*.

Small-flowered Sage. Pl. 1½ foot.

Sect. VII. Micro'sphace (from μικρος, *mikros*, small; and σφακος, *sphakos*, *sage*; *in allusion to the small corollas.*) Benth. lab. p. 244. Calyx ovate: upper lip entire. Corolla small; tube inclosed, without any ring of hairs inside; lips very short; upper lip erect: lateral lobes of lower lip spreading. Connective deflexed behind, linear, combined longitudinally. Lower lobe of style flattened, dilated, rounded.—Procumbent, American herbs.

85 S. occidenta'lis (Swartz, fl. ind. occ. 1. p. 28.) diffuse, procumbent, glabrous, or pubescent; leaves petiolate, broad-ovate, acute, serrated, rounded at the base, or cuneated, glabrous or hispid; floral leaves sessile, hardly longer than the pedicels, ovate-lanceolate, acute, permanent; racemes elongated, branched a little at the base; whorls 2-6-flowered, remote; flowers minute; calyx tubular, clothed with glandular villi; teeth of lower lip obtuse; corolla a half longer than the calyx. ♃. S. Native of Tropical America, in waste fields; Mexico, Jamaica, St. Domingo, Cuba, Martinico, Trinidad, Antigua, Peru, in the valley of Lima, and elsewhere on the same coast. S. procumbens, Ruiz. et Pav. fl. per. 1. p. 27. t. 30. f. a. S. radicans, Poir. suppl. 6. p. 621. Hyptis glandulòsa, Sieb. fl. mart. exsic. no. 151. Verbena minima chamædryos folio, Sloane, jam. 1. p. 172. t. 107. Stems numerous, tetragonal. Leaves 1 to 1½ inches long. Racemes like those of *Verbèna officinàlis*. Corolla blue, glabrous.

Western Sage. Pl. procumbent.

86 S. mise'lla (H. B. et Kunth, nov. gen. amer. 2. p. 290.) herbaceous; stems pilose; leaves roundish rhomboid, acute, rather cuneated at the base, crenated, glabrous; whorls generally 6-flowered, remote; calyx beset with glandular hairs. ♃. S. Native of New Spain, in most places between Acapulco and La Venta del Exido. Stem branched, diffuse; branches ascending. Leaves on short petioles, 2-4 lines long. Racemes filiform. Bracteas roundish-ovate, hairy, acuminated, deciduous, shorter than the calyxes. Corolla violet.? This species hardly differs from *S. occidentàlis*.

Pitiful Sage. Pl. ½ to 1 foot.

Sect. VIII. Calo'sphace (from καλος, *kalos*, beautiful; and σφακος, *spakos*, sage; many of the species contained in this section are showy.) Benth. in Hook. bot. misc. 3. p. 374. lab. p. 245. Calyx ovate, tubular, or campanulate: upper lip entire, or shortly tridentate. Tube of corolla exserted, or inclosed, without any ring of hairs inside, but sometimes furnished near the base with two teeth: upper lip of corolla straight, concave, entire, or usually a little emarginate; lobes of lower lip spreading. Connective deflexed behind, linear, longitudinally connate. Lower lobe of style subulate.—Herbs, undershrubs, or shrubs, variable in habit, but readily distinguished from the other sections. Leaves entire, serrated, crenated, rarely quite entire.

§ 1. Micra'nthæ (μικρος, *mikros*, small; and ανθος, *anthos*, a flower; flowers small.) Benth. lab. p. 245. *Corolla hardly 3 lines long, half as long again, rarely almost twice as long as the calyx, with an inclosed tube; lower lip almost twice as long as the upper, which is erect.—Herbs, with blue inconspicuous corollas.*

87 S. obscu'ra (Benth. lab. p. 245.) herbaceous, diffuse; leaves petiolate, ovate, acute, serrated, narrowly cuneated at the base, glabrous or hispid above, green on both surfaces; floral leaves permanent, sessile, ovate, acuminated, shorter than the calyxes; racemes elongated, simple; whorls 2-6-flowered, remote; flowers minute; calyx tubular, clothed with rather glandular villi, increasing in the fructiferous state: upper lip entire, and the teeth of the lower lip shortly and subulately acuminated; corolla a half longer than the calyx; lobes of style subulate. ♃.? S. Native of Jamaica. *Very nearly allied to S.*

occidentalis; but differs in the lobes of the calyx being subulately-acuminated; in the lobes of the style being acute and subulate, not roundish and flattened.

Obscure Sage. Pl ½ to 1 foot.?

88 S. RIPA'RIA (H. B. et Kunth, nov. gen. amer. 2. p. 306.) stem herbaceous, *erect, branched, pubescent*; leaves *ovate-oblong*, acute, cordate, serrated, pilosely pubescent on both surfaces; whorls many-flowered, rather remote; calyx subcampanulate, *striated, beset with glandular hairs, having the upper lip* cricuspidate, and the lower one bifid, the segments acuminately subulate; corolla a little longer than the calyx. ♃.? S. Native of Peru, between Guancabamba and Paramo de Guamani, Humb. et Bonpl.; on the banks of the river Chulucana. Herb canescent, sweet-scented. Leaves on short petioles, an inch long. Racemes 3-4 inches long. Bracteas roundish-ovate, acute, hardly longer than the pedicels, which are pilose. Corollas bluish.

River-side Sage. Pl.?

89 S. TENUI'LLA (Swartz, *fl.* ind. 1. p. 45. t. 2.) stems herbaceous, small, procumbent; branches ascending, pubescent, leaves petiolate, broad-ovate, roundish, obtuse, crenated, cordate at the base, clothed with adpressed pubescence above, but glabrous beneath; floral leaves lanceolate, minute, permanent; racemes short; whorls about 6-flowered; flowers minute; calyx tubular, clothed with glandular villi, having the upper lip entire, and the teeth of the lower lip very short and bluntish; corolla exceeding the calyx a very little: upper lip short, truncate; lobes of style subulate. ♃.? S. Native of Jamaica. Habit of *Verónica agréstis*. Corollas blue.

Slender Sage. Pl. procumbent.

90 S. MICRA'NTHA (Vahl, enum. 1. p. 235.) stems herbaceous, erect, glabrous or pubescent; leaves petiolate, broad-ovate, obtuse, irregularly crenated, a little curled, truncate at the base or cordate, nearly glabrous; floral leaves lanceolate, shorter than the pedicels; racemes simple; whorls 6-10-flowered; flowers minute; calyx tubular, clothed with glandular villi, having the upper lip quite entire, and the teeth of the lower lip obtuse; corolla a half longer than the calyx: upper lip short, truncate; lobes of style subulate. ☉. S. Native of Mexico, and near the Havana, in Cuba. S. bullàta, Ort. dec. 9. p. 109. Jacq. hort. schœnbr. 4. p. 41. t. 481. S. serótina, Vahl, enum. 1. p. 232. but not of Lin. S. foliis cordato-ovatis, &c. Ard. spec. 1. p. 10. t. 2. Leaves small. Corollas blue.

Small-flowered Sage. Fl. May, June. Clt. 1823. Pl. ½ foot.

91 S. SERÓTINA (Lin. mant. p. 25.) stems herbaceous, pubescent or villous; leaves petiolate, ovate, obtuse, crenated, truncate at the base, somewhat cordate, wrinkled, villous above, and clothed with soft woolly pubescence beneath; floral leaves lanceolate, shorter than the pedicels; racemes simple; whorls about 6-flowered; flowers minute; calyx tubular, clothed with glandular villi, having the upper lip almost entire, and the teeth of lower lip acutish; corolla exceeding the calyx a little: upper lip short, truncate; lobes of style subulate. ♃.? S. Native of the Bahama Islands, Trinidad, Santa Cruz, Jamaica, &c. Jacq. icon. rar. 1. p. 1. t. 3. S. Dominica, Vahl, enum. 1. p. 233. Swartz, obs. p. 18. t. 1. f. 1. but not of Lin. Allied to *S. micrántha*, but smaller. Racemes loose, more branched and more villous. Leaves villous. Corollas smaller, dirty white or bluish.

Late Sage. Fl. Aug. Clt. 1808. Pl. 1½ foot.

92 S. HU'MILIS (Benth. lab. p. 246.) stem herbaceous, erect, branched, beset with spreading hairs; leaves petiolate, broad-ovate, acutish, crenated, rounded at the base or cordate, green on both sides, and finely pubescent; upper floral leaves membranous, lanceolate, deciduous; racemes simple; whorls 2-4-flowered, loose, remote; lower flowers in the axils of the cauline leaves; calyx tubularly campanulate, villous, with the upper lip entire, and the teeth of the lower one acute, increased very much in the fructiferous state. ♃.? S. Native of Mexico, Karwinski. Habit and leaves of *S. serótina*; but differs in the whorls being *usually 2-flowered*, and in the lower whorls being axillary, but particularly in the increased fructiferous calyx.

Humble Sage. Pl. ½ foot.?

93 S. INCONSPI'CUA (*Benth. lab. p. 247.*) *stems procumbent?* villous; leaves on short petioles, ovate-lanceolate, obtuse, crenated, cordate at the base, wrinkled, clothed with rufous tomentum beneath; floral leaves deciduous; racemes a little branched; whorls 4-6-flowered, loose; flowers small; calyx tubular, striated, clothed with rather glandular villi, with the upper lip entire, and the teeth of the lower lip obtuse. ♃.? S. Native of Mexico, Hænke. This species differs from *S. micrántha*, in the leaves being wrinkled and tomentose beneath. Stems elongated, branched. Leaves 1 to 1½ inch long: superior ones sessile. Calyx of *S. serótina*, but stiffer, and the teeth more obtuse.

Inconspicuous Sage. Pl. procumbent.?

94 S. TILLEFÒLIA (Vahl, symb. 3. p. 7.) stem herbaceous, erect, almost glabrous or finely pubescent; leaves broad-ovate, crenated, truncate or nearly cordate at the base, softly wrinkled and pubescent from a few hairs on both surfaces: floral leaves membranous, lanceolate, deciduous; racemes simple; whorls loose, approximate, 6-10-flowered; calyx tubular, with ciliated nerves, having the upper lip entire, and the teeth of the lower lip ovate-lanceolate, acute; corolla hardly exceeding the calyx, with short erectish lips: lobes of style nearly equal, subulate. ♃. S. Native of Caracccas, and the Andes of New Spain, near the town of Pazcuara; Mexico, at Jalapa, &c. Jacq. hort. schœnbr. 3. p. 2. t. 254. S. fimbriàta, H. B. et Kunth, nov. gen. amer. 2. p. 299. t. 149.? Leaves with the petioles 1 to 1½ inch long. Corollas blue, variegated with white.

Lime-tree-leaved Sage. Fl. June, Aug. Clt. 1793. Pl. 3 to 4 feet.

95 S. PALÆFÒLIA (H. B. et Kunth, l. c. p. 303. t. 157.) stem suffruticose, erect, and is, as well as the branches, pilose; leaves cordate-sagittate, rounded at top, crenated, hairy on both surfaces, canescent beneath; spikes paniculed; whorls 2-flowered, crowded; calyx clothed with glandular hairs, campanulate, striated, having the upper lip bluntish, and the teeth of the lower lip acuminated; tube of corolla exceeding the calyx a little: upper lip pubescent: middle segment of the lower lip emarginately 2-lobed; genitals exserted. ♄. S. Native of New Granada, between Popayan and Palace. Leaves petiolate, 2 inches long. Pedicels clothed with glandular pili. Flowers size of those of *Thymus serpyllum*. Corollas blue.

Chaff-leaved Sage. Shrub.

96 S. FLEXUÒSA (Presl, mss. ex Benth. lab. p. 248.) stem diffuse, twisted, glabrous; leaves petiolate, ovate, acute, serrately crenated, roundly cuneated at the base, glabrous; floral leaves membranous, lanceolate, deciduous; racemes simple; whorls 6-10-flowered; flowers minute; calyx tubular, glabrous or ciliated on the nerves, with an entire upper lip, and the teeth of the lower lip acutish; corolla hardly exceeding the calyx. ♃. S. Native of Mexico, Hænke. Allied to *S. tiliæfólia*, but differs in the diffuse, twisted, glabrous stem. Leaves glabrous or minutely ciliated on the nerves and margins, not truncate nor cordate at the base. Racemes 2-6 inches long.

Twisted-stemmed Sage. Pl. diffuse.

97 S. LANCEOLA'TA (Willd. enum. 1. p. 37.) stem herbaceous, ascending, branched, glabrous; leaves petiolate, lanceolate-linear, bluntish or acuminated, narrowed at the base, pubescent, hoary *while young*; *floral leaves lanceolate-subulate, shorter than the*

calyxes; racemes simple; whorls generally 2-flowered, all remote; calyx tubular, striated, glabrous, having the upper lip entire, and the teeth of the lower lip lanceolate, acute; corolla exceeding the calyx a little: upper lip straight. ⊙. *H.* Native of Mexico, Moçino et Sesse; in the valley of Guanaxuato, Humb. et Bonpl.; at the river Missouri, Clarke and Lewis. Jacq. fil. eclog. 1. p. 13. t. 13. S. lanceæfòlia, Poir. suppl. 5. p. 49. S. reflèxa, Horn. hort. hafn. 1. p. 34. S. aspidophýlla, Roem. et Schultes, syst. mant. 1. p. 206. S. trichostemmoides, Pursh, fl. amer. sept. 1. p. 19. Stem glabrous, or clothed with hoary pubescence at top. Leaves 1½ to 2 inches long, obscurely and bluntly serrated. Whorls 2-4-flowered. Corollas blue.

Lanceolate-leaved Sage. Fl. June, Sept. Clt. 1818. Pl. 1 foot.

98 S. leptophýlla (Benth. lab. p. 249.) stem herbaceous, ascending, branched, glabrous; leaves nearly sessile, narrow-linear, acute, quite entire, glabrous: floral leaves deciduous; racemes simple; whorls remote, generally 2-flowered; calyx tubular, striated, glabrous, with the upper lip entire, and the teeth of the lower lip acute; corolla about twice as long as the calyx: tube inclosed; style bifariously bearded. ⊙.? *H.* Native of Mexico. Nearly allied to *S. lanceolàta*; but differs in the leaves being narrower, quite glabrous, and in the flowers being larger; and from *S. angustifòlia*, in the stem being glabrous, and in the flowers being much smaller.

Slender-leaved Sage. Pl. 1 foot.

§ 2. Brachya'ntha (from βραχυς, *brachys*, short; and ανθος, *anthos*, a flower; in allusion to the shortness of the flowers.) Benth. lab. p. 249. *Floral leaves bractea-formed, deciduous. Calyx glabrous, villous, or clothed with hoary tomentum. Corolla 4 lines long, or longer: tube inclosed, or hardly a half again as long as the calyx: lower lip generally longer than the upper one, flat, with rounded lobes: the middle lobe very large. Flowers blue, rarely white or pale red, never scarlet nor yellow.*

* Angustifòliæ. *Leaves linear or lanceolate, very narrow at the base, or cuneated, usually petiolate.*

99 S. angustifòlia (Cav. icon. 4. p. 9. t. 317.) stems herbaceous, erect, glabrous, or beset with spreading hairs; leaves nearly sessile, oblong-linear, narrowed at both ends, quite entire or serrated, glabrous; floral leaves bractea-formed, linear-lanceolate, deciduous; racemes elongated, simple; whorls all distant, 2-6-flowered; calyx tubular, striated, hispid, with the upper lip entire, and the teeth of the lower lip ovate, acute; corolla twice as long as the calyx: tube equalling the calyx: middle lobe of lower lip emarginately bifid; style bifariously bearded. ¥. S. Native of Mexico, in bushy places near Totonilco el Grande and Tlalpuxahua. Lindl. bot. reg. t. 1554. S. réptans, Jacq. hort. schœnbr. 3. p. 38. t. 319. S. virgàta, Ort. dec. 3. Stems numerous, twiggy, a little branched, leafy at the base, bluntly tetragonal. Leaves 1½ inch long. Calyx usually bluish. Corolla azure blue. Upper lobe of style very long, subulate.

Narrow-leaved Sage. Fl. June, July. Clt. 1806. Pl. 1 to 1½ foot.

100 S. pa'tula (Benth. lab. p. 250.) stem herbaceous, procumbent, glabrous; branches ascending, canescent; leaves petiolate, ovate-lanceolate or linear, acuminated, narrowed at the base, clothed with hoary tomentum while young, but at length glabrous: floral leaves ovate at the base, but with a long linear acumen at apex, deciduous; racemes simple, elongated; whorls remote, about 6-flowered; calyx nearly sessile, tubular, striated, clothed with hoary tomentum, with the upper lip entire, and the teeth of the lower lip ovate, acute: corolla about twice as long as the calyx, downy outside; tube ventricose, equalling the calyx; style pubescent beneath. ¥.? S. Native of the south of Brazil, Sello; at Buenos Ayres, Parker. S. canéscens, Benth. mss. but not of Meyer. Habit of *S. lanceolàta*; but the stems are more procumbent and elongated; the branches canescent; the leaves more acute. Flowers size of those of *Stachys lanata*.

Pale Sage. Pl. procumbent.

101 S. azu'rea (Lam. diar. hist. nat. 1. p. 409.) stem herbaceous, erect, glabrous; leaves petiolate, oblong-lanceolate or linear, bluntish, narrowed a long way at the base, subserrated, green on both surfaces, and glabrous; floral leaves lanceolate-linear, deciduous; racemes simple, elongated; whorls distant, generally 6-flowered; calyxes nearly sessile, tubular, striated, nearly glabrous, with the upper lip entire, and the teeth of the lower lip broad, acutish; corolla more than twice as long as the calyx, pubescent outside: tube ventricose, a half again as long as the calyx; style bifariously bearded. ¥.? *H.* Native of the southern states of North America, as of Carolina, Upper Georgia, Eastern Florida, Jacksonville, Alabama, Arkansas, &c. Sims, bot. mag. t. 1728. S. Mexicàna, Walt. fl. car. p. 65. but not of Lin. S. elàta, Poir. dict. 6. p. 625. S. angustifòlia, Michx. fl. bor. amer. 1. p. 13. but not of Cav. S. acuminàta, Vent. hort. cels. 50. t. 50. S. acuminàta, Pers. ench. 1. p. 24. S. longifòlia, Nutt. in amer. phil. trans. n. s. 5. p. 185. Herb tall, green or bluish. Leaves 2-3 inches long, stiffish, entire or few-toothed. Whorls subsecund. Calyx pubescent, green or bluish. Corolla blue, downy outside.

Azure-blue-flowered Sage. Fl. Aug. Clt. 1806. Pl. 4 to 6 feet.

102 S. Pitche'ri (Torrey, mss. ex Benth. lab. p. 251.) stem herbaceous, erect, tomentose, pubescent; leaves petiolate, oblong-lanceolate, or linear, acute, somewhat serrated, narrowed a long way at the base, clothed with soft tomentum on both surfaces; floral leaves lanceolate-linear, deciduous; racemes simple, elongated; whorls distant, 6-15-flowered; calyxes nearly sessile, tubular, striated, villous, with the upper lip entire, and the teeth of the lower lip broad, obtuse; corolla more than twice as long as the calyx, pubescent outside; tube ventricose, a half again as long as the calyx; style bearded. ¥. *H.* Native of North America, at the Red River, Pitcher. Habit of *S. azùrea*, but the whole plant is pubescent and canescent, the flowers more numerous, and the calyx larger, and the teeth blunter.

Pitcher's Sage. Pl. 3 to 4 feet.?

103 S. læ'vis (Benth. lab. p. 251.) stem herbaceous, erect, glabrous; leaves petiolate, oblong-lanceolate, narrowed a long way at the base, remotely serrated, glabrous; floral leaves membranous, broad roundish, ciliated, obtuse, deciduous; racemes simple, on long peduncles; whorls 6-10-flowered: lower ones remote: upper ones approximate; calyxes pedicellate, campanulate, ciliated, with the upper lip almost entire, and the teeth of the lower lip lanceolate, cuspidate; corolla thrice as long as the calyx: tube exserted, ventricose; upper lip glabrous. ¥.? G. Native of Mexico. Stem nearly terete, striated, with yellow and green lines. Corollas pale blue. Genitals inclosed. Allied to *S. aliginòsa*. Style furnished with a long beard at top.

Smooth Sage. Pl.?

104 S. villòsa (Benth. lab. p. 251.) stem herbaceous, erect, glabrous, or villous; leaves petiolate, oblong-lanceolate, acute, serrated, narrowed at the base, glabrous, or pubescent; floral leaves membranous, broad-ovate, acuminated, deciduous; racemes dense, on long peduncles, a little branched; whorls many-flowered; calyx campanulate, with the upper lip almost

entire, and the teeth of the lower one acuminated; corolla twice as long as the calyx: tube almost inclosed, ventricose: upper lip pubescent; style shortly bearded at top. ♃. S. Native of Brazil, in the province of Rio Grande; and in bogs in the missions of the Uruguay, Buenos Ayres, &c. Stems glandular. Leaves 2-4 inches long. Whorls 10-20-flowered. Corollas blue, or white.

Var. β, *rufescens* (Benth. lab. p. 252.) stem and lower surfaces of the leaves clothed with rufous pubescence. ♃. S. Native by way-sides from Rio Janeiro to the Mines.

Bog Sage. Pl. 2 to 4 feet.

105 S. lavandulóides (H. B. et Kunth, nov. gen. 2. p. 287.) stem herbaceous; branches erect, clothed with hoary pubescence; leaves on short petioles, oblong-lanceolate, acute, cuneated at the base, crenated, clothed with hoary pubescence, white beneath: floral leaves ovate, long, and subulately acuminated, deciduous; spikes simple; whorls approximate, equal, about 10-flowered; calyx tubularly-campanulate, clothed with hoary pubescence, having the upper lip entire, and the teeth of the lower lip ovate, and shortly mucronate; corolla half as long again as the calyx: tube inclosed, nearly equal; style inclosed, shortly bearded. ♃. S. Native of New Spain, Moçino et Sesse; near Pazcuaro, on the shores of lakes, Humb. et Bonpl. S. lavandulæfólia, Spreng. syst. 1. p. 58. but not of Vahl. S. Humboldtiàna, Roem. et Schultes, syst. mant. 1. p. 188. Stems many, branched at the base. Leaves 1½ to 2 inches long. Calyx usually tipped with blue. Corollas small, pale blue.

Lavender-like Sage. Pl. 2 to 3 feet. ?

106 S. stachyoides (H. B. et Kunth, l. c. p. 287. t. 138.) stem herbaceous, almost simple, pubescent, as well as the leaves; leaves lanceolate, acute, crenately serrated; spikes oblong, on long peduncles; whorls approximate; calyx clothed with hoary villi, tubular, striated, having the upper lip entire and acute, and the teeth of the lower lip acuminated. ♃. H. Native of Mexico, in frigid places on the mountains near Los Joares and Santa Rosa de La Sierra. Leaves on short petioles, 2-3 inches long. Bracteas oblong, acuminately subulate, pubescent. Corolla probably blue. This hardly differs from *S. elongàta*.

Stachys-like Sage. Pl. 3 feet.

107 S. elongàta (H. B. et Kunth, l. c. p. 287. t. 139.) stem herbaceous, erect, almost simple, clothed with hoary pubescence; leaves on short petioles, oblong, acutish, narrowed at the base, crenately serrated, almost glabrous, or pubescent beneath: floral leaves ovate-lanceolate, hairy, equalling the calyxes; spikes oblong, on long peduncles; whorls many-flowered, closely approximate; calyx tubular, striated, pilose, having the upper lip entire, and the teeth of the lower lip acute; corolla twice as long as the calyx: tube hardly exserted, ventricose; style bearded. ♃. S. Native of New Spain, Moçino et Sesse; on the western declivities of the mountains between Ario and Agnasarco. S. simplex, Spreng. syst. 1. p. 58. S. betónica, Roem. et Schultes, mant. 1. p. 188. Stems many, leafy at the base, and almost naked at top. Leaves 1½ inch long, rather scabrous above, and glabrous beneath, or pubescent on the nerves. Spikes villous. Calyx coloured a little. Corolla violaceus, pubescent outside.

Elongated-peduncled Sage. Pl. 2 feet.

108 S. corunga'ta (Vahl, enum. 1. p. 252.) stem shrubby; branches clothed with rufous tomentum; leaves petiolate, oblong-lanceolate, obtuse, crenated, rounded at the base, much wrinkled, almost glabrous above, and clothed with rufous wool beneath: floral leaves deciduous; whorls usually 6-flowered, distant; calyx campanulate, almost glabrous, coloured, having the upper lip entire, and the teeth of the lower lip obtuse; corolla a little longer than the calyx: tube almost inclosed. ♄. S. Native of Peru. Leaves 2 inches long, approximate. Calyxes bluish. Corolla blue, hairy.

Wrinkled-leaved Sage. Shrub.

* * Ovatifólia. *Leaves petiolate, ovate-roundish, ovate, or ovate-lanceolate, rounded, truncate, or cuneated at the base, rarely almost sessile, and cuneated at the base.*

109 S. assu'rgens (H. B. et Kunth, nov. gen. amer. 2. p. 293.) stem herbaceous, a little branched, ascending, pubescent; leaves ovate-elliptic, acute at both ends, crenately serrated, nearly glabrous; whorls many-flowered: lower ones distant; calyx clothed with silky hairs, campanulate, having the upper lip ovate, obtuse, and mucronate, and the lower lip bifid, with obtuse, mucronate segments; tube of corolla ventricose, equalling the calyx. ♃. S. Native of Mexico, near Pazcuaro. Leaves almost glabrous on both surfaces, or pubescent on the veins beneath, 2 inches long. Calyx very pilose. Corolla pale violet. Stamens inclosed. Said to be nearly allied to *S. prunelloides*.

Assurgent Sage. Pl. 1 foot.

110 S. helianthemifólia (Benth. lab. p. 254.) stem herbaceous, erect; branches twiggy, pubescent; leaves on short petioles, oblong, acute, somewhat serrated, narrowed at the base, wrinkled, glabrous, or pubescent on both surfaces: floral leaves very minute; racemes simple; whorls 6-20-flowered, secund, remote, or the upper ones are approximate; calyx tubular, with pubescent nerves, having the upper lip entire, and the teeth of the lower lip acute; corolla about twice as long as the calyx: tube equal, inclosed: upper lip pubescent outside; style bearded. ♃. S. Native of Mexico, near Thalpuxahua. Leaves ½ to 1½ inches long. Corollas blue.

Var. β; flowers white, smaller. ♃. S. Native of Mexico, near San Martin, Graham.

Sun-Rose-leaved Sage. Pl. 1 to 1½ foot.

111 S. sideritoides (Presl, mss. ex Benth. lab. p. 255.) shrubby; branches erect, clothed with white tomentum; leaves on short petioles, oval, bluntish, serrately crenated, cuneated at the base, wrinkled, green above, and clothed with white tomentum beneath; racemes short; whorls about 6-flowered; calyx tubular, villous, having the upper lip entire, and the teeth of the lower lip acute. ♄. S. Native of Peru, at Huanuco, Hænke. This species differs from *S. spicàta* in the upper lip of calyx being entire, not tridentate.

Sideritis-like Sage. Shrub.

112 S. chamædryoides (Cav. icon. 2. p. 77. t. 197.) stem suffruticose, procumbent; branches clothed with hoary tomentum; leaves petiolate, ovate-oblong, obtuse, crenulated, narrowed or rounded at the base, wrinkled, clothed with hoary tomentum beneath: floral leaves broad-ovate, acuminated, longer than the calyxes, deciduous; racemes simple; whorls about 6-flowered; calyx tubular, striated, tomentose, the upper lip entire, and the teeth of the lower lip shortly cuspidate; corolla twice as long as the calyx, glabrous outside; tube hardly exserted, ventricose: middle lobe of lower lip large, bifid; style bearded at apex. ♄. S. Native of Mexico. Sims, bot. mag. t. 808. S. chamæ'drys, Willd. hort. berol. 1. p. 29. t. 29. S. chamædrifólia, Andr. bot. rep. 6. p. 416. An humble branched, canescent shrub. Leaves wrinkled similar to those of *S. officinàlis*, but smaller. Corollas blue. Genitals equalling the corolla.

Germander-like Sage. Fl. June, Sept. Clt. 1795. Shrub 1½ foot.

113 S. thymoides (Benth. lab. p. 255.) stem suffruticose, much-branched, canescent; leaves small, nearly sessile, oval, obtuse, quite entire, canescent, with sub-revolute edges; floral

leaves ovate, acuminated, deciduous; racemes short, few-flowered; whorls distinct, loosely 2-4-flowered; calyx ovate-tubular, striated, clothed with glandular pubescence, having the upper lip entire, and the teeth of the lower one bluntish; corolla twice as long as the calyx: tube ventricose, equal in length to the calyx: middle lobe of lower lip emarginate; style shortly bearded at apex. ♄. S. Native of New Spain, Moçino et Sesse. A much branched, humble, canescent shrub, with the habit of *Thýmus*, or *Gardòquia*. Corollas bluish.

Thyme-like Sage. Shrub dwarf.

114 S. GLECHOMÆFÒLIA (H. B. et Kunth, nov. gen. amer. 2. p. 290. t. 141.) stems herbaceous, nearly simple, rather pilose at top; leaves ovate-triangular, obtuse, somewhat cordately truncate at the base, crenated, almost glabrous, rather pilose while young; whorls about 5-flowered, remote; calyx hairy, campanulate, striated, having the upper lip tricuspidate, and the segments of the lower lip cuspidate; tube of corolla ventricose, a little shorter than the calyx: middle lobe of lower lip emarginately 2-lobed. ♃. S. Native of New Spain, between the city of Guanaxuato and Santa Rosa. Stems many, procumbent. Leaves petiolate, 6-9 lines long. Floral leaves ovate, acuminated, ciliated, length of flowers deciduous. Corollas blue.

Ground-Ivy-leaved Sage. Pl. procumbent.

115 S. NA'NA (H. B. et Kunth, l. c. p. 289.) plant herbaceous, stemless; leaves ovate, obtuse, narrowed at the base, crenated, hispid above, and clothed with hairy tomentum beneath; spikes ovate, pedunculate; whorls usually 4-flowered; calyx clothed with glandular hairs, the upper lip tridentate, and the lower lip bifid: teeth all subulate. ♃. S. Native of New Spain, in dry places near the mine of Valentiana, in the valley of Guanaxuato. Leaves radical, nearly sessile, an inch long. Corolla blue, ex Bonpl. Spikes radical. Leaves more wrinkled than in *S. prunelloides*.

Dwarf Sage. Pl. small.

116 S. PRUNELLOIDES (H. B. et Kunth, l. c. p. 289.? Benth. lab. p. 256.) stems herbaceous, nearly simple, erect, pilosely pubescent; leaves petiolate, ovate-oblong, obtuse, crenated, narrowed at the base, green on both surfaces, and nearly glabrous; floral leaves ovate, acuminated, deciduous; racemes simple, on long pedunculs; whorls remote, sub-secund: upper whorls approximate, 6-10-flowered; calyx campanulate, striated, clothed with silky hairs, having the upper lip shortly tridentate, and the teeth of the lower lip lanceolate, acute; corolla about 2 times longer than the calyx, pubescent outside: tube ventricose, equalling the calyx: middle lobe of lower lip emarginate; style bearded. ♃. S. Native of Mexico, among rocks on the burning mount Jorullo. Stems many, ascending. Calyxes bluish. Corolla blue.

Prunella-like Sage. Pl. 1 to 1½ foot.

117 S. ARENA'RIA (St. Hil. mss. ex Benth. lab. p. 257.) shrubby; branches glabrous; leaves petiolate, oblong, or lanceolate, acuminated, serrately crenated, cuneated, or narrowed at the base, green, and glabrous on both surfaces: floral leaves ovate, acuminated, deciduous; racemes short, simple; whorls 4-6-flowered, secund; calyx tubularly campanulate, striated, glabrous, smooth, with the upper lip entire, and the teeth of the lower lip ovate, acuminated; corolla about twice as long as the calyx, nearly glabrous outside: tube ventricose, a little exserted. ♄. S. Native of Brazil, in sandy places at the limits of the provinces of Minas Geraes and Rio Janeiro. Shrub much branched. Leaves 2-3 inches long. Style bifariously bearded.

Sand Sage. Shrub.

118 S. SERRA'TA (Benth. lab. p. 257.) stem herbaceous, erect, almost simple, and nearly glabrous; leaves petiolate, ovate, oblong, or lanceolate, acute, coarsely and irregularly serrated, cuneate at the base, or rounded, glabrous: floral leaves lanceolate-linear, shorter than the calyxes, reflexed, or deciduous; racemes elongated, simple; whorls all remote, 6-10-flowered; calyxes pedicellate, tubular, striated, pubescent, the upper lip entire, and the teeth of the lower lip acutish; corolla about 3 times as long as the calyx, pubescent outside: tube rather exserted, ventricose: middle lobe of lower lip large, emarginate; style bearded. ♃. S. Native of the South of Brazil. Habit of *S. uliginòsa*, but the inflorescence and flowers are very different. Corollas blue, almost an inch long.

Serrated-leaved Sage. Pl.?

119 S. URUGUAYE'NSIS (St. Hil. mss. ex Benth. lab. p. 257.) stem herbaceous, erect, nearly glabrous; leaves petiolate, ovate-lanceolate, or oblong, acute, serrately crenated, roundly cuneated at the base, nearly glabrous, green on both surfaces, or pale beneath; floral leaves ovate, acuminated, deciduous; racemes simple, elongated; whorls remote, 6-10-flowered; calyxes nearly sessile, tubular, striated, clothed with hoary villi, the upper lip entire, and the teeth of the lower lip ovate, acute; corolla about twice as long as the calyx, pubescent outside: tube ventricose, exceeding the calyx; style bearded below. ♃. S. Native of Brazil, on the banks of the Uruguay, in fields, at San Jozè; in the province of Rio Grande do Sul. Nearly allied to *S. pállida*, but the stems are erect, the leaves broader and less acuminated, and the flowers more numerous. It is probably only a variety of *S. pállida*.

Uruguay Sage. Pl. erect.

120 S. URTICÆFÒLIA (Lin. spec. p. 34.) plant herbaceous, erect, beset with rather glandular villi; leaves on short petioles, ovate-rhomboid, acutish, crenated, roundly subcordate at the base, cuneated at the petioles, nearly glabrous; floral leaves broad-ovate, deciduous; whorls many-flowered, remote; calyxes on short pedicels, campanulate, clothed with clammy villi, the upper lip entire, and the teeth of the lower lip ovate, acutish; corolla about twice as long as the calyx, pubescent outside: middle lobe of lower lip emarginately bifid; style bearded. ♃. H. Native of Carolina, Virginia, and Georgia. Pursh, fl. amer. sept. 1. p. 20.—Mor. hist. 3. p. 395. sect. 11. t. 13. f. 31.? Corollas blue, small.

Nettle-leaved Sage. Fl. June, July. Clt. 1799. Pl. 3 feet.

121 S. GRA'CILIS (Benth. lab. p. 258.) stem herbaceous? erect, almost glabrous; leaves on long petioles, ovate, acuminated, rounded at the base, serrated, pilosely pubescent on both surfaces; floral leaves ovate, acuminated, coloured, deciduous: racemes simple; whorls loose, 6-10-flowered: lower ones remote: upper ones approximate; calyxes on short pedicels, campanulate, striated, coloured, glabrous, having the upper lip entire, and the teeth of the lower lip setaceously acuminated; corolla twice as long as the calyx: tube ventricose, equalling the calyx: middle lobe of lower lip broad, emarginate; style bearded. ♃. S. Native of New Spain, Moçino and Sesse. Stems or branches simple, purplish. Leaves flaccid, 1½ inch long. Flowers small, flesh-coloured, size of those of *S. cárnea*. Allied to *S. cárnea*; but differs from it in the calyx being glabrous, and in the leaves not being cordate at the base.

Slender Sage. Pl.

122 S. LEPTÓSTACHYS (Benth. lab. p. 258.) stem herbaceous, erect, branched, clothed with hoary pubescence; leaves on long petioles, ovate-roundish, acute, truncate at the base, green, and finely pubescent on both surfaces; floral leaves ovate, subulately acuminated, deciduous; racemes simple, elongated; whorls at length all remote, about 6-flowered; calyx ovate-tubular, striated, hoary, having the upper lip entire, and the teeth of the lower lip acuminated; corolla twice as long as the calyx: tube rather ventricose, equalling the calyx; middle lobe of lower lip broad, emarginate; style glabrous. ♃. S. Na-

tive of New Spain, Moçino et Sesse. Leaves similar to those of *S. tiliæfòlia*, 1½ to 2 inches long: upper ones more sessile. Corollas blue.

Slender-spiked Sage. Pl. ?

123 S. membrana'cea (Benth. lab. p. 259.) stem herbaceous? erect, glabrous; leaves on long petioles, ample, broad-ovate, acute, crenated, rounded at the base or truncate, glabrous; floral leaves deciduous; racemes elongated, simple; whorls all remote, loose, about 10-flowered; calyxes pedicellate, nutant, campanulate, glabrous, the upper lip entire, and the teeth of the lower lip setaceously acuminated; corolla twice as long as the calyx: tube ventricose, equalling the calyx: middle lobe of lower lip large, emarginate; style bearded. ♃. S. Native of Mexico, Moçino et Sesse. Herb glabrous. Leaves 3-6 inches long, membranous, often purplish beneath. Calyxes often purplish. Corollas blue, size of those of *S. angustifòlia*.

Var. β, acuminàta (Benth. l. c.) leaves long-acuminated at both ends; corollas shorter. ♃. ? S. Native of Guayaquil, Tafalla.

Var. γ, villòsula (Benth. lab. p. 720.) leaves smaller, and are, as well as the younger calyxes, villous. ♃. G. Native of Mexico, about Oaxaca.

Membranaceous-leaved Sage. Pl. 2 to 3 feet.

124 S. rhombifòlia (Ruiz, et Pav. fl. per. 1. p. 26. t. 36. f. b.) stem herbaceous, erect, branched, pubescent; leaves petiolate, broad-ovate or rhomboid, subcordate at the base, pubescent; floral leaves ovate-lanceolate, deciduous; racemes simple, few-flowered; whorls about 6-flowered, remote; calyx ovate, pubescent, the upper lip entire, and the teeth of the lower lip ovate, acute; corolla a half again as long as the calyx: tube inclosed, ventricose: middle lobe of lower lip emarginate; style glabrous. ☉. S. Native of Peru, in the province of Canana, on the sandy hills of Lomas de Atiquipa and Pongo; plentiful about Chancay and near Lima; and also of Mexico. *S. foliòsa*, Benth. in bot. reg. t. 1429. *S. pilòsa*, Vahl, enum. 1. p. 240. Leaves 1½ to 2 inches long, coarsely crenated. Genitals exserted. Corollas blue.

Var. β, glàbrior (Benth. l. c.) calyxes more slender and glabrous. ☉. H. Native near Lima.

Rhomb-leaved Sage. Fl. Year. Clt. 1827. Pl. 1½ foot.

125 S. herba'cea (Benth. lab. p. 720.) stem herbaceous, erect, a little branched, villous; leaves on long petioles, broad-ovate or rhomboid, rather cordate at the base, pubescent; floral leaves ovate, deciduous; racemes simple; whorls about 6-flowered, distinct; calyx ovate-tubular, hairy, green, the upper lip and the teeth of the lower one ovate-dilated; corolla half as long again as the calyx: tube inclosed. ☉. H. Native of Mexico, at Tehuantepec, in Oaxaca. Nearly allied to the preceding, from which it differs in the stem and calyxes being more hairy, &c.

Herbaceous Sage. Pl. 1½ foot. ?

126 S. Tafa'llæ (Benth. lab. p. 260.) stem herbaceous, erect, branched, villous; leaves petiolate, ovate, crenated, rounded at the base or cuneated, rather hispid; floral leaves ovate, acute, at length deciduous; racemes simple; whorls 6-10-flowered, remote; calyx ovate, nerved, villous, the upper lip entire, and the teeth of the lower lip ovate, acute; corolla a half as long again as the calyx: tube inclosed, ventricose: middle lobe of lower lip emarginate; style glabrous. ☉. H. Native of Peru, at Tarma, Tafalla. Leaves hardly an inch long. Corollas small, blue.

Tafalla's Sage. Pl. 1½ foot. ?

127 S. viola'cea (Ruiz, et Pav. fl. per. 1. p. 26. t. 43.) stem herbaceous, hairy; leaves ovate, acute, crenated, wrinkled; spikes short, terminal; whorls 6-flowered; upper lip of corolla dependent. ☉. H. Native of Peru, in the province of Tarma. Flowers on short pedicels, propped by ovate, concave, opposite bracteas. Corolla bluish-violet, about 3 times as long as the calyx.

Violaceous-flowered Sage. Pl. 1 to 2 feet.

128 S. glandulife'ra (Cav. ann. hist. nat. 2. p. 8.) stem branched, beset with glandulíferous pili, as well as the branches, bracteas, and calyxes: leaves petiolate, serrated, villous; whorls 6-flowered; corolla hardly twice as long as the calyx. ☉. ? H. Native on Mount Chimboraco, Cav. Floral leaves short, acute. Calycine segments bluntish. Corolla purplish-violet. Stamens exserted.

Gland-bearing Sage. Pl. 1 to 3 feet.

129 S. Cruikshanksii (Benth. lab. p. 261.) stem herbaceous? erect, glabrous or pubescent; leaves on short petioles, ovate, obtuse, crenated, rounded at the base or subcordate, glabrous or pubescent beneath; floral leaves deciduous: racemes simple; whorls about 6-flowered, remote, somewhat secund; calyx tubularly campanulate, striated, pubescent, the upper lip entire, and the teeth of the lower lip ovate, acute; corolla thrice as long as the calyx: tube ventricose, inclosed: middle lobe of lower lip large, emarginate; style glabrous. ♃. ?. S. Native of Peru, in the valley of Canta, near Obrajillo, Cruikshanks; and at Huamantanga, Mathews. *S. rhombifòlia, β*, Hook. bot. misc. Stem naked at the base, and leafy in the middle. Leaves 1 to 1½ inch long. Calyxes sessile. Corollas blue, nearly glabrous.

Cruikshanks's Sage. Pl. 1 to 1½ foot.

130 S. gale'ta (Ruiz, et Pav. fl. per. 1. p. 27. t. 42. f. a.) stem shrubby, much branched, naked at bottom; leaves nearly sessile, oval or ovate, serrated, wrinkled, pubescent; spikes terminal, by threes; whorls 6-10-flowered, propped by ovate deciduous bracteas; calyx ventricose at top, the upper lip concave; corolla twice as long as the calyx. ♄. S. Native of Peru, around Muna, in arid places. Flowers on short pedicels. Corollas pale violet. Genitals inclosed.

Galeate-calyxed Sage. Shrub 3 feet.

131 S. mi'tis (Ruiz, et Pav. fl. per. 1. p. 27.) stem shrubby, branched; branches pubescent; leaves petiolate, ovate, acute, serrated, tomentose, hoary beneath; spikes terminal: middle one longer, and leafless; whorls many-flowered, secund; calyx pubescent, subcampanulate: the upper lip bifid and acute. ♄. S. Native of Peru, in the valley of Canta, at Obrajillo. Flowers pedicellate. Whorls 6-12-flowered. Floral leaves oval, acuminated, pubescent, deciduous. Corolla whitish blue, a little longer than the calyx, pubescent outside. Stamens length of corolla. Stigma exserted.

Mild Sage. Shrub 2 feet.

132 S. incurva'ta (Ruiz, et Pav. fl. per. 1. p. 24. t. 42. f. b.) stem herbaceous, erect, clothed with fine hoary tomentum; leaves petiolate, ovate, acute, serrated, rounded at the base or cordate, clothed with soft white tomentum beneath; floral leaves deciduous; racemes simple; whorls 4-6-flowered, remote; calyx tubularly campanulate, pubescent, the upper lip entire, and the teeth of the lower lip ovate, acuminated; corolla twice as long as the calyx: tube inclosed, ventricose; style glabrous. ♃. ? S. Native of Peru, around Muna. Leaves 2 inches long, approximate at the middle of the stem. Lips of fructiferous calyx incurved. Corolla purplish blue.

Incurved-calyxed Sage. Pl. 2 feet.

133 S. Hispa'nica (Lin. spec. 37.) stem herbaceous, erect, pubescent; leaves petiolate, ovate, acute, crenately serrated, narrowed or cuneated at the base, glabrous; floral leaves ovate, acuminated, ciliated, almost permanent; racemes dense, branched; whorls many-flowered, approximate; calyx inflately tubu-

lar, clothed with soft pubescence, the upper lip entire, and the teeth of the lower lip acute; corolla hardly exceeding the calyx: tube ventricose; style bearded. ☉. H. Native of tropical America; Quito, near Chillo; Jamaica, among the mountains; Mexico; State of New York; and now apparently naturalized in the south of Europe, as in Spain, Portugal, Piedmont, Liguria, &c. Ker. bot. reg. t. 359. S. tetragòna, Mœnch, meth. p. 373. S. prismática, Cav. descr. 14.—Arduin. spec. 1. p. 10. t. 2.—Lam. ill. t. 20. f. 2. Leaves 2-3 inches long. Whorls usually 10-flowered. Corolla glabrous outside, pale blue. Genitals equalling the corolla.

Spanish Sage. Fl. June, Aug. Clt. 1739. Pl. 1 to 2 feet.

134 S. angula'ta (Benth. lab. p. 721.) stem herbaceous, erect, hardly pubescent; leaves petiolate, broad, ovate, acuminated, serrated, roundly cuneated at the base, clothed with fine pubescence, scarcely canescent beneath; floral leaves ovate, acuminated, deciduous; racemes many-flowered, elongated, branched; whorls loose, secund; calyx tubularly campanulate, scarcely pubescent, the upper lip entire, and the teeth of the lower lip acute; corolla exceeding the calyx a little, upper lip pubescent; style bearded. ☉.? H. Native of Caracas, Vargas. Habit of *S. polystàchya*. Calyx often coloured, angular. Corolla small, blue.?

Angular-calyxed Sage. Pl. 1 to 2 feet.

135 S. densiflòra (Benth. lab. p. 721.) stem herbaceous, erect, hardly pubescent; leaves petiolate, ovate, obtuse, crenated, roundly truncate at the base, or subcordate, much wrinkled, pubescent on both surfaces, green, or hardly canescent beneath; floral leaves deciduous; racemes almost simple, spike-formed; whorls many-flowered, approximate; calyx tubular, nearly glabrous, having the upper lip entire, and the teeth of the lower lip ovate, obtuse; corolla half as long again as the calyx; genitals exserted; style glabrous. ☉. H. Native of the Island of Dominica. Allied to *S. polystàchya* and *S. Keèrlii*, but differs from both in the form of the calyx, small corolla, and exserted genitals.

Dense-flowered Sage. Pl. 1 to 2 feet.

136 S. polysta'chya (Ortega, dec. p. 55.) stem herbaceous, erect, clothed with hoary down; leaves petiolate, ovate, acuminated, serrated, rounded at the base or cordate, rather wrinkled above, and pubescent, nerved, and clothed with hoary pubescence beneath; floral leaves ovate, acuminated, deciduous; racemes dense, branched; whorls many-flowered, approximate, almost secund; calyx tubularly campanulate, pubescent or tomentosely villous, having the upper lip entire, and the teeth of the lower lip acute; corolla twice as long as the calyx: tube inclosed, ventricose; style bearded. ♃.? G. Native of Mexico, in many places; as among the mountains of Guanaxuato; shores of Lake Pazcuaro; near Tlalpuxahua, &c. Cav. icon. 1. p. 17. t. 27. bad. H. B. et Kunth, nov. gen. amer. 2. p. 296. S. cæ'sia, H. B. et Kunth. l. c. p. 295. S. lineatifòlia, Lag. gen. et spec. nov. 2. Stem nearly glabrous, but usually pubescent. Leaves 2-3 inches long. Whorls 15-20-flowered. Corolla blue. This species occurs in gardens, under the names of *S. spicàta*, *S. Breyniàna*, *S. eremitica*, and *S. tetragòna*.

Many-spiked Sage. Fl. Oct. Dec. Clt. 1822. Pl. 1 to 2 feet.

137 S. Kee'rlii (Benth. lab. p. 263.) stem shrubby? erect, pubescent; leaves petiolate, ovate, obtuse, crenated, roundly truncate or cordate at the base, much wrinkled, clothed with hoary tomentum on both surfaces; floral leaves ovate, deciduous; racemes dense, paniculately branched; whorls many-flowered, approximate; calyx tubularly campanulate, pilosely hairy, having the upper lip entire, and the teeth of the lower lip acute; corolla twice as long as the calyx: tube inclosed, ventricose: upper lip pubescent; style glabrous or bearded above. ♄.? S. Native of Mexico, near Tlalpuxahua, Keerl. Nearly allied to *S. polystàchya*; but the leaves are smaller, obtuse, and much wrinkled, and more cordate at the base; the racemes shorter and more dense; the calyxes hairy, not clothed with hoary tomentum.

Keerl's Sage. Shrub 1 to 3 feet.?

* * * *Leaves petiolate, more or less cordate at the base.*

138 S. semiatra'ta (Zucc. acad. wiss. 1. p. 298.) stem shrubby; branches tomentosely pubescent; leaves petiolate, ovate, obtuse, crenated, cordate at the base, much wrinkled, clothed with white tomentum beneath; floral leaves ovate, small, deciduous; racemes simple; whorls 4-8-flowered, distant; calyxes pedicellate, tubular, striated, clothed with glandular villi, the upper lip entire, and the teeth of the lower lip obtuse; corolla twice as long as the calyx, pubescent outside: tube ventricose, a little exserted; style bearded beneath. ♄. S. Native of Mexico, Karwinski. Said to be nearly allied to *S. scorodònia*; but differs in the calyxes being twice the size; in the pedicels being elongated; and in the lower lip of the corolla being shorter and of a more intense colour.

Half-dark-flowered Sage. Shrub.

139 S. fruticulòsa (Benth. lab. p. 721.) stem shrubby, humble, much branched; branches clothed with white tomentum; leaves petiolate, ovate, obtuse, crenated, roundly truncate or subcordate at the base, much wrinkled, hardly pubescent above, and clothed with white tomentum beneath; floral leaves ovate, acuminated, deciduous; racemes simple; whorls about 6-flowered, distant; calyxes nearly sessile, tubularly campanulate, clothed with white tomentum, having the upper lip entire, and the teeth of the lower lip obtuse and truncate; corolla about 3 times as long as the calyx: tube a little exserted; style shortly bearded. ♄. S. Native of Mexico, about Oaxaca, Andrieux. Allied to *S. scorodònia* and *S. brevifòra*, but differs from both in habit. Leaves ½ inch long.

Fruticulose Sage. Shrub ½ foot.

140 S. scorodònia (Poir. suppl. 5. p. 46.) stem shrubby; branches clothed with hoary tomentum; leaves petiolate, ovate or oblong, obtuse, crenulated, roundly cordate at the base, much wrinkled, pubescent above, pale, or clothed with white tomentum beneath; floral leaves ovate, acuminated, deciduous; racemes simple; whorls 6-20-flowered, distant; calyxes nearly sessile, tubularly campanulate, striated, clothed with glandular villi, having the upper lip entire, and the teeth of the lower one bluntish; corolla twice as long as the calyx, pubescent outside: tube a little exserted, ventricose; style glabrous. ♄. S. Native of Mexico. S. melissodòra, Lag. nov. gen. et spec. 3. S. hirta, Schranck, in syll. pl. soc. ratisb. 2. p. 60.? Leaves 1-2 inches long. Corollas blue, white at the base; middle lobe of lower lip large, emarginate.

Garlick Sage. Shrub.

141 S. amarissima (Ortega, dec. p. 4.) stem herbaceous, erect, branched, hispidly pilose; leaves petiolate, ovate-cordate, crenated, wrinkled, almost glabrous, canescent beneath; floral leaves ovate, acuminated, deciduous; racemes simple, dense-flowered; whorls distinct, rather remote, generally 10-flowered; calyx tubularly campanulate, striated, villous, having the upper lip entire, and the teeth of the lower lip acutish; corolla about 3 times as long as the calyx: tube ventricose, equalling the calyx: upper lip almost glabrous; style bearded above. ♃. G. Native of Mexico, in several places. Ker. bot. reg. t. 347. S. nepetoïdes, H. B. et Kunth, nov. gen. 2. p. 299. t. 150. S amàra, Jacq. hort. schœnbr. 3. t. 255. S.

circinàta. Cav. icon. 4. p. 9. t. 318. Stem beset with long hairs, often glandularly hispid. Leaves 1½ inch long. Corollas blue: middle lobe of lower lip broad, emarginate. Upper lobe of style twice as long as the lower one.

Very-bitter Sage. Fl. July, Aug. Clt. 1803. Pl. 3 to 6 feet.

142 S. cuspida'ta (Ruiz, et Pav. fl. per. 1. p. 23. t. 40. f. b.) suffruticose; branches pubescent; leaves petiolate, ovate, bluntish, crenated, cordate at the base, wrinkled, pale and pubescent beneath; floral leaves ovate, acuminated, deciduous; racemes elongated, almost simple; whorls usually 6-flowered, distant; calyx tubularly campanulate, villous, having the upper lip tricuspidate, and the teeth of the lower lip ovate, cuspidate; corolla about 3 times as long as the calyx; tube exserted a little, ventricose; style glabrous, or shortly pubescent. ♄. S. Native of Peru, on hills about Purrochuca and Cheuchin. Leaves an inch long, somewhat doubly crenated. Flowers almost like those of *S. scorodònia* and *S. amarissima*. Corollas blue.

Cuspidate-calyxed Sage. Shrub 4 to 6 feet.

143 S. cardiophy'lla (Benth. lab. p. 721.) herbaceous or suffruticose; branches pubescent; leaves petiolate, ovate, crenated, deeply cordate at the base, wrinkled, clothed with soft villi on both surfaces: floral ones deciduous; racemes elongated, simple; whorls about 6-flowered, distant; calyx tubularly campanulate, finely pubescent, having the upper lip entire, and the teeth of the lower lip ovate, acutish; corolla twice as long as the calyx; tube almost inclosed, ventricose; style glabrous. ♄.? G. Native of South America, without the tropic, in Banda Oriental. Habit of *S. cuspidàta*, from which it differs in the soft villous leaves, and larger, somewhat coloured calyxes, mutic teeth, and entire upper lip.

Heart-leaved Sage. Pl. 2 feet.?

144 S. Gillie'sii (Benth. lab. p. 264.) stem shrubby; branches clothed with hoary tomentum; leaves petiolate, ovate or ovate-lanceolate, bluntish, crenately toothed, truncately cordate at the base, wrinkled, nearly glabrous above, and clothed with hoary tomentum beneath; floral leaves ovate, acute, deciduous; racemes simple; whorls remote, 2-6-flowered; flowers nearly sessile; calyx campanulate, clothed with hoary pubescence, having the upper lip entire, and the teeth of the lower lip ovate, obtuse, mucronate, recurved; corolla about twice as long as the calyx, downy outside; style pubescent. ♄. G. Native of Chili; plentiful on the Andes near Mendoza, at Uspaleta; and on Mount Cerro de las Achiras. Branches tomentose, and furnished with red scattered glands. Leaves 1 to 1½ inch long. Calyxes usually coloured. Corollas blue, like those of *S. urticæfòlia*, but smaller.

Gillies's Sage. Shrub humble.

145 S. racemòsa (Ruiz, et Pav. fl. per. 1. p. 25.) plant shrubby, hairy, erect, branched; leaves cordate, acute, sublanceolate, serrated; racemes terminal, numerous, compound; floral leaves ovate, acuminated, concave, deciduous. ♄. S. Native of Peru, among rubbish, and in waste places of Huanuco. Leaves on long petioles, usually spotted with livid purple. Flowers verticillate, on short pedicels. Corolla pale blue.

Racemose-flowered Sage. Shrub.

146 S. ca'rnea (H. B. et Kunth, nov. gen. 2. p. 300. t. 151.) stem shrubby, erect, branched, glabrous; leaves roundish-ovate, cordate, crenately serrated, hairy; floral leaves oblong, acuminated, shorter than the calyxes, deciduous; spikes terminal; whorls many-flowered: lower ones remote; calyx tubular, striated, hairy: upper lip ovate, acuminated, and the teeth of the lower lip acuminated; tube of corolla exceeding the calyx a little, rather ventricose: upper lip pubescent: middle segment of the lower lip emarginately 2-lobed. ♄. S. Native of New Granada, on the Andes of Quindiu. Leaves on long petioles, 2 to 2½ inches long. Corolla pale red. Genitals a little exserted. Stigma glabrous.

Flesh-coloured Sage. Shrub.

147 S. procu'rrens (Benth. lab. p. 266.) stems creeping, and rooting at the base; floriferous branches ascending, glabrous, or villous; leaves petiolate, roundish, or broad-ovate, cordate at the base, crenated, glabrous, or villous: floral leaves broad-ovate, acutish, deciduous; racemes simple, on long peduncles; whorls 6-10-flowered, remote; flowers on short pedicels; calyx campanulate, hispid, having the upper lip entire, or shortly tridentate, and the teeth of the lower lip acute; corolla glabrous, about twice as long as the calyx: tube ventricose, equalling the calyx; style almost glabrous. ♃. G. Native of South America, in humid pastures and woods; in the province of Rio Grande do Sul, and the more southern parts of Brazil, St. Hil. and Sello; in moist woods at Porana, Tweedie; in ditches near Buenos Ayres, Gillies. Stem glabrous, or hispid from hairs, which are often glandular, clammy, pubescent while young. Leaves similar to those of Ground Ivy. Corolla blue.

Running Sage. Pl. creeping.

148 S. procu'mbens (Benth. lab. p. 267.) stems creeping at the base?; branches ascending, elongated, villous; leaves petiolate, ovate, obtuse, crenated, cordate at the base, villous on both surfaces; floral leaves deciduous; racemes simple; whorls about 6-flowered, remote; calyxes equal in length to the pedicels, tubular, striated, clothed with rufous villi, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla twice as long as the calyx: tube ventricose, equalling the calyx: lobes of lower lip roundish, emarginate; style glabrous. ♃. G. Native of the south of Brazil, Sello. Allied to *S. procàrrens*; but differs in the stem being firmer; in the leaves being more villous, on short petioles, and particularly in the flowers being larger; in the calyxes being on long pedicels, and tubular, not campanulate, clothed with rufous villi, not hispid.

Allied Sage. Pl. creeping.?

* * * * Sessilifòliæ. *Leaves sessile, or nearly so, rounded or truncate at the base. Species all natives of Brazil.*

149 S. ovalifòlia (St. Hil. mss. ex Benth. lab. p. 267.) stems creeping at the base; branches ascending, glabrous or villous; leaves on short petioles, oval, obtuse, crenated, rounded at the base, glabrous, rather coriaceous; floral leaves ovate-lanceolate, shorter than the calyxes, deciduous; racemes simple; whorls 6-10-flowered, remote; calyx tubular, striated, pubescent, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla twice as long as the calyx: tube ventricose, equalling the calyx: middle lobe of lower lip very broad, emarginate; style shortly bearded. ♃.? G. Native of Brazil, common in pastures in the missions of the Uruguay; and to the south of that, as well as in the province of Minas Geraes. *S. rèpens*, Benth. in herb. berol. Stems rather woody. Branches naked under the racemes. Leaves an inch and more long. Racemes on long peduncles.

Var. β, villòsa (Benth. lab. p. 267.) leaves deeply serrate-crenated, broadest at the base. ♃. G. Native near Salto Grande, on the banks of the Uruguay, in the province of Rio Grande do Sul.

Oval-leaved Sage. Pl. 1 to 1½ foot.

150 S. lachnostachys (Benth. lab. p. 267.) stem rooting at the base; branches ascending, simple, villous or spreadingly pilose; leaves nearly sessile, oval-oblong, obtuse, regularly crenulated, rounded or subcordate at the base, wrinkled, clothed with rufous tomentum above; floral leaves cordate-ovate, bluntish, rather shorter than the calyxes, almost permanent; racemes dense; whorls remotish, usually 10 flowered; calyx campanu-

late, pilosely hispid, having the upper lip entire, and the teeth of the lower lip acutish; corolla about twice as long as the calyx: tube about equal in length to the calyx, ventricose; style bifariously bearded. ♃. G. Native of Brazil, in the province of St. Paul, in fields near Registra de Curitiba, and the pastures near Fazenda da Fortaleza, St. Hil.; and in the south of Brazil, Sello. Stems clothed with rufous tomentum, or villous. Leaves 1 inch long, pubescent above. Corolla blue, a little smaller than those of *S. ovalifolia*.

Woolly-spiked Sage. Pl. 1 to 2 feet.

151 S. vi'scida (St. Hil. mss. ex Benth. lab. p. 268.) suffruticose, clammy; branches clothed with glandular hairs; leaves nearly sessile, or the lower ones are ovate-lanceolate, acutish, serrately crenated or cordate at the base, green on both surfaces, soft, hispid; racemes elongated, almost simple; whorls generally 6-flowered, subcecnd; calyx tubularly campanulate, villous, clammy, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla twice as long as the calyx: tube a little exserted, ventricose; style bearded above. ♄. G. Native of Brazil, in the woods called Carrascos, in Serra Negro, at the limits of the provinces of Minas Geraes and Rio Janeiro, St. Hil. Shrub decumbent at the base. Racemes numerous, ½ foot. Corollas blue.

Viscid Sage. Shrub 3 to 4 feet.

152 S. corda'ta (Benth. lab. p. 268.) stem herbaceous, erect, tall, villous; leaves on short petioles, ovate-oblong, acute, crenated, cordate, wrinkled, pubescent above, clothed with soft white tomentum beneath; floral leaves ovate, acute? deciduous; racemes simple; whorls distant, many-flowered; calyx tubularly campanulate, striated, pubescent, having the upper lip entire, and the teeth of the lower lip acute; corolla thrice as long as the calyx: tube a little exserted, ventricose; upper lip pubescent: middle lobe of lower lip very broad, emarginate; style glabrous. ♃. G. Native of the south of Brazil, Sello. Stems almost simple. Leaves 3-4 inches long. Whorls often 20-flowered. Corolla blue, above an inch long. Upper lobe of style very long, subulate.

Cordate-leaved Sage. Pl. 3 to 4 feet.

153 S. nervo'sa (Benth. lab. p. 268.) stem herbaceous? erect, almost simple, clothed with rufous tomentum, and long spreading hairs; leaves sessile, ovate-lanceolate, acute, crenately serrated, rounded or subcordate at the base, coriaceous, wrinkled above, and glabrous, nerved, and clothed with fine rufous tomentum beneath; floral leaves ovate, acuminated, deciduous; racemes elongated; whorls numerous, 6-10-flowered; calyx ovate-tubular, striated, pubescent, having the upper lip entire, and the teeth of the lower lip broad-ovate, obtuse, or shortly acuminated; corolla twice as long as the calyx, tomentose outside: tube exserted, widened at top; style bearded. ♃.? G. Native of the south of Brazil, Sello. Stems naked at the base. Leaves 1-2 inches long. Whorls distant. Corolla bluish. Stamens inclosed. Upper lobe of style longest.

Nerved-leaved Sage. Pl. 2 to 3 feet.

154 S. si'cula (Benth. lab. p. 269.) stems herbaceous, erect, villous or nearly glabrous; leaves sessile, lanceolate or linear, cordate at the base, with crenulated margins, glabrous, rather coriaceous, stiff; floral leaves minute, linear, deciduous; racemes simple; whorls 6-10-flowered, remote; calyx tubular, striated, villous, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla about twice as long as the calyx: tube ventricose, equalling the calyx; style shortly bearded beneath. ♃.? G. Native of Brazil, in the provinces of Minas Geraes, Rio Grande do Sul, and the south of Brazil, St. Hil. and Sello. Stems branched at the base. Branches almost simple. Leaves 1-2 inches long. Flowers almost sessile. Corolla blue, hardly half an inch long with the calyx.

Stiff Sage. Pl. 1 to 2 feet.

155 S. rosmarinoi'des (St. Hil. mss. ex Benth. lab. p. 269.) stem suffruticose; branches erect, twiggy, tomentosely villous; leaves sessile, linear or linear-lanceolate, acuminated, crenated, subcordate at the base, stiff, almost glabrous above, but clothed with hoary tomentum beneath; floral leaves ovate, acuminated, deciduous; racemes elongated, simple; whorls about 6-flowered, distant; calyx tubular, clothed with clammy villi, having the upper lip entire, and the teeth of the lower lip acute; corolla about thrice as long as the calyx: tube a little exserted; style bifariously pubescent. ♄. G. Native of Brazil, in fields in the Missions of the Uruguay, near El Salto Grande. Plant scentless. Racemes nearly a foot long. Corollas blue, marked with white lines.

Rosmary-like Sage. Shrub 2 feet.

§ 3. Axillariflo'ræ. *Floral leaves conforming to the cauline ones. Flowers axillary. Tube of corolla equal in height to the calyx, or hardly half as long again.—Humble undershrubs, with bluish flowers.*

156 S. axilla'ris (Moc. et Sesse, mss. ex Benth. lab. p. 270.) leaves oblong-linear, acute, quite entire, narrowed at the base, scabrous from hairs; whorls axillary, 2-6-flowered; calyxes almost sessile, tubular, striated, pubescent, having the upper lip tridentate, and the lower lip bifid: teeth all acute, and subulately acuminated. ♄. S. Native of New Spain, Moçino et Sesse. Habit of *Thymus* or *Satureia*. Leaves 3-4 lines long. Corollas not seen.

Axillary-flowered Sage. Shrub humble.

157 S. cunrifo'lia (Benth. lab. p. 270.) branches decumbent, villous; leaves sessile, ovate-cuneated, a little toothed, narrowed at the base, green on both surfaces; whorls axillary, few-flowered; calyx tubular, villous, having the upper lip shortly tricuspidate, and the lower lip bifid: lobes acuminated; corolla more than twice as long as the calyx: tube exserted, equal; style glabrous. ♄. G. Native of Mexico, near Chapultepec? Karwinski. Stems many, rising from a thick woody base. Leaves 3-4 lines long, furnished with one or two teeth on both sides: the upper ones quite entire. Flowers size of those of *Calamintha Nepeta*.

Wedge-leaved Sage. Shrub ½ foot.

158 S. calamintheifo'lia (Vahl, enum. 1. p. 233.) stem shrubby; branches canescent; leaves petiolate, broad-ovate, obtuse, crenated, cordate at the base, clothed with fine tomentum on both surfaces; whorls axillary, remote, generally 6-flowered; calyxes pedicellate, tubularly campanulate, nearly glabrous, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla about twice as long as the calyx, pubescent outside; style bearded above. ♄. S. Native of St. Domingo. Branches slender, purplish. Leaves hardly a nail in length. Corollas blue. Genitals a little exserted.

Calamint-leaved Sage. Shrub humble.

159 S. ballotæfo'lia (Benth. lab. 270.) leaves petiolate, ovate, roundish, obtuse, truncate or cordate at the base, nearly glabrous above, and clothed with white tomentum beneath; upper floral leaves bractea-formed; whorls few, axillary, 2-6-flowered, distant, or the 2 or 3 upper ones approximating into a short raceme; calyx pedicellate, tubularly campanulate, attenuated at the base, having the upper lip entire, and the teeth of the lower lip ovate, dilated after florescence; corolla about twice as long as the calyx: tube inclosed; style bifariously bearded. ♄. G. Native of Mexico, near Toliman, Karwinski. Shrub much branched. Leaves hardly ½ an inch long, when young clothed with mealy tomentum beneath, as well as the calyxes.

Ballota-flowered Sage. Shrub humble.

§ 4. Membranace'æ. *Floral leaves bractea-formed, dilately spreading, membranous. Tube of corolla inclosed, or hardly longer than the calyx.—Herbs or subshrubs, with bluish flowers.*

160 S. bupleuroi'des (Presl, mss. ex Benth. lab. p. 271.) herbaceous, nearly glabrous; leaves petiolate, ovate, acute, crenately-serrated, narrowed or cuneated at the base, green on both surfaces; axillary branches short; peduncles long, fascicled, with a solitary, terminal, many-flowered whorl on each peduncle; floral leaves exceeding the calyxes, permanent, broad, rounded, subcordate at the base, shortly acuminated at the apex, membranaceous, veiny, glabrous; calyxes sessile, membranous, having the upper lip entire, and the teeth of the lower lip acutish; corolla hardly longer than the calyx. ♃. G. Native of Mexico, Hænke. Flowers small. Very distinct from all other species in the inflorescence.

Bupleurum-like Sage. Pl.?

161 S. Moci'ni (Benth. lab. p. 271.) stem herbaceous, procumbent; branches ascending, clothed with short pubescence; leaves petiolate, ovate, acuminated, serrately-crenated, cuneated or truncate at the base, nearly glabrous; floral leaves large, orbicular, acuminated, membranous, veiny, spreading; racemes simple; whorls remote, 6-10-flowered; calyx almost sessile, ovate, tubular, canescent, having the upper lip entire, and the teeth of the lower lip acute, ciliated; corolla twice as long as the calyx: tube inclosed, ventricose: middle lobe of lower lip emarginate; style glabrous. ♃.? G. Native of New Spain, Moçino et Sesse. Leaves green on both surfaces, glabrous or downy; floral ones almost an inch broad. Corollas blue.

Moçino's Sage. Pl. procumbent.

§ 5. Bracteate'æ. *Floral leaves bractea-formed, permanent, green, broad-roundish, clasping the flowers. Tube of corolla inclosed, or hardly half as long again as the calyx.—Herbs and undershrubs, with bluish flowers.*

162 S. hirsu'ta (Jacq. schœnbr. 3. p. 1. t. 252.) stem herbaceous, ascending, branched, pubescent; leaves petiolate, oblong, acute, remotely serrated, narrowed at the base, villous; floral leaves sessile, broad-roundish, acuminated, ciliated, permanent, exceeding the whorls; racemes simple: whorls about 6-flowered, at length distant; calyxes sessile, tubularly campanulate, somewhat inflated, striated, pubescent or hispid, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla exceeding the calyx a little: tube inclosed, ventricose; style bearded beneath. ☉. G. Native of Mexico. S. nepetifolia, Poir. suppl. 5. p. 48. S. cryptánthos, Schultes, obs. p. 12. S. sideritidis, Vahl, enum. 1. p. 250. S. bracteàta, Poir. dict. 6. p. 662.? S. ciliàta, Poir. dict. 6. p. 588. S. phlomoides, Cav. icon. 4. p. 10. t. 320. but not of Asso. Corollas blue.

Hairy Sage. Fl. May, July. Clt. 1801. Pl. 1 to 2 feet.

163 S. clinopodioi'des (H. B. et Kunth, nov. gen. amer. 2. p. 294. t. 145.) stem herbaceous, erect, clothed with white wool above; leaves ovate, bluntish, rounded at the base, crenated, pubescent beneath; floral leaves roundish-ovate, obtuse, pilose, permanent, exceeding the calyxes; whorls many-flowered, distant; calyx clothed with white hairs, tubularly campanulate, with an ovate-acuminated upper lip, and a reflexed lower bifid lip, with acuminated segments. ♃. S. Native of New Spain, between Pazcuaro and Aguasarco. Leaves petiolate, 2 inches long. Corollas pale blue: upper lip pubescent: tube a little longer than the calyx. Stamens equalling the upper lip of the corolla.

Clinopodium-like Sage. Pl.?

164 S. speciòsa (Presl, mss. ex Benth. l. c. p. 272.) shrubby; branches clothed with white villi; leaves petiolate, ovate, acute, serrated, rounded at the base or truncate, wrinkled, pubescent above, and clothed with white villi or tomentum beneath; floral leaves bractea-formed, broad-ovate, acuminated, longer than the calyxes, permanent, herbaceous, a little coloured; raceme dense, imbricate; whorls approximate, 6-10-flowered; calyx large, tubular, having the upper lip erect, and the teeth of the lower lip ovate, acute; corolla about twice as long as the calyx: tube equalling the calyx; genitals much exserted. ♄. S. Native of Peru, about the town of Huanuco, and on the mountains in the vicinity, Hænke. Corolla dark purple.?

Showy Sage. Shrub.

165 S. Parquere'nsis (Moc. et Sesse, mss. ex Benth. lab. p. 273.) stem herbaceous, erect, clothed with white wool above; leaves on long petioles, ample, ovate, acute, pubescent on both surfaces, rounded or cuneated at the base, running into the winged petioles; floral leaves sessile, rounded, obtuse, permanent, clasping the flowers; racemes simple; whorls densely globose, many-flowered, approximate, distinct; calyx tubularly campanulate, clothed with white hairs, having the upper lip ovate, acuminated, entire, and the segments of the lower lip acuminated, reflexed; corolla about thrice as long as the calyx: tube exserted, widened at top: middle lobe of lower lip large, emarginate; style pubescent. ♃.? S. Native of New Spain. Corollas blue, an inch long.

Parquero Sage. Pl.?

166 S. Mathe'wsii (Benth. lab. p. 722.) herbaceous?; branches very villous at top; leaves ample, petiolate, ovate, deeply cordate at the base, flaccid, green on both surfaces, glabrous or hardly hairy on the nerves; floral leaves bractea-formed, broad-ovate, membranous, coloured, almost permanent, equalling the calyxes; racemes elongated, loose; whorls 6-10-flowered; calyxes pedicellate, large, tubular, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla hardly twice as long as the calyx: tube equalling the calyx; genitals much exserted. ♃.? S. Native of Peru, at Purrochuca and Obrajillo, Mathews. Leaves 6-8 inches long. Calyxes hispid at the base, glabrous at apex, and coloured. Flowers like those of *S. speciòsa*.

Mathews's Sage. Pl.?

167 S. macrosta'chya (H. B. et Kunth, nov. gen. 2. p. 298.) stem shrubby, erect, hairy; leaves petiolate, roundish-ovate, acute, deeply cordate at the base, with rounded imbricate auricles, pubescently villous on both surfaces; floral leaves broad-ovate, villous, permanent, equalling the calyxes; spikes dense, thick; whorls many-flowered, closely approximate; flowers sessile; calyx tubular, villous, having the upper lip entire, and the teeth of the lower lip acute; corolla hardly exceeding the calyx. ♄. S. Native of Peru, near Guayaquil; and near Quito, Llactacunga, and Cuença. Leaves 2-3 inches long. Corolla blue: upper lip arched, emarginate, as well as the middle segment of the lower lip.

Long-spiked Sage. Shrub 4 to 6 feet.

§ 6. Eria'nthæ. *Floral leaves bractea-formed, deciduous. Calyxes densely clothed with tomentose wool. Tube of corolla hardly a half as long again as the calyx.—Herbs or shrubs. Flowers whitish or yellowish, rarely reddish.*

168 S. leucoce'phala (H. B. et Kunth, nov. gen. 2. p. 301. t. 156.) stem shrubby, erect, and is, as well as the branches, clothed with hoary tomentum; leaves ovate, bluntish, cordate, crenately serrated, clothed with hoary tomentum beneath; spikes

ovate: whorls many-flowered, closely crowded; calyx tubular, having the upper lip ovate, acute, and the segments of the lower lip acute; tube of corolla equalling the calyx. ♄. S. Native of Peru, in the province of Quito, near Alausi. Floral leaves ovate, acute. Corolla violaceous. Stamens hardly exserted. This is a very showy species.

White-headed Sage. Shrub 3 to 4 feet.

169 S. BREVIFLÒRA (Moc. et Sesse, mss. ex Benth. lab. p. 274.) stem shrubby; branches clothed with hoary tomentum; leaves on short petioles, ovate, acute, crenulated, rounded at the base or subcordate, clothed with soft hoary pubescence above, and white tomentum beneath; floral leaves ovate, acuminated, equalling the calyxes; racemes spike-formed, dense, a little branched; whorls about 6-flowered, approximate, secund; flowers almost sessile; calyx tubularly campanulate, having the upper lip entire, and the teeth of the lower lip short, obtuse; corolla about twice as long as the calyx, tomentose outside, with equal lips; genitals exserted a little; style glabrous. ♄. S. Native of New Spain. Leaves almost like those of a species of *Lantàna*, scarcely an inch long. Upper lip of corolla shortly emarginate, and the middle segment of the lower lip large, bifid.

Short-flowered Sage. Shrub.

170 S. COLLI'NA (H. B. et Kunth, l. c. p. 288.) shrubby; branches and under sides of leaves clothed with white tomentum, but pubescent above; leaves oblong-lanceolate, bluntish, acute at the base, crenated; floral leaves lanceolate, tomentose, deciduous; spikes on long peduncles; whorls many-flowered, approximate; calyx clothed with white tomentum, campanulate, striated, having the upper lip entire, acute, and the lower one bipartite, with acuminated segments. ♄. S. Native of Quito, on dry hills about Riobamba Nuevo. Shrub sweet-scented. Leaves an inch long, green above. Lower whorls distant. Corollas blue: lower lip spotted with white, ex Bonpl. This species differs from *S. breviflòra*, in the leaves being green above, and in their form.

Hill Sage. Shrub.

171 S. SPICA'TA (Roem. et Schultes, syst. mant. 1. p. 202.) shrubby; branches glabrous, clothed with hoary pubescence while young; leaves lanceolate-oblong, obsoletely crenated towards the apex, pubescent above, but clothed with white tomentum beneath; floral leaves ovate, acuminated, clothed with white tomentum, tipped with blue, deciduous; spikes terminal, solitary, pedunculate; whorls many-flowered, approximate; calyx clothed with white tomentum, campanulate, striated, having the upper lip obtuse and tridentate, and the lower one bidentate: teeth all acute. ♄. S. Native of New Spain. S. salignà, Willd. herb. ex Link, Schwæg. et Dietr. spec. pl. 1. p. 308. S. Humbóldtii, Spreng. syst. 1. p. 64. S. Humboldtiàna, Dietr. gart. lex. 7. p. 418. S. pulchélla, H. B. et Kunth, nov. gen. 2. p. 288. t. 140. Leaves about an inch long. Corolla blue: tube equalling the calyx: upper lip galeate, concave, emarginate, pubescent. Calyx reddish, more villous than that of *S. breviflòra*.

Spicate-flowered Sage. Shrub 3 feet.

172 S. FARINA'CEA (Benth. lab. p. 274.) stem herbaceous, erect, nearly glabrous; leaves petiolate, ovate-oblong, or lanceolate, bluntish, irregularly serrate-crenated, narrowed a long way at the base, nearly glabrous, green on both surfaces or canescent beneath; floral leaves small, deciduous; raceme elongated, simple; whorls many-flowered, almost secund, remote, or the upper ones are approximate; flowers almost sessile; calyx tubular, having the upper lip entire, and the teeth of the lower lip short and obtuse; corolla twice as long as the calyx: tube hardly exserted, ventricose; style bearded. ♃. ? S. Native of Texas, between Rio Guadaloupe and Rio Colorado. Leaves like those of *S. uliginòsa* or *S. serràta*.

Mealy Sage. Pl. ?

173 S. REVOLU'TA (Ruiz, et Pav. fl. per. 1. p. 28. t. 41. f. b.) stem shrubby, erect, clothed with white tomentum; leaves on short petioles, linear-lanceolate, obtuse, crenated, with revolute edges, wrinkled, clothed with white tomentum on both surfaces; lower floral leaves similar to the cauline ones: upper ones ovate, acuminated, deciduous; racemes simple; whorls about 6-flowered, remote, secund; calyx tubular, having the upper lip entire, and the teeth of the lower lip acute; corolla twice as long as the calyx: tube exserted, ventricose: lips equal in length; style hairy. ♄. S. Native of Peru, in the province of Canta. Shrub much branched. Leaves on short petioles, 1¼ inch long. Corolla whitish-violet.

Revolute-leaved Sage. Shrub 2 to 3 feet.

174 S. LEUCA'NTHA (Cav. icon. 1. p. 16. t. 24.) stem shrubby; branches nearly terete, clothed with white wool; leaves on short petioles, lanceolate-linear, acute, minutely crenated, rounded at the base, wrinkled above, and pubescent, but clothed with white wool beneath; floral leaves ovate, acuminated, deciduous; raceme elongated; whorls many-flowered: lower ones remote; flowers almost sessile; calyx ovate, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla twice as long as the calyx, clothed with white tomentum outside: tube exserted, rather ventricose: lips short; style bearded. ♄. S. Native of Mexico. Leaves 2-6 inches long. Racemes usually purplish. Corolla white, rather contracted under the throat.

White-flowered Sage. Shrub 4 to 5 feet.

175 S. VELUTI'NA (Benth. lab. p. 275.) stem shrubby?; branches densely leafy, clothed with velvety wool; leaves almost sessile, oblong-lanceolate, obtuse, crenated, narrowed at the base, wrinkled, clothed with velvety wool beneath; floral leaves lanceolate, deciduous; racemes rather loose; whorls about 6-flowered; calyxes striated, tubular, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla half again as long as the calyx, clothed with white wool outside: tube wide: lips nearly equal; style glabrous. ♄. ? S. Native of the South of Brazil, Sello. Nearly allied to *S. confertiflòra*. Corollas white.

Velvety Sage. Shrub.

176 S. ERIOCA'LYX (Bertero, ex Roem. et Schultes, syst. addit. to mant. 1. p. 246.) stem shrubby; branches divaricate, clothed with hoary pubescence; leaves oblong-lanceolate, acuminated, serrated, cuneated at the base, pubescent above, and densely clothed with hoary tomentum beneath; floral leaves ovate, acuminated, deciduous; racemes short, simple; whorls 6-10-flowered, approximate; calyx campanulate, having the upper lip entire, and the teeth of the lower lip ovate, obtuse; corolla exceeding the calyx a little, woolly outside: tube inclosed: lips short; style bearded. ♄. S. Native of Jamaica. Branches divaricate or procumbent. Leaves 3-4 inches long. Flowers nearly sessile. Wool of calyx generally reddish. Corollas like those of *S. confertiflòra*.

Woolly-calyxed Sage. Shrub.

177 S. LONTENTIFLÒRA (Pohl, pl. bras. 2. p. 134. t. 190.) stem shrubby?; branches clothed with rufous tomentum; leaves petiolate, ovate-oblong, acutish, crenated, cuneated at the base, and running into the petioles, a little wrinkled above, and clothed with adpressed tomentum, and densely clothed with rufous tomentum beneath; floral leaves ovate, long-acuminated, reflexed or deciduous; racemes elongated; whorls numerous, many-flowered; calyx ovate-tubular, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla one half longer than the calyx, clothed with yellow wool outside: tube

exserted, ventricose: lips short; style glabrous. ♄. S. Native of Brazil, near Rio Janeiro, and on Serra d'Estrella, and Padre Correa. Leaves 3-4 inches long, and 1½ broad. Bracteas long-acuminated, comose at apex. Whorls 10-20-flowered. Calyx reddish. Corolla reddish, small.

Crowded-flowered Sage. Shrub. ?

178 S. lasiántha (Benth. lab. p. 276.) shrubby; branches densely woolly; leaves almost sessile, oval-oblong, obtuse, crenated, rounded at the base or cordate, much wrinkled above, hispid, clothed with soft white wool beneath: floral ones ovate, acuminated, shorter than the calyxes, deciduous; racemes elongated, simple; whorls distant, many-flowered; calyxes tubular, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla one half longer than the calyx: tube hardly exserted, ventricose, pubescent outside: lips nearly equal; style glabrous. ♄. S. Native of Mexico. Shape of leaves and habit of *S. scorodònia*. Racemes reddish or yellowish. Inflorescence of *S. eriocàlyx*.

Woolly-flowered Sage. Shrub.

§ 7. Longiflòræ. *Tube of corolla 2-3 times longer than the calyx: lower lip generally shorter, rarely longer than the upper one.—Herbs, undershrubs, or shrubs. Corollas white, yellowish, orange-coloured, bluish, scarlet, or purple.*

* Aléidæ. *Corollas white or whitish.*

179 S. tomentélla (Pohl, pl. bras. 2. p. 138. t. 194.) herbaceous? erect, clothed with rufous tomentum; leaves sessile, ovate-oblong, obtuse, crenated, narrowed at the base, wrinkled, and rather hispid above, and clothed with tomentose pubescence beneath; floral leaves deciduous; racemes elongated; whorls 6-10-flowered, remote; calyxes tubular, striated, tomentosely pubescent, having the upper lip entire, and the teeth of the lower one acute; corolla twice as long as the calyx, clothed with white wool outside: tube exserted: lips short; lateral lobes of lower lip reflexed: middle one concave; style shortly bearded. ♃.? S. Native of Brazil, in the provinces of Goyaz and Minas Geraes. Leaves 2-3 inches long, few. Corolla 15 lines long, white.

Woolly Sage. Pl. 2 to 3 feet.

** Aurantiàcæ. *Corollas yellowish or orange-coloured.*

180 S. ícxea (H. B. et Kunth, nov. gen. 2. p. 297. t. 148.) stems shrubby, and are, as well as the branches, pilose; leaves oblong, acutish, cordate, crenated, glabrous above, and clothed with white tomentum beneath; whorls many-flowered: lower ones distant; floral leaves ovate, acute, shorter than the calyxes, deciduous; calyx subcampanulate, clothed with glandular hairs, the upper lip tridentate, the teeth acuminately mucronate, and the segments of the lower lip acuminately subulate. ♄. S. Native of Peru, between Loxa and Mount Saraguru, in the province of Quito. Leaves 1½ inch long. Corolla yellow, glandularly pilose on the back: tube ventricose, thrice as long as the calyx.

Yellow-flowered Sage. Shrub.

181 S. funcia'na (Ruiz, et Pav. fl. per. 1. p. 27. t. 39.) stem suffruticose, erect, clothed with glandular pubescence; leaves petiolate, ovate, acute, serrated, rounded at the base, quite entire, coriaceous, veiny, clammy above, of the same colour beneath, pubescent or glabrous; floral leaves ovate, acuminated, deciduous; racemes simple; whorls 1-10-flowered, remote; calyx campanulate, hairy, having the upper lip entire, obtuse, or shortly tridentate, and the teeth of the lower lip ovate, acute; corolla pubescent, thrice as long as the calyx: tube exserted, rather ventricose: lips nearly equal; style bearded. ♄. S. Native of Peru, on hills of Huannco.—A fetid ferruginous plant. Branches purplish. Leaves hardly an inch long. Corollas white, but usually yellowish or whitish-violet, size of those of *S. lamiifòlia*.

Dotted Sage. Shrub 2 to 3 feet.

182 S. Pavònii (Benth. lab. p. 278.) stem shrubby, bifariously pubescent; branches beset with glandular villi at top; leaves petiolate, ovate, obtuse, quite entire, cuneated at the base, glabrous; floral leaves ovate, acuminated, deciduous; racemes simple; whorls many-flowered, distant; calyx campanulate, clothed with glandular villi, having the upper lip entire, and the teeth of the lower lip broad-ovate, acute; corolla pubescent outside, about 4 times longer than the calyx: tube much exserted, inflated in the middle: lips short, erect; style bearded above. ♄. S. Native of Peru. Allied to *S. punctàta*; but differs in the quite entire obtuse leaves, and longer corollas. Corollas yellowish.

Pavon's Sage. Shrub.

183 S. integrifòlia (Ruiz, et Pav. fl. per. 1. p. 26. t. 36. f. b.) stem shrubby, glabrous; leaves petiolate, ovate, quite entire, rounded at the base, glabrous, clammy, rather fleshy; floral leaves lanceolate, acute, deciduous; racemes short, simple; whorls about 6-flowered, distant; calyx tubular, glabrous, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla thrice as long as the calyx, pubescent: tube exserted, nearly equal; style glabrous. ♄. S. Native of Peru, at Caxatamba, near the hot baths of Cheuchin, and among rocks, where it is called *Succoncha* by the natives. Stem much branched. Branches clammy, purplish. Leaves scarcely half an inch long, obtuse or acute. Corolla more than an inch long, of a coppery-yellow colour. Genitals exserted.

Entire-leaved Sage. Shrub 2 to 3 feet.

184 S. oppositifòlia (Ruiz, et Pav. fl. per. 1. p. 26. t. 43. f. a.) stem suffruticose, procumbent at the base; branches erect, finely pubescent; leaves petiolate, ovate, obtuse, rounded at the base or cordate, wrinkled, pubescent; floral leaves deciduous; racemes simple; whorls 2-flowered, secund; calyx tubular, striated, the upper lip entire, and the teeth of the lower lip ovate, acute; corollas 4 times as long as the calyx, pubescent outside: tube much exserted: lips nearly equal; style glabrous.? ♄. S. Native of Peru, in elevated, exposed, arid places of Tarma. S. grata, Vahl, enum. 1. p. 244. Plant with a grateful scent. Leaves 1 to 1½ inch long. Corollas a little smaller than those of *S. tubiflòra*, scarlet. The vernacular name of the plant is *Chenchelcoma*.

Opposite-flowered Sage. Shrub.

185 S. glechæ'oea (H. B. et Kunth, nov. gen. 2. p. 298.) stem suffruticose, erect, and is, as well as the branches, pubescent; leaves ovate, obtuse, cordate, almost quite entire, coriaceous, nearly glabrous; whorls 2-flowered, distant; floral leaves oblong, acute, ciliated, glumaceous, about equal in length to the calyxes; calyx nearly glabrous, tubular: lips ciliately pilose: upper lip and segments of the lower lip acuminated. ♄. S. Native of New Spain, in temperate places. Corolla scarlet.?

Glumaceous-bractead Sage. Shrub.

186 S. strictiflòra (Hook. bot. misc. 2. p. 234.) stem shrubby; branches clothed with tomentose pubescence; leaves petiolate, ovate, acute, crenately serrated, cordate at the base, thickish, rather fleshy, nearly glabrous; floral leaves ovate, acute, membranous, deciduous; racemes elongated; whorls 2-flowered, secund; calyx tubular, striated, pubescent, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla more than twice as long as the calyx: tube elongated, incurved, tomentose outside: lips nearly equal, hardly spreading: lateral lobes of lower lip very short; genitals exserted;

style glabrous. ♄. S. Native of Peru, between Yazo and Obrajillo, in the valley of Canta. Leaves 1½ to 2 inches long. Corolla of a yellowish scarlet colour.

Strict-flowered Sage. Shrub 4 to 6 feet.

187 S. TURBIFLÒRA (Smith, icon. ined. t. 26.) stem suffruticose, erect, villous; leaves petiolate, ovate, obtuse, crenately-serrated, cordate at the base, pubescent above, or villous, and clothed with white wool beneath, or the lower ones are nearly glabrous; floral leaves ovate, acute, membranous, deciduous; racemes simple; whorls 2-flowered, secund; calyx tubular, striated, woolly or villous, having the upper lip entire, and the teeth of the lower lip lanceolate, acute; corolla 3 times as long as the calyx: tube elongated, incurved, tomentose outside: lateral lobes of lower lip small: middle one concave; genitals exserted a little; style glabrous. ♄. S. Native of Peru, on the mountains. S. biflòra, Ruiz, et Pav. fl. per. et chil. 1. p. 24. t. 38. f. a. Stem and branches densely villous. Floral leaves and calyxes glumaceous, usually clothed with soft, silky, white tomentum. Corolla of a golden scarlet colour, 1½ inch long.

Var. β, *glabràta* (Benth. lab. p. 279.) lower leaves of the same colour on both surfaces, and nearly glabrous. ♄. S. Native of Peru, common in sandy places in the town of Atiquipa, in the province of Camana. S. excisa, Ruiz, et Pav. fl. per. 1. p. 25. t. 36. f. a. Stem and racemes less villous; the younger leaves constantly tomentose beneath.

Tube-flowered Sage. Fl. June, July. Clt. 1820. Shrub 2 to 3 feet.

* * * Coccíneæ. *Corollas scarlet or purple.*

188 S. LEONUROÍDES (Glox. obs. bot. 15. t. 2.) stem suffruticose, nearly glabrous; leaves petiolate, ovate, or rhomboid, obtuse, crenated a little, truncate or subcordate at the base, nearly glabrous above, veiny and canescent beneath; floral leaves similar to the others; whorls about 6-flowered; flowers about equal in length to the leaves; pedicels shorter than the petioles; calyx tubularly campanulate, glabrous: the upper lip entire, and the lobes of the lower lip broad-ovate, acute; corolla about twice as long as the calyx: tube ventricose: lips nearly equal: upper lip pubescent outside; stamens inclosed; style exserted, bearded, with subulate lobes. ♄. S. Native of Quito, in temperate places near Chillo, Ichubamba, and Huanuco. Lam. ill. t. 20. f. 3. S. comòsa, Lher. stirp. 1. p. 41. t. 21. Mirb. ann. mus. 15. t. 15. f. 6. S. nodòsa, Ruiz, et Pav. fl. per. 1. p. 25. t. 41. f. a. S. pyrifòlia, Donbey, ex Cav. Jùngia formòsa, Mœnch. Branches furrowed, nodose, glabrous, or clothed with fine hoary tomentum. Leaves rarely quite entire, but usually sinuated or crenated. Corolla scarlet.

Lion's-tail-like Sage. Shrub 4 to 6 feet.

189 S. PHLOMÒSA (Ruiz, et Pav. fl. per. 1. p. 26. t. 37. f. a.) shrubby, clothed with rusty tomentum; branches woolly; leaves petiolate, subcordate, acute, crenated, veiny, wrinkled, very woolly beneath; peduncles 4-5, axillary, 6-flowered, propped by subulate bracteoles; calyx tubular, scabrous inside; corolla hairy outside, twice as long as the calyx: lips equal: upper one emarginate: lower one trifid; style plumose, purplish. ♄. S. Native of Peru, in the province of Tarma, among broken rocks at Huassahuassi. Corollas purple: tube not ventricose. Very nearly allied to the preceding.

Plumose-styled Sage. Shrub.

190 S. BALAUSTÍNA (Pohl, pl. bras. 2. p. 133. t. 189.) suffruticose, erect, pilose; leaves petiolate, oblong, acute, serrated, narrowed at the base, green on both surfaces, pilose; floral leaves conforming to the others; whorls axillary, remote, 6-flowered; calyx tubular, pilose, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla thrice as long as the calyx: tube much exserted; style bearded. ♄. S. Native of Brazil, among bushes, by way sides near Eugenho da Varge, in the province of Rio Janeiro. Branches reddish-brown. Leaves 2 to 2½ inches long. Bracteas lanceolate, hardly longer than the pedicels. Corolla 2 inches long, scarlet. Stamens inclosed.

Pomegranate-flowered Sage. Shrub 3 feet.

191 S. ASPERIFÒLIA (Benth. lab. 281.) stem suffruticose, erect, clothed with short pubescence; leaves sessile, oblong, crenated, narrowed at the base, tubercled and very rough above, but nearly glabrous beneath; floral leaves ovate, acuminated, membranous, ciliated, deciduous; racemes elongated; whorls about 6-flowered, somewhat secund: lower ones remote; calyx tubular, pubescent, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla 3 times as long as the calyx, pubescent: tube elongated, widened above: lateral lobes of lower lip deflexed; style exserted, plumose. ♄. S. Native of Brazil, in the provinces of Goyaz and Minas Geraes. Stem nearly naked above. Leaves 3-4 inches long. Corolla 1½ inch long, scarlet.

Rough-leaved Sage. Shrub.

192 S. SCABRIDA (Pohl, pl. bras. 2. p. 140. t. 195.) stem suffruticose, erect, clothed with short pubescence; leaves almost sessile, oblong-lanceolate, obtuse, crenated, narrowly rounded at the base, rough from tubercles above, and nearly glabrous beneath; floral leaves ovate, acuminated, deciduous; racemes simple, elongated; whorls few-flowered; calyx tubular, pubescent, having the upper lip entire, and the segments of the lower lip ovate, acute; corolla thrice as long as the calyx, pubescent: tube elongated, hardly widened; style plumose. ♄. S. Native of Brazil, in grassy pastures at St. Lucia, in the province of Goyaz; and about Barbacena and Registo Velho, in the province of Minas Geraes. This differs from *S. asperifolia*, in the narrower leaves; in the whorls being usually 2-4-flowered, and in the tube of the corolla being less widened. Corolla of a beautiful red colour.

Scabrous Sage. Shrub.

193 S. PERSICÆFÒLIA (St. Hil. mss. ex Benth. lab. p. 281.) shrubby; branches villous above; leaves nearly sessile, oblong-lanceolate, acuminated, a little serrated, narrowed at the base, rather scabrous above, and of the same colour on both surfaces, nearly glabrous beneath; floral leaves bractea-formed, ovate, acuminated, deciduous; racemes simple; whorls about 6-flowered, distant; calyx campanulate, clothed with long purple wool outside, having the upper lip entire, and the teeth of the lower lip ovate, acutish; corolla more than twice as long as the calyx, villous: tube widened above; style plumose. ♄. S. Native of Brazil, in woods near Rio Vermelho, in the eastern part of the province of Minas Geraes. Leaves 2-3 inches long, villous on the veins beneath, the rest glabrous. Racemes and calyxes densely clothed with purple articulated hairs. Corolla scarlet, more than 2 inches long. Style exserted.

Peach-leaved Sage. Shrub 5 to 7 feet.

194 S. MARIÁNA (Mart. mss. ex Benth. lab. p. 282.) shrubby; branches clothed with tomentose villi; leaves on short petioles, oblong-lanceolate, narrowed a long way at both ends, pubescent on both surfaces, pale beneath; floral leaves bractea-formed, ovate, acuminated, deciduous; racemes simple; whorls about 6-flowered, distant; calyx tubularly campanulate, densely clothed with brownish-white, rather silky adpressed wool, having the upper lip entire, and with the teeth of the lower lip very short, ovate-acute; corolla twice as long as the calyx, villous: tube much exserted; style bearded. ♄. S. Native of Brazil, in the province of Minas Geraes, in humid parts of woods at Mariana, and elsewhere in the same province. This differs from *S. persicæfòlia*, in the leaves being narrower, and rather

tomentose beneath; in the woolly calyx and shorter corolla. Corolla 1½ inch long, scarlet.

Mariana Sage. Shrub.

195 S. Uiga'ati (Benth. lab. p. 282.) shrubby; branches glabrous; leaves petiolate, oblong or ovate-lanceolate, acuminated, subserrated, narrowly cuneated at the base, green on both surfaces, smoothish, glabrous; floral leaves linear, almost deciduous; racemes simple, short; whorls few, 2-4-flowered, approximate; calyx tubularly campanulate, corrugated from short wool outside, having the upper lip entire, and the teeth of the lower lip very short, ovate, bluntish; corolla twice as long as the calyx, woolly: tube much exserted; style bearded. ♄. S. Native of Brazil, St. Hil. Leaves almost like those of *S. persicæfòlia*, but broader, and on longer petioles. Flowers size of those of *S. persicæfòlia*, or a little smaller, but differs in the wool of the corolla and calyx.

St. Hilaire's Sage. Shrub.

196 S. salicifòlia (Pohl, pl. bras. 2. p. 140. t. 196.) shrubby; branches glabrous, pubescent, or clothed with rufous villi; leaves on short petioles, oblong-lanceolate, somewhat crenately serrated, narrowed at both ends, glabrous or hispid above, and clothed with fine rufous tomentum beneath; floral leaves ovate, acute, deciduous; racemes elongated; whorls about 6-flowered; calyx tubularly campanulate, glabrous or pubescent, having the upper lip entire, and the teeth of the lower lip very short and acute; corolla more than twice as long as the calyx: tube much exserted; style bearded. ♄. S. Native of Brazil, among bushes about Queluz, in the province of Minas Geraes, and elsewhere in the same province. This species differs from *S. persicæfòlia*, in the glabrous or pubescent calyxes, &c.

Willow-leaved Sage. Shrub.

197 S. Hæ'nkei (Benth. lab. p. 283.) shrubby; branches clothed with hoary tomentum and clammy villi at top; leaves on short petioles, ovate-oblong or oblong-lanceolate, acute, serrated, rounded at the base, wrinkled, clothed with white tomentum beneath; floral leaves bractes-formed, lanceolate, deciduous; racemes elongated, simple, or the lower whorls are irregularly cymose, and a little branched; calyx tubularly campanulate, clothed with clammy villi, having the upper lip entire, and the teeth of the lower lip bluntish; corolla about 3 times as long as the calyx, clothed with clammy villi: tube much exserted; genitals exserted; style glabrous. ♄. S. Native of Peru, Hænke. Upper whorls 6-flowered, but sometimes 8-10-flowered: lower ones elongated, or the racemes are branched at the base. Corolla 15-16 lines long, scarlet: tube slender, hardly widened at top. This species is very distinct in the form of the leaves and inflorescence.

Hænke's Sage. Shrub.

198 S. hirta (H. B. et Kunth, nov. gen. amer. 2. p. 296.) stem shrubby, erect, bifariously pilose; leaves ovate-oblong, acuminated, crenately-serrated, clothed with hoary pubescence beneath; spikes panicled; whorls remote, few-flowered; floral leaves ovate, acuminated, hairy, shorter than the calyxes, deciduous; calyx clothed with rather glandular hairs, tubularly campanulate; upper lip acuminated, entire: segments of the lower lip acuminately mucronate; corolla thrice as long as the calyx. ♄. S. Native of the Andes of Peru, near Ayavaca, and elsewhere. Leaves petiolate, 2 inches long. Corolla purple.

Hairy Sage. Shrub.

199 S. tortuòsa (H. B. et Kunth, nov. gen. amer. 2. p. 292. t. 142.) stems shrubby, erect, clothed with fuscescent tomentum; leaves petiolate, ovate-oblong, acuminated, narrowed at the base, serrated, clothed with fuscescent tomentum beneath, and pubescence above; spikes secund; whorls about 6-flowered, approximate; calyx tubularly campanulate, clothed with villous tomentum, having the upper lip entire, ovate, acuminated, subulate, and the segments of the lower lip acuminately subulate; corollas 2-3 times longer than the calyx, pubescently villous; genitals a little exserted. ♄. S. Native of New Granada, on the Andes of Quindiu. Branches twisted, clothed with fuscescent tomentum. Flowers on long pedicels. Corolla an inch long: upper lip emarginate, villous outside, and middle segment of the lower lip obcordate: tube widened above.

Twisted-branched Sage. Shrub.

200 S. curvifòra (Benth. lab. p. 284.) shrubby; branches clothed with tomentose pubescence; leaves petiolate, ovate-oblong, acute, crenately serrated, rounded or narrowed at the base, pubescent above, but clothed with soft hoary tomentum beneath; floral leaves acuminated, deciduous; flowers secund, incurvedly reflexed, nearly sessile; whorls 6-10-flowered; calyx tubular, pubescent, having the upper lip as well as the teeth of the lower lip acuminated; corolla about 4 times longer than the calyx, pubescent outside: tube rather widened above; stamens inclosed; style exserted, quite glabrous. ♄. G. Native of Mexico, near Tlalpuxahua. Shrub divaricately branched. Leaves 1 to 1½ inch long. Corolla reddish scarlet, nearly 1½ inch long: tube bidentate inside at bottom.

Curved-flowered Sage. Shrub.

201 S. Neovingensis (Benth. lab. p. 284.) shrubby?; branches finely pubescent; leaves petiolate, ovate, acuminated, serrately crenated, rounded at the base, soft, pubescent above, and pale and clothed with hoary tomentum beneath; upper leaves sessile: floral leaves lanceolate-subulate, longer than the calyxes, at length deciduous; racemes elongated, simple; whorls loose, remote, secund, 2-6-flowered; calyxes tubularly-campanulate, pubescent, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla 4-5 times longer than the calyx, nearly glabrous: tube slender at the base, and much widened at top: lower lip very short; genitals exserted; style glabrous. ♄. S. Native of Brazil, near Rio Janeiro, Prince Maximilian Neuwied. Nearly allied to *S. curvifòra*. Corolla 14-15 lines long, scarlet.

Neuwied Sage. Shrub.

202 S. frutictòrum (Benth. lab. p. 284.) herbaceous, erect, tall, nearly glabrous; leaves petiolate, ovate, acuminated, serrated, cuneated at the base, green on both surfaces, glabrous, or clothed with fine pubescence; floral leaves deciduous; racemes elongated, simple; whorls about 6-flowered, distant; calyx tubular, striated, pubescent, having the upper lip entire, and the teeth of the lower lip ovate, obtuse; corolla about 3 times as long as the calyx, villous outside: lower lip very short; stamens shorter than the corolla; style pubescent. ♃. S. Native of Brazil, among bushes at Arrayal, Prince Maximilian Neuwied. Leaves 3 inches long. Calyx green. Corollas deep red, form of those of *S. Neocidénsis*.

Bush Sage. Pl. 4 feet.

203 S. altíssimum (Pohl, pl. bras. 2. p. 136. t. 192.) suffruticose; branches erect, tall, nearly glabrous; leaves petiolate, ovate-oblong, acute, serrated, narrowly cuneated at the base, glabrous above, and clothed with fine pubescence beneath; floral leaves ovate, acuminated, deciduous; racemes elongated, simple; whorls distant, many-flowered; calyx tubular, villous, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla more than twice as long as the calyx, glabrous: tube much exserted: lips equal; style pilose. ♄. S. Native of Brazil, among bushes at Arrayal Santa Rita, in the province of Goyaz. Branches, as well as the nerves of the leaves and calyxes, clothed with glandular villi. Corolla pure red, 14 lines long: tube scarcely widened at top. Leaves 4-5 inches long.

Tallest Sage. Shrub 6 to 7 feet.

204 S. moschāta (H. B. et Kunth, nov. 2. p. 293, t. 143.) shrubby, erect, glabrous; leaves petiolate, ovate, acute, cuneated at the base, serrated, glabrous or pilose; whorls 5-6 flowered, distant; calyx tubular, striated, glabrous or pilose, having the upper lip ovate, acuminated, entire, and the segments of the lower lip acuminated; corolla thrice as long as the calyx; tube widened at top; upper lip emarginate; middle segment of the lower lip short, retuse; style villous on the upper side. ♄. S. Native of New Granada, near Almaguer, among bushes. Plant exhaling a scent of musk. Leaves 2 inches long; pilose on the veins beneath. Spikes terminal, pedunculate. Corolla purple. Calyxes clothed with fuscescent hairs while young. Allied to *S. Neovidénsis* and *S. altíssima*.

Musky-scented Sage. Shrub, 4-6 feet.

205 S. sequālens (H. B. et Kunth, nov. gen. amer. 2. p. 297.) stem shrubby, erect, and are, as well as the branches, pilose and clammy; leaves petiolate, ovate-oblong, obtuse, cordate, crenated, coriaceous, wrinkled above, and pilose but clothed with hoary tomentum beneath; whorls 2-flowered, distant; floral leaves ovate-oblong, shorter than the calyxes, deciduous; calyx tubular, hairy, striated, the upper lip, and segments of the lower lip, acuminated; corolla twice as long as the calyx, pubescent; stamens exserted. ♄. S. Native of Peru, on the Andes. Branches purple. Leaves 1½ to 2 inches long. Spikes terminal. Corolla purple.

Filthy Sage. Shrub.

206 S. rubescens (H. B. et Kunth, nov. gen. amer. 2. p. 301. t. 154.) stem shrubby, erect, canescent, glabrous; leaves on long petioles, ovate, narrowly-acute, cordate, crenated, clothed with fine hoary tomentum beneath; spikes panicled; whorls 4-6 flowered, distant; calyx densely clothed with clammy hairs, tubular, purple, having the upper lip ovate, acute, entire, and the teeth of the lower lip acuminated; corolla glabrous, twice as long as the calyx. ♄. S. Native of Quito, in temperate places. Leaves 4 inches long. Leaves pubescent above. Corolla beautiful purple.

Reddish-flowered Sage. Shrub.

207 S. hirtella (Vahl. enum. 1. p. 249.) stem herbaceous? ascending, clothed with clammy villi; leaves petiolate, ovate-oblong, acute, crenated, roundly-cuneated at the base, green on both surfaces, and nearly glabrous; floral leaves ovate, acute, deciduous; racemes elongated, simple; whorls about 6-flowered, remote; calyx tubular, very hairy, having the upper lip entire, and the teeth of the lower lip ovate, obtuse; corolla more than twice as long as the calyx, villous outside: tube much exserted: lips nearly equal; genitals much exserted. ♄.? S. Native of Peru, Dombey. Corolla scarlet, an inch long; tube dilated a little at top.

Hairy Sage. Shrub.

208 S. secunda (Benth. lab. p. 285.) stem herbaceous, erect, glabrous; branches pubescent; leaves petiolate, oblong, narrowed at the base, acute, serrated, rather hispid above, and glabrous beneath: floral leaves ovate, acuminated, deciduous; whorls about 6-flowered, secund; calyx tubular, striated, pubescent, having the upper lip entire, and the teeth of the lower lip acute; corolla one half longer than the calyx, pubescent outside: tube a little exserted, nearly equal, or hardly contracted at the throat: lips short, nearly equal; genitals inclosed; style glabrous. ♃.? G. Native of the South of Brazil, Sello. Leaves 2-3 inches long. Corolla scarcely half an inch long. Hairs of branches reflexed.

Var. β; leaves clothed with hoary tomentum beneath. ♄. G. Native of Brazil, in the province of Minas Geraes.

Second-flowered Sage. Pl.?

209 S. ciliāta (Benth. lab. p. 286.) stem herbaceous?; branches elongated, glabrous, or the angles and petioles are ciliated; leaves petiolate, ovate, acute, crenately serrated, roundish or subcordate at the base, nearly glabrous: floral leaves ovate, acuminated, ciliated at length, deciduous; whorls about 10-flowered; calyx tubular, striated, pubescent, having the upper lip entire, and the teeth of the lower lip acute; corolla pubescent outside, 2-3 times longer than the calyx: tube widened at top: lips nearly equal; style glabrous, exserted. ♃.? S. Native of Mexico, among bushes, at Papantla. Leaves downy on the nerves. Corolla scarlet. Allied to *S. lamiifólia*, like the preceding.

Ciliated Sage. Shrub. ?

210 S. élegans (Vahl. enum. 1. p. 238.) stem herbaceous, erect, glabrous, or furnished with scattered hairs; leaves petiolate, ovate, acuminated, serrated, rounded or narrow at the base, rather hispid above, and glabrous beneath; floral leaves sessile, ovate, acuminated, deciduous; whorls remote, about 6-flowered; flowers on short pedicels; calyx campanulate, clothed with glandular villi, having the upper lip almost entire, or with 1-3 short awns, lower lip shortly bidentate, 2-awned; corolla pubescent outside, six times as long as the calyx: tube slender, incurved: lips equal, oblong; stamens a little exserted, bearded. ♃ ? S. Native of Mexico, near Tlalpuxahua and Guanaxuato. *S. incarnàta*, Cav. ann. sc. 2. p. 112. H. B. and Kunth, nov. gen. amer. 2. p. 298. t. 144. *S. microcalúlis*, Poir. dict. 6. p. 614. Branches purplish at the base. Leaves 1 to 1½ inch long. Corolla blood-red, more than an inch long. Tube toothless inside.

Elegant Sage. Pl. 4 feet.

211 S. mentiens (Pohl, pl. bras. 2. p. 137. t. 193.) herbaceous, erect; stem glabrous at the base, but furnished with spreading hairs at apex; leaves petiolate, ovate, acuminated, serrated, rounded at the base, green and glabrous on both surfaces; floral leaves small, deciduous; racemes simple, elongated; whorls remote, few-flowered; calyx tubularly campanulate, green at the base, villous, membranous, and coloured at top, having the upper lip entire, and the teeth of the lower lip ovate, subulately acuminated; corolla 4-5 times longer than the calyx: tube much exserted: lips short, nearly equal, broad; genitals inclosed; style glabrous. ♃ ? S. Native of Brazil, at Serra d'Estrella, and about Fazenda de Padre Correa, in the province of Rio Janeiro, and about the town of Rio Janeiro. Herb nearly simple. Calyx scarlet at top. Corolla scarlet, nearly glabrous, 18-22 lines long. Tube widened a little at top.

Disguising Sage. Pl. 1½ foot.

212 S. selloidens (Sello ex Roem. et Schultes, syst. mant. 2. p. 185. Benth. lab. p. 287.) shrubby; branched; branches glabrous; leaves petiolate, ovate, acuminated, crenately serrated, cuneate, rounded or subcordate at the base, glabrous on both surfaces; floral leaves ovate, acuminated, coloured, deciduous; whorls 2-flowered; calyx campanulate, membranous, coloured, glabrous, or the nerves and pedicels are villous, having the upper lip entire, and the teeth of the lower lip broad, ovate, acute; corolla glabrous outside, about three times as long as the calyx: tube exserted, widened a little; lower lip short; stamens exserted; style glabrous. ♄. G. Native of Brazil, in woods at Guaxindiba, near Rio Janeiro. Ker. bot. reg. t. 687. Rehb. hort. bot. 1. t. 51. Colla in acad. taur. 31. p. 331. t. 17. S. colórans, Hortul. S. Brasiliénsis, Spreng. syst. 2. p. 56.—An elegant species, very common in gardens, having the floral leaves, calyxes, and corollas scarlet. Corolla 2 to 2½ inches long. This species is a very great ornament in the autumn, if planted out in the open ground against a south wall.

Shining Sage. Fl. Sept. Nov. Clt. 1822. Shrub 3 to 4 feet.

213 S. involucrāta (Cav. icon. 2. p. 114. t. 195.) stem

shrubby; branches elongated, glabrous; leaves petiolate, ovate, acuminated, crenately serrated in the middle, roundly serrated at the base, glabrous; floral leaves bractea-formed, sessile, broad-ovate, acuminated, coloured, imbricated before florescence, deciduous; whorls about 6-flowered, approximate; calyx tubularly campanulate, striated, having the upper lip entire, and the teeth of the lower lip short, ovate, setaceously acuminated; corolla 2-3 times as long as the calyx; tube ventricose, glabrous: lips short, nearly equal; style bearded. ♄. G. Native near to the city of Mexico and Tlalpuxahua. Bot. reg. 1205. Hook. bot. mag. t. 2872. S. lævigàta, H. B. et Kunth, nov. gen. amer. 2. p. 295. t. 147. Corolla rose-coloured.

Involucrated-flowered Sage. Fl. July, Aug. Clt. 1825. Shrub 2-4 feet.

214 S. Sessèi (Benth. lab. p. 288.) stem shrubby; branches nearly glabrous: leaves petiolate, ovate-oblong, acuminated, rounded, cuneated, or narrowed at the base, glabrous on both surfaces, or pubescent beneath; floral leaves smaller: uppermost ones minute, deciduous; whorls few-flowered, panicled; calyx inflately-campanulate, membranous, coloured, glabrous, having the upper lip entire, and the teeth of the lower lip ovate, rounded; corolla about three times as long as the calyx, pubescent outside; tube much exserted, nearly equal; style glabrous. ♄. G. Native of New Spain, on the western declivity of Cordillera de Guchillaque. Leaves 2-3 inches long, rather coriaceous. Panicles short, loose. Fructiferous calyx large, scarlet. Corolla nearly 2 inches long, scarlet. Upper lobe of style very long.

Sessé Sage. Shrub.

215 S. Agglutina'ta (Lag. gen. et spec. nov. p. 2. no. 120.) leaves cordate-ovate-lanceolate, acute, serrated, white beneath; corolla pubescent, four times longer than the calyx, which is inflated; stem hairy, clammy. ♄. S. Native of New Spain. S. frutícosa, Cervantes. Leaves clothed with clammy villi, particularly while young. Whorls about 6-flowered, bracteate. Bracteas ovate, acuminated, concave, deciduous, shorter than the calyxes. Corolla scarlet. Style bearded. This species agrees with *S. Sessèi* in the calyx; but the leaves are very distinct.

Clammy Sage. Shrub.

216 S. pube'scens (Benth. lab. p. 723.) stem shrubby; branches tomentosely pubescent; leaves petiolate, ovate, bluntish, rounded at the base, wrinkled, pubescent above, and clothed with hoary villi beneath; floral leaves smaller: upper ones minute, deciduous; whorls few-flowered, rather panicled; flowers nearly sessile; calyx inflately tubular, rather incurved, coloured at top, having the upper lip entire, and the teeth of the lower lip broad-ovate, obtuse; corolla twice as long as the calyx, pubescent outside: tube much exserted, nearly equal: lips nearly equal; style shortly bearded. ♄. S. Native of Mexico at San Dionicio, in Oaxaca. Allied to *S. Sessèi* and *S. Règla*.

Pubescent Sage. Shrub.

217 S. Re'gla (Cav. icon. 5. p. 33. t. 455.) stem shrubby; branches glabrous or pubescent under the axils; leaves petiolate, rounded, obtuse, sinuately crenated, broadly subcordate at the base, coriaceous, wrinkled, rather hispid above, nerved and pubescent beneath; floral leaves conforming to the others; whorls terminal, few-flowered; flowers nearly sessile; calyx tubular, coloured, having the upper lip entire, and the teeth of the lower lip broad-ovate, acutish; corolla twice as long as the calyx, pubescent outside; tube ventricose; style glabrous, exserted. ♄. S. Native of Mexico at Vilalpando and Regla. Branches purplish. Leaves 1½ inch long, fuscescent beneath. Flowers crowded in the number of 3 to 6, at the tops of the branches. Calyx pubescent. Corolla scarlet.

Regla Sage. Shrub 5 to 6 feet.

218 S. Grama'mi (Benth. in bot. reg. t. 1370.) stem shrubby; branches glabrous or bifariously pubescent; leaves petiolate, oval, obtuse, rounded or cuneated at the base, irregularly crenated in the middle, nearly glabrous; floral leaves ovate, acuminated, ciliated, deciduous; racemes elongated; whorls 2-flowered; calyx tubular, striated, pubescent on the nerves, having the upper lip entire, and the teeth of the lower lip acute; corolla twice as long as the calyx, glabrous outside: tube much exserted, ventricose: middle lobe of lower lip very broad, emarginate; style shortly bearded. ♄. S. Native of Mexico, in several places. Calyxes usually coloured. Flowers smaller than those of *S. microphýlla*; but the leaves are larger.

Graham's Sage. Shrub.

219 S. microphy'lla (H. B. et Kunth, nov. gen. amer. 2. p. 294.) stem shrubby; branches finely pubescent: leaves petiolate, ovate, obtuse, minute, regularly crenated, rounded at the base, wrinkled, pubescent; floral leaves ovate, acuminated, deciduous; racemes short; whorls 2-flowered; calyx tubular, striated, with pubescent nerves, having the upper lip entire, and the teeth of the lower lip acuminated; corolla twice as long as the calyx, glabrous outside: tube ventricose, exceeding the calyx: throat contracted: middle lobe of lower lip broad; style shortly bearded. ♄. G. Native of New Spain, near Santa Rosa, Moran, and Pachucan. Leaves 3-4 lines long. Corolla reddish, purple, or scarlet.

Small-leaved Sage. Shrub 1 foot.

220 S. subrotu'nda (St. Hil. mss. ex. Benth. lab. p. 290.) herbaceous, erect; branches glabrous; leaves petiolate, broad-ovate, roundish, bluntish, crenately serrated, rounded or truncate at the base, green and glabrous on both surfaces; racemes elongated, simple; whorls loose, 2-6-flowered; flowers pedicellate; calyx tubularly campanulate, pubescent, coloured at top; corolla more than twice as long as the calyx: tube exserted, widened: middle segment of lower lip very broad; genitals exserted; style glabrous. ♃. ? S. Native of Brazil. Nearly allied to *S. coccínea*.

Roundish-leaved Sage. Pl. 1 to 2 feet?

221 S. coccínea (Lin. mant. p. 88.) stem herbaceous, erect, clothed with hoary pubescence; leaves petiolate, ovate, acute, crenated, cordate at the base, pubescent above, and clothed with hoary tomentum beneath; floral leaves ovate, acuminated, deciduous; racemes simple; whorls 6-10-flowered, remote; calyx tubularly campanulate, striated, pubescent, having the upper lip entire, and the teeth of the lower lip acute; corolla glabrous, twice as long as the calyx: tube exserted, widened at top: upper lip short: middle segment of the lower lip broad, emarginate. ♃. S. Native of Florida, Georgia, Mexico, Cuba, Jamaica, Brazil, in the province of Goyaz; East Indies, on the banks of the Ganges, and about Madras, but probably escaped from gardens. Murr. comm. gœtt. 1778. p. 86. t. 1. S. rósea, Vahl. enum. 1. p. 244. S. glaucéscens, Pohl. pl. bras. 2. p. 136. t. 192. Horminum coccíneum, Mœnch. Stem branched, hoary, sometimes hispid at the base from pili. Leaves 1-2 inches long, very soft beneath: floral ones shorter than the calyxes. Calyx often purplish. Corolla scarlet.

Scarlet-flowered Sage. Fl. April, Oct. Clt. 1772. Pl. 1 to 3 feet.

222 S. pseudo-coccí'nea (Jacq. coll. 2. p. 302. icon. rar. p. 22. t. 209.) stem herbaceous, erect, hispid from long spreading hairs; leaves petiolate, ovate, acute, crenated, rounded or subcuneated at the base, pubescent above, and clothed with hoary tomentose pubescence beneath; floral leaves ovate, acuminated, deciduous; racemes simple; whorls 6-10-flowered, remote; calyx tubular, striated, pubescent, having the upper lip entire, and the teeth of the lower lip acute; corolla pubescent outside, twice as long as the calyx: tube exserted, equal: middle lobe of lower lip very broad, emarginate; style exserted, glabrous. ♃. S. Native of tropical America in New Andalusia, on the

declivity of Mount Tumiriquiri; also of Caraccas, and Trinidad. Bot. mag. 2864. This species differs from *S. coccinea*, in being taller, beset with long hairs, not with hoary tomentum; and in the leaves being rounded at the base, not cordate, &c. Corollas scarlet.

False-scarlet Sage. Fl. June, Aug. Clt. 1797. Pl. 2 to 3 feet.

223 S. PHŒNÍCEA (H. B. et Kunth, nov. gen. amer. 291.) stems shrubby, erect, and are, as well as the branches, muricately hispid; leaves ovate, acute, subcordate, serrated, glabrous; racemes terminal; whorls many-flowered, distant; calyx tubular, hispidly glandular, having the upper lip entire and acute, and the segments of the lower lip acuminated; corolla downy outside, twice as long as the calyx: middle segment of lower lip large, emarginately 2-lobed; stamens much exserted. ♄. S. Native of Quito, at the roots of the mountains of Colopaxi and El Corazon, between Mulalo and Tambillo. Leaves pilose on the middle nerve, above 1½ inch long, strong-scented. Peduncles purplish, glandularly pilose, as well as the floral leaves. Corolla blood-coloured. A plant intermediate between *S. pseudo-coccinea* and *S. pulchélla*. Leaves quite glabrous. Allied to *S. glumácea*, yet the flowers are very different.

Crimson-flowered Sage. Shrub 3 to 4 feet.

224 S. LINEA'TA (Benth. lab. p. 724.) branches bifariously pubescent; leaves petiolate, ovate, obtuse, crenated, truncate at the base, green on both surfaces, and clothed with fine pubescence; floral leaves broad-ovate, deciduous; racemes simple; whorls 4-6-flowered; calyx tubularly-campanulate, green, pubescent, having the upper lip entire, and the teeth of the lower lip ovate, scarcely acuminated; corolla twice as long as the calyx: tube exserted, ventricose: throat contracted; upper lip villous; stamens enclosed; style plumose. ♄. ? S. Native of Mexico, Karwinski. Leaves almost like those of *S. Grahàmi*. Corollas form of those of *S. fúlgens*, but smaller. Floral leaves imbricate before florescence, pubescent, ciliated. Leaves crenated.

Lined-leaved Sage. Shrub.

225 S. PULCHE'LLA (D. C. cat. hort. monsp. p. 142. Benth. lab. p. 291.) stem shrubby; branches pubescent; leaves petiolate, ovate, narrowed at apex, bluntish, crenated, broad and cordate at the base, membranous, wrinkled a little, nearly glabrous; floral leaves membranaceous, acuminated, deciduous; racemes simple; whorls about 10-flowered; calyx tubular, striated, finely-pubescent, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla twice or thrice as long as the calyx, glabrous outside: tube much exserted, bidentate inside at the base: middle segment of the lower lip broad-roundish, shortly-emarginate; style shortly-bearded above. ♄. G. Native of Mexico. S. dolióstachys *Lag.* Colla, hort. vip. p. 125. t. 16. Allied to *S. fúlgens*, but differs in the thinner nearly glabrous leaves, and more glabrous stem, and shorter glabrous corollas, &c. Corollas scarlet.

Pretty Sage. Fl. Oct. Feb. Clt. 1821. Shrub 2 feet.

226 S. VE'RNANS (Cav. icon. 1. p. 15. t. 23.) stem shrubby; branches pilosely-hairy; leaves petiolate, ovate, acute, crenately-serrated, cordate at the base, pubescent above, clothed with white tomentum or wool beneath; floral leaves sessile, ovate, acuminated, deciduous; whorls 6-flowered; calyxes longer than their pedicels, tubularly-campanulate, pubescent, having the upper lip entire, and the teeth of the lower lip ovate, shortly and bluntly-acuminated; corolla twice as long as the calyx: tube exserted, ventricose, bidentate inside at the base: throat contracted: upper lip villous outside; stamens enclosed; style plumose, hardly exserted. ♄. G. Native of Mexico, on the mountains. Sweet, fl. gard. n. s. 1. t. 59. Bot. reg. t. 1356. S. cardinàlis. H. B. et Kunth, nov. gen. amer. 2. p. 301. t. 151. S. splèndens Nova, Lond. gard. mag. 5. p. 577. f. 116. Leaves variable in hairiness, and size from 1 to 3 inches long: floral leaves usually coloured, deciduous. Corollas showy, scarlet, 2 inches long: upper lip a little longer than the lower one.

Fulgent Sage. Fl. May, Oct. Clt. 1829. Shrub 2 to 5 feet.

227 S. AYAVACE'NSIS (H. B. et Kunth, nov. gen. amer. 2. p. 298.) stem shrubby, erect, and is, as well as the branches, beset with yellow hairs; leaves petiolate, ovate, acute, cordate, crenated, pilose beneath; spikes terminal, sessile; whorls 6-8 flowered, distant; calyx tubular, striated, glandularly pilose, having the upper lip, and the teeth of the lower lip, subulately acuminated. ♄. S. Native of Peru, in temperate places between Ayavaca and the river Cutaco. Leaves 2 to 2½ inches long. Rachis and pedicels hairy. Corolla purple, ex Bonpl. Allied to *S. rubéscens* and *S. squàlens*, but differs in the corolla being blue.

Ayavaca Sage. Shrub 4 to 6 feet.

228 S. ACUMINA'TA (Ruiz, et Pav. fl. per. 1. p. 24. t. 37. f. b.) stem suffruticose, erect, villous; leaves petiolate, ovate, acuminated, crenately-serrated, cordate at the base, wrinkled, rather hispid above, and of the same colour beneath, pubescent on the nerves: floral leaves about equal in length to the calyxes, ovate-oblong, obtuse, membranous, ciliated, deciduous; racemes almost simple; whorls about 6-flowered, remote; flowers pedicellate; calyx tubular, striated, pubescent, having the upper lip entire, and the teeth of the lower one lanceolate and a little incurved; corolla twice as long as the calyx: tube exserted, a little incurved: lips nearly equal. ♄. S. Native of Peru, in Pillao and Canta. Floral leaves glumaceous, flesh coloured. Calyx almost an inch long. Corolla flesh coloured.

Acuminated-leaved Sage. Shrub 5 to 6 feet.

229. S. LONGIFLO'RA (Ruiz, et Pav. fl. per. 1. p. 23. t. 10. f. a.) stem shrubby, erect, villous, clammy; leaves petiolate, ovate, acuminated, serrated, cordate at the base, pubescently-hairy, clothed with white tomentum beneath; floral leaves ovate, acute, coloured, deciduous; raceme simple; whorls few-flowered, distant; calyx ovate, inflated, coloured, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla very long, five times longer than the calyx, hairy outside: tube ample, much exserted: lips nearly equal; style glabrous. ♄. S. Native of Peru in Tarma at Huichay. Shrub much branched. Leaves ample. Racemes elongated, nutant. Corolla 5 inches long, showy, colour of wool.

Long-flowered Sage. Shrub 10 to 15 feet.

* * * * CÆRU'LEÆ. *Corollas blue, or bluish-violet.*

230 S. RUBICUNDÒLIA (H. B. et Kunth, nov. gen. amer. 2. p. 305.) stem shrubby, erect, and is, as well as the branches, pubescently-hairy; leaves petiolate, oblong, hastate, bluntish, crenated, clothed with hoary tomentose wool beneath; panicles terminal; whorls 2-flowered, remote; calyx clothed with glandular hairs, campanulate, striated, having the upper lip entire and acute, and the teeth of the lower lip acutish. ♄. S. Native near the city of Quito, at the foot of Mount Javirac. Leaves wrinkled and pilose above, 4 inches long and 2½ broad. Peduncles, and branches of panicle beset with glandular hairs. Corolla unknown. A beautiful species, intermediate between sections *Brachyánthæ* and *Longiflòræ*.

Dock-leaved Sage. Shrub 4 to 5 feet.

231 S. PETIOLA'RIS (H. B. et Kunth, nov. gen. amer. 2. p. 304.) stems herbaceous, erect, branched, pubescent; leaves on very long petioles, deltoid, cordately-hastate, bluntish, irregularly crenate-serrated, hairy; spikes terminal, on long peduncles, usually by threes; whorls 2-flowered, distant; calyx clothed with glandular hairs, campanulate, having the upper lip tridentate, and the lower one bifid, with acuminated segments.

4. S. Native of tropical America, on the banks of the river Magdalena. Leaves 3 inches long. Corolla blue, pubescent.

Petiolate-leaved Sage. Pl. 1½ foot.

232 S. sagitta'ta (Ruiz, et Pav. fl. per. 1. p. 23. t. 35. f. a.) stem herbaceous, erect, villous; leaves petiolate, triangularly sagittate, acute, crenately serrated, much wrinkled, clothed with soft villi; floral leaves ovate, acuminated, deciduous; racemes elongated, branched; whorls remote, 2-6-flowered; flowers pedicellate; calyx ovate, villous, having the upper lip broad-ovate, obtuse, or tridentate, and the teeth of the lower lip acutish; corolla 4 times longer than the calyx: tube exserted, rather inflated beneath: middle lobe of lower lip emarginate; style glabrous. 4. S. Native of Peru, plentiful in gardens, and in waste places of Tarma and Huanuco, and at Olrajillo; and of New Granada, on Mount Quindiu. Stem much branched at bottom. Branches villous, and glandularly pubescent. Leaves 2-3 inches long. Calyx purplish-violet. Corolla pale blue, downy outside. The vernacular name of this species in Peru is *Salvia Real*, where the plant is used as a substitute for common sage.

Sagittate-leaved Sage. Pl. 4 to 6 feet.

233 S. vitifo'lia (Benth. lab. p. 724.) stem herbaceous, erect, villous; leaves petiolate, broadly deltoid, angularly lobed, truncate at the base, or broadly and sagittately cordate, thick, villously hairy, and green on both surfaces, or rufescent beneath; floral leaves ovate-lanceolate, acuminated, deciduous; racemes elongated, branched; whorls remote, 2-6-flowered; flowers pedicellate; calyx ovate-campanulate, villous, having the upper lip somewhat tridentate, and the teeth of the lower lip acuminated; corolla 3-4 times longer than the calyx: tube a little exserted, ventricose: limb gaping: upper lip falcate; style glabrous. 4. S. Native of Mexico, on Mount San Felipe, near Oaxaca. Habit of *S. petiolaris*, *S. sagittata*, and *S. macrophylla*, but differs in the form of the leaves. Corollas blue, almost like those of *S. petiolaris*.

Vine-leaved Sage. Pl. ?

234 S. macrophy'lla (Benth. lab. p. 725.) stem herbaceous, erect, pilosely hispid; leaves on long petioles, ample, ovate, cordate: upper ones hastate, a little wrinkled, green on both surfaces, hispid; floral leaves ovate, deciduous; racemes elongated, branched, clammy; whorls remote, 2-6-flowered; flowers pedicellate; calyx campanulate, at length elongated, villous, having the upper lip very shortly tridentate, and the lower one bifid: the teeth all ovate, acute; corolla about 4 times as long as the calyx: tube exserted, widened: lips nearly equal; style glabrous. 4. S. Native of Peru, in the valley of Huanuco. Allied to *S. sagittata*; but differs in the taller stature, in the larger broader leaves, with the auricles rounded at the base.

Long-leaved Sage. Pl. 5 to 6 feet.

235 S. scutellarioi'des (H. B. et Kunth, nov. gen. amer. 2. p. 303. t. 158.) plant herbaceous; branches pilosely pubescent, or nearly glabrous; leaves petiolate, ovate, deltoid, acutish, crenately-serrated, cordately hastate at the base, hairy on both surfaces; floral leaves ovate, deciduous; racemes nearly simple, elongated; whorls distant, generally 2-flowered; calyx campanulate, clothed with clammy villi, having the upper lip shortly trilentate, and the lower lip bifid: teeth all acute; corolla 3 times longer than the calyx: tube much exserted, ventricose: middle segment of the lower lip emarginate; genitals much exserted. 4. S. Native of tropical America, as of the province of Quito, near Chillo; and in humid sandy places near Santa Fe de Bogota. Stems procumbent at the base. Branches a foot long, nearly naked in the upper part. Leaves 1½ inch long, and nearly the same in breadth. Corolla an inch long, blue, pubescent outside. Form of calyx and lower lip of corolla almost as in section *Brachyánthæ*.

Skullcap-like Sage. Pl. 1 foot.

236 S. pa'tens (Cav. icon. 5. p. 33. t. 454.) stem herbaceous, erect, pilose; leaves petiolate, ovate-deltoid, crenated, hastate at the base, or the upper ones are rounded, hispid on both surfaces; floral leaves lanceolate-linear; whorls few, remote; flowers large; calyx campanulate, villous, having the upper lip very shortly tricuspidate, and the lower lip bifid: teeth acuminated; corolla about 3 times as long as the calyx: throat widened; stamens much exserted; style very long, glabrous. 4.? G. Native of Mexico, near Tlalpuxahua, Guanaxuato, and Santa Rosa, and near Real del Monte. S. grandiflòra, Nee, ex Cav. S. spectàbilis, H. B. et Kunth, nov. gen. amer. 2. p. 304. Stems nearly simple. Lower leaves petiolate: upper ones nearly sessile, paler beneath: floral leaves quite entire, clothed with glandular villi. Corolla blue, more than 2 inches long, pubescent outside; middle lobe of lower lip very broad, emarginate.

Spreading Sage. Pl. 1 to 2 feet.

237 S. longi'styla (Benth. lab. p. 295.) stem herbaceous? erect, clothed with tomentose villi; leaves petiolate, broad, ovate, acuminated, crenated, amply cordate at the base, wrinkled, clothed with soft pubescent villi on both surfaces: superior ones sessile; floral leaves ovate, long-acuminated, ciliated, deciduous: uppermost ones rather connate; whorls 6-10-flowered; calyx elongated, tubular, striated at the base, clothed with soft pubescence, having the upper lip entire, and the teeth of the lower lip very short, and setaceously acuminated; corolla hardly twice as long as the calyx: tube equal: middle lobe of lower lip bifid; genitals exserted; style glabrous, the upper lobe very long and subulate. 4.? G. Native of Mexico, near Zinapecuaro, Graham. Corolla blue, a little incurved.

Long-styled Sage. Pl. ?

238 S. amethy'stina (Smith, icon. ined. 2. p. 27. t. 27.) shrubby; branches clothed with white villi; leaves petiolate, ovate, acute, deeply cordate at the base, with rounded auricles, wrinkled, pubescent above, but clothed with hoary or white tomentum beneath; floral leaves lanceolate, deciduous; racemes elongated, simple; whorls loose, 6-flowered, remote; calyx tubularly campanulate, villous outside, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla about twice as long as the calyx: tube exserted, ventricose: lips nearly equal: middle lobe of lower lip almost entire; genitals inclosed; style bearded. h. S. Native of tropical America, on the Andes of Quindiu, &c. Leaves 2 to 3½ inches long, serrated. Corollas form of those of *S. fúlgens*, or *S. Mexicàna*, but blue, and 1 inch long. Leaves similar to those of *S. fúlgens*.

Amethyst-flowered Sage. Fl. Aug. Sept. Clt. 1817. Shrub 2 to 4 feet.

239 S. Karwi'nski (Benth. lab. p. 725.) stem shrubby?; branches clothed with rufous wool; leaves petiolate, ovate, acuminated, crenated, rounded at the base, rather wrinkled above, and roughish, and clothed with rufous wool beneath; floral leaves deciduous; whorls many-flowered; calyx ample, tubular, clothed with glandular villi, having the upper lip entire, and the teeth of the lower lip very short, long-acuminated; corolla twice as long as the calyx; genitals equalling the corolla; style glabrous. h.? G. Native of Mexico, Karwinski. Allied to *S. longistyla* and *S. amethystina*. Habit of *S. Hæ'nkei*, but the corolla is blue.

Karwinski's Sage. Shrub.

240 S. cya'nea (Benth. lab. p. 296. but not of Fisch.) stem shrubby; branches clothed with hoary pubescence; leaves petiolate, ovate, acuminated, serrately crenated, cordate at the base, pubescent on both surfaces; floral leaves ovate, acuminated, membranous, deciduous; racemes simple; whorls loosely

6-10-flowered, rather secund; calyx tubular, clothed with rufous villi: upper lip very short, tricuspidate, and the teeth of the lower lip lanceolate-acute; corolla about 3 times as long as the calyx: tube exserted, ventricose above: lips nearly equal: style bearded. ♄. G. Native of New Spain, Moçino et Sessé. Allied to *S. amethystina*; but differs in the more acuminated leaves, and particularly in the slenderer calyxes being clothed with rufous villi, and in the tricuspidate upper lip.

Azure-flowered Sage. Shrub.

241 S. Mexica'na (Lin. spec. p. 37.) stem shrubby, erect, tomentose; leaves petiolate, ovate or oblong, narrowed at both ends, crenately serrated, pubescently tomentose; floral leaves ovate, acute, deciduous, scarcely longer than the pedicels; whorls 6-20-flowered; calyx tubular, with ciliated nerves, having the upper lip entire, and the teeth of the lower lip ovate, acute, and mutic; corolla twice as long as the calyx: tube inflated at the middle, contracted under the throat: lips nearly equal; upper lip pubescent: middle lobe of lower lip smaller than the lateral ones, roundish, emarginate; style bearded, with subulate unequal lobes. ♄. S. Native of Mexico, near Pazcuaro, and near the city of Mexico. Cav. icon. 1. p. 16. t. 26. S. melissæfòlia, Desf. cat. hort. par. Sclàrea Mexicàna, Dill. hort. elth. 339. t. 254. f. 330. Mill. dict. no. 14. Júngia altíssima, Mœnch. meth. Leaves 2-3 inches long. Corolla blue; tube oblong, bidentate inside.

Var. β, màjor (Benth. lab. p. 297.) younger leaves more densely and velvety tomentose. ♄. S. S. papilionàcea, Cav. icon. 4. p. 9. t. 319. S. nitidifòlia, Ortega, dec. p. 9. This is a large handsome plant. The wings of the corolla figured by Cavanilles, must be the side lobes of the lower lip split up by accident, ex Benth.

Mexican Sage. Fl. May, July. Clt. 1724. Shrub 4 to 6 feet.

242 S. glabra'ta (H. B. et Kunth, nov. gen. amer. 2. p. 299.) shrubby? glabrous; leaves petiolate, ovate, acuminated, serrately crenated, cordate at the base, green on both surfaces, glabrous; floral leaves small, deciduous; racemes elongated, simple; whorls loose, 6-10-flowered; flowers on long pedicels; calyx tubularly campanulate, nearly glabrous, having the upper lip entire, and the teeth of the lower lip subulately acuminated; corolla more than twice as long as the calyx: tube much exserted, ventricose: lips rather short: upper lip villous: middle lobe of lower lip very broad; style bearded. ♄. S. Native of Mexico, Karwinski; and of New Spain, at the monastery of Caripe, and the village of Coccollar. Larger leaves 2-4 inches long. Corolla violaceous, an inch long. Stamens inclosed. Style a little exserted.

Glabrous Sage. Shrub.

243 S. cóncolor (Lamb. herb. ex Benth. lab. p. 297.) stem shrubby?; branches glabrous; leaves petiolate, ovate, acuminated, serrated, truncate at the base, glabrous; floral leaves deciduous; racemes elongated, simple; whorls remote, many-flowered; flowers on long pedicels; calyx tubular, striated, villous, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla twice as long as the calyx, pubescent outside: tube slender, exserted, ventricose at top: lips nearly equal; style glabrous. ♄. S. Native of Mexico. This differs from *S. amethystina*, in the leaves being glabrous, truncate at the base, not cordate; in the long pedicels. Calyx bluish, villous; hairs usually glanduliferous. Corolla blue. Leaves same colour on both surfaces, sometimes pubescent in the young state.

Self-coloured-leaved Sage. Shrub. ?

244 S. caru'lea (Benth. lab. p. 298.) stem herbaceous? erect; branches glabrous, or spreadingly pilose; leaves petiolate, ovate, long-acuminated, truncate, rounded or subcordate at the base, glabrous; floral leaves deciduous; whorls 2-6-flowered, somewhat secund; calyx tubular, having the upper lip entire, and the teeth of the lower lip very short and bluntish; corolla about 3 times as long as the calyx: tube exserted, widened at top: lips nearly equal: upper lip pubescent outside; connective minutely toothed behind; style glabrous. ♃.? G. Native of the south of Brazil, Sello. Upper part of branches generally hispid from glanduliferous hairs. Leaves usually hispid from a few scattered hairs above, 4 inches long. Flowers on short pedicels. Calyxes green & bluish, pubescent. Corolla blue, 1½ to 4 inches long. Stamens equalling the lower lip.

Blue-flowered Sage. Pl. ?

245 S. tubiflòra (Cav. icon. 1. p. 16. t. 25.) stem herbaceous, nearly glabrous; leaves petiolate, broad-ovate, serrately crenated, roundedly truncate or subcuneated at the base, nearly glabrous above, or clothed with hoary pubescence beneath; floral leaves deciduous; racemes simple; whorls about 6-flowered, secund; flowers nearly sessile; calyx tubular, striated, nearly glabrous, having the upper lip entire, and the teeth of the lower lip ovate, acuminated; corolla 3-4 times as long as the calyx, glabrous outside, or pubescent: tube exserted, equal, a little incurved: lips short; style bearded. ♃.? S. Native of Mexico, Moçino et Sessé. S. longiflòra, Willd. spec. 1. p. 141. Stems purplish, glabrous or pubescent on the angles. Corolla violaceous, 12-15 lines long. Stamens a little exserted.

Tube-flowered Sage. Fl. June, July. Clt. 1820. Pl. 2 to 3 feet.

246 S. Guaraní'tica (St. Hil. mss. ex Benth. lab. p. 298.) shrubby; branches beset with spreading hairs; leaves petiolate, ovate, acute, serrated, truncately cordate at the base, much wrinkled, hispid, clothed with rather hoary tomentum beneath; racemes numerous, simple, secund; whorls few-flowered, loose, approximate; calyx tubular, nearly glabrous, having the upper lip entire, and the teeth of the lower lip ovate, acute; corolla about 3 times as long as the calyx: tube much exserted; lips elongated, equal; stamens shorter than the corolla; style bearded beneath. ♄. S. Native of Brazil, among bushes near Santa Anjo, in the Missions of the Uruguay, St. Hilaire. This is a showy species. Leaves 1 to 1½ inch long. Corolla 15-16 lines long, deep blue. Calyx usually glabrous, sometimes hispid from glanduliferous hairs.

Guaranitic Sage. Shrub.

247 S. lamiifòlia (Jacq. achœnbr. 3. p. 37. t. 318.) stem shrubby, erect, nearly glabrous; leaves petiolate, ovate, acuminated, serrately crenated, rounded or cuneated at the base, glabrous; floral leaves membranous, ovate-lanceolate, deciduous; racemes elongated; whorls 6-10-flowered; flowers almost sessile; calyx tubular, having the upper lip entire, and the teeth of the lower lip acute; corolla scarcely twice as long as the calyx: tube nearly equal: upper lip villous outside; stamens equalling the corolla in length; style bearded. ♄. S. Native of the Islands of St. Vincent and Trinidad. S. Boosiàna, Jacq. fil. ecl. 1. p. 69. t. 47. S. Boòsii, Tratt. obs. bot. fasc. 3. p. 59. t. 92. S. byemàlis, Boose, ex Jacq. fil. l. c. S. cyánea, Fisch. cat. hort. gorenki. p. 21. S. thymiflòra, Willd. enum. suppl. p. 2. S. amœ'na, Sims, bot. mag. t. 1294. Andr. bot. rep. 6. t. 446. S. violàcea, Donn, hort. cantabr. ed. 4. S. latifòlia, Anders. in trans. soc. arts et man. vol. 25. p. 210. S. azùrea, and S. cærùlea, Hortul. Branches often pubescent while young. Leaves 3-4 inches long. Corolla blue.

Dead-nettle-leaved Sage. Fl. March, April. Clt. 1821. Shrub 2 to 4 feet.

248 S. apf'nis (Cham. et Schlecht, in Linnæa, 5. p. 99.) stem shrubby; branches glabrous; leaves petiolate, ovate, acuminated, serrately crenated, rounded at the base, glabrous or

finely pubescent; floral leaves ovate, membranaceous, deciduous; racemes elongated, nearly simple, many-flowered; whorls somewhat approximate, 6-10-flowered, secund; flowers pedicellate; calyx tubular, pubescent, having the upper lip entire, and the teeth of the lower lip subulately acuminated; corolla about 3 times as long as the calyx: tube exserted, equal, slender: lips nearly equal; genitals exserted; style glabrous. ½. S. Native of Mexico, near Jalapa, Schiede et Deppe; and of the Cordillera de Guchilapa, Berlandier. Corollas pale violet.

Allied Sage. Shrub.

249 S. purpu'rea (Cav. icon. 2. p. 52. t. 166.) stem herbaceous, erect, nearly glabrous; leaves petiolate, ovate, acuminated, serrated, rounded or cordate at the base, glabrous or clothed with fine hoary pubescence; floral leaves small, ovate, acuminated, deciduous; racemes dense, branched; whorls many-flowered, approximate, secund; calyx tubular, clothed with white or purple wool, having the upper lip entire, and the teeth of the lower lip subulately mucronate; corolla about 3 times as long as the calyx: tube exserted, incurved: upper lip pubescent; style bearded on all sides. ♃. S. Native of Mexico. Jacq. schœnbr. 3. p. 2. t. 253. Habit of *S. polystachya*; but differs in the stem being more glabrous; in the flowers being secund, densely woolly; and in the corolla being twice as long, tubular, and of a reddish purple colour.

Purple-flowered Sage. Fl. May, July. Clt. 1825. Pl. 2 to 3 feet.

† *Species doubtful whether belonging to the present section.*

250 S. cupheæfo'lia (H. B. et Kunth. nov. gen. amer. 2. p. 288.) stem herbaceous, bifariously pilose; leaves petiolate, ovate-elliptic, bluntish, acute at the base, crenated, glabrous, with hairy margins; whorls 2-flowered, very remote; calyxes glabrous, ciliated, tubular, striated, having the upper lip ovate, entire, acute, and the teeth of the lower lip acute. ♃. S. Native of Peru, in woods. Stem branched. Leaves 6-9 lines long. Pedicels hairy. Bracteas ovate-lanceolate, acuminated, glabrous, with ciliated margins, deciduous. This species ought probably to be placed in section *Longiflòræ Aurantiacæ*.

Cuphea-leaved Sage. Pl. 1½ foot.

251 S. ru'fula (H. B. et Kunth, l. c. p. 291.) stem suffruticose, erect, clothed with rufous tomentum; leaves ovate, acuminated, narrowed at the base, petiolate, serrated, clothed with rufous pubescence beneath; whorls about 6-flowered, distant; calyx rather pilose, having the upper lip entire and acute, and the lower one bifid; genitals inclosed. ½. S. Native of New Granada, on the Andes of Quindiu, near Los Gallegos. Leaves rather hairy above, 2-3 inches long. Bracteas ovate, acuminately subulate, pubescent, ciliated. Corolla purple: upper lip pubescent.

Rufous Sage. Shrub 2 to 3 feet.

252 S. Tolime'nsis (H. B. et Kunth, l. c. p. 292.) stem shrubby, erect, clothed with rufous pubescence; leaves ovate-lanceolate, acute at both ends, petiolate, densely pubescent beneath; whorls about 6-flowered, distant; calyx hairy, having the upper lip ovate, entire, acute, and the lower lip bifid; stamens inclosed. ½. S. Native on Mount Quindiu, between Ibague and Tolima. Leaves nearly glabrous above, but beset with short scattered hairs beneath, 2-3 inches long. Bracteas ovate, acute, serrulated, pubescent beneath. Upper lip of corolla pubescent outside.

Tolima Sage. Shrub 3 to 4 feet.

253 S. bi'color (H. B. et Kunth, l. c. p. 146.) stem shrubby, erect, clothed with hoary tomentum; young branches clammy; leaves petiolate, ovate-lanceolate, acutish, rounded at the base, quite entire, glabrous above, and clothed with white tomentum beneath; whorls about 8-flowered, distant; bracteas caducous; calyx clothed with white tomentum, campanulate, striated, having the upper lip ovate, acute, and the teeth of the lower lip short, acute; corolla twice as long as the calyx: middle segment of the lower lip 2-lobed; stamens inclosed. ½. S. Native of the Andes of Peru, in shady places along the valley of the river Guamcabamba. Leaves 2 inches long. Corolla violaceous. This is a very distinct species, and ought probably to be placed in section *Longiflòræ Cærùleæ*.

Two-coloured-leaved Sage. Shrub 2 to 3 feet.

254 S. acutifo'lia (Ruiz, et Pav. fl. per. 1. p. 24. t. 38. f. b.) shrubby, branched; branches tomentose; leaves petiolate, cordate, acute, bluntly and unequally serrated, wrinkled above, and tomentose, and very veiny beneath; whorls 6-12-flowered, approximate; flowers on short pedicels, secund; bracteas ovate-lanceolate, acute, keeled, deciduous, tomentose; calyx tomentose, having the upper lip entire, and the lower one bifid; corolla twice as long as the calyx; stamens length of corolla; stigma villous, exserted. ½. S. Native of Peru, plentiful in meadows and humid places in Cheuchin, where it is called *Succhonca* by the natives.

Acute-leaved Sage. Shrub 4 to 5 feet.

255 S. paucifl'ora (H. B. et Kunth, nov. gen. amer. 2. p. 303.) stems shrubby, erect, and are, as well as the branches, hairy; leaves petiolate, ovate, obtuse, cordate, crenated, clothed with fine white tomentum beneath; whorls 2-flowered, distant; calyx pubescent, tubular, striated, having the upper lip acute, and the segments of the lower lip acuminated; genitals exserted. ½. S. Native of New Spain, in hot places. Branches purplish. Leaves pubescent above, 1 inch long. Bracteas oblong, shorter than the calyxes, deciduous. Corolla purple, with a hairy upper lip.

Few-flowered Sage. Shrub 1 to 2 feet.

Sect. IX. Echino'sphace (from εχινος, *echinos*, a hedge-hog; and σφακος, *sphakos*, sage; so called in reference to the spiny floral leaves and bracteas.) Benth. lab. p. 302. Floral leaves and bracteas imbricate, spinose. Calyx ovate: upper lip tridentate: lower lip shorter, bifid: teeth all spinose. Tube of corolla furnished with a ring of hairs inside; upper lip straight, emarginately bifid: lateral lobes of lower lip small, and the middle lobe large, and lacerately fringed. Connective fixed by the middle, remote, stretched out behind, and bearing a polliniferous cell, nearly similar to the other.—A Californian herb. Flowers heaped in many-flowered dense whorls, propped by bracteas.

256 S. cardua'cea (Benth. lab. p. 302.) stem herbaceous, erect, almost simple, clothed with white wool; leaves petiolate, oblong, pinnatifid, clothed with loose wool beneath: lobes ovate, sinuately toothed: teeth spinosely acuminated; whorls remote, densely many-flowered; calyx inflated, woolly; tube of corolla almost inclosed; connective free behind, and bearing an almost empty cell. ♃.? H. Native of California, Douglas. Habit of *Morìna Pérsica*, or a species of *Cárduus*.

Thistle-like Sage. Pl. 1 to 2 feet.

Sect. X. Pychno'sphace (so called from πυκνος, *pychnos*, dense; and σφακος, *sphakos*, sage; in reference to the dense whorls of flowers.) Benth. lab. p. 302. Floral leaves and bracteas imbricate, mutic. Calyx ovate; upper lip tridentate; lower lip bifid: teeth all subulate. Tube of corolla furnished with a ring of hairs inside; upper lip straight: middle lobe of the lower lip entire or emarginate. Connective fixed by the middle, remote, and extended behind, bearing a

polliniferous, almost conform cell.—A Californian herb. Whorls densely many-flowered.

257 S. columba'ria (Benth. lab. p. 302.) herbaceous, erect, a little branched; leaves deeply pinnatifid, wrinkled, almost glabrous: lobes oblong-linear, obtuse, erosely toothed or cut: terminal lobe hardly broader than the rest; floral leaves bracteaformed; whorls solitary or twin, hemispherical, densely many-flowered; bracteas broad, ovate, acuminated, membranous; calyx pubescent: upper lip elongated, concave; tube of corolla inclosed: middle lobe of lower lip crenulated; connective bearing an empty cell behind. ♃.? H. Native of California, Douglas. Habit of *Scabiòsa columbària*. Stems pubescent. Corollas a little longer than the calyxes, bluish, size of those of *S. Nilótica*.

Pigeon Sage. Pl. ½ to 1 foot.

† *A species doubtful whether belonging to sect.* X.

258 S. Leònia (Benth. lab. p. 303.) herbaceous, pubescent, branched; leaves cordate, crenated, wrinkled, petiolate; whorls 5-6-flowered, propped by sessile, ovate, acuminated bracteas; flowers pedicellate; calyx with a truncate tridentate upper lip, and a bidentate lower lip; upper lip of corolla keeled, erect, shorter than the lower lip: middle lobe of lower lip larger, emarginate; stigma trifid? the lower segments the longest; stamens 2-forked at top, with an anther on each division. ♃. G. Native of Mexico, at Chignagua, in Santa Rosa. Leònia salvifòlia, Llave ex Lexarza, nov. pl. mex. fasc. 2. p. 6.

Leon Sage. Pl. 1 foot.

Sect. XI. Heterosphace (from ἕτερος, *heteros*, variable; and σφακος, *sphakos*, sage.) Benth. in Hook. bot. misc. vol. 3. lab. p. 303. Floral leaves deciduous. Calyx tubular: upper lip truncate, tridentate. Tube of corolla furnished with a pilose ring inside: upper lip short, straight; lateral lobes of the lower lip small, spreading a little. Connective fixed by the middle, reniform, and extended behind, bearing a polliniferous, almost conform cell.—Herbs, natives of the Mediterranean, Africa, Asia, and North America. Flowers racemose; whorls loose, few-flowered. Calyxes often coloured.

259 S. Nilótica (Vahl, enum. 1. p. 238.) stem herbaceous, erect, villous; lower leaves petiolate, ovate, crenated, crose or lyrate, rather narrowed at the base: upper ones broad, heart-shaped, nearly sessile, all green on both surfaces, and villous; floral leaves ovate-lanceolate, very acute, rather shorter than the calyxes; racemes short, branched; whorls 6-10-flowered, distinct; calyx ovate-campanulate, pubescent: teeth of lower lip lanceolate, very acute; corolla half as long again as the calyx: tube nearly equal, naked inside: middle lobe of lower lip emarginate; connective bearing an empty cell behind. ♃. H. Native of Egypt. Murr. comm. gœtt. 1778. p. 98. t. 2. Jacq. hort. vind. 3. p. 48. t. 92. S. intermèdia, Schultes, obs. bot. 9. S. napœfòlia, of many authors, but not of Jacq. S. Abyssínica, Jacq. icon. rar. 1. p. 2. t. 6, but not of Lin., but probably of Lin. fil. suppl. p. 81.? S. Núbia, Murr. comm. gœtt. 1770. p. 90. t. 3. Vahl, enum. 1. p. 259, and probably of Ait. S. applanàta, Willd. enum. suppl. 3. Horminum Nilóticum, Mœnch. meth. Horminum napifòlium, Mill. dict. no. 4.? Hairs of stem rather clammy. Floral leaves and calyxes bluish. Corollas pale blue.

Nile Sage. Fl. June, Aug. Clt. 1775. Pl. 2 to 3 feet.

260 S. sylvi'cola (Burch. cat. geogr. no. 6052.) stem herbaceous, ascending, villous; leaves on short petioles, broad-ovate, acute, toothed, cordate at the base, a little lobed, villous on both surfaces; floral leaves ovate, acuminated, shorter than the calyxes; racemes simple; whorls secund, loose, 6-flowered, distant; calyx tubularly campanulate, villous: teeth of lower lip lanceolate, all setaceously acuminated; corolla twice as long as the calyx: tube slender, exserted: upper lip, and middle lobe of lower lip emarginate. ♃.? S. Native of the Cape of Good Hope. Stems almost simple. Leaves furnished with one or two lobes on each side, canescent beneath. Corollas almost like those of *S. aurìta*, but one half smaller.

Wood Sage. Pl. 2 feet.

261 S. tenuifòlia (Burch. cat. geogr. no. 298.) stems herbaceous, erect, branched at the base, villous; leaves on long petioles, ovate-roundish, obtuse, toothed, or a little cut, subcordate, truncate or subhastate, or lobed at the base, villous on both surfaces; floral leaves rather shorter than the pedicels, ovate-lanceolate, acute; racemes simple; whorls subsecund, 2-6-flowered, remote; flowers pedicellate; calyx tubular, coloured, striated, pubescent; corolla about twice as long as the calyx: tube exserted, equal: upper lip very short: middle lobe of lower lip emarginate; connective bearing an empty cell behind. ♃.? G. Native of the Cape of Good Hope. Corolla blue. Genitals exserted. Herb small, leafy and branched at the base.

Thin-leaved Sage. Pl. ½ to 1 foot.

262 S. auri'ta (Thunb. prod. p. 96.) stem herbaceous, erect, villous; leaves petiolate, lyrately pinnatifid or pinnate, with erosely toothed segments, veiny beneath, and clothed with hoary pubescence; floral leaves minute, ovate, acute; racemes simple; whorls 6-10-flowered, distant, secund; calyx sessile, tubular, elongated, coloured, striated, pubescent: teeth of upper lip setaceous, of the lower lip lanceolate, very acute; corolla more than twice as long as the calyx: tube slender, much exserted, equal: upper lip very short: middle lobe of lower lip emarginate; connective bearing an empty cell behind. ♃. G. Native of the Cape of Good Hope. Stem nearly simple, erect or ascending. Calyxes bluish-purple at top. Corollas size and form of those of *S. lyràta*, but more slender.

Eared-leaved Sage. Fl. May, June. Clt. 1795. Pl. 1 to 2 feet.

263 S. sca'bra (Thunb. prod. p. 97.) stem herbaceous, erect, panicled, branched; leaves lyrately pinnatifid, wrinkled, scabrous, with erosely curled margins, veiny and canescent beneath; floral leaves minute, ovate-lanceolate; racemes elongated, a little branched; whorls 6-flowered, distant; calyx campanulate, pubescent: teeth of upper lip setaceous, of the lower lip lanceolate, acute; corolla twice as long as the calyx: tube nearly equal: middle lobe of lower lip emarginate; connective bearing an empty cell behind. ♃.? G. Native of the Cape of Good Hope. Stem stiff, scabrous, pubescent. Corolla blue, similar to those of *S. runcinàta*, but a little larger.

Scabrous Sage. Fl. April, Aug. Clt. 1774. Pl. 2 feet.

264 S. runcina'ta (Lin. mant. 80.) stem herbaceous, erect, panicled, branched; leaves runcinately pinnatifid, wrinkled, rather hispid above: lobes deeply crenated: terminal lobe the largest; floral leaves minute, ovate-lanceolate, acute; racemes a little branched, few-flowered; whorls 2-6-flowered, remote; calyx ovate, pubescent: teeth of upper lip minute, setaceous, and of the lower one lanceolate-acute; corolla twice as long as the calyx: tube nearly equal: middle lobe of lower lip emarginate; connective bearing an empty cell behind. ♃.? G. Native of the Cape of Good Hope. Jacq. hort. schœnbr. 1. p. 5. t. 8. S. eròsa, Desf. cat. hort. par. p. 68. Poir. suppl. 5. p. 49. Herb usually clothed with hoary pubescence. Corollas blue. Genitals a little exserted.

Runcinate-leaved Sage. Fl. April, Sept. Clt. 1774. Pl. 1 to 2 feet.

265 S. stenophy'lla (Burch. cat. geogr. no. 1881.) plant herbaceous, erect, nearly glabrous; leaves petiolate, oblong-lanceolate or linear, runcinately-sub-pinnatifid, wrinkled: floral leaves minute, ovate-lanceolate, acute; racemes a little branched; whorls about 6-flowered, remote; calyx ovate, glabrous: teeth of lower lip lanceolate, acutish, all mutic; corolla twice as long as the calyx: tube nearly equal, hardly exserted: lips short, nearly equal; connective bearing an empty cell behind. ♃. ? G. Native of the Cape of Good Hope. Allied to *S. runcinàta*, but is nearly glabrous, the stem taller and less branched, &c.

Narrow-leaved Sage. Pl. ?

266 S. re'pens (Burch. cat. geogr. no. 2830.) herbaceous, quite glabrous; stems creeping at the base, leafy; floriferous branches ascending, nearly naked; leaves nearly all radical, petiolate, elongated, runcinately pinnatifid, hardly wrinkled: floral leaves ovate-lanceolate, acute, shorter than the calyxes; racemes nearly simple; whorls somewhat secund, about 6-flowered, remote; calyx ovate, with the teeth of the lower lip lanceolate, all setaceously-acuminated. ♃. ? G. Native of the Cape of Good Hope. Leaves like those of *S. stenophylla*, but the flowers are a little larger.

Creeping Sage. Shrub. ?

267 S. lyra'ta (Lin. spec. p. 33.) stem herbaceous, erect, nearly simple, pilose; radical leaves lyrate, crosely-toothed, rather hispid on both surfaces; cauline leaves few, oblong-lanceolate, narrowed a long way at the base: floral leaves oblong-linear, rather shorter than the calyxes; racemes nearly simple; whorls 6-flowered, loose, distant: calyx tubularly-campanulate, nutant, pilose, with the teeth of the lower lip lanceolate, acute, of the upper one short and distant; corolla about three times as long as the calyx: tube much exserted, widened at top: middle lobe of lower lip very broad, emarginate: connective bearing an empty cell behind. ♃. H. Native of North America, in Philadelphia, Virginia, Carolina, and Georgia. Cunila lyràta, Schranck, in sylL pl. soc. ratisb. 2. p. 57. Horminum lyràtum, Mill. dict. no. 2. Horminum Virginicum, Lin. spec. p. 832.—Dill. elth. 219. t. 175. f. 216.—Mor. hist. 3. sect. 13. t. 27. Radical leaves 2-3 inches long. Flowers pedicellate. Calyxes coloured, ciliated with long spreading hairs. Corolla purplish, violet, 9-10 lines long.

Lyrate-leaved Sage. Fl. June, July. Clt. 1728. Pl. ½ to 1 foot.

268 S. obova'ta (Elliott, bot. carol. 1. p. 33.) stem herbaceous, erect, rather pilose; leaves broad-obovate, entire, sinuated, nearly glabrous, narrowed a long way at the base; floral leaves ovate, rather shorter than the calyxes; racemes nearly simple; whorls 6-flowered, dense, remote; calyx tubularly-campanulate, nutant, pilose: teeth of lower lip lanceolate, acute; corolla about three times longer than the calyx: tube much exserted, widened at top; connective bearing an empty cell behind. ♃. H. Native of Georgia, at the river Oakmulgee, and of New Orleans. Nearly allied to *S. lyràta*.

Obovate-leaved Sage. Pl. 1 foot.

269 S. acau'lis (Vahl, enum. 1. p. 257.) stem herbaceous, erect, nearly simple, pilose; leaves obovate, entire, sinuated, rather hispid on both surfaces, narrowed a long way at the base: floral leaves ovate, rather shorter than the calyxes; racemes almost simple; whorls 6-flowered, remote; calyx tubularly-campanulate, nutant, pilose, the teeth of the lower lip lanceolate, acute; corolla more than twice as long as the calyx: tube slender, much exserted, widened above; connective bearing an empty cell behind. ♃. ? G. Native of the East Indies, Rottler. *S. scymoides*, Roxb. et Benth. Wall. pl. rar. 1. p. 68. This species differs from *S. obovàta*, in the corollas being smaller and slenderer, and in the leaves being narrower. Perhaps not distinct from *S. obovàta*.

Stemless Sage. Pl. ½ foot?

270 S. Japónica (Thunb. jap. p. 22. t. 5.) stem herbaceous, erect, branched, glabrous; leaves petiolate, pinnate; leaflets ovate, acuminated, narrowed at the base, deeply-toothed, or pinnatifid, glabrous; floral leaves lanceolate, shorter than the calyxes; racemes almost simple; whorls about 6-flowered, distinct; calyx tubularly campanulate, glabrous, striated, having the upper lip entire, ovate, obtuse, and the teeth of the lower lip acute; corolla twice as long as the calyx: tube hardly exserted, equal: middle lobe of the lower lip emarginate; genitals exserted. ☉. H. Native of Japan. Corollas blue, size of those of *S. verticillàta*. Leaves 3-4 inches long. This is a very elegant annual species.

Japan Sage. Pl. 1 foot?

271 S. Chinénsis (Benth. lab. p. 725.) stem herbaceous, erect, pubescent; leaves petiolate, entire, or the lower ones ternate, broad-ovate, obtuse, crenated, truncate or cordate, pilose above, and glabrous beneath: floral leaves small, bractea-formed; racemes nearly simple; calyx tubularly-campanulate, striated, glabrous or hispid; corolla about twice as long as the calyx: tube hardly exserted, upper lip incurved, lower one spreading. ☉. H. Native of China, near Kia-nang, Sir G. Staunton. Herb fasciculately-branched. Leaves about an inch long. Calyx coloured. Corolla pubescent outside. Flowers similar to those of *S. Japónica*.

China Sage. Pl.

† *Species belonging to sect.* XI. *but are not well known.*

272 S. triangula'ris (Thunb. prod. p. 96.) plant hispidly villous; stem erect, branched; leaves petiolate, cordate, triangularly-spatulate, toothed; whorls remote; flowers pedicellate; calyx angular, awned, a little shorter than the corolla. ☉. ? H. Native of the Cape of Good Hope. Branches and branchlets divaricate. Leaves hardly an inch long. Petioles length of leaves. Easily distinguished from *S. aurita* by the petioles being without auricles, and by the stem being branched.

Triangular-leaved Sage. Pl. 2 feet.

273 S. obtusa'ta (Thunb. prod. p. 97.) villous; stem erectish, simple, or branched; leaves petiolate, ovate, deeply crenated, rarely sub-hastate, glabrous above, and pilose on the veins beneath, with ciliated edges; whorls 2-flowered; flowers pedicellate; calyxes narrow, scabrous, awned, about half the length of the corollas. ♃. ? G. Native of the Cape of Good Hope. Leaves hardly an inch long. Petioles ciliated.

Blunt-leaved Sage. Pl. 1 foot.

274 S. Clayto'nii (Elliott, bot. carol. 1. p. 32.) stem herbaceous, erect; leaves ovate and cordate, lanceolate, pinnatifid, wrinkled, pubescent on the veins and margins; segments toothed; floral leaves ovate-cordate, acuminated, toothed, pubescent: whorls 6-flowered; calyx sub-campanulate, hispid on the margins and veins: the teeth of the upper lip connivent, and the segments of the lower lip acuminated, mucronate. ♃. H. Native of South Carolina, in arid, sandy pastures about Beaufort, abundant. Root thick; almost tuberous. Anthers black. Connective antheriferous at both ends.

Clayton's Sage. Pl. 1 foot.

Sect. XII. Notio'space (from νοτιος, *notios*, humid, and σφακος, *sphakos*, sage; the species contained in this section are inhabitants of humid places.) Benth. in Hook. bot. misc. 3. p. 374. lab. p. 300. Floral leaves and bracteas minute. Calyx ovate, the upper lip entire or shortly tridentate, with the teeth connivent; lower lip bifid. Corolla small; tube inclosed; upper lip straight, lower lip spreading a little. Connective fixed by the middle, remote, and extended behind, bearing a conform fertile cell.

275 S. plebe'ia (R. Br. prod. p. 501.) stem herbaceous, erect, branched, pubescent; leaves petiolate, oblong, wrinkled; whorls loose, about 6-flowered, racemose; racemes fastigiately-panicled; calyxes campanulate, the upper lip quite entire, and the teeth of the lower lip obtuse; corolla hardly longer than the calyx, the upper lip arched; connective bearing an empty cell behind. ♃. ? G. Native of the East Indies in humid places; of Nipaul, Oude, Hindostan, and Silhet, Wall.; Deyra Dhoon, and the banks of the river Jumna, Royle; Cashmere, Jacquemont; China, Reeves; Tropical New Holland, R. Br. S. minutiflòra, Bunge, enum. pl. chin. p. 50. S. brachiàta, Roxb. hort. beng. 4. fl. ind. 1. p. 146. S. parviflòra, Roxb. hort. beng. 4.? Ocymum fastigiàtum, Roth, nov. spec. 277. Lumnitzera fastigiàta, Spreng. syst. 2. p. 687. Leaves 2-3 inches long. Corolla having the upper lip and the middle segment of the lower lip emarginate.

Plebeian Sage. Pl. 2 to 3 feet.

276 S. Ægyptia'ca (Lin. spec. p. 33.) stems procumbent, humble, much branched, clothed with hoary pubescence; cauline leaves small, remote, sessile, lanceolate-linear, acute, toothed, or the lower ones are oblong, narrowed into the petioles at the base; floral leaves minute; racemes elongated, a little branched; whorls remote, usually 2-flowered; calyx ovate, pubescent, having the upper lip shortly tridentate, and the lower lip bifid, with lanceolate subulately-acuminated teeth; corolla scarcely exceeding the calyx; connective bearing an empty cell behind. ☉. S. Native of the North and West coast of Africa, as of Egypt, Libya, Arabia, Canary Islands, Cape Verd Islands, Persia, &c. Thymus Syriacus, Spreng. syst. 2. p. 697. Thymus hirtus, Viv. fl. libyc. p. 30. t. 14. f. 1. Melissa perénnis, Forsk. fl. ægypt. p. 108. S. Ægyptiaca, Jacq. hort. vind. 2. p. 49. t. 108. Plant woody at base. Branches and leaves pubescent and canescent. Leaves ½ inch long. Corolla and stamens as in *S. plebèia*.

Egyptian Sage. Pl. ½ to ¾ foot.

277 S. pu'mila (Benth. lab. p. 726.) stem humble, erect, tufted, bearded by long stiff hairs; leaves approximate at the base of the stem, oblong or linear, narrowed at the base, much wrinkled, green on both surfaces: floral leaves minute; racemes a little branched; whorls remote, 2-6-flowered: upper whorls sterile; calyx ovate, pilose: upper lip shortly-tridentate: lower lip bifid, with broad-lanceolate, very acute teeth; corolla hardly exceeding the calyx; connective bearing an empty cell behind. ♃. H. Native of Cashmere, Royle. Very nearly allied to *S. Ægyptiaca*, but differs in the stems being erect and hardly branched, and in the root being perennial.

Dwarf Sage. Pl. ½ to ½ foot.

Sect. XIII. Gymnósphace (from *γυμνος, gymnos*, naked; and *σφακος, sphacos*, sage; probably so called from the naked floriferous branches.) Benth. in Hook. bot. misc. 3. p. 374. lab. p. 810. Calyx ovate-tubular; upper lip entire, recurved; lower lip bifid. Tube of corolla short, ample, furnished with a ring of hair inside; lips short: upper one erect: lobes of lower lip spreading. Connective remote behind, deflexed, filiform, acute. Filaments erect, somewhat continuous with the connective. Perhaps a proper genus.

278 S. saxicola (Wall. ex Benth. in Wall. pl. rar. asiat. 1. p. 68. lab. p. 810.) stems tufted, branched at the base; floriferous branches erect, almost naked; radical leaves and lower cauline ones roundish-cordate, crenated, glabrous; cauline leaves very few, ovate-lanceolate, deeply-toothed; floral leaves minute, ovate; racemes a little branched; whorls loose, distinct, or the upper ones are spicate; calyx tubularly-campanulate, drooping, glabrous: teeth of lower lip lanceolate, acutish; corolla hardly exceeding the calyx; fertile anthers all adnate. ♃. F. Native of Nipaul, Wall. Stems numerous, from a thick radicant base, simple or branched under the raceme, glabrous at the base; axis of raceme villous. Radical leaves 2-3 inches long, pale beneath. Corolla small, blueish.

Rock Sage. Pl. ½ to 1½ foot.

Sect. XIV. Hemi'sphace (from *ἡμι, hemi*, half; and *σφακος, sphacos*, sage.) Benth. in Hook. bot. misc. 3. p. 374. lab. p. 810. Calyx tubular; upper lip truncate, tridentate; lower lip bifid. Tube of corolla furnished with a pilose ring inside; upper lip erectly-spreading, arched, and the lobes of the lower lip spreading. Connective remote behind, drawn out a little, deflexed, acute. Filaments straight, somewhat continuous with the connective. Herbs, native of the region of the Mediterranean, with the habit of those species contained in Sect. *Heterósphace*. Perhaps a proper genus.

279 S. verticilla'ta (Lin. spec. 37.) stems herbaceous, erect, pilosely-hispid; leaves cordate at the base, lyrate: terminal lobe very large, ovate, roundish, or entire, sinuately-crenated, hispid or woolly on both surfaces; racemes branched; whorls 20-40-flowered, remote; calyx tubular, villous: teeth of lower lip setaceously-acuminated; corolla about twice as long as the calyx: tube almost inclosed. ♃. H. Native of the South of Europe, and the North of Africa, and Caucasus.—Barrel, icon. t. 199. Horminum verticillàtum, Mill. dict. no. 3. Leaves large, irregularly crenated or sinuated, hispid on the nerves; floral leaves bractea-formed, broad, ovate, acuminated, ciliated, shorter than the calyxes. Calyx usually coloured. Corolla bluish violet. The whole plant is hoary.

Var. β. móllis (Benth. lab. p. 811.) leaves clothed with soft wool on both surfaces. ♃. H. S. móllis, Donn, hort. cant. edit. 1804, but not of Jacq. Corolla bluish purple.

Var. γ. pállida (Benth. lab. p. 811.) leaves almost quite entire, and are, as well as the stems, clothed with pale villi. ♃. H. Young leaves densely woolly beneath.

Whorled Sage. Fl. June, Nov. Clt. 1628. Pl. 2 to 3 feet.

280 S. napifòlia (Jacq. hort. vind. 2. p. 71. t. 152.) stem herbaceous, erect, pilosely-hispid; lower leaves lyrate, terminal lobe large, and is, as well as the superior leaves, ovate-oblong, sinuately-crenated, rounded, or cordate at the base, rather villous on both surfaces; racemes scarcely branched; whorls 6-12-flowered, remote; calyx tubular, villous, teeth all setaceously-acuminated; corolla half as long again as the calyx: tube inclosed. ♃. H. Native of Syria, among bushes about Smyrna, and of the island of Cois. S. verticillàta, var. D'Urv. in mem. soc. lin. par. 1. p. 260.? This hardly differs from *S. verticillàta*, except in the whorls being usually 10, but never 20-flowered, and in the corollas being about half the size. The leaves, as in *S. verticillàta*, are also sometimes entire. Corollas blueish purple.

Turnip-leaved Sage. Fl. June, July. Clt. 1776. Pl. 2 to 3 feet.?

281 S. Rossi'lii (Benth. lab. p. 812.) stems herbaceous, erect, pubescent; leaves petiolate, oblong, acute, sinuately-toothed, thick, wrinkled, clothed with white wool on both surfaces: floral leaves ovate, acuminated, shorter than the calyxes; whorls loosely many-flowered, remote; calyx tubular: teeth all acuminated; corolla half as long again as the calyxes; tube inclosed. ♃. H. Native of Syria, near Aleppo, Russell. Flowers similar to those of *S. verticillàta*, but smaller; and the leaves are almost like those of *S. pomífera*.

Russell's Sage. Pl. 2 to 3 feet.?

† *Species, the names of which are alone known.*

1 S. bysanti'na, Juss. ex. Steud. nom. p. 725. 2. *S. Hallèri*, Fisch. ex Steud. nom. 726. 3. *S. rostràta*, Schmidt, abhandl. boh. wiss. 1. p. 11.

Cult. Many of the species of *Sálvia* are very showy when in blossom, particularly most of those species belonging to sections *Horminum*, *Eúsphace*, and *Calósphace*, § 7, *Longiflóræ*. Most of them thrive in a rich, light soil. The shrubby kinds are readily increased by young cuttings, under a hand-glass; those of the stove species in heat; the herbaceous perennial kinds by dividing at the root. The seeds of the annual and biennial kinds only require to be sown in the open border where they are intended to remain.

XXX. AUDIBE'RTIA (named after M. Audibert, a nurseryman of Tarascon.) Benth. in bot. reg. 17. no. 1469. lab. p. 312; but not of Benth. in bot. reg. 15. no. 1282.

Lin. syst. *Diándria*, *Monogýnia*. Calyx ovate, bilabiate; upper lip concave, entire, or shortly tridentate; lower lip bifid; throat naked inside. Corolla having the tube equal in length to the calyx, or exserted; limb bilabiate; upper lip bifid, with spreading lobes; lower lip trifid, having the lateral lobes ovate or oblong, and the middle lobe very broad and emarginate. The two lower stamens fertile, ascending, usually exserted; the rudiments of the two upper ones small and club-shaped or wanting; anthers dimidiate with a linear connective, which is articulated in the filament, ascending, bearing a one-celled linear anther at top, but not drawn out behind, or very shortly acuminated. Style subulately-bifid.—A californian genus intermediate between *Rosmarínus* and sections *Eckinósphace* and *Pycnósphace* of *Sálvia*.

1 A. grandiflòra (Benth. lab. p. 312.) stem tall, villous; leaves oblong-elliptic, sinuately-crenated, cordate at the base, wrinkled; whorls dense, many-flowered; bracteas broad-ovate, and are, as well as the calyxes, ample, membranous, coloured, and villous; stamens much exserted. ♃. ? H. Native of North California, Douglas. Lower leaves petiolate, 3-4 inches long, villous, pale or canescent beneath: upper ones sessile, smaller; floral leaves stem-clasping. Tube of corolla exserted. Upper lip of calyx obtuse.

Great-flowered Audibertia. Pl. 2 to 3 feet.

2 A. humìlis (Benth. lab. p. 313.) suffruticose; leaves approximate at the base of the stem, petiolate, oblong-lanceolate, obtuse, crenulated, narrowed a long way at the base, wrinkled, canescent; floral leaves and bracteas lanceolate, acute, villous; genitals exserted. ♄. F. Native of North California, Douglas. Habit of a small variety of *Sálvia officinàlis*. Stem leafy and hoary at bottom, but villous at top. Lower leaves 1 to 1½ inch long. Whorls many-flowered. Upper lip of calyx tridentate. Tube of corolla hardly exserted.

Humble Audibertia. Shrub ½ foot.

3 A. stachyoìdes (Benth. lab. p. 313.) suffruticose; branches stiff, leafy; leaves on short petioles, oblong-lanceolate, obtuse, crenulated, narrowed at the base, wrinkled, canescent beneath: floral leaves and bracteas ovate, acuminated; genitals rather shorter than the corolla. ♄. F. Native of North California. Branches tomentosely-pubescent, clammy and villous above, as well as the bracteas and calyxes. Leaves 2-3 inches long, green above; petioles dilated, and stem-clasping as in the preceding species. Teeth of calyx spiny.

Stachys-like Audibertia. Shrub.

4 A. rívea (Benth. lab. p. 313.) suffruticose; branches stiff, clothed with white tomentum above; leaves nearly sessile, lanceolate, obtuse, rounded at the base, wrinkled, clothed with white tomentum on both surfaces: floral leaves and bracteas ovate-lanceolate; raceme simple; genitals exserted. ♄. F. Native of North California, Douglas. Leaves distant, 1 to 1½ inch long. Lips and teeth of calyx almost obsolete. Tube of corolla a little exserted.

Snowy Audibertia. Shrub.

5 A. incàna (Benth. in bot. reg. t. 1469.) suffruticose; branches divaricate, branched, canescent; leaves obovate-oblong, obtuse, quite entire, narrowed at the base, canescent: floral leaves broad-ovate; racemes simple; genitals exserted. ♄. F. Native of North-west America, on the plains of the river Columbia, near Priest's rapid, and on argillaceous hills. Leaves 1 to 1½ inch long, pubescent; upper floral leaves orbicular, sessile, ciliated. Calyx pubescent; upper lip entire, obtuse. Corolla pale blue; tube exserted.

Hoary Audibertia. Fl. July, Sept. Clt. 1827. Shrub 1½ foot.

6 A. polystàchya (Benth. lab. p. 314.) suffruticose, clothed with hoary tomentum; leaves petiolate, oblong-lanceolate, obtuse, crenulated, narrowed at the base, wrinkled, hoary on both surfaces: floral leaves and bracteas loose, lanceolate; racemules numerous, approximating into a dense, elongated panicle; genitals much exserted. ♄. F. Native of North California, Douglas. Upper lip of calyx obtuse, almost entire. Tube of corolla scarcely exserted.

Many-spiked Audibertia. Shrub 3 to 4 feet. ?

Cult. The species will grow in common garden soil, and will be readily increased by cuttings and seeds. Being rather tender, they will require some shelter in winter.

XXXI. ROSMARI'NUS (from *ros*, *dew*, and *marinus*, of the sea, on account of its affecting maritime situations.) Tourn. inst. t. 92. Lin. gen. no. 38. Schreb. gen. no. 49. Juss. gen. p. 111. Benth. lab. p. 314.

Lin. syst. *Diándria*, *Monogýnia*. Calyx ovate-campanulate, bilabiate; upper lip entire; lower lip bifid; throat naked inside. Corolla with an exserted tube, glabrous inside; throat a little inflated; limb bilabiate; lips nearly equal: upper lip erect, emarginate: lower lip spreading trifid: lateral lobes oblong, erect, twisted a little: middle lobe, large, concave, dependent. Stamens 2, ascending, exserted from the superior lip, without any rudiments of upper ones; filaments inserted in the throat of the corollas, shortly-toothed near the base; anthers linear, somewhat 2-celled, with connate margins, and divaricate-confluent cells. Upper lobe of style very short; stigmas minute, terminal. Achenia dry, smooth. A South European shrub, with the calyx of *Sálvia* and *Audibértia*, and corolla and stamina of *Monárda*, unless the tooth at the base of each filament, which is probably an appendage analogous to those of *Ocymum* and *Phlòmis*.

1 R. officinàlis (Lin. spec. p. 88.) ♄. H. Native of Europe and Africa, in the region of the Mediterranean; as of Portugal, Spain, South of France, Italy, Naples, Sicily, Greece, Syria, Balearic Islands, &c., on dry hills and among rocks. Sibth. and Smith, fl. græc. 1. p. 11. t. 14. Woodv. med. bot. t. 87. R. latifòlia, Mill. dict. no. 2.—Riv. mon. irr. t. 39.—Blackw. icon. 159.—Sabb. hort. rom. 3. t. 67. A densely-branched and densely-leafy shrub. Leaves sessile, linear, entire, with revolute margins, canescent beneath. Flowers disposed in short axillary racemes, few, approximate, almost sessile. Calyx purplish. Corollas white, or pale blueish-purple. Rosemary has a fragrant smell and a bitter, pungent taste. The leaves and tops are strongest in their sensible qualities; the flowers ought not to be separated from their calyxes, the active matter residing principally, if not wholly, in the latter. Rosemary yields its qualities completely to rectified spirit, but only partially to water. The leaves and tops distilled with water yield a thin, light, pale, essential oil, of great fragrancy, though not quite so agreeable as the rosemary itself. From one hundred pounds of the herb in flower eight ounces of oil have been obtained. The virtues of rosemary depend entirely on its essential oil, which seems to be combined with camphor, not only from its peculiar taste, but

from its possessing chemical properties which depend upon the presence of camphor, and from its depositing crystals of camphor when long kept. Rosemary is reckoned one of the most powerful of those plants which stimulate and strengthen the nervous system; it has, therefore, been recommended in various affections supposed to proceed from debilities or defective excitement of the brain and nerves; as in certain headachs, deafnesses, giddinesses, palsies, &c., and in some hysterical and dyspeptic symptoms.

The ancients were well acquainted with this shrub; and it is mentioned by Dioscorides, Galen, and Pliny. It has ever been treated with great respect for comforting the brain and strengthening the memory; hence the frequent allusions to this property in our old poets. Its supposed quality of strengthening the memory made rosemary an emblem of fidelity in lovers: it was accordingly worn at weddings, and perhaps, on the same principle, at funerals. Rosemary is a principal ingredient in what is known by the name of Hungary water; and the herb is taken as tea by many persons for headachs, and disorders called nervous.

There are several varieties of the rosemary, as, 1. R. angustifòlia, Mill. dict. no. 1. The narrow-leaved or garden rosemary. 2. The silver-striped-leaved rosemary. 3. The golden-striped-leaved rosemary.

Officinal, or Common Rosemary. Fl. Jan. April. Clt. 1548. Shrub 4 to 12 feet.

Cult. Rosemary thrives best on dry rocky soils by the sea-side, in the countries where it grows wild. It is hardy enough to bear our winters in the open air, provided it be planted upon a poor, dry, gravelly soil, or against a wall. Rosemary, if by accident rooted in a wall, will endure the greatest cold of our winters. The striped-leaved varieties are more tender, and therefore require the protection of a frame or green-house in winter. Rosemary may be increased by planting the young cuttings in the spring just before the plants begin to shoot, in light earth under a hand-glass. When the cuttings are rooted transplant them where they are intended to remain in September.

XXXII. MONA'RDA (so called from Nic. Monárda or Monárdes, a physician of Seville in the sixteenth century.) Benth. lab. p. 315. Monárda species of Lin. and other authors. Monárda and Cheilýctis, Rafin. Monárda and Coryánthus, Nutt.

Lin. syst. *Diándria, Monogýnia.* Calyx tubular, elongated, 15-nerved, nearly equal, 5-toothed; throat villous inside, rarely almost naked. Corolla with an exserted or inclosed tube, glabrous or pubescent inside, exannulate; throat dilated a little; limb bilabiate; lips linear or oblong, nearly equal: upper lip erect, entire, or emarginate: lower lip spreading, shortly trifid at apex: the lateral lobes ovate, obtuse: the middle one narrower, oblong, retuse, or emarginate. Stamens 2 (inferior) ascending, usually exserted from the upper lip of the corolla; the rudiments of the two superior ones almost wanting: filaments toothless, inserted at the throat of the corolla; anthers linear, somewhat 2-celled: cells divaricate, confluent, with connate margins. Style almost equally bifid at top; stigmas minute, terminal. Achenia dry, smooth.—Herbs, with entire, usually toothed or crenated leaves. Flowers collected into a few dense whorls, propped by bracteas.

Sect. 1. Eumona'rda (from *eu*, well, and *Monárda*. This section is supposed to contain the true species of the genus.) Benth. lab. p. 726. Genitals much exserted.

1 M. dídyma (Lin. spec. p. 32.) leaves petiolate, ovate-lanceolate, acuminated, roundly-subcordate at the base, rather hispid on both surfaces, rarely glabrous; floral leaves sessile, and are, as well as the outer bracteas, oblong-lanceolate, narrowed a long way at the base, coloured; calyx incurved, striated, coloured, with an almost naked throat; corollas quite glabrous. ♃. H. Native of North America, from Canada to North Carolina. Curt. bot. mag. t. 548. Mill. fig. t. 183. f. 1. Trew. ehret. t. 66. M. fistulòsa, var. Curt. bot. mag. t. 145.? S. coccínea, Michx. fl. bor. amer. 1. p. 16. M. purpùrea, Lam. dict. 4. p. 256. M. Kalmiàna, Pursh, fl. amer. sept. 1. p. 17. t. 1. bad. M. purpuráscens, Wender. ind. sem. hort. marb. 1828. M. Oswegoensis, Bart. prod. fl. pennsyl. 1. p. 34.? Stems fistular, acutely-tetragonal. Leaves 2-3 inches long. Whorls solitary or twin. Bracteas, calyxes, and corollas scarlet. The leaves emit a very grateful, refreshing odour.

Didymous Monarda, or Oswega tea. Fl. June, August. Clt. 1752. Pl. 2 to 3 feet.

2 M. fistulòsa (Lin. spec. p. 32.) leaves petiolate, ovate-lanceolate, roundly-subcordate at the base, glabrous, pubescent or hispid on both surfaces: floral leaves sessile, and are, as well as the outer bracteas, a little coloured; calyxes a little incurved, scarcely coloured: throat hispid inside; corolla villous. ♃. H. Native of North America, among bushes, &c., very common, West Coast, Canada, the States; Texas, and near Jalapa in Mexico. Rchb. icon. exot. 2. p. 28. t. 172. Mill. fig. t. 183. f. 2. M. altíssima, Willd. enum. p. 38. Rchb. icon. exot. 2. p. 27. t. 170. M. longifòlia, Lam. dict. 4. p. 255. M. glàbra, Lam. dict. 4. p. 256. M. rugòsa, Ait. hort. kew. ed. 2d. 1. p. 51. M. purpùrea, Pursh, fl. amer. sept. 1. p. 17, but not of Lam. M. 51. M. oblongàta, Ait. hort. kew. ed. 2d. 1. p. 51. M. clinopòdia, Lin. spec. p. 32. M. allophýlla, Michx. fl. bor. amer. 1. p. 16. M. affinis, Link, enum. 1. p. 9. Rchb. icon. exot. 2. p. 31. t. 182. M. undulàta, Tausch, Rchb. icon. exot. 2. p. 31. t. 181. M. mèdia, Willd. enum. p. 32. Sweet, fl. gard. 1. p. 98. M. violàcea, Desf. cat. hort. par. p. 66. M. involucràta, Wender. in ind. sem. hort. marb. 1828. M. commutàta, Wender, l. c. M. lilácina, Wender, l. c. M. hýbrida, Wender, l. c. M. barbàta, Wender, l. c. M. vàrians, Bart. prod. fl. penns. 1. p. 34.? M. cærùlea, M. cristàta, M. dùbia, &c., Hortul. This species is very variable in downiness, size and colour of flowers and bracteas, and differs from *M. didyma* in being taller; in the calyxes and bracteas being less coloured, in the corollas being smaller, more or less pubescent, and particularly in the throat of the calyx being hispid from pili inside, and usually closed. Stems fistular or filled. Leaves green or canescent. Corollas pale red or purplish, rarely deep violet or purple, never scarlet.

Var. β. móllis (Lin. spec. 32.) leaves clothed with soft pubescence; upper lip of corolla densely bearded. ♃. H. Native of the northern regions of North America; as the species is of the southern regions. M. móllis, Lin. amœn. acad. 3. p. 399. Rchb. icon. exot. 2. p. 28. t. 171. M. menthæfòlia, Graham, in edinb. phil. journ. vol. 21. (1829) p. 347. Hook. bot. mag. t. 2958.

Fistular-stemmed Monarda. Fl. June, Aug. Clt. 1656. Pl. 2 to 5 feet.

3 M. Bradburia'na (Beck, in Sill. amer. journ. scienc. 10. p. 260.) leaves nearly sessile, ovate-lanceolate, rounded at the base, clothed with canescent tomentum beneath, pilose on both surfaces: floral leaves and outer bracteas roundedly-sub-cordate at the base, coloured; calyx smoothish, striated, contracted above, with a hairy throat, and subulate-awned teeth; corolla hardly twice as long as the calyx, almost glabrous outside; upper lip very slender, and bearded at top. ♃. H. Native of North America in uncultivated places, near St. Louis, Beck; along the Missouri and Ohio, Torrey. M. fisculòsa, Hook. bot. mag. t. 3310, exclusive of the syn. Stems glabrous or ciliated on the angles. Whorls solitary, size of those of M. fistulòsa. Corolla pale, scarcely twice as long as the calyx; lower lip marked with purple dots.

Bradbury's Monarda. Pl. 3 feet.

4 M. Russellia'na (Nutt. trav. in ark. territ. p. 141.) almost glabrous; leaves nearly sessile, lanceolate, roundly-subcordate at the base: floral leaves and outer bracteas sessile, coloured, narrowed a long way at the base, acute, mutic; calyx nearly glabrous, with an almost naked throat, and nearly equal, lanceolate, short stiff teeth; corolla glabrous: tube much exserted: lower lip dotted. ♃. H. Native of the Arkansas, and among the Rocky Mountains, Sims, bot. mag. t. 2513. Hook, exot. fl. 2. t. 130. Sweet, fl. gard. 2. t. 166. Stem glabrous or ciliated on the angles. Leaves shining beneath, smoothish or ciliated on the edges, remotely toothed; floral leaves and outer bracteas purplish. Corolla slender, pale, elongated, dotted on the lower lip. (*fig.* 77.)

FIG. 77.



Russell's Monarda. Fl. Aug. Sept. Clt. 1823. Pl. 2 to 3 feet.

Sect. II. Cheilyctis (from χειλος, *cheilos*, a lip.) Benth. lab. p. 726. Cheilýctis, Rafn. Coryánthus. Nutt. in amer. phil. trans. 5. p. 186. Stamens shorter, or equal in length to the upper lip of the corolla.

5 M. punctа'ta (Lin. spec. p. 32.) clothed with fine pubescence; leaves petiolate, lanceolate, narrowed at the base: floral leaves and outer bracteas sessile, coloured a little at the base, mutic; calyxes pubescent, having the throat shortly bearded, and the teeth nearly equal, lanceolate, short, and stiff; corolla glabrous: tube hardly exserted: lower lip dotted. ♃. H. Native from Virginia and New Jersey to Florida, Carolina, and New Orleans. Andr. bot. rep. 8. t. 546. Ker. bot. reg. t. 85. M. lútea, Michx. fl. bot. amer. 1. p. 16. Stem ascending, branched. Leaves 2 inches long, sparingly toothed or entire. Whorls few, remote, all shorter than the leaves. Genitals equal in length to the upper lip of corolla. Corolla yellowish, dotted with brown.

Dotted-flowered Monarda. Fl. June, Oct. Clt. 1714. Pl. 1 to 1½ foot.

6 M. arista'ta (Nutt. trav. in ark. territ. ex Benth. lab. p. 818.) canescent; leaves oblong-lanceolate, narrowed at the base; floral leaves and outer bracteas sessile, a little coloured, subulately awned at apex; calyx striated, pubescent, with a bearded throat, and nearly equal, long, subulate teeth, which are pencilled at apex; tube of corolla hardly exceeding the calycine teeth. ♃. H. Native of Arkansas; Texas, at Bejar; and Rio de la Trinidad, &c. M. citriodòra, Cerv. ex Lag. nov. gen. et spec. 2. Habit and stature of *M. punctáta*. Leaves sharply and remotely toothed. Bracteas ciliated, often purplish or yellowish. Corolla yellowish?: lower lip almost dotless. Stamens shorter than the upper lip of corolla.

Awned-bractead Monarda. Fl. July, Sept. Clt. 1825. Pl. 1 to 1½ foot.

† *Species not sufficiently known.*

7 M. scа'bra (Beck, in Sill. amer. journ. 10. p. 260.) stem nearly glabrous; leaves ovate-lanceolate, subcordate, serrated, with revolute edges, scabrous, thick, dotted, on short petioles, rather villous; bracteas ovate-lanceolate; whorls of flowers large, terminal, by threes; calyx hairy, with a densely bearded throat, and short, acute, erectish teeth; corolla hairy; stamens equal in length to the upper lip. ♃. H. Native in woods on the banks of the Mississippi, near St. Louis. Stem branched. Leaves 2 to 2½ inches long. Corolla pale purple.

Scabrous Monarda. Pl. 3 feet.

8 M. gra'cilis (Pursh, fl. amer. sept. 1. p. 17.) quite glabrous; heads small, nearly naked, lateral and terminal; outer bracteas linear, ciliated; calyxes pubescent, ciliated; corolla short, very slender, glabrous; leaves linear-lanceolate, acuminated, serrated, glabrous; stem obtuse-angular, glabrous. ♃. H. Native of South Carolina and Virginia, among the mountains. Perhaps a species of *Blephília*; but there are no specimens in Pursh's herbarium to ascertain this point. Corollas purple.

Slender Monarda. Pl. 1 to 2 feet.

N.B. M. praténsis, M. rígida, and M. virgàta, Rafin, med. fl. 2. p. 37. not being recognizable by the descriptions given, are therefore excluded.

Cult. The species are of easy culture and propagation, growing freely in any soil; and are readily increased by dividing at the root. The *M. punctàta* and *M. aristàta* are more shy of cultivation than the others; and for this reason it is safer to grow them in pots, in a mixture of peat and sand.

XXXIII. BLEPHILIA (probably from βλεφαρις, *blepharis*, the eye-lash, in allusion to the ciliated bracteas.) Rafin. ex Benth. lab. p. 819. Monárda species of Lin. and other authors.

Lin. syst. *Diándria*, *Monogýnia*. Calyx ovate-tubular, 13-nerved, naked inside the throat, bilabiate; upper lip tridentate, with the teeth awned; lower lip bidentate, with the teeth mutic, or shortly awned. Corolla having the tube a little exserted, and exannulate inside; the throat dilated, and the limb bilabiate: lips nearly equal: the upper one erect and entire: the lower one spreading and trifid: the lateral lobes ovate-roundish, and the middle one narrower, oblong, retuse and emarginate. Rudiments of upper stamens wanting, or small and filiform: lower two fertile, ascending, exserted from the upper lip of the corolla; filaments toothless, inserted in the throat of the corolla; anthers linear, somewhat 2-celled, with connate margins, and divaricate confluent cells. Style equally bifid at top; stigmas minute, terminal. Achenia dry, smooth.—Herbs, with a habit and character between *Monárda* and *Ziziphora*; the leaves of the first, and the flowers of the latter genus. Whorls numerous, globose: upper ones approximating into a spike.

1 B. cilia'ta (Rafin, journ. phys. 89. 98.) leaves almost sessile, ovate-oblong, narrowed at the base, canescent beneath; lower floral leaves conforming to the cauline ones: upper ones and outer bracteas ovate, acute, coloured, equalling the calyxes. ♃. H. Native of Pennsylvania, Virginia, Carolina, Missouri, and near St. Louis. Monárda ciliàta, Lin. spec. 32, but not of Michx.—Mor. hist. 3. p. 374. sect. 11. t. 8. f. 6.—Pluck. phyt. t. 24. f. 1. alm. t. 164. f. 3. Stems pubescent, furnished with retrograde hairs on the angles. Leaves 2 inches long, nearly glabrous or pubescent. Whorls all distinct. Bracteas ciliated, reddish at top. Corollas blue, marked with dark purple spots.? Root creeping.

Ciliated Blephília. Fl. July. Clt. 1798. Pl. 1 to 2 feet.

2 B. hirsu'ta (Benth. lab. p. 320.) leaves petiolate, ovate, roundly cordate at the base, hairy on both surfaces; lower floral leaves conforming to the cauline ones: upper floral leaves and bracteas linear-subulate, shorter than the calyxes; calyxes pubescent, recurved. ♃. H. Native of Virginia, on the moun-

tains; at Lake Michigan; and on the banks of the Missouri. *Monárda hirsùta*, Pursh, fl. amer. sept. 1. p. 19. *Monárda ciliàta*, Michx, fl. amer. bot. 1. p. 16. but not of Lin. Habit more branched and loose than in *B. ciliàta*. Whorls more numerous: upper ones approximate. Calyx smaller, and more hairy. Corolla more exserted, and nearly glabrous, purple or blue.

Hairy Blephilia. Fl. July, Sept. Clt. 1798. Pl. 1 to 2 feet.

Cult. For culture and propagation see *Monárda*, p. 758.

XXXIV. ZIZI'PHORA (said to be from *zizi* of the Indians; and *φορεω*, *phoreo*, to bear.) Lin. gen. no. 36. Schreb. gen. no. 47. Juss. gen. 111. Gærtn. fruct. 1. p. 316. t. 66. Benth. lab. p. 320.

Lin. syst. *Diándria*, *Monogýnia*. Calyx tubular, elongated, 13-nerved, villous inside the throat, bilabiate; upper lip tridentate, with mutic teeth. Corolla having the tube hardly exserted, and exannulate inside; the throat dilated, and the lips nearly equal: upper lip erect, entire: lower one spreading, trifid, with rounded lobes, the middle lobe longer and emarginate. Rudiments of the superior stamens almost wanting: the 2 lower ones fertile, ascending under the upper lip, and equal in length to it, or longer; filaments inserted at the throat of the corolla, toothless; anthers linear, somewhat 2-celled, with divaricate, confluent cells, and subconnate margins. Upper lobe of style very short; stigmas minute, terminal. Achenia dry, smooth.—Herbs or subshrubs, with a habit between *Monárda* and *Thýmus*. Leaves quite entire, or furnished with a few minute teeth, lined with diverging veins beneath; floral leaves almost similar to the others, but sometimes broader, and sometimes narrower. Whorls few-flowered, usually approximate at the tops of the branches. Pedicels short, flattened, erect. Bracteas almost wanting. Flowers intermediate between those of *Blephilia* and *Thýmus*.

§ 1. *Permanent suffruticose plants.*

1 Z. clinopodioi'des (Bieb. fl. cauc. 1. p. 17.) suffruticose; leaves ovate-oblong or lanceolate; floral leaves similar to the others, or narrower, loose; whorls approximating into a roundish terminal head; calyx clothed with hoary pubescence, or ciliated with a few hairs. ♄. F. Native of Armenia, Iberia, Caucasus, Siberia, Altaian mountains, in grassy places. Habit of a large variety of *Thýmus serpýllum*. Branches diffuse, purplish, canescent from short tomentum, like the leaves and calyxes. Corolla bluish purple. Stamens a little exserted.

Var. α, *canéscens* (Benth. lab. p. 321.) leaves for the most part narrow; calyxes less pilose. ♄. F. Cunila capitàta, Lin. spec. p. 30. Thymus punctàtus, Willd. phyt. 1. p. 8. ex Rœm. et Schultes. Thymus lùcidus, Ehrh. beitr. 7. p. 150. ex Rœm. et Schultes. Z. clinopodioides, α. Cunila, and β. acinoides, Rudolph. in mem. acad. sc. petrop. 2. p. 313. Z. tenùior, Falck. topogr. 1. p. 98. ex Rudolph. l. c. Z. Mussini, Adam. ex Rudolph. l. c. Z. serpyllàcea, Bieb. fl. cauc. 1. p. 17. Rudolph. in mem. acad. sc. petrop. 2. p. 315. t. 12.

Var. β, *mèdia* (Benth. lab. p. 321.) leaves for the most part ovate; calyxes rather pilose. ♄. F. Native of the Caucasus, and the Altaian mountains. Z. clinopodioides, Rudolph. in mem. acad. petrop. 2. p. 311. t. 11. exclusive of var. α. and β. Z. serpyllàcea, Sims, bot. mag. t. 906. bad. Z. mèdia, Link, enum. 1. p. 17. Corollas reddish purple.

Clinopodium-like Ziziphora. Fl. July, Aug. Clt. 1803. Shrub trailing, ½ to 1 foot long.

2 Z. dasyá'ntha (Bieb. fl. cauc. 1. p. 18.) suffruticose; leaves ovate or oblong; floral leaves conforming to the others, loose; whorls approximating into an oblong head, or the lower ones are distinct; calyx hispid, very pilose. ♄. F. Native of Caucasus and Iberia, in alpine places. Z. Puschkìni, Adams, in Web. et Mohr. cat. 1. p. 42. ex Rœm. et Schultes. Sims. bot. mag. t. 1093. bad. This differs from *Z. clinopodioides*, in the broader leaves, longer heads of flowers, and the very hispid calyxes; the calycine teeth are also a little longer, the corollas usually shorter, and the stamens rarely exserted. Corollas purplish blue.

Thick-flowered Ziziphora. Fl. June, Aug. Clt. 1803. Shrub procumbent.

3 Z. canéscens (Benth. lab. p. 321.) suffruticose? leaves ovate, clothed with hoary pubescence on both surfaces; floral leaves similar to the others; whorls approximate into a terminal head; calyx clothed with soft pubescence. ♄. ? F. Native of Syria and Egypt, Labillardiere. Habit of *Z. Hispánica*. Flowers capitate, as in *Z. clinopodioides*, but the leaves are broader, and the calyxes smaller; but is distinguished from both in the hoary pubescence.

Canescent Ziziphora. Shrub.

§ 2. *Annual plants.*

4 Z. Hispa'nica (Lin. spec. p. 31.) annual; leaves nearly sessile, ovate or oblong; floral leaves rhomboid, longer than the calyxes; whorls distinct, axillary, approximate, 6-10-flowered; calyxes sessile. ☉. H. Native of Spain. Lam. ill. t. 13. f. 1.—Herb branched at base; branches stiff, villous. Teeth of calyx connivent. Corolla hardly exceeding the calyx, purplish blue.

Spanish Ziziphora. Fl. June. Clt. 1759. Pl. ½ to 1½ foot.

5 Z. Acinoi'des (Lin. spec. p. 31.) annual; leaves on short petioles, broad-ovate: floral ones similar to the others, longer than the calyxes; whorls few, distinct, axillary, loose, 6-10-flowered; calyxes pedicellate. ☉. H. Native of Spain. Allied to *Z. Hispánica*; but the stems are longer and looser, the flowers larger, and the calyxes pilosely hispid.

Acinos-like Ziziphora. Fl. July, Aug. Clt. 1786. Pl. ½ foot.

6 Z. capita'ta (Lin. spec. p. 31.) leaves lanceolate, narrowed at the base: floral ones very broad, rhomb-ovate, acuminated; whorls approximating into a terminal, nearly globose head; calyxes pilosely hispid. ☉. H. Native of the region of the Mediterranean, as of the south of Russia, in fields and on hills; on Mount Atlas, in cultivated ground; Spain; south of Italy, Armenia, Caucasus, Island of Cyprus, Tauria; Soongarian mountains, in Siberia, &c. Rudolph. in mem. acad. sc. petrop. 2. p. 308. t. 10. Lam. ill. t. 18. f. 3. Sibth. et Smith. fl. græc. 1. p. 10. t. 13.—Buxb. cent. 3. p. 28. t. 51. f. 1.—Mor. hist. sect. 11. t. 8. f. 5. Herb divaricately branched, pubescent. Floral leaves ciliated. Corolla a little longer than the calyx, red: tube slender, exserted. Stamens equalling the corolla.

Capitate-flowered Ziziphora. Fl. July, Aug. Clt. 1759. Pl. ½ to 1½ foot.

7 Z. tene'ior (Lin. spec. p. 31.) leaves lanceolate, narrowed at the base; floral leaves almost conform to the rest; whorls all distinct, axillary; calyx very pilose, hispid; corolla exserted a very little from the calyx. ☉. H. Native of the region of the Mediterranean; of the south of Russia, on hills; Spain, Mount Atlas, Caucasus, Altaia, &c. Lam. ill. t. 18. f. 2. S. spicàta, Cerv. ann. sc. matr. 4. p. 259. Z. serpyllàcea, Tenore, sylt. p. 16. ? but not of Bieb. Branches numerous, pubescent. Leaves 1 inch long, quite entire or denticulated, ciliated on the margins and middle nerve, especially the upper ones, rarely all

naked; floral leaves longer than the flowers. Teeth of calyx connivent. Corolla purplish. Stamens inclosed.

Slenderer Ziziphora. Fl. June, July. Clt. 1752. Pl. ½ to 1 foot.

8 Z. Tau'rica (Bieb. fl. taur. 3. p. 259.) leaves lanceolate, narrowed at the base: floral ones similar to the others; whorls all distinct, axillary; calyx very pilose, hispid; corolla twice as long as the calyx. ⊙. H. Native of Tauria, in dry gravelly places; Arabia and Persia. Corollas reddish purple. Very like *Z. tenùior*, but differs in the corollas being as large as those of *Thymus alpìnus*.

Taurian Ziziphora. Fl. June, Sept. Clt. 1816. Pl. ½ foot.

† *A doubtful species.*

9 Z. Java'nica (Blum. bijdr. p. 822.) flowers capitately spicate, terminal; bracteas subulate, ciliated; calyxes villous; leaves petiolate, ovate, erosely and coarsely serrated, clothed with prostrate pubescence on both surfaces. ⊙.? H. Native of Java, in the province of Cheribon, on the top of the burning Mount Tjerimai. Upper lip of corolla reflexed, entire: lower one 3-lobed. Stamens 2, hardly exserted. Stigma unequally bifid.

Java Ziziphora. Pl.?

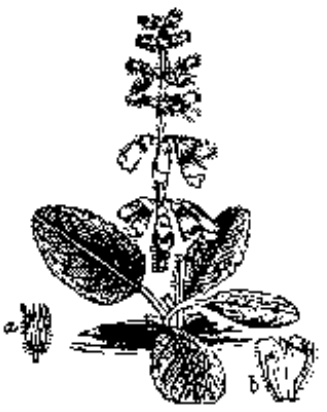
N.B. *Z. thymoìdes* of Roem. et Schultes, is an imaginary species.

Cult. The perennial species of *Ziziphora* are very pretty rock plants. They should be grown either on rockwork, or in small pots well drained with sherds, in any light sandy soil; they are readily increased by seeds and cuttings. The seeds of annual species only require to be sown in the open ground, in April, where they are intended to remain.

XXXV. HORMI'NUM (from ὁρμαω, *hormao*, to excite; in allusion to the qualities of the plant.) Benth. lab. p. 727. Horminum species, Lin. and other authors.—Melissa species, Jacq.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, bilabiate; upper lip tridentate; lower lip bifid. Corolla with an exserted tube, which is furnished with a pilose ring inside, an elongated widened throat, and a sub-bilabiate limb; the upper lip truncate, emarginate: the lower lip 3-lobed, with broad, short, rounded segments. Stamens 4, all fertile, ascending, didynamous: lower ones the longest; anthers cohering by pairs, linear, with divaricate cells. Style shortly bifid at apex: lobes subulate; stigmas minute. Achenia smoothish.—A tufted perennial herb, with numerous radical leaves, simple, almost naked stems, and purplish blue flowers.

FIG. 78.



1 H. Pyrena'icum (Lin. spec. p. 831.) ¼. H. Native of the temperate parts of Europe, on the mountains; as of the Pyrenees, Alps of Vallais and Salisburgh, &c. Sweet, fl. gard. 3. t. 252. Melissa Pyrenàica, Jacq. hort. vind. 2. t. 183. Lam. ill. t. 515. Leaves almost all radical, petiolate, ovate, obtuse, deeply crenated, truncate at the base, or subcordate, veiny, green on both surfaces, glabrous, or rather hispid on the nerves. Floriferous stems erect, simple, furnished with 1 or 2 pairs of small, sessile, crenated leaves. Whorls distant, 6-flowered, secund. Floral leaves bractea-formed, shorter than the calyxes. Flowers on short pedicels, nutant. Calyx 13-nerved, often coloured at top, glabrous or hispid on the nerves; lips spreading: teeth acute. Corolla bluish purple, 9-10 lines long (fig. 78.)

Pyrenean Horminum. Fl. June, July. Clt. 1820. Pl. ½ to 1 foot.

Cult. This is a very elegant plant when in blossom. It will grow in the open border, and is readily increased by dividing at the root, or by seed. In severe winters it is sometimes liable to be killed by damp; therefore a reserve plant or two should be grown in pots, so that they may be protected by placing them under a frame in winter.

Tribe IV.

SATUREI'NEÆ (so called from containing genera agreeing with *Saturèia* in the characters given below.) Benth. lab. p. 324. Calyx 5-toothed, equal or bilabiate, with the upper lip tridentate, and the lower one bifid. Tube of corolla exannulate inside, shorter, or scarcely longer than the imbricate calyx and bracteas; limb of corolla sub-bilabiate: upper lip flat, entire, or emarginately bifid: lower lip spreading, trifid, with flat, nearly equal lobes; or the middle lobe is rather the broadest. Stamens distant, straight, diverging, or scarcely ascending, equal, or the upper ones are shorter or abortive. The tetrandrous genera of this tribe are intermediate between tribe *Menthoìdeæ* and *Melissìneæ*; but the corolla is more decidedly bilabiate than in the former tribe; and the stamens are seldom ascending, as in the latter; from most genera of which they are also distinguished by the shortness of the tube of the corolla. The diandrous genus *Cunìla* connects tribe *Monárdeæ* with *Melissìneæ*.

XXXVI. BYSTROPO'GON (from βυω, *byo*, to close; and πωγων, *pogon*, a beard; the throat of the calyx is closed by villi inside.) Benth. lab. p. 324.—Bystropògon species, Lher. sert. angl. 19.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx 10-13-nerved, campanulate or tubular, equal, 5-toothed; throat villous inside. Corolla with an inclosed tube, and sub-bilabiate limb; upper lip erectish, bifid; lower lip spreading, trifid: lobes all flat and entire. Stamens 4, erect, distant, shorter than the corolla, didynamous: lower ones the longest; filaments glabrous; anthers 2-celled: cells parallel. Disk equal, glandless. Style shortly bifid at apex: lobes nearly equal, linear, a little thickened, obtuse, stigmatiferous at top. Achenia dry, smooth.—Shrubs. Flowers small, cymose in the first section; the cymes dichotomous, subcorymbose, or panicled; in the second section, disposed in dense spicate whorls. Bracteas lanceolate or subulate. This genus is scarcely distinct from *Méntha*.

Sect. I. Bystropògon (see genus for derivation.) Benth. lab. p. 325. Calyx campanulate, 10-nerved. Flowers loosely cymose.

1 B. punctà'tus (L'Her. sert. angl. p. 20. t. 23.) leaves crenated, green on both surfaces, glabrous, or hardly tomentose beneath; cymes axillary, pedunculate, corymbose; calycine teeth ovate. ½. G. Native of Madeira. Branches glabrous or pubescent. Leaves 1 to 1½ inch long. Corollas downy outside, pale purple.?

Dotted Bystropogon. Fl. July, Sept. Clt. 1775. Shrub 2 to 3 feet.

2 B. Canarie'nsis (*L'Her. sert. angl. p. 20.*) branches very villous; leaves crenated, villous or glabrous, green on both surfaces; cymes axillary, pedunculate, corymbose; calycine teeth

subulate, shorter than the tube. ♄. G. Native of the Canary Islands. Méntha Canariénsis, Lin. spec. 807. Heliotròpium Canariénse, &c., Comm. hort. amst. 2. p. 129. t. 65. Floriferous branches very hispid. Corollas white. Very like the preceding, but differs in the hairiness, and the more slender calycine teeth.

Canary-Island Bystropogon. Fl. June, Aug. Clt. 1714. Shrub 3 to 4 feet.

3 B. plumòsus (L'Her. sert. angl. p. 20. t. 22.) leaves serrately crenated, clothed with fine tomentum above, and white tomentum beneath; cymes axillary, dense; calycine teeth subulate. ♄. G. Native of the Canary Islands. Habit of *B. Canariénsis*. Leaves of *B. origanifòlius*. Floral leaves shorter than the cymes. Corollas pale purple. ?

Plumose Bystròpogon. Fl. June, July. Clt. 1779. Shrub 2 to 3 feet.

4 B. eriánthos (Benth. lab. p. 727.) leaves serrated, green above, and glabrous, and hardly tomentose beneath; cymes pedunculate, corymbose; calycine teeth ovate; corolla more than twice as long as the calyx, villous outside. ♄. G. Native of the Island of Juan Fernandez, Graham.—A humble shrub, with the habit of *B. punctàtus*; but the leaves are acute and serrated, and the flowers distinct. Tube of corolla inflated beyond the calyx.

Woolly-flowered Bystropogon. Shrub dwarf.

5 B. origanifòlius (L'Her. sert. angl. p. 20.) leaves almost quite entire, clothed with white tomentum beneath; cymes pedunculate, paniculately racemose; calycine teeth subulate. ♄. G. Native of the Canary Islands. Méntha plumòsa, Lin. mant. p. 278. Floriferous branches rather tomentose. Superior floral leaves much shorter than the flowers. Flowers of *B. Canariénsis*, but the calyxes and pedicels are less hispid.

Marjoram-leaved Bystropogon. Fl. July, Aug. Clt. 1815. Shrub 2 to 3 feet.

Sect. II. Minthóstachys (from μινθα, *mintha*, mint; and σταχυς, *stachys*, a spike; the whorls of flowers are spicate, like those of some species of mint.) Benth. lab. p. 325. Calyx 13-nerved, tubular. Whorls densely spicate. This section is intermediate between *Bystropògon* and *Pychnánthemum*.

6 B. spicàtus (Benth. lab. p. 326.) leaves subserrated, green on both surfaces, glabrous; whorls dense, spicate; calycine teeth ovate. ♄. G. Native of Peru, at Parrochuca, Mathews. Shrub quite glabrous. Leaves 1 to 1½ inch long; floral leaves much smaller, clothed with hoary tomentum on both surfaces. Whorls 6-10-flowered. Calyx very villous. Corolla hardly longer than the calycine teeth. A fifth fertile stamen sometimes occurs in this species.

Spicate-flowered Bystropogon. Shrub.

7 B. tomentòsus (Benth. lab. p. 326.) leaves a little crenated, green above, and rather hispid, at length glabrous, but clothed with tomentose wool beneath; whorls dense, subspicate; calycine teeth subulate. ♄. G. Native of Peru, Ruiz. et Pav. Young branches villous. Cauline leaves 1-2 inches long, rounded at the base, obtuse and acute, white or rufescent beneath; floral leaves gradually smaller: upper ones hardly exceeding the calyxes, and clothed with soft villi on both surfaces. Corollas like those of *B. spicàta*.

Tomentose Bystropogon. Shrub.

8 B. ca'nus (Benth. lab. p. 326.) leaves ovate-lanceolate, a little toothed, canescent beneath; lower whorls distinct: upper ones subspicate; calycine teeth subulate. ♄. G. Native of Peru, Ruiz. et Pav. Branches villous, slender. Leaves an inch long, acute, cuneately rounded at the base. Flowers smaller than in the preceding.

Hoary Bystropogon. Shrub.

† *A doubtful species.*

9 B. denta'tus (Poir. suppl. 1. p. 755.) leaves ovate, hairy, serrated; whorls of flowers hispid. ♄. ? G. Native of Peru. Probably a species of *Hyptis*.

Toothed-leaved Bystropogon. Shrub. ?

Cult. The species of *Bystropògon* are shrubs of no beauty; their culture is that of other common greenhouse plants, and they are readily increased by cuttings.

XXXVII. PYCHNA'NTHEMUM (from πυκνος, *pychnos*, dense; and ανθεμις, *anthemis*, a flower; the flowers are disposed in dense whorls.) Michx. fl. bor. amer. 2. p. 7. Benth. lab. p. 326.—Brachystèmum, Michx. fl. bor. amer. 2. p. 5.—Koéllia, Moench. meth. 407. Túllia, Leavenworth, in Sill. journ. sc. vol. 20. p. 343.

Lin. syst. *Didynàmia, Gymnospérmia*. Calyx ovate or tubular, somewhat 13-nerved; teeth nearly equal, straight, or the 3 upper ones are joined at the base into an upper lip; throat naked inside. Corolla with the tube equalling the calyx, and the limb sub-bilabiate; the upper lip straight, flat, entire, or shortly emarginate; the lower lip flat, trifid; lobes all ovate, obtuse. Stamens 4, nearly equal, or the lower ones are rather the longest, straight, diverging, exserted, or inclosed; anthers 2-celled: cells parallel. Style almost equally bifid at top; lobes subulate, stigmatiferous at top. Achenia dry, smooth, or minutely dotted.—Perennial, stiff, usually canescent herbs, paniculately corymbose at top. Whorls few, dense, many-flowered, propped by bracteas, usually forming a terminal head, sometimes one or more disposed along the stem beneath. Corollas white or purplish; the lower lip usually dotted with purple.

Sect. I. Tu'llia (meaning unknown to us.) Benth. lab. p. 327. Calyx ovate-tubular, somewhat bilabiate, with usually subulately awned teeth. Whorls few, ample, often loose; cymes much branched, many-flowered. Outer bracteas foliaceous: inner ones subulate. Leaves petiolate.

1 P. incа'num (Michx. fl. bor. amer. 2. p. 7.) leaves on short petioles, ovate-oblong, acute, remotely serrated, rounded at the base, pubescent, clothed with white tomentum beneath; whorls many-flowered, dense, cymose; bracteas linear, or the outer ones are lanceolate; calycine teeth acute, a little awned, nearly equal. ♃. H. Native of North America, in cornfields and among bushes from Canada to Carolina. Origànum incànum, Walt. fl. car. p. 165. ? Clinopòdium incànum, Lin. spec. p. 822.—Dill. elth. 1. p. 87. t. 74. Plant pubescent. Leaves 1½ inch long. Corollas whitish, tinged with red. Stamens exserted.

Hoary Pychnanthemum. Fl. July, Oct. Clt. 1732. Pl. 1½ to 3 feet.

2 P. Tu'llia (Benth. lab. p. 328.) leaves petiolate, oblong, acute, a little serrated, narrowed at the base, pubescent on both surfaces, pale beneath; whorls many-flowered, cymose; bracteas linear: outer ones oblong, awned; calyx bilabiate; teeth acute, a little awned; corolla glabrous inside. ♃. H. Native of Tenessee. Túllia pychnanthemoides, Leavenworth, in Sill. amer. journ. sc. vol. 20. p. 343. t. 5. Plant pubescent. Leaves 2 inches long. Tube of corolla a little longer than the calyx. Stamens exserted.

Tullia Pychnanthemum. Pl. 1½ foot.

3 P. Lomi'su (Nutt. acad. nat. sc. phil. 7. p. 100.) leaves petiolate, ovate, somewhat serrated, acute, short, glabrous above; flowers cymose, propped by many bracteas; bracteas lanceolate,

acuminated, hoary; calycine teeth short, acuminated, pilose at top; flowers spotted. ♃. H. Native of Georgia. Allied to *P. lanàta*; but readily distinguished from it, in the shorter, more glabrous leaves, more humble stature, and spotted flowers. Cymes large, usually terminal. Bracteas canescent. Corolla white or pale red, spotted with red.—A beautiful species, having the fragrance of *Penny-Royal*.

Lewis's Pychnanthemum. Pl. ½ to 1 foot.

4 P. Aristàtum (Michx. fl. bor. amer. 2. p. 8. t. 38.) leaves on short petioles, oblong, acute, a little serrated, rounded at the base, glabrous on both surfaces, or scarcely tomentose; whorls many-flowered, dense; bracteas very acute: outer ones oblong: inner ones subulate; calycine teeth equal, acute, a little awned; corolla pubescent inside. ♃. H. Native from Maryland to Upper Carolina. P. verticillàtum, Pursh, fl. amer. sept. 2. p. 410. exclusive of the syn. of Michx. Origanum clinopodioides, Walt. fl. car. ex Pursh, l. c. Herb a little branched, quite glabrous, pale green. Leaves 1½ to 2 inches long. Corolla hardly longer than the calyx, whitish. Stamens a little exserted.

Awned-calyxed Pychnanthemum. Fl. Aug. Clt. 1752. Pl. 1 foot.

5 P. Torrei (Benth. lab. p. 329.) leaves on short petioles, oblong-lanceolate or linear, acute, scarcely serrated, narrowed a long way at the base, almost glabrous; whorls dense, subcorymbose; bracteas oblong or subulate, awned; calycine teeth nearly equal, subulate; corolla pubescent inside. ♃. H. Native of the State of New York, near Princeton, Torrey; and of South Carolina, Mitchell. Stem a little branched, pubescent. Leaves 1 to 2½ inches long, green, finely downy on the veins. Calyxes and bracteas clothed with soft villi. Stamens exserted.

Torrey's Pychnanthemum. Pl. 1 to 2 feet.

6 P. hyssopifòlium (Benth. lab. p. 329.) leaves almost sessile, oblong-lanceolate or linear, obtuse, nearly quite entire, glabrous, or clothed with fine tomentum; whorls few, many-flowered, rather loose; bracteas subulate, awned: outer ones oblong; teeth of calyx nearly equal, subulate, stiff; corolla almost glabrous inside. ♃. H. Native of Virginia, Carolina, Georgia, and Louisiana. P. setòsum, Nutt. in journ. acad. sc. phil. 7. p. 100.? Herb a little branched, usually canescent from fine tomentum. Leaves an inch long, very rarely subserrated, with often fascicles of smaller ones in the axils. Bracteas exceeding the calyxes. Flowers similar to those of *P. aristàtum*.

Hyssop-leaved Pychnanthemum. Pl. 1 to 1½ foot.

Sect. II. Brachyste'mon (from *βραχυς, brachys*, short; and *στημων, stemon*, a stamen.) Benth. lab. p. 329. Calyx ovate, with short equal teeth. Whorls dense, numerous, head-formed, almost all terminal and panicled. Bracteas oblong, lanceolate, or subulate, adpressed. Leaves usually sessile.

7 P. mu'ticum (Pers. ench. 2. p. 128.) pubescent; stem panicled at top; leaves sessile, ovate-lanceolate, acute, a little serrated, rounded at the base, stiff; upper ones white on both surfaces; whorls very dense, capitate; bracteas ovate-lanceolate; calyxes bluntly and almost equally toothed; throat of corolla villous inside. ♃. H. Native of Upper Carolina; at St. Louis and West Chester, Drummond; Arkansas, Nuttall. Stems branched, green, villous, pubescent, or almost glabrous, as well as the lower leaves; but the upper leaves and whorls are white from tomentum. Leaves sometimes all entire, but the lower ones are usually serrated. Corolla white; lower lip dotted with purple.

Mutic Pychnanthemum. Pl. 1 to 2 feet.

8 P. pilòsum (Nutt. gen. amer. 2. p. 33.) stem pilose, branched a little at top; leaves lanceolate, pilose beneath, with prominent veins, obscurely denticulated; bracteas length of calyxes, clothed with hoary pubescence; heads larger than in *P. lanceolàtum*. ♃. H. Native of Kentucky and Tenessee, in valleys. Beck, in Sill. amer. journ. sc. 14. p. 117. Stems and leaves more or less pilose. Heads terminal, large. Bracteas and calyxes villous, mutic. Stamens exserted. Corolla pubescent, spotless. Said by Bentham to be the same as *P. mùticum*.

Pilose Pychnanthemum. Pl. 1 to 2 feet.

9 P. lanceola'tum (Pursh, fl. amer. sept. 2. p. 410.) stem panicled at top, with pubescent angles; leaves sessile, ovate-lanceolate or lanceolate, quite entire, rounded at the base, stiff, almost glabrous; whorls dense, numerous, villous; bracteas ovate-lanceolate; calyxes bluntly and unequally toothed; throat of corolla villous inside. ♃. H. Native of Pennsylvania, even to Upper Carolina, among the mountains. Allied to *P. mùticum*; but differs in the stem being more glabrous, and in the leaves being quite entire and all green. Stem often purplish. Leaves sometimes glabrous and sometimes villous. Corolla usually spotted, but sometimes also spotless.

Var. α, *latifòlium* (Benth. lab. p. 330.) leaves broader. ♃. H. Brachystèmum verticillàtum, Michx. fl. bor. amer. 2. p. 6. t. 31. Thymus verticillàtus, Poir. dict. 7. p. 653. P. verticillàtum, Pers. ench. 2. p. 128.

Var. β, *angustifòlium* (Benth. lab. p. 330.) leaves narrower. ♃. H. Népeta Virgínica, Willd. spec. 3. p. 56. Brachystèmum Virgínicum, Michx. fl. bor. amer. 2. p. 6. P. Virgínicum, Pers. ench. 2. p. 128. Brachystèmum lanceolàtum, Willd. enum. 2. p. 623. Thymus lanceolàtus, Poir. suppl. 5. p. 305.

Lanceolate-leaved Pychnanthemum. Fl. July, Aug. Clt. 1812. Pl. 1 to 2 feet.

10 P. linifòlium (Pursh, fl. amer. sept. 2. p. 409.) glabrous; stem panicled at top; leaves sessile, linear, quite entire, stiff; whorls dense, numerous, terminal, almost glabrous; bracteas linear, acute, stiff; calycine teeth lanceolate-subulate, short, acute, stiff; corolla villous inside at the throat. ♃. H. Native from New England to Carolina; Georgia, and New Orleans. P. tenuifòlium, Schrad. in Steud. nom. 669.? Thymus Virgínicus, Lin. syst. p. 453. Brachystèmum linifòlium, Willd. enum. p. 623. Koëllia capitàta, Mœnch. meth. p. 408. Origanum flexnòsum, Walt. fl. car. p. 165. ex Pursh.—Herm. par. 218.? Habit of *P. mùticum*. Margins of leaves subrevolute. Stamens a little exserted. Corolla whitish.

Flax-leaved Pychnanthemum. Fl. July, Aug. Clt. 1739. Pl. 1 to 2 feet.

11 P. nu'dum (Nutt. gen. amer. 2. p. 34.) plant glabrous, pale green; stems nearly simple, strict; leaves sessile, ovate-oblong, obtuse, quite entire, rounded at the base; whorls loose, terminal, corymbosely panicled, glabrous; outer bracteas lanceolate-linear: inner ones very short and subulate; corollas pubescent inside. ♃. H. Native of Carolina and Georgia, on the mountains. Stems more simple and strict than in other species. Leaves erect, with subrevolute edges, scarcely an inch long. Corymbs dense. Corolla pubescent, pale.? Stamens exserted from the tube, shorter than the limb.

Naked Pychnanthemum. Fl. July, Aug. Clt. 1824. Pl. 1 to 2 feet.

Cult. Plants of easy culture, very fragrant, but of little beauty. The species are readily increased by dividing at the root or by seed; and they thrive best in a pear border.

XXXVIII. MONARDE'LLA (a dim. of Monárda.) Benth. lab. p. 331. Pychnánthemum species, Michx. and other authors.

Lin. syst. *Didynàmia, Gymnospérmia*. Calyx ovate-tubular, often elongated, 10-13-nerved, 5-toothed: teeth short, nearly

equal, erect; throat naked inside. Corolla with the tube equalling the calyx, or a very little exserted; throat glabrous inside; limb sub-bilabiate: upper lip bifid: lower lip trifid: lobes all oblong or linear, flat, nearly equal. Stamens 4, nearly equal, or the lower ones are the longest, straight, diverging, exserted; anthers 2-celled: cells parallel, at length diverging or divaricate. Style shortly bifid at apex; stigmas minute. Achenia dry.—Perennial herbs. Whorls large, almost globose, propped by broad bracteas, solitary, terminal. Habit different from *Pychnánthemum*, although nearly allied in characters.

1 M. monta'na (Benth. lab. p. 331.) stem erect; leaves sessile, ovate-lanceolate, acute, serrated, rounded at the base; whorls densely globose, large; outer bracteas broad-ovate, acute; calyxes tubular, almost equally toothed. ♃. II. Native of North America, on the high mountains of Carolina. Pychnánthemum montànum, Michx. fl. bor. amer. 2, p. 8. Leaves sessile, and whorls large. Corollas purple, spotted.

Mountain Monardella. Pl. 1 to 1½ foot.

2 M. Carolinia'na (Benth. lab. p. 332.) very hairy; leaves abruptly-petiolate, somewhat cordately-oval, serrated; heads involucrated by coloured bracteas; bracteoles ciliated; calyxes bearded at top. ♃. II. Native of Carolina, on the high mountains. Pychnánthemum Monardélla, Michx. fl. bor. amer. 2. p. 8. t. 84. Habit of *Monárda fistulòsa*, ex Michx. Leaves more than an inch long, acuminated. Bracteas twice as long as the calyxes. Corollas small, pale red. Pychnánthemum Monardélla, Pursh, is nothing but *Monárda fistulòsa*.

Carolinian Monardella. Fl. July, Aug. Clt. 1816. Pl. 2 to 3 feet.

3 M. odoratíssima (Benth. lab. p. 332.) stems procumbent; leaves almost sessile, oblong-lanceolate, narrowed at both ends, quite entire, hoary; whorls densely-globose, large, solitary; outer bracteas broad-ovate, very blunt, coloured; calyx tubular, elongated, almost equally toothed. ♃. II. Native of North West America, in rocky places, at the Columbia river, and on rocks among the White Mountains, Douglas. Plant suffruticose, branched, purplish at the base. Leaves hardly half an inch long, clothed with hoary tomentum on both surfaces. Corolla rose-coloured, glabrous: tube a little exserted.

Very sweet-scented Monardella. Pl. procumbent.

4 M. undula'ta (Benth. lab. p. 332.) stem procumbent at the base; branches ascending; leaves oblong-linear, obtuse, with undulately-curled edges, narrowed a short way into the petioles, green on both surfaces, glabrous; whorls densely-globose, large, solitary; outer bracteas broad-ovate, acute, membranous, mutic; calyx tubular, elongated, almost equally toothed, mutic. ♃. H. Native of North California, Douglas. Stems perennial or suffruticose at the base. Branches purplish, glabrous, or downy. Leaves thickish, 1-nerved, usually fascicled in the axles, ½ to 1 inch long. Heads and flowers as in the preceding. Calyxes villous at top.

Undulated-leaved Monardella. Pl. ½ to 1 foot.

5 M. Dougla'sii (Benth. lab. p. 332.) stem procumbent at the base; leaves petiolate, lanceolate, or linear, narrowed at both ends, green, pubescent; whorls densely-globose, large, solitary; outer bracteas ovate-lanceolate, exceeding the calyxes, aristately-subulate; calyx ovate-tubular, inflated, villous, with nearly equal, awned teeth. ♃. H. Native of North California. Herb pubescent, divaricately-branched; branches purplish. Leaves one inch long, flattish. Heads an inch in diameter. Segments of corolla and genitals shorter than in *M. odoratissima* and *M. undulata*.

Douglas's Monardella. Pl. ½ foot.

Cult. For culture and propagation, see *Pychnánthemum*, p. 763.

XXXIX. AMARA'CUS (Αμαρακος, *amaracos*, the Greek name of Dittany, of Crete.) Mœnch. ex Benth. lab. p. 333. Origanum, spec. of Lin. and other authors.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx ovate-campanulate, 13-nerved at the base; upper lip elongated, entire, erect; lower lip truncate, almost wanting, or very shortly bidentate; throat naked inside. Tube of corolla exserted from the calyx, equalling the imbricate bracteas; limb bilabiate; the upper lip erect, emarginate, flattish: the lower lip spreading, trifid, with nearly equal, entire lobes. Stamens 4, erect, ascending, scarcely distant, exserted, didynamous: lower ones the longest; filaments glabrous; anthers 2-celled: cells distinct, diverging, or divaricate. Upper lobe of style short; stigmas minute.—Shrubs with quite entire leaves. Flowers aggregate into oblong spikelets. Bracteas orbicular, membranous, coloured, loosely-imbricate, much longer than the calyxes, equalling the tubes of the corollas. This genus differs from *Origanum*, from which it has been separated, in habit, calyx, corolla, &c.

1 A. dicta'mnus (Benth. lab. p. 333.) leaves almost sessile, clothed with dense wool on both surfaces, as well as the branches. ♄. F. Native of Candia, on rocks, and elsewhere in Greece. A. tomentòsus, Mœnch. Origanum Dictámnus, Lin. spec. 823. Curt. bot. mag. t. 298.—Blackw. t. 462.—Sabb. hort. rom. 3. t. 76. Dictámnus Crécicus, Bauh. pin. p. 222. Branches ascending. Leaves broad-ovate, obtuse, quite entire, rounded at the base, thick; floral leaves small, almost glabrous. Corolla without a spur, purple. Heads of flowers nutant. The fabulous qualities attributed to this plant (Dictámnus) may be seen in Virgil's 12th Æneid, and in Cicero's de Natura Deorum, 2. p. 50.

Dittany of Crete. Fl. June, Aug. Clt. 1551. Shrub 1 foot.

2 A. Tournefórtii (Benth. lab. p. 333.) leaves sessile, orbicular, sub-cordate at the base, and are, as well as the branches, quite glabrous or ciliated. ♄. F. Native of the Grecian Archipelago; as in the island of Amorgos, on rocks; and of the Levant. Origanum Tournefórtii, Ait. hort. kew. ed. 1st. vol. 2. p. 311. Andr. bot. rep. t. 537. Sibth. et Smith, fl. græc. 6. p. 56. t. 569. Origanum calcarátum, Juss. ex Steud. nom. p. 572. Origanum dictamni Cretici facie, folio crasso, nunc villoso, nunc glabro, Tourn. cor. 18. itin. 1. p. 240. with a figure. This differs from the preceding in being glabrous; in the spikes being more dense; in the bracteas being broader, and the genitals a little shorter. Lower lip of calyx distinctly bidentate. Corollas purple, furnished with a small obtuse spur under the throat. Habit of *Rhodiola rósea*.

Tournefort's Amaracus, or Dittany of Amorgos. Fl. Aug. Sept. Clt. 1788. Shrub ½ foot.

Cult. The species of this genus are liable to be killed by severe frosts if allowed to remain in the open air; but in common winters, if planted against a south wall in a dry soil, will survive. It is, however, proper to keep a few reserve plants in pots, that they may be protected by placing them in a greenhouse or frame. A rich light soil suits them best; and cuttings are readily rooted under a hand-glass.

XL. ORIGANUM (said to be derived from *opos, oros*, a mountain; and *γανος, ganos*, joy, the delight of the mountain. Origanum of Pliny, and Ογιγανον of Theophrastus and Dioscorides.) Benth. lab. p. 334. Origanum, species of Lin. and other authors.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx ovate-tubular, 10-13-nerved, striated; teeth 5, equal, or the 3 superior ones are rather the longest; throat villous inside. Corolla having the tube equal in length to the calyx, or hardly longer than it; limb sub-bilabiate; the upper lip erectish, emarginate; the lower lip spreading and trifid, with nearly equal lobes. Stamens 4, exserted, distant, somewhat didynamous, the lower ones

the longest. Style almost equally bifid at top; stigmas minute. Achenia dry, smoothish.—Herbs. Leaves quite entire, or a little toothed. Flowers collected into cylindrical or oblong spikelets. Bracteas imbricate, coloured, covering the calyxes, but more loose than in the genus *Marjorana*.

1 O. Sipy'leum (Lin. spec. 833.) stems decumbent, paniculately-branched at top; leaves on short petioles, quite entire: lower ones roundish, hispid, or woolly: upper ones ovate, quite glabrous, glaucous; spikelets oblong, solitary, or by threes, nutant; bracteas loose, ovate, coloured; calyx quite glabrous, having the three superior teeth longer. ♄. F. Native of the Levant and Greece; on Mount Sipylos in Phrygia; and between Smyrna and Bursa, Sibthorp. Near Aleppo, Russell. On Mount Delphus, Sibthorp. O. hybridum, Mill. dict. no. 12. O. Sipýleum, Sibth. et Smith, fl. græc. 6. p. 57. t. 570. Origanum, montis sipyli, Herm. lugdb. 462. t. 463. Origanum Sipýleus, marjoranæ foliis, Mor. hist. 3. p. 357. sect. 11. t. 4. f. 2. Procumbent at the base. Sterile branches short, very villous. Leaves thick, woolly on both surfaces. Floriferous stems glabrous, with a few remote leaves. Tube of corolla equalling the calyx. Corolla pale purple. ?

Sipylos Marjoram. Fl. June, Sept. Clt. 1699. Shrub 1 to 1½ foot.

2 O. compa'ctum (Benth. lab. p. 334.) humble, almost simple; leaves nearly sessile, ovate, obtuse, scarcely serrated; spikes densely capitate, cylindrical; bracteas elongated, lanceolate, acute, coloured, twice as long as the calyx. ♄. F. Native near Tangiers, Salzmann. O. glandulòsum, Salzm. pl. exsic. but not of Desf. Stems rising from a suffruticose base, simple. Leaves smaller and stiffer than in *O. vulgàre*, but the bracteas are a little larger, and all acute. Teeth of calyx bearded inside: the 3 upper ones rather the longest. Corolla pale purple. ?

Compact Marjoram. Pl. ½ to ¾ foot.

3 O. vulga're (Lin. spec. 824.) erect, villous; leaves petiolate, ovate, obtuse, serrated a little, rounded at the base, green on both surfaces; spikelets oblong or cylindrical, glomerate, corymbosely-panicled; bracteas ovate, obtuse, coloured, from half as long again as the calyx to twice as long. ♃. H. Native of Europe, North of Africa, and Middle Asia, by way-sides, in hedges, and in woods; plentiful in some parts of Britain; Caucasus, Siberia, Cashmere; also from Pennsylvania to Carolina, but probably escaped from gardens. Curt. lond. 3. with a figure. Woodv. med. bot. 451. t. 164. Oed. fl. dan. t. 638. Sab. hort. rom. 3. t. 75. Smith, engl. bot. 1143. O. stolonìferum, Bess. O. orientàle, Mill. dict. no. 5. O. decìpiens, Wallr.—Blackw. t. 280.—Riv. mon. 60. f. 1. Habit very variable. Stems numerous, erect, more or less hairy, often reddish. Leaves more or less villous, rarely almost glabrous. Bracteas usually glabrous and reddish. Corolla exserted, usually purple, rarely white, with green bracteas. The wild marjoram is an aromatic and ornamental plant. The dried leaves, used instead of tea, are extremely grateful; they are also used in fomentations; the essential oil is so acrid that it may be considered as a caustic, and was formerly used with that intention by farriers. A little cotton moistened with it and put into the hollow of an aching tooth, frequently relieves the pain. The tops will dye linen of a reddish brown. This species is only used in cookery in default of one of the other marjorams.

Var. β, prismàticum (Gaud. ex Benth. lab. p. 335.) fructiferous spikes elongated, prismatic. ♃. H. Native of the region of the Mediterranean. O. heracleóticum, Rchb. fl. germ. exc. 813, but not of Lin. O. Créticum, Lin. spec. 823. O. macrostàchyum, Link, handb. 468. O. megastàchyum, Link, enum. 2. p. 114. ? O. latifòlium, Mill. dict. no. 3. This hardly differs from the species, except in the spikelets being elongated, and the flowers generally white; but they are also purple.

Var. γ, hùmile (Mart. Mill. dict. no. 8. Benth. lab. p. 335.) hardly half a foot high, nearly glabrous; leaves narrower, spikelets small, numerous, corymbose. ♄. H. Native of Asia, in shady places. O. hùmile, Mill. dict. no. 4. Poir. suppl. 4. p. 186. Corollas purple.

Var. δ, vìrens (Benth. lab. p. 335.) bracteas hardly coloured, usually pubescent. ♃. H. Native of Portugal and Cashmere. O. vìrens, Hoffm. et Link, fl. port. 1. p. 119. t. 9. O. oblongàtum, Link, enum. 2. p. 114. O. thymiflòrum, Rchb. fl. germ. exc. p. 813.

Common or Wild Marjoram. Fl. June, Oct. Britain. Pl. 1 to 2 feet.

4 O. norma'le (D. Don. prod. fl. nep. p. 113.) ascending, villous; leaves petiolate, ovate, bluntish, cuneately-rounded at the base, green on both surfaces; spikelets small, oblong, glomerate, corymbosely-panicled; bracteas lanceolate, acute, exceeding the calyxes a little. ♃. H. Native of the Himalaya, Cashmere, Nipaul, Kamaon, and Sirmore, Wall; and Siberia, at Lake Baical. Stems paniculately branched at top. Bracteas spreading, a little green, pubescent. Calyx of *O. vulgàre*, but the corolla is smaller, and probably purple. Stamens probably always inclosed.

Normal Marjoram. Fl. June, Aug. Clt. 1819. Pl. 1 to 2 feet.

5 O. heracleóticum (Lin. spec. p. 823.) plant erectish, glabrous or villous, glandular; leaves on short petioles, ovate, obtuse, quite entire, rounded at the base; panicle elongated; spikelets oblong or elongated, glomerate; bracteas ovate, acute, green, pubescent, equalling the calyxes. ♃. H. Native of the region of the Mediterranean; as on Mount Atlas, near Muscar; Calabria; some of the Grecian Islands; and about Smyrna and Constantinople; also about Odessa. O. glandulòsum, Desf. fl. atl. 2. p. 27. O. Smyrnæ'um, Sibth. et Smith, fl. græc. 6. p. 57. t. 571, but not of Lin. O. Créticum, Sieb. pl. exsic. and of other authors, but not of Lin.—Lob. icon. 492. A very variable species, dissimilar in habit to the others, but readily recognized by the bracteas being longer than the calyxes; by the loose spikes and small flowers. Stamens more or less villous. Leaves pale green, glabrous or pubescent. Flowers one half smaller than those of *O. vulgàre*, white. Bracteas often deciduous, usually pubescent. This, the winter sweet marjoram, requires a sheltered, dry soil, and seldom ripens seed in this country, and is usually propagated by slips or cuttings. Like other marjorams it is an aromatic, of sweet flavour, much used as relishing herbs in soups and broths, stuffings, &c. The young, tender tops and leaves together are used in summer in a green state, and they are dried for winter.

Var. β, hùmile (Benth. lab. p. 336.) ♃. H. O. parviflòrum, D'Urv. enum. pl. arch. in mem. soc. Lin. par. p. 327.

Heracleon, or Winter Sweet Marjoram, or Bastard Marjoram. Fl. June, Nov. Clt. 1640. Pl. 1 foot.

6 O. laxiflòrum (Royle, in Hook. bot. misc. 3. p. 376.) stem procumbent, villous; leaves on short petioles, broad-ovate, obtuse, almost entire, rounded at the base, green on both surfaces, pubescent; bracteas acute, rather longer than the calyxes, green, and are, as well as the flowers, disposed in very loose spikes. ♃. H. Native of the Himalaya at Nagkanda, Royle. Leaves like those of *O. vulgàre*, but differs otherwise from it in the stems being procumbent; and especially in the spikes being loose, not imbricated.

Loose-flowered Marjoram. Pl. procumbent.

7 O. Majóricum (Cambess. enum. pl. balear. p. 124.) stem loosely tomentose; leaves elliptic, pubescent; flowers fasciculate; calyx and corolla bilabiate. ♃. H. Native of the Balearic Islands, in arid places. Spikes very short, globose. Calyx glandular: upper lip deeply tridentate: lower lip shorter,

bipartite. Corolla rose-coloured, deciduous. Perhaps Thymus Richárdi, Pers.?

Majorca Marjoram. Pl. 2 to 3 feet.

† *Doubtful species.*

8 O. punctátum (Poir. dict. suppl. 4. p. 186.) leaves ovate-lanceolate, dotted, glabrous; heads spherical, rather downy; bracteas acute, longer than the calyxes. ♃. H. Native country unknown. Stems glabrous. Leaves almost sessile, quite entire. Spikelets globose, size of peas. Bracteas rather pubescent. Corollas whitish. Perhaps a young specimen of *O. Heracleóticum*.

Var. β: leaves narrower, lanceolate. ♃. H.

Dotted-leaved Marjoram. Pl. 1 foot.

9 O. vestítum (Clarke, trav. 2. p. 451.) leaves subcordate, ovate, petiolate, quite entire, tomentose on both surfaces, and very soft; spikes roundish-ovate, compact, tomentose, usually by threes. ♄. F. Native of Palestine, near Cana. Plant branched, suffruticose, hoary from tomentum. Calyx bilabiate, with a woolly throat. Corollas slender, glandularly dotted. Perhaps the same as *Marjoràna crassifólia*.

Clothed Marjoram. Shrub branched.

10 O. salviifólium (Roth, ex Steud. nom. p. 572.) Nothing is known of this plant but the name.

Sage-leaved Marjoram. Pl.?

Cult. All the species are of easy culture and propagation. A sandy soil and dry situation suit them best. The herbaceous species are readily propagated by dividing at the root, and the shrubby kinds, by cuttings or slips, or by separating the rooted shoots.

XLI. MARJORA'NA (altered from the Arabic name *Maryamych*, but the marjoram of the Arabs is *Sálvia verticillata*.) Mœnch. meth. 406. Benth. lab. p. 338. Origanum species of Lin. and other authors.

Lin. syst. *Didynámia, Gymnospérmia*. Calyx shortly campanulate at the base; limb cleft, conplanately dilated above, quite entire, orbicular, with the margin implicate beneath at the base; throat naked inside. Corolla having the tube equalling the calyx, and the limb somewhat bilabiate; upper lip erectish, emarginate: lower lip spreading, trifid, with nearly equal lobes. Stamens 4, exserted, distant, somewhat didynamous: lower ones the longest; anthers 2-celled: cells parallel, diverging, or at length divaricate. Style almost equally bifid at apex; stigmas minute.—Perennial or suffruticose herbs, usually clothed with tomentose villi. Leaves quite entire or toothed. Flowers collected into short tetragonal spikelets. Bracteas orbicular, villous, not coloured, flat, equal in height to the calyxes, lying upon them, and closely imbricate.

1. M. microphy'lla (Benth. lab. p. 338.) suffruticose, procumbent; branches slender, almost glabrous, panicled; leaves small, remote, petiolate, broad-ovate, obtuse, rounded at the base, clothed with white tomentum; spikelets nearly globose, few, and sub-corymbose at the tops of the branches. ♄. F. Native of Candia, on the Sphacliotic Mountains. Origanum Màru, Sibth. et Smith, fl. græc. 6. p. 59. t. 573. Sims, bot. mag. t. 2602. Origanum microphyllum, Sieb. pl. exsic. creta. Branches purplish, smooth, filiform. Leaves not above a third the size of those of *M. hortènsis*. Branches and calyxes clothed with tomentose villi, densely ciliated at apex. Corollas of *M. hortènsis*.

Small-leaved Pot Marjoram. Shrub procumbent.

2 M. horte'nsis (Mœnch. meth. 406.) branches nearly glabrous, racemosely panicled; leaves petiolate, oblong-ovate, obtuse, quite entire, clothed with hoary tomentum on both surfaces; spikelets oblong, sessile, glomerate on the branchlets; ♄. in its native country, ☉. in our gardens. H. Native of the North of Africa, near Mascar, on hills; and of Asia, on the Alps of Kamaon, Wall. Origanum Marjoràna, Lin. spec. p. 824. Woodv. med. bot. 453. t. 165. Origanum Marjoranoides, Willd. spec. 3. p. 137. Origanum Wallichiànum, Benth. in Wall. pl. rar. asiat. 1. p. 81. Marjoràna crássa, Mœnch. meth. 406.? Origanum Onites, Lam. dict. 4. p. 608. ex De. fl. fr. 3. p. 559. but not of Lin. Marjoràna vulgàris, Bauh. pin. 224. Amáracus vulgátior, Lob. icon. 498. Origanum acinacifólium, Wallr. —Blackw. t. 319.—Mor. hist. sect. 11. t. 3. f. 2. Branches tetragonal, pubescent, a little branched. Leaves half an inch long. Spikelets 3-5 together, nearly sessile. Bracteas and calyxes complanate, closely imbricate. Corollas small, purplish, or white. A variety of this species occurs in Miller's herbarium, under the name of O. Heracleóticum. This, the sweet or knotted marjoram, is a hardy annual in our gardens, although suffruticose in the places of its natural growth. As the seed seldom ripens in this country, it is generally procured from France. When in blossom the herb is cut over and dried for winter use; so that a sowing requires to be made every year. Like the other culinary kinds of marjoram, it is much used as a relishing herb in soups, broths, stuffings, &c. The young, tender tops and leaves are used together in summer in a green state, and they are dried for winter. For a seed-bed, 3 feet by 3 feet, a quarter of an ounce of seed will be sufficient. Sow in April on a compartment of light earth, either in small drills or broad cast; or sow a portion in a hot-bed, if requisite to have a small crop forwarded. When the plants are 1-2 or 3 inches high, thin the seed-bed, and plant those thinned out in a final bed, six inches apart, giving water; or where large supplies are required, some may remain thick, where sown, to be drawn off by the root as wanted. Sweet marjoram is a moderately-warm aromatic, yielding its virtues both to aqueous and spirituous liquors by infusion, and to water in distillation.

Garden Marjoram, or Sweet or Knotted Marjoram. Fl. June, July. Clt. 1573. Pl. 1 to 2 feet.

3 M. crassifólia (Benth. lab. p. 339.) branches rather tomentose, racemosely-panicled; leaves sessile, ovate-elliptic, thick, clothed with soft tomentum; spikelets oblong, sessile, glomerate on the branches. ♄ F. Native of the Levant, Palestine, and Candia. Origanum Màru, Lin. spec. p. 825, but not of other authors. Origanum Ægyptiacum, of authors, but not of Lin. Habit of *M. hortènsis*, from which it differs in the sessile, larger, thick leaves, which are densely clothed with tomentose wool on both surfaces, as well as the calyxes and bracteas. Corollas purplish.

Thick-leaved Marjoram. Fl. June, July. Clt.? Shrub 1 foot.

4 M. nervósa (Benth. lab. p. 339.) erect, branches panicled, beset with spreading villi; leaves sessile, broad-ovate, almost quite entire, roundly-truncate at the base, or the lower ones are somewhat cordate, villous on both surfaces; spikelets oblong, small, sessile, glomerate on the branches. ♄. F., or ☉. H. Native of Arabia and Egypt. Origanum Syriacum, Lin. spec. p. 824.? Origanum Indicum Zatarhéndi, Alp. et Vesl. pl. segypt. 31. t. 33. Màrum Syriacum, Lob. icon. t. 499. Habit of *M. hortènsis*, but the panicles are more divaricate and more branched. Leaves form of those of *M. onites*. Spikelets numerous, smaller, and more distinct than in *M. hortènsis*. Calyxes and bracteas of *M. onites*. Corollas a little larger.

Nerved-leaved Marjoram. Fl. June, July. Clt. 1823. Pl. 1 foot.

5 M. Onites (Benth. lab. p. 339.) stems erect, nearly simple, hairy; leaves sessile, ovate, serrated a little, rather villous or

tomentose; spikelets small, ovoid, numerous, densely corymbose. ♄. F. Native of the eastern region of the Mediterranean; as of Dalmatia, Greece, and the neighbouring islands, &c. Origanum Onites, Lin. spec. p. 824. Sibth. et Smith, fl. græc. 6. p. 58. t. 572. Origanum Smyrnæ'um, Lin. spec. p. 843. Origanum pállidum, Desf. hort. par. ed. 2d. p. 395. Pers. ench. 2. p. 129.—Bocc. mus. 2. p. 45. t. 38. Leaves half an inch long, usually cordate at the base. Corolla of *M. hortènsis*, but a little smaller, whitish. This, the *pot-marjoram*, though hardy enough to stand our winters, seldom ripens its seeds in this country. It is in flower from July to November, and is propagated by seed, but chiefly from slips. It is used and cultivated for the same purposes as *sweet marjoram*.

Ass's or Pot Marjoram. Fl. July, Nov. Clt. 1759. Shrub 1 foot.

Cult. All the species of marjoram are shrubby if protected in winter; and they are readily increased by slips or cuttings. When any of them are sown to be reaped the same year treat them as recommended for *M. hortènsis*, p. 766.

XLII. THY'MUS (from Θυμος, *thymos*, of Theophrastus and Dioscorides; from θυμος, *thymus*, courage, strength, the smell of thyme being reviving; or from θυω, *thyo*, to perfume, because it was used for incense in the temples.) Benth. lab. p. 340. Thymus species, Lin. and other authors. Serpyllum, Pers. ench. 2. p. 130.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx ovate, 13-nerved, bilabiate; upper lip tridentate, spreading; lower lip bifid, with ciliated subulate segments; throat villous inside. Corolla having the tube inclosed in the calyx and imbricating bracteas, naked inside; limb sub-bilabiate; upper lip straight, emarginate, flattish; lower lip spreading, trifid, with equal lobes, or the middle lobe is longest. Stamens exserted, rarely inclosed, straight, distant, nearly equal or didynamous, lower two the longest; anthers 2-celled: cells parallel, or at length diverging. Style about equally bifid at apex; lobes subulate, stigmatiferous at apex.—Small, usually canescent under shrubs. Leaves small, quite entire, veiny, with usually revolute margins. Whorls few-flowered sometimes, all remote, and sometimes disposed in loose, dense, or imbricate spikelets. Bracteas minute. Flowers usually purplish, rarely white.

Sect. I. Mastichina (so called from exhaling a scent like that of Mastich.) Benth. lab. p. 341. Calycine teeth, all subulate. Very nearly allied to the genus *Bystropógon*.

1 T. mastichina (Lin. spec. 827.) plant diffuse, branched, pale green, or canescent; leaves petiolate, ovate or oblong, obtuse, narrowed at the base, naked, flat: upper and floral leaves broader; calyx villous, with plumose subulate teeth, which are longer than the tube. ♄. F. Native of Spain, Portugal, and Barbary, in sandy, uncultivated places. T. ciliàtus, Mœnch. ex Steud. nom. p. 886. Sampsùchus seu Màrum Mastichen redolens, Bauh. pin. p. 224. Màrum, Blackw. icon. t. 134. Riv. mon. t. 40. Leaves almost entire, canescent while young. Superior whorls approximating into a round head. Corolla whitish, usually shorter than the calycine teeth.

Mastich Thyme. Fl. July, Sept. Clt. 1596. Shrub 1 foot.

2 T. tomentòsus (Willd. enum. 2. p. 626.? Benth. lab. p. 341.) plant diffuse, branched, canescent; leaves scarcely petiolate, ovate or oblong, obtuse, narrowed at the base, naked, flat, clothed with hoary tomentum when young: floral leaves broad-ovate, a little imbricated; calyx very villous, having the teeth all subulate, plumose, and shorter than the tube. ♄. H. Native of Spain and the Algarves, Masson. T. marifòlius, Pourr. ex Willd. l. c. T. elongàtus, Link, enum. 2. p. 118.? This species differs from the preceding in the calyxes, and inflorescence. Heads small, numerous, almost globose.

Tomentose Mastich Thyme. Fl. June. Aug. Clt. 1816. Pl. 1 foot.

Sect. II. Serpy'llum (ἑρπυλλον, the Greek name of the wild thyme; from ἑρπω, *herpo*, to creep; in reference to the creeping stems.) Benth. lab. p. 342. Superior teeth of calyx lanceolate. Floral leaves almost of the same colour as the cauline leaves.

3 T. vulga'ris (Lin. spec. p. 825.) plant erect or procumbent at the base, clothed with hoary pubescence; leaves sessile, linear, or ovate-lanceolate, acute, with revolute edges, fascicled in the axils: floral leaves lanceolate, obtuse; whorls loose, rather distant; teeth of upper lip of calyx lanceolate, but the segments of the lower lip are subulate and ciliated. ♄. H. Native of the South West of Europe, in dry, arid, uncultivated places; as of Portugal, Spain, South of France, South of Germany, Italy, Piedmont, and Greece. Woody. med. bot. 299. t. 109.—Blackw. icon. t. 211. Shrub much branched. Flowers purplish, smaller than those of *T. Serpyllum*. Upper whorls, or all, loosely approximate into a terminal head, or the 2 or 4 lower ones are remote.

There are two kinds of thyme cultivated for culinary purposes. The common and the lemon thyme. Of the garden or common thyme there are two varieties, the broad and narrow-leaved, besides the variegated, grown for ornament. The lemon thyme, *Thymus serpyllum*, var. γ, *citrátus*, is a low, trailing shrub, of a yellowish colour, having a strong scent of lemons. The young leaves and tops of both kinds are used in soups, stuffings, and sauces. For these purposes the broad-leaved common is generally preferred; but the flavour of the lemon thyme is much liked in peculiar dishes.

To raise thyme from seed is the general and most eligible method. It is occasionally multiplied by parting the roots of stocky close plants, and by slips of the young shoots. By seed, sow in March or April in a bed or border of light fine earth, either broad-cast, scattered thin and raked in lightly, which is the general course, or in small shallow drills, six inches asunder: the young plants may either remain, or be transplanted in the summer when 2 or 3 inches high. A portion may be drilled for an edging to a border. As soon as the plants are 3 or 5 inches in growth, in June or July, taking the opportunity of rain, thin them out, and plant 6 inches asunder, and water at planting. Others may be planted in a single row to form an edging to a border, either set close to form at once a full edging, or as far as 3 inches apart. Seedlings thus treated will come in for use the same year.

Those who raise considerable supplies of thyme for the markets usually sow large portions thickly in beds, to remain till of useful growth, then to be drawn off, root and top together, at different seasons as wanted; it is then tied in small bunches for market. Some persons also transplant considerable portions in spring and summer to 6-10 or 12 inches distance, to form a stocky full growth, to be drawn off in large bushy plants. Thyme is also propagated by slips of the branching shoots in the spring or early in autumn, but more especially by sections of the bush, or by removing rooted branches. Plant all these in light rich earth, and shade and water till rooted. In autumn, to provide against the effect of frosts on exotic evergreens, dry and house a store for winter; either cutting the tops or drawing the entire plants. Seed is produced abundantly in this country, and ripens in summer and autumn. Gather the seed spikes and spread them upon a cloth to dry; rub out clean, and put the seed up for sowing the following year.

Common or Garden Thyme. Fl. June, Aug. Clt. 1548. Shrub ½ to 1 foot.

4 T. tenuifòlius (Mill. dict. no. 2. Benth. lab. p. 728.) erect or procumbent at the base; branches pubescent; leaves

sessile, linear-subulate, acute, with revolute edges, fascicled in the axils, green, nearly glabrous; floral leaves lanceolate, obtuse; whorls distant; teeth of the upper lip of the calyx ovate, and the segments of the lower lip subulate. ♄. H. Native of the South of Spain, Pavon; near Cadiz, Picard. This differs from *T. vulgàris*, in the more slender, green, glabrous leaves, which are scarcely white from pubescence beneath.

Fine-leaved Thyme. Fl. June, Aug. Clt. 1548. Shrub ½ to 1 foot.

5 T. DIFFU'SUS (Salzm. pl. exsic. ex Benth. lab. p. 342.) procumbent; floriferous branches ascending, clothed with hoary pubescence; leaves sessile, linear or lanceolate-linear, fascicled in the axils, with revolute, naked margins, clothed with hoary tomentum on both surfaces; floral leaves similar to the others; whorls approximate into an oblong head; teeth of the upper lip of calyx lanceolate, acute: segments of the lower lip subulate, ciliated. ♄. F. Native of Gibraltar. T. ascéndens, Bernh. ex Rchb. fl. germ. exc. p. 313. Habit of *T. angustifòlius*. Leaves of *T. vulgàris*, of which it is probably a variety.

Diffuse Thyme. Shrub procumbent.

6 T. DECUSSA'TUS (Benth. lab. p. 342.) erect; stems much branched, pubescent; leaves sessile, ovate, obtuse, with revolute edges, clothed with fine tomentum: those of the sterile branches decussate; floral leaves similar to the rest; whorls few-flowered, capitellate; teeth of upper lip of calyx short, ovate, obtuse: segments of the lower lip subulate, ciliated. ♄. F. Native of Arabia, in the desert of Sinai, Bove. Old branches rather spiny. Whorls few, 2-4-flowered at the tops of the branches. Corollas small.

Decussate-leaved Thyme. Shrub erect.

7 T. Bové'i (Benth. lab. p. 342.) erect; branches stiff, strict, villous; leaves on short petioles, ovate, obtuse, flattish, having the petioles and margins ciliated a little; floral leaves similar to the rest, adpressed; whorls few-flowered, spicate; upper lip of calyx large, shortly tridentate, and the segments of the lower lip subulate, ciliated. ♄. F. Native of the desert of Sinai, between Suez and Gaza, Bové; and between Aleppo and Baghdad, Olivier. Leaves almost like those of *T. piperélla*. Whorls about 6-flowered: lower one rather distant: upper whorls approximate, spicate. Calyx rather villous. Corolla of *T. Serpýllum*.

Bové's Thyme. Shrub ½ to 1 foot.

8 T. PIPERE'LLA (Lin. syst. p. 452. but not of Ait.) suffruticose, procumbent; branches ascending, stiff, pubescent; leaves petiolate, broad-ovate, obtuse, truncately subcordate at the base, not ciliated, thick, stiff, veiny, glandular: floral ones conforming to the others; calyx almost glabrous: teeth of upper lip short, ovate, and the segments of the lower lip subulate, ciliated. ♄. F. Native in the region of the Mediterranean; as of Barbary, Spain, Mount Parnassus, &c. T. graveòlens, Sibth. et Smith, fl. græc. 6. p. 61. t. 576. but not of Bieb.—Barr. icon. 694.?—Boec. mus. 2. p. 166. t. 117.? Allied to *T. Serpýllum*. Corolla exceeding the calyx a little, purple.?

Small-Peppermint Thyme. Fl. July, Aug. Clt. 1810. Shrub procumbent.

9 T. HERBABARÒNA (Lois. fl. gall. p. 360. t. 9.) procumbent, glabrous; floriferous branches shortly ascending; leaves on short petioles, ovate-lanceolate, acute, rounded at the base, ciliated a little; floral leaves conforming to the others; teeth of upper lip of calyx short, lanceolate, and the segments of the lower lip subulate, ciliated. ♄. H. Native of Corsica, Requien. T. affinis, Sieb. pl. exsic. T. lúcidus, Guss. prod. fl. sic. suppl. 193.? Aëynos hèrba barònі, G. Don, in Loud. hort. brit. 289. Hardly distinct from *T. Serpýllum*, unless in the shape of the leaves, and more loose habit.

Herb-Baron Thyme. Fl. July, Aug. Clt. 1820. Shrub procumbent.

10 T. SERPY'LLUM (Lin. spec. 825.) suffruticose, procumbent; floriferous branches shortly ascending; leaves on short petioles, ovate, narrowed at the base, cuneated or rounded, veiny, having the petioles and margins more or less ciliated; floral leaves almost similar to the rest; teeth of upper lip of calyx lanceolate, ovate: segments of the lower lip subulate, ciliated. ♄. H. Native throughout Europe and the North of Asia, in dry exposed places; as of Britain, Sweden, Lapland, Denmark, Germany, France, Spain, Italy, Greece, European Russia, even to St. Petersburgh, Caucasus, Siberia; and the Himalaya, at Simla and Choor. T. exsérens and T. inclúdens, Ehrh. arb. p. 158. This is a very variable plant. Corollas purple. Whorls 6-12-flowered, usually approximating into a terminal head. This, the Wild Thyme, has the same sensible qualities as Garden Thyme, but the flavour is milder, and rather more grateful. It is a common notion, that the flesh of sheep that feed upon aromatic plants, particularly Wild Thyme, is superior in flavour to other mutton. The truth is, that sheep do not crop these aromatic plants, unless now and then by accident, or when they are first turned on hungry to downs, heaths, or commons; but the soil and situations favourable to aromatic plants, produce a short sweet pasturage, best adapted to feeding sheep, whom nature designed for mountains, and not for turnip grounds and rich meadows. The attachment of bees to this and other aromatic plants is well known. Few plants are subject to more varieties than Wild Thyme.

Var. α, vulgàris (Benth. lab. p. 343.) leaves smaller, with very prominent veins. ♄. H. T. Serpýllum, Lin. spec. 825. Fries. nov. fl. suec. Hook. fl. lond. vol. 3. with a figure. Smith, engl. bot. t. 1514. Woodv. med. bot. p. 301. t. 110. Curt. lond. 2. t. 47. T. sylvéstris, Schreb. and Rchb. fl. germ. exc. p. 313. T. rigidus, Rchb. T. humifùsus, Bernh. ex Rchb. fl. germ. l. c. T. collínus, Bieb. fl. cauc. 3. p. 401. with narrower leaves. T. effùsus, Host, fl. austr. 2. p. 137. T. procèrus, Opiz. T. Kollmunzerìànus, Opiz. T. Sudéticus, Opiz. ex Rchb. fl. germ. exc. p. 312. T. serràtus, Opiz. l. c. T. lævigàtus, Vahl, symb. 2. p. 65. with cuneate-oblong, not linear leaves. T. arenàrius, Bernh. ex Rchb. fl. germ. l. c. T. melissoides, Fisch. T. decúmbens, Bernh. ex Rchb. fl. germ. l. c. T. glabràtus, Schultes, ex Rchb. l. c. and probably of Link. T. deflèxus, Lej. ex Rchb. l. c. T. glàber, Mill. dict. no. 6. Corollas usually purple, rarely white.

Var. β, lanuginòsus; the whole plant white from wool; stems trailing. ♄. S. Native of France, at Fontainbleau; and of England, on the Gogmagog hills. T. lanuginòsus, Willd. spec. 3. p. 138. Schkuhr. handb. 2. p. 164. with a figure. Mill. dict. no. 8. T. serpýllum, var. ε, Lin. spec. p. 825.

Var. γ, citràtum; plant almost glabrous, yellowish, trailing. ♄. H. Native of Kent, and at Downton Castle, Shropshire. O. citriodòrus, Pers. ench. 2. p. 130. Schreb. ex Link, enum. 2. p. 115. T. subcitràtus, Schreb. ex Rchb. fl. germ. exc. p. 313. T. citràtus, Dumort, floril. belg. p. 47. Lemon Thyme is frequently kept in gardens for the agreeable odour of the leaves. Plants raised from seeds of this kind have not the same scent, it is therefore an accidental variety, which is preserved by means of slips or cuttings.

Var. δ, montànus (Benth. lab. p. 344.) leaves larger and less rigid. ♄. H. Native of the more southern parts of Europe. T. montànus, Waldst. et Kit. hung. 1. p. 72. t. 71. T. chamædrys, Fries, nov. fl. suec. ed. 1st. p. 95. ed. 2d. p. 197. T. pulegioìdes, Rchb. fl. germ. exc. p. 313. Cunila thymoides, Lin. spec. p. 31. Hedeòma thymoides, Pers. ench. 2. p. 131. Ziziphora thymoides, Roem. et Schultes, syst. 1. p. 209. T. nummulàrius, Bieb. fl. cauc. 2. p. 58. Sims, bot. mag. vol. 58. t. 2666. with larger broader leaves. T. pseudoserpýllum,

Rchb. T. marjoranoides, Desf. cat. hort. par. p. 74. Poir. suppl. 5. p. 306. T. ovàtus, Mill. dict. no. 7.

N.B. Besides the above varieties, there are numerous others which run so gradually into each other as scarcely to be distinguished.

Wild Thyme, or Mother of Thyme. Fl. June, Aug. Britain. Shrub trailing.

11 T. angustifòlius (Pers. ench. 2. p. 130.) suffruticose, procumbent; floriferous branches shortly ascending, glabrous or pubescent; leaves on short petioles, oblong-linear, narrowed at the base, veiny, having the petioles and margins ciliated; floral leaves almost similar to the others; calyxes usually glabrous: teeth of upper lip short, lanceolate-ovate, and the segments of the lower lip ciliated. ♄. H. Native of the South of Europe and Middle Asia, on dry arid hills, and by way sides; as of Portugal, Spain, South of France, South of Germany, Italy, Greece, Caucasus, and Siberia; also of Madèra and the Azores. T. aciculàris, Waldst. et Kit. hung. 2. p. 157. t. 147. T. cæspititius, Link et Hoffm. fl. port. 1. t. 18.? Brot. phyt. p. 26. t. 11. T. rèpens, Link et Hoffm. fl. port. T. odoratissimus, Bieb. fl. cauc. 3. p. 405. more erect plant. T. spinulòsus, Tenore, fl. nap. prod. p. 35. T. nervòsus, Gay, pl. exs. ind. itin. T. Zygis, Lin. spec. p. 826. and of many other authors. T. variàbilis, Link et Hoffm. fl. port. 1. t. 17. T. ciliàtus, Lam. fl. fr. 2. p. 302. T. albidus, Opiz, in bot. zeit. 1824. 2. p. 526. T. inodòrus, Lej. ex Dumort, fl. belg. p. 47. T. micans, Lowe, prim. fl. mader. p. 19. Thymbra ciliàta, Tenore, fl. nap. prod. suppl. 2. p. 69. syll. fl. neap. p. 269. but not of Lin.—Barr. icon. 777. Hardly differing from some varieties of *T. Serpyllum*, unless in the narrower leaves. Corollas purple. There are varieties of this with glabrous, pubescent, or villous leaves, but usually quite glabrous. The *T. Zygis* of the gardens is an erect, narrow-leaved, canescent plant, with white flowers.

Narrow-leaved Thyme. Fl. Aug. Clt. 1771. Shrub procumbent.

12 T. Pannónicus (All. fl. ped. 1. p. 20.) suffruticose, procumbent; floriferous branches ascending, villous; leaves on short petioles, linear, or the lower ones are oblong, narrowed at the base, veiny, having the petioles and margins ciliated; floral leaves almost similar to the others; calyx villous: teeth of upper lip short, lanceolate-ovate, and the segments of the lower lip subulate, ciliated. ♄. H. Native of the South of Europe, and Middle Asia; as on the alps of Pannonia, South of Germany, Hungary, Podolia, Caucasus, Altaia, &c. T. Marschallianus, Willd. spec. 3. p. 141. T. glabrèscens, Hoffm. et Link, fl. port. 1. p. 130. t. 15.? T. Zygis, Pall. nov. act. petrop. 10. p. 313. but not of Lin. T. adscéndens, Bernh.? ex Link, enum. 2. p. 115.? T. odoratíssimus, Mill. dict. no. 9. T. lanuginòsus, Mill. dict. no. 8. and other authors. T. Austriacus, Bernh. ex Rchb. fl. germ. exc. p. 312. T. piligerus, Opiz, ex Rchb. l. c. p. 313. Corollas purple. Hardly differing from *T. angustifòlius*, unless in the floriferous branches being longer and more erect, villous, and in the leaves being twice as long.

Pannonian Thyme. Fl. June, Aug. Clt. 1817. Shrub procumbent.

13 T. Sibthórpii (Benth. lab. p. 345.) stem procumbent at the base, branched; branches erect, nearly glabrous; leaves nearly sessile, oblong-lanceolate, glabrous, nerved; floral leaves conform to the others; flowers numerous, small, somewhat spicate; calyx villous, the lips divaricate: teeth of upper lip lanceolate, very acute, and the segments of the lower lip subulate. ♄. F. Native of Greece, on the mountains. T. lanceolàtus, Sibth. et Smith, prod. fl. græc. 1. p. 419. but not of Desf. Leaves 6-9 lines long, broader than in *T. Pannónicus*. Whorls 2-6-flowered, approximating into loose spikes. Corollas hardly exceeding the calyx. Stamens exserted.

Sibthorp's Thyme. Shrub ½ foot.

14 T. lanceolà'tus (Desf. fl. atl. 2. p. 30. t. 128. but not of Smith.) suffruticose, erect, clothed with soft villi; leaves nearly sessile, ovate-lanceolate, obtuse, roundly cuneated at the base, veiny, clothed with soft pubescence beneath; floral leaves similar to the others; racemes dense, secund; calyxes villous, nutant: the teeth of the upper lip ovate, acute, and the segments of the lower lip subulate. ♄. F. Native of the North of Africa, on Mount Atlas, near Tlemsen, Desf. Erect, much branched at the base. Leaves nearly an inch long. Spikes 2-3 inches long. Corollas purple. Bentham has seen specimens of this species, in which the spikes are scarcely secund.

Lanceolate-leaved Thyme. Fl. July, Aug. Clt. 1823. Shrub ½ to ¾ foot.

15 T. linea'tus (Benth. in Wall. pl. rar. asiat. 1. p. 31. lab. p. 346.) procumbent; floriferous branches shortly ascending; leaves on short petioles, oblong-linear, narrowed at the base, veiny, having the petioles and margins ciliated; floral leaves ovate, rounded at the base, rather imbricate; calyx almost glabrous: teeth of upper lip short, lanceolate-ovate, and the segments of the lower lip subulate, ciliated. ♄.? F. Native of the Himalaya, among the mountains of Kamaon. This species differs from the more glabrous variety of *T. Pannónicus*, in the more loose habit and floral leaves.

Lined Thyme. Shrub procumbent.

16 T. bracteòsus (Visiani, mss. ex Benth. lab. p. 346.) procumbent; floriferous branches ascending; leaves petiolate, oblong, narrowed at the base, flat, veiny, having the margins and petioles of the upper leaves ciliated; floral leaves sessile, broadly roundish-cordate, imbricate, ciliated; calyx villous: teeth of upper lip short, ovate-lanceolate, and the segments of the lower lip short, subulate, ciliated. ♄. H. Native of Dalmatia. Corollas purple.? Habit of *T. lineàris*, but differs in the floral leaves; it differs also from *T. striàtus*, in the more loose habit, but is probably only a variety of it.

Bracted Thyme. Shrub procumbent.

17 T. stria'tus (Vahl, symb. 73.?) procumbent; floriferous branches ascending, pubescent; leaves nearly sessile, linear, stiff, narrowed at the base, glabrous, ciliated; floral leaves broadly cordate-ovate, striated, and are, as well as the calyxes, pubescent, rather imbricate, approximating into an oblong head. ♄. F. Native of the South of Europe, Gibraltar, Naples; on the banks of the Bosphorus, Olivier. T. Zygis, Sibth. et Smith, fl. græc. 6. p. 60. t. 574. but not of Lin. T. hirtus, Willd. enum. p. 628.? T. aciculàris, Guss. prod. fl. sic. 2. p. 127. Corollas purple. Habit of *T. angustifòlius*; but the leaves are longer and stiffer, and the inflorescence is very distinct. The floral leaves are veiny, stiff, with ciliated edges.

Striated-leaved Thyme. Shrub procumbent.

18 T. hirsu'tus (Bieb. fl. cauc. 2. p. 59. 3. p. 408.? Benth. lab. p. 346.) procumbent; floriferous branches ascending, clothed with hoary pubescence; leaves sessile, linear, somewhat fascicled in the axils, with flat ciliated margins, clothed with hoary tomentum on both surfaces; floral leaves broader, closely approximate, as well as the flowers, into an oblong head. ♄. H. Native of Greece and Tauria. T. vulgàris, Sibth. et Smith, fl. græc. prod. 1. p. 419. but not of Lin. This species differs from *T. villòsus* in the quite entire floral leaves; and from *T. diffùsus* and *T. angustifòlius*, in the broader floral leaves; and from *T. striàtus* in the hairiness.

Hairy Thyme. Fl. July, Aug. Clt. 1821. Shrub procumbent.

19 T. villòsus (Lin. spec. 827.) suffruticose, procumbent;

branches short, rather hairy; leaves oblong-linear, flattish, with ciliated margins; floral leaves oblong-lanceolate, serrated at top, and are, as well as the calyxes, coloured; whorls few-flowered, approximate. ♄. F. Native of the Grecian Archipelago. Sibth. et Smith, fl. græc. 6. p. 62. t. 578. Hoffm. et Link, fl. port. 1. t. 14. Corollas purple. Habit of *T. angustifólius*; from which it differs in the leaves being more ciliated, and especially in the calyxes being twice the size, and in the floral leaves, which are coloured as in *Thýmbra spicàta*. Whorls loose, not imbricate. Corolla scarcely exceeding the calyx.

Villous Thyme. Fl. June, July. Clt. 1759. Shrub procumbent.

20 T. CAPITELLA'TUS (Hoffm. et Link, fl. port. 1. t. 12.) shrubby, canescent; leaves lanceolate, obtuse, with revolute edges, clothed with hoary tomentum beneath; floral leaves subimbricate, broad-ovate, exceeding the calyxes; whorls few-flowered, collected into globose terminal heads. ♄. F. Native of Portugal, beyond the Tagus, near Lisbon, Link; and in the Algarves, Masson. Habit and cauline leaves of *T. vulgàris*. Heads of flowers very numerous, size of peas. Calyx small, with short spreading teeth. Corolla purplish? scarcely longer than the calyx.

Small-headed Thyme. Shrub.

21 T. NUMI'DICUS (Desf. fl. atl. 2. p. 29.? Benth. lab. p. 347.) erect or prostrate at the base; branches clothed with hoary pubescence; leaves sessile, oblong-linear or spatulate, small, fascicled, flat, glabrous, ciliated a little; floral leaves imbricating, very broad at the base; whorls closely approximate into small globose heads; calyx villous: teeth of upper lip lanceolate, acute, and the segments of the lower lip subulate. ♄. F. Native of Spain, Pavon; and of Barbary, near La Calle, Desf. Habit of *T. vulgàris*; but differs from it in the shorter glabrous leaves, and especially in the inflorescence. Heads hardly larger than peas, hairy. Floral leaves clasping the flowers, ciliated, ex Desf. Corollas small, rose-coloured.

Numidian Thyme. Fl. July, Aug. Clt. 1816. Shrub ½ foot.

22 T. HISPA'NICUS (Poir. dict. 7. p. 646.) shrubby, erect; leaves linear, ciliated; flowers capitate, rather villous. ♄. F. Native of Spain, and of North Africa, on the sea-shore. Branches numerous, slender. Leaves sessile. Teeth of calyx sub-setaceous, ciliated. Corolla purplish, longer than the calyx. Stamens rather longer than the corolla. Very nearly allied to *T. Numidicus*, and probably only a variety of it.

Spanish Thyme. Shrub ½ foot.

23 T. CAPITA'TUS (Hoffm. et Link, fl. port. 1. p. 123.) procumbent at the base, much branched; branches erect, canescent; sterile branches sub-spinescent; leaves sessile, linear or oblong, flat; floral leaves imbricate, ovate, ciliated, green, covering the calyxes. ♄. H. Native of the region of the Mediterranean, in dry, arid, stony places; as of Barbary, near Tangiers; Portugal, Spain, Sicily, Naples, Greece, Syria, Palestine, &c. *T. Créticus*, Brot. phyt. p. 27. t. 12. *T. Marinósei*, Tenore, fl. nap. prod. p. 35. syll. p. 296. *Saturèia capitàta*, Lin. spec. 795. Sibth. et Smith, fl. græc. 6. p. 36. t. 544.—An elegant, densely branched shrub. Heads of flowers globose or oblong, composed of 6-flowered whorls. Corollas exserted, purple. Stamens exserted.

Capitate-flowered Thyme. Fl. June, Oct. Clt. 1596. Shrub ½ to 1 foot.

SECT. III. PSEUDOTHY'MBRA (from ψευδος, *pseudos*, falsehood; and θυμβρα, *thymbra*, a sweet-scented herb allied to Thyme.) Benth. lab. p. 348. Floral leaves large, membranous, coloured.

24 T. CEPHALÒTUS (Lin. spec. 826.) erect, branched, clothed with hoary pubescence; leaves sessile, linear, with revolute edges, small, fascicled: floral leaves large, ovate, acute, rather membranous, coloured, covering the calyxes. ♄. H. Native of Spain and Portugal. Habit of *T. vulgàris*, but the inflorescence is very distinct. Floral leaves sessile, with ciliated edges, purplish. Heads of flowers size of cherries. Corolla downy outside, purplish or white: tube exserted from the calyx. Stamens diverging, about equal in length to the corolla.

Headed Thyme. Fl. June, Sept. Clt. 1759. Shrub ½ to 1 foot.

25 T. CILIA'TUS (Benth. lab. p. 348.) shrubby, erect; branches pubescent or villous; leaves oblong-lanceolate or linear, obtuse, flat, green, veiny, having the margins a little ciliated; floral leaves large, broad-ovate, acute, rather membranous, nerved, coloured, ciliated, imbricate, covering the calyxes. ♄. F. Native of the North of Africa, on arid hills near Mascar, Desf.; and near Galla, Masson; and the Canary Islands. *Thymbra ciliàta*, Desf. fl. atl. 2. p. 10. t. 122. An elegant much branched shrub. Heads of flowers ovate, cylindrical. Bracteas purplish. Teeth of calyx ciliated: lower teeth the longest. Corollas violaceous. Stamens scarcely longer than the corolla.

Ciliated Thyme. Fl. June, Aug. Clt. 1824. Shrub ½ to 1 foot.

† *Species not sufficiently known, or doubtful.*

26 T. PULCHE'LLUS (Meyer, verz. pflanz. p. 87.) stems shrubby at the base, erect, pubescent on the angles; leaves quite glabrous, flat, oblong or linear, obtuse: lower ones elliptic; whorls spicately approximate; teeth of the upper lip of the calyx nearly equal, subulate; stamens exserted. ♄. H. Native of Caucasus, on gypsaceous hills at the river Anticeta.

Neat Thyme. Shrub erect.

27 T. SERPYLLOI'DES (Bory, ann. gen. 3. p. 18.) stems frutiose, procumbent; leaves linear or lanceolate, obtuse, a little ciliated at the base; flowers capitate. ♄. H. Native of Spain, on Sierra Nevada, among rocks. Allied to *T. angustifólius*. There are varieties of this with white and purple flowers.

Serpyllum-like Thyme. Shrub procumbent.

28 T. RICHA'RDI (Pers. ench. 2. p. 130.) flowers capitate; bracteas ovate, and are, as well as the calyxes, stiff; leaves broad-ovate, nerved beneath. ♄. H. Native of the Balearic Islands, Ant. Richard. Perhaps the same as *Origanum Majóricum*, Cambess.

Richard's Thyme. Shrub.

29 T. MULTICÒRNIS (Pers. ench. 2. p. 131.) flowers axillary, pedunculate; peduncles many-flowered; calyxes oblong, with acute teeth; leaves ovate, glabrous, having the veins prominent beneath. ♄. ? H. Formerly cultivated in the garden of Trianon, Persoon. Allied to *Calamintha*. Leaves dotted beneath.

Many-flowered Thyme. Pl. ?

30 T. HIRSUTI'SSIMUS (Poir. dict. 7. p. 650.) leaves ovate-lanceolate, nearly sessile, hairy; spikes capitately verticillate; bracteas ciliately hairy. ♄. ?. Native of the Levant. Erect, humble, much branched. Leaves small. Flowers disposed in short spicate heads at the tops of the branches, dense, very villous. Bracteas lanceolate, equalling the flowers, ciliated. Corolla purplish, rather longer than the calyx. Teeth of calyx subulate, acuminated, rather spiny, nearly equal, ciliated. Perhaps the same as *Micromèria nervòsa*.

Very-hairy Thyme. Shrub ½ foot.

31 T. AFRICANUS (Hoffm. et Link, fl. port. t. 11.) flowers

verticillately capitate, terminal and axillary; leaves lanceolate, white beneath; calycine teeth nearly equal, subulate, ex Poir. dict. suppl. 5. p. 305. ♄. H. Native of Portugal. Perhaps the same as *Micromèria Græ'ca*.

Whitish-leaved Thyme. Shrub.

32 T. megapota'micus (Spreng. cur. post. p. 224.) stem erect, herbaceous; leaves linear, convolute, rough from dots; peduncles crowded, exceeding the leaves. Native of the South of Brazil, at Rio Grande. Perhaps the same as *Hedèoma multiflòra*.

Rio Grande Thyme. Pl. ?

33 T. longicau'lis (Presl, fl. sic. 37.) stems very long, creeping: puberulous; leaves cuneiform-oblong, obtuse, length of calyxes, which are pubescent; calycine teeth ciliated, subulate; anthers exserted. ♃. ? H. Native of Sicily.

Long-stemmed Thyme. Pl. creeping.

34 T. Ægypti'acus (Bernh. ex Steud, nom. p. 835.) Nothing is known of this plant but the name.

Egyptian Thyme. Shrub.

35 T. camphora'tus (Hoffm. et Link, fl. port.) ♄. H. Native of Portugal.

Camphorated Thyme. Shrub.

Cult. All the species of *Thymus* prefer a dry, light, sandy soil, and an exposed situation. They are of easy culture and propagation; and are readily increased either by divisions slips, cuttings, or seeds, as recommended for *Thymus vulgàris*, p. 767. Some of the more tender and rarer species should be grown in pots, and placed among other Alpine plants, that they may be sheltered from the frosts of winter.

XLIII. SATURE'IA (Ssatter is the Arabic name for all labiate plants.) Lin. gen. no. 707. Schreb. gen. 961. Juss. gen. p. 112. Benth. lab. p. 351.

Lin. syst. *Didynàmia, Gymnospérmia*. Calyx campanulate, 10-nerved, equal, 5-toothed or obscurely-bilabiate; throat naked inside, or furnished with a few hairs. Corolla having the tube equalling the calyx and imbricating bracteas; limb bilabiate; upper lip erect, flat, entire, or emarginate: lower one spreading, trifid, with flat nearly equal lobes. Stamens 4, erectish, diverging: lower ones longer, exserted; anthers 2-celled: cells parallel or diverging. Style about equally bifid at top; lobes subulate, stigmatiferous at apex.—Aromatic herbs or under shrubs. Leaves small, quite entire, often fasciculate in the axils. Whorls sometimes few-flowered, with short bracteas or without bracteas; sometimes many-flowered, or collected into heads, propped by bracteas.

Sect. I. Sature'ia (see genus for derivation.) Benth. lab. p. 352. Whorls few-flowered; bracteas small or wanting.

1 S. horte'nsis (Lin. spec. 795.) annual, erect, pubescent; whorls sub-secund, remote, or the upper ones are somewhat spicate. ☉. H. Native of the South of Europe; as of Spain, South of France, Italy: it is also to be found in North America, Cape of Good Hope, and in the Indian Peninsula; but has probably been introduced from Europe. Lam. ill. t. 504. f. 1. S. viminea, Burm. fl. ind. p. 126. but not of Lin.—Sabb. hort. rom. 3. t. 70.—Blackw. icon. t. 419.—Mor. hist. sect. 11. t. 17. f. 1. Herb much branched, usually purplish. Leaves oblong-linear, acute, entire. Whorls usually 6-flowered. Bracteas linear, or altogether abortive. Corolla pale red, scarcely exceeding the calycine teeth. Stamens shorter than the lobes of the corolla. Summer savory is raised from seed, being an annual. In March or April sow either in small drills, 9 by 6 inches apart, or on smoothed surfaces, and raked in lightly. The plants may either remain to be thinned, or some may be transplanted in June, 9 by 6 inches asunder. The herb comes in for gathering from June to October. When a store is to be dried, draw it by the roots. Abercrombie.

Garden or Summer Savory. Fl. June, Aug. Clt. 1652. Pl. ½ to 1 foot.

2 S. supe'rstris (Wulf. in Jacq. misc. 2. p. 130. icon. rar. 3. t. 404.) suffruticose; branches ascending; leaves petiolate, ovate, obtuse, glabrous, or rather canescent; racemes dense, many-flowered, sub-secund; teeth of calyx short, acutish. ♄. H. Native of Carniola, Hungary, Croatia, Carinthia, Dalmatia, &c., in dry rugged mountainous places. S. thymifòlia, Scop. fl. carn. ed. 2d. t. 29.? Calamintha rupéstris, Host, fl. austr. 2. p. 131. Melissa álba, Waldst. et Kit. pl. rar. hung. 3. p. 227. t. 205. Népeta Croática, Spreng. syst. 2. p. 727. Népeta pùmila, Spreng. cent. spec. min. cogn. p. 29. Habit between *Satureia* and *Melissa*. Leaves almost quite entire. Whorls many-flowered, disposed in dense spikes or racemes. Bracteas minute. Throat of calyx glabrous. Corolla white, 2-3 times longer than the calyx, tinged with blue.

Rock Savory. Fl. June, July. Clt. 1798. Shrub 1 to 1½ foot.

3 S. monta'na (Lin. spec. 794.) suffruticose, erect, glabrous, or scabrously-pubescent; leaves oblong-linear, acute, or the lower ones are spatulate or cuneated; whorls many-flowered, loose, secund, approximating into spikes or racemes. ♄. H. Native in the region of the Mediterranean, in arid, exposed places, and on mountains; in the Pyrenees, near Bagneres de Luchon; Spain, Portugal, North of Africa, South of France and Germany, Greece, Italy, Naples, &c. Sibth. et Smith. fl. græc. 6. p. 35. t. 543. S. trifida, Mœnch. meth. p. 386. S. subspicàta, Vis. spec. pl. dalm. 11. t. 4. S. Illyrica, Host, fl. austr. 2. p. 133. S. variegàta, Host, fl. austr. 2. p. 134. S. hyssopifòlia, Bert. ann. di stor. nat. 1829. fasc. 3. p. 406. Micromèria montàna, Rchb. fl. germ. exc. p. 311. Micromèria pygmæ'a, Rchb. l. c. S. pygmæ'a, Sieb. pl. exs. ex. Rchb. l. c. Micromèria variegàta, Rchb. fl. germ. exc. p. 859.—Sab. hort. rom. 3. t. 64.—Mor. hist. sect. 11. t. 17. f. 3. Shrub erect or ascending, much branched. Branches beset with very short reflexed hairs. Lower whorls rather remote. Corolla white or purplish, more than twice as long as the calyx. Winter Savory, Suriette, French, Saturei, Germ. Satureggia, Italian, was cultivated in England in 1562; that is as far back as we have any printed registers; for there can be no doubt that this and summer savory, with other pot-herbs, were much cultivated in far earlier times, before the spices of the East Indies were known and in common use. This kind of savory is generally propagated by slips or cuttings of the young side shoots in April, May, and June, or July, planted in a shady border and watered; also by dividing at the root. When the plants are a little advanced in branchy growth, they may be transplanted. Set some in single plants a foot apart; others to form a close edging. In spring and autumn loosen the earth a little about the plants, and trim off decayed and irregular parts. It continues useful for summer and winter; and some may be gathered, when of full growth, in autumn, to dry for winter use.

Mountain or Winter Savory. Fl. June, July. Clt. 1562. Shrub ½ to 1 foot.

4 S. mu'tica (Fisch et Meyer, ind. sem. hort. petesb. 1836. p. 49.) plant clothed with hoary pubescence; stems erect, much branched; branches twiggy: leaves oblong or almost linear; cymes axillary, few-flowered; bracteoles linear, much shorter than the calyxes; calyx bilabiate, with sub-linear mutic lobes, the lower 2 the longest. ♄. H. Native of Caucasus, on the Talusch Mountains, in arid, stony places. Allied to *S. montàna*, but differs in the segments of the calyx being mutic, and from *S. intermèdia*, in the stem being tall and erect, in the leaves being narrower and distant, in the bracteoles being minute, &c.

Mutic-calyxed Savory. Fl. June, July. Clt. 1836. Shrub erect.

5 S. virga'ta (Vis. ex. pl. exs. un. itin. wurtemb. ex Benth. lab. p. 353.) suffruticose, hispidly-scabrous; leaves oblong-linear, acute; whorls many-flowered, nearly equal, rather remote, disposed in long twiggy racemes. ♄. H. Native of Dalmatia, Naples, &c. Micromèria spicàta, Rchb. fl. germ. exc. p. 311. S. fasciculàta, Tausch, in sylt. pl. soc. ratisb. 2. p. 248.? but not of Biv. S. cuneifòlia, Tenore, fl. nap. t. 151. f. 2. sylt. p. 277. S. obovàta, Lag. ex Spreng. syst. 2. p. 720. This does not differ in any respect from *S. montàna*, unless in the inflorescence and hairiness; the teeth of the calyx is also a little shorter, and the flowers smaller. Racemes never beyond a foot in length.

Twiggy Savory. Shrub 1 to 2 feet.?

6 S. spinòsa (Lin. spec. 795.) suffruticose, erect, tortuosely-branched; branches tomentose, spinescent; leaves oblong, acute, glabrous; whorls few, few-flowered. ♄. F. Native of the Grecian Islands. Sibth. et Smith, fl. græc. 6. p. 36. t. 545. Much branched. Branches short, all ending in spines. Leaves shorter and broader than those of *S. montàna*, and the flowers smaller. Corollas purplish.?

Spiny-branched Savory. Shrub ½ foot.

7 S. ikonòra (Salzm. pl. tang. exs. ex Benth. lab. p. 354.) suffruticose, diffuse, nearly glabrous, branches ascending; leaves linear-spatulate, obtuse, with ciliated edges: superior leaves exceeding the flowers; flowers few, nearly sessile; calycine teeth bluntish. ♄. F. Native near Tangiers, Salzmann. A very distinct species, with the habit of *Thymus angustifòlius*. Branches scabrously-pubescent; branchlets short, densely clothed with leaves at top. Throat of calyx naked inside.

Scentless Savory. Shrub diffuse.

Sect. II. Tragoriganum (from τραγος, *tragos*, a goat, and ορηγανον, *origanon*, marjoram, goat's marjoram.) Benth. lab. p. 354. Whorls densely-globose, many-flowered, remote, propped by bracteas. Calyx about equal in height to the tube of the corolla.

8 S. Thy'mbra (Lin. spec. 794.) suffruticose, diffuse, scabrously hispid; leaves oblong-linear, or the lower ones are obovate-cuneated, acute; whorls many-flowered, dense, nearly globose, all remote. ♄. H. Native of the Grecian islands, and the mountains of Syria and Palestine. Sibth. et Smith, fl. græc. 6. p. 33. t. 541. Thymus tragoriganum, Lin. mant. p. 84. Satureia tragoriganum, Tausch. in sylt. pl. soc. ratish. 2. p. 248.—Sab. hort. rom. 2. t. 71.—Mor. hist. sect. 11. t. 17. f. 6.—Park. theatr. 5. f. 4.—Barr. icon. rar. t. 898. Leaves more acute, shorter and a little broader than those of *S. montàna*. Whorls 20-40-flowered. Bracteas ovate, lanceolate, acute, adpressed, equalling the calyxes, hispid from spreading pili, as well as the calyxes. Teeth of calyx nearly equal, lanceolate-subulate. Corollas smaller than those of *S. montàna*.

Thymbra Savory. Fl. May, July. Clt. 1739. Shrub 1 to 2 feet.

Sect. III. Pycnothy'mus (from πυκνος, *pyknos*, dense; and θυμος, *thymos*, thyme; in reference to the dense heads of flowers.) Benth. lab. p. 354. Whorls collected into an oblong head, propped by bracteas. Calyx minute.

9 S. rigida (Bartr. in herb. Banks ex Benth. lab. p. 354.) suffruticose, procumbent; branches ascending, rather pilose at top; leaves lanceolate, obtuse, with revolute margins; whorls collected into an oblong head; bracteas imbricate, very villous; calyx very short, membranous. ♄. F. Native of Eastern Florida. Branches almost simple, numerous. Leaves sometimes glabrous, and sometimes hispid. Bracteas a little coloured, lanceolate, obtuse. Tube of corolla equalling the bracteas; limb like that of *Pycnánthemum*.

Stiff Savory. Shrub ½ foot.

† *Doubtful species.*

10 S. interme'dia (Meyer, verz. pflanz. p. 91.) plant clothed with canescent pubescence; stems diffuse, much branched, shrubby at the base; leaves obovate-oblong, bluntish, a little crenated; cymes axillary, few-flowered; bracteas nearly linear, rather shorter than the calyxes; calyx bilabiate, with linear-lanceolate mutic lobes. ♄. H. Native of Caucasus, in stony places, near Swant. Leaves of *S. Thymbra*, and the calyxes almost of *S. montàna*.

Intermediate Savory. Shrub.

11 S. sessilifl'ora (Presl, fl. sic. p. 36.) stem shrubby at the base; branches diffuse, clothed with velvety pubescence; leaves linear-lanceolate, acute, ciliated, dotted, scabrous above; fascicles of flowers sessile, disposed into an oblong, leafy spike; mouth of calyx ciliated, and the teeth ovate, erectly spreading; tube of corolla twice as long as the calyx. ♄. H. Native of Sicily.

Sessile-flowered Savory. Shrub diffuse.

12 S. hirsu'ta (Presl, del. prag. 79.) stems simple, hairy; hairs erectly spreading; leaves ovate-lanceolate, hispid; pedunclos axillary, short, 1-3-flowered; bracteas about equal in length to the calyxes. ♄.? H. Native of Sicily. Perhaps referrible to *Micromèria microphýlla* or *M. Juliàna*.

Hairy Savory. Shrub.?

13 S. parvifl'ora (Presl, fl. sic. p. 36.) stems suffruticose at the base, villous; leaves villous, ovate-lanceolate, twice the length of the internodes; fascicles of flowers sessile, 3-flowered, disposed into a leafy spike; bracteas numerous, setaceous; teeth of the calyx erect; tube of corolla exceeding the length of calyx. ♄. H. Native of Sicily.

Small-flowered Savory. Shrub.

14 S. angustifòlia (Presl, fl. sic. 36.) stem suffruticose, spreading, scabrously-pubescent, as well as the leaves; leaves oblong-lanceolate; fascicles of flowers shorter than the leaves; teeth of calyx erectly-spreading; tube of corolla exceeding the calyx a little. ♄. H. Native of Sicily.

Narrow-leaved Savory. Shrub diffuse.

15 S. longifl'ora (Presl, fl. sic. p. 36.) stem suffruticose, diffuse; leaves ovate-lanceolate, canescent beneath; fascicles of flowers equal in length to the leaves; teeth of calyx spreading; tube of corolla twice as long as the calyx. ♄. H. Native of Sicily.

Long-flowered Savory. Shrub diffuse.

16 S. campane'lla (Ehrenb. naturg. reize, p. 13.) suffruticose; branches pubescent; leaves ovate-lanceolate, acute, quite entire, rather hispid, nearly sessile; cymes of flowers a little longer than the leaves, bracteate; calyx shortly campanulate, deeply 5-toothed. ♄. F. Native of the North of Africa, near Castelnuovo, Ehrenberg.

Small-bell calyxed Savory. Shrub.

17 S. O'lla (Ehrenb. l. c.) suffruticose; branches rather bristly; leaves narrow-linear and lanceolate-linear, acute, setosely hispid; cymes of flowers hardly longer than the leaves, bracteate; calyx shortly campanulate, deeply 5-cleft. ♄. F. Native along with the preceding. Habit almost of *S. Thymbra*, but the leaves and flowers are larger.

Olla Savory. Shrub.

18 S. sca'bra (Presl, fl. sic. p. 36.) ♄.? H. Native of Sicily. Thymus scaber. Presl, del. prag.

Scabrous Savory. Shrub.

19 S. globifera (Desf. ex Steud. nom.) Nothing is known of this plant but the name.

Globe-bearing Savory. Shrub.
Cult. For culture and propagation, see *Thymus*, p. 771.

XLIV. HYSSO'PUS (Hyssopus, of Pliny; ὕσσωπος, of Dioscorides; derived from the Hebrew name of Hyssop, *ezob*, or the Arabic name *azzof*.) Benth. in bot. reg. vol. 15. lab. p. 356. Hyssòpus species, Lin. and other authors.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx tubular, 15-nerved, equal, or with a somewhat oblique mouth; teeth 5, equal; throat naked inside. Corolla having the tube equalling the calyx, bilabiate; upper lip erect, flat, emarginate: lower lip spreading trifid, middle lobe the largest. Stamens 4, exserted, diverging, didynamous: lower ones the longest; anthers 2-celled: cells linear, divaricate. Style somewhat equally bifid at top; lobes subulate, stigmatiferous at apex. This genus differs from all others belonging to the tribe *Saturèia* in the calyx, which is more allied to tribe *Nepèteæ*.

1 H. officina'lis (Lin. spec. 767.) ♄. H. Native of the South of Europe and Middle Asia; South of France, Italy, South of Germany, South of Russia; Caucasus and the Altaian Mountains. Woodv. med. bot. 181. t. 65. Jacq. austr. 3. t. 254.—Riv. mon. irr. t. 68.—Sabb. hort. rom. 3. t. 79. Shrub usually glabrous, diffuse, much branched. Corollas blueish purple, rarely white. Whorls 6-15-flowered, approximate into terminal secund spikes, or the lower whorls are remote. Outer bracteas lanceolate-linear, acute, scarcely shorter than the calyxes; inner bracteas minute.

Var. α, latifòlius (Benth. lab. p. 357.) leaves elliptic, glabrous, quaternately decussate, green. ♄. H. H. Fischèri, Hortul. H. alopecuroìdes, Fisch. ex Hortul. H. officinàlis, β, decussàtus, Pers. ench. 2. p. 114. H. myrtifòlius, Desf. hort. par.

Var. β, vulgàris (Benth. lab. p. 357.) leaves linear, lanceolate, usually glabrous, green on both surfaces. ♄. H. H. officinàlis, Lin. spec. 767. Jacq. fl. austr. 2. t. 254. Lam. ill. t. 502. and other authors. H. rùber, Bernh.

Var. γ, angustifòlius (Benth. lab. p. 357.) leaves narrow, obtuse, quite entire, with sub-revolute edges, narrowed more to the base, green on both surfaces. ♄. H. Native of Caucasus and other places in Asia. H. angustifòlius, Bieb. fl. cauc. 2. p. 38. and 3. p. 389. H. Orientàlis, Adam. ex Willd. enum. 2. p. 600. H. Caucásicus, Spreng. ex Steud. nom.?

Var. δ, canéscens (Dl. fl. fr. suppl. 396. Benth. lab. p. 357.) The whole plant is canescent from villi of pubescence. ♄. H. Native of Switzerland and France, among the mountains. H. Schleichèri, G. Don. in Loud. hort. brit. p. 233. H. officinàlis, Schleich. Corollas blue. This is an elegant plant when in blossom.

The common hyssop, *hyssope*, French, *isop*, Germ. and *isopo*, Ital., has a strong aromatic flavour, and warm pungent taste. The leaves and young shoots are occasionally used as a pot-herb, and the leafy tops and flower-spikes are cut, dried, and preserved for medicinal purposes. Its virtues depend entirely on an essential oil, which rises in distillation both with water and with alcohol. Besides the general virtues of an aromatic, its preparations were formerly recommended in humoral asthmas, coughs, and other disorders of the breast and lungs, and were said to promote expectoration. There are several varieties of *hyssop* cultivated, as the white and red-flowered; but the blue-flowered is the original colour, and most commonly cultivated.

Common or *Officinal* Hyssop. Fl. June, Sept. Clt. 1548. Shrub 1 to 2 feet.

Cult. Hyssop is raised from seed, by slips and cuttings of the branches, and by dividing the plant at the root. It likes a dry, sandy soil. When it is propagated by seed, sow in March or April a small portion either broad-cast and raked in, or in small drills 6 inches apart. The plants may mostly be transplanted into final beds in June or July, 9 inches apart, or some may be planted as an edging, or you may also sow some seed for an edging, to remain where sown. Give the edgings occasional trimmings in their established growth, cutting away also any decayed flower-spikes in autumn. You may take rooted offsets from established plants in March, April, August, or September; cuttings from the stalks in April and May; also cuttings of the young shoots in June and July. After May shade for a time, or plant in a shady border. If for culinary purposes the distance from plant to plant may be nine inches; in the physic garden 18 inches or 2 feet. Water at planting, and twice or thrice a week in dry weather till rooted.

XLV. COLLINSO'NIA (named by Linnæus in honour of Peter Collinson, F. R. S., a most distinguished promoter of botanical studies, and the first who introduced this plant, among many others, to the English gardens, Miller.) Lin. gen. no. 40. Schreb. gen. no. 51. Gaertn. fruct. p. 317. t. 66. Juss. gen. p. 112. ed. Usteri, p. 125. Benth. lab. p. 357.

Lin. syst. *Diándria*, *Monogýnia*. Fructiferous calyx declinate, ovate, 10-nerved; throat almost naked inside; limb bilabiate; upper lip truncate, flattish, tridentate; lower lip bifid. Corolla exserted, sub-campanulate; tube a little exserted; throat widened; limb sub-bilabiate, the 4 superior lobes nearly equal: the lower lobe usually the longest, declinate, flattish, toothed or lacerately fringed. Stamens 2 or 4, divaricate, much exserted; upper ones the shortest, or altogether abortive; anthers 2-celled: cells divaricate, often confluent. Style about equally bifid at top; stigmas minute, terminal. Achenia dry and smooth.—Strong-scented herbs, with the habit almost of *Plectránthus*, Section *Germànea*. Cauline leaves large, but the floral leaves are small and bractea-formed. Flowers pedicellate, solitary; pedicels opposite, disposed in simple but usually paniculately-branched racemes. Calyx small, in the floriferous state, but increasing much to the fructiferous state. Corollas yellow, or yellowish purple.

1 C. Canade'nsis (Lin. spec. p. 80. hort. cliff. 14. t. 5.) stems almost glabrous; leaves broad-ovate, acuminated, rounded at the base, sub-cordate, or rarely cuneated, glabrous; panicles elongated, loose, many-flowered; flowers diandrous. ♃. H. Native from Canada to Carolina, among rocks and stones, in woods. C. decussàta, Mœnch, meth. p. 379. C. ovàlis, Pursh, fl. amer. sept. 1. p. 21. C. cuneàta, Wender. schrift. nat. ges. marb.? Stem branched, glabrous or a little downy. Leaves ample, glabrous, or minutely-glandular, serrately-crenated. Corolla yellow, 4 times longer than the floriferous calyx.

Mr. Bartram was the first who discovered this plant, and sent it to Europe. It has a peculiar scent, which is agreeable but very strong. It is reputed to be an excellent remedy against pains in the limbs and a cold, if the parts affected be rubbed with it: a decoction of it is also said to have cured the bite of the rattle-snake. In the States they call the plant horse-weed, because the horses eat it in the spring before any other plant comes up.

Canadian Collinsonia. Fl. Aug. Oct. Clt. 1734. Shrub 1 to 2 feet.

2 C. tuberòsa (Michx. fl. bor. amer. 1. p. 17.) leaves somewhat rhomboid-oval, acute, cuneated at the base; panicles elongated, loose, much branched, many-flowered; flowers diandrous. ♃. F. Native of Carolina, in shady, humid parts of woods. C. serótina, Walt. fl. car. 65. ex Pursh. Stem almost terete at bottom, branched. Leaves 1½ inch long; cauline ones opposite, cordate. Calycine teeth setaceous, much longer than the tube. Flowers much smaller than those of *C. Canadénsis*.

Tuberous-rooted Collinsònia. Fl. Aug. Clt. 1806. Pl. 1 to 1½ foot.

3 C. scabriúscula (Ait. hort. kew. ed. 2d. vol. 1. p. 20.) stems procumbent, almost glabrous; leaves petiolate, ovate, acute, toothed, rounded at the base, glabrous or rather pilose above, glabrous beneath; racemes simple, axillary, and terminal; flowers diandrous. ♃. H. Native of Carolina and Florida, and at Jacksonville in Louisiana. *C. scàbra*, Pers. ench. 1. p. 29. Pursh. fl. amer. sept. 1. p. 20. *C. præcox*, Walt. fl. car. p. 65. Leaves hardly 2 inches long, smaller than the rest. Racemes pubescent. Flowers one half smaller than those of *C. Canadénsis*. Corollas reddish yellow, Pursh. Stems sometimes erectish, and the racemes a little branched.

Roughish Collinsònia. Fl. July, Sept. Clt. 1776. Pl. proc.

4 C. punctàta (Elliott, bot. car. 1. p. 36.) leaves ovate-lanceolate, acuminated, acute at the base, pubescent, and dotted beneath; panicles compound; stamens 4, the 2 upper ones sterile, capitate, the 2 lower ones filiform, much exserted. ♃. F. Native of Carolina in boggy places, common. Root tuberous. Stems scabrous, pubescent, branched at top. Leaves pubescent above, and rather tomentose beneath. Corolla yellowish, downy outside, and pilose inside.

Dotted Collinsònia. Pl. 2 to 6 feet.

5 C. verticillàta (Baldw. in Elliott, bot. car. 1. p. 36.) stem glabrous and naked at the base, clothed with clammy pubescence above; leaves broad-ovate, acuminated, roundly-cuneated at the base, approximating by twin pairs, and therefore falsely verticillate; raceme loose, almost simple; flowers tetrandrous. ♃. F. Native of Georgia. Herb almost simple. Leaves large, more narrowed at the base than in *C. Canadénsis*. Lower whorls 6-flowered; upper ones 2-flowered. Corolla 3 times longer than the calyx, downy outside. Stamens nearly equal, 2 ascending and 2 declinate.

Whorled-leaved Collinsònia. Pl. 1 foot.

6 C. anisàta (Pursh. fl. amer. sept. 1. p. 21.) leaves broad-ovate, a little toothed, roundly-truncate at the base, wrinkled, pubescent on the nerves beneath, and on the stems; panicle dense; flowers tetrandrous. ♃. F. Native of Georgia, on the mountains, Lyon. Sims. bot. mag. 1219. Stem a little branched, rufescent, clothed with clammy pubescence. Leaves shorter than in *C. Canadénsis*. Corollas size of those of *C. Canadénsis*, pale yellow, glabrous outside.

FIG. 79.



Anise-scented Collinsonia. Fl. Sept. Oct. Clt. 1806. Pl. 2 to 3 feet.

Cult. The species are generally strong coarse plants, of no beauty. They grow well in common garden soil, but prefer peat, and a moist situation; and they are readily increased by dividing at the root in spring. All of them, except *C. Canadénsis*, require protection in severe frosts, by covering them over with haulm of other herbs, or by mulching them with horse litter.

XLVI. CUNILA (The name of a plant in Pliny, κονιλη of Nicander; supposed to be derived from κωνος, *konos*, a cone, because the flowers grow in heads resembling a cone.) Benth. lab. p. 360. Cunila, species of Lin. and other authors. Ziziphora species, Roem. et Schultes.

Lin. syst. *Diándria*, *Monogýnia*. Calyx about 13-nerved, ovate-tubular, equal, 5-toothed; throat villous inside. Corolla having the tube equalling the calyx, naked inside, and the limb bilabiate; upper lip erect, flattish, usually emarginate; lower lip spreading trifid, with nearly equal entire lobes, the middle lobe rather the largest and emarginate. Stamens 2, erect, exserted, without any rudiments of the upper 2; filaments glabrous, toothless; anthers 2-celled: cells parallel, or at length divaricate. Style shortly bifid at apex; lobes nearly equal, subulate, minutely stigmatiferous at top. Achenia dry, smooth.—Herbs, shrubs, and under shrubs. Whorls sometimes loosely corymbose; sometimes axillary and few-flowered, much shorter than the leaves; sometimes densely many-flowered, approximating into terminal spikes or heads. Flowers small, white, or purplish. Corolla usually villous inside; lower lip dotted.

1 C. maria'na (Lin. spec. 30.) herbaceous; leaves nearly sessile, ovate, serrated, cordate at the base: floral ones almost similar: lower ones exceeding the flowers; cymes pedunculate, loosely corymbose. ♃. F. Native from Canada to Carolina, on dry mountains. Sweet fl. gard. 3. t. 243. *Ziziphora Mariàna*, Roem. et Schultes, syst. 1. p. 208. *Saturèia origanoides*, Lin. spec. ed. 1st, p. 568.—Mor. hist. 413. sect. 11. t. 19. f. 7.—Pluck. mant. t. 344. f. 1. Herb branched; branches short, glabrous, but pubescent at the nodi. Whorls few. Cymes forked on both sides. Corolla about twice as long as the calyx, pubescent inside, red.

Mariane Cunila. Fl. July, Sept. Clt. 1759. Pl. 1 foot.?

2 C. incisa (Benth. lab. p. 361.) shrubby; leaves petiolate, ovate-rhomboid, coarsely and deeply serrated, quite entire at the base, cuneated: floral leaves conform to the others, exceeding the flowers; cymes small, pedunculate, sessile, sub-capitate. ♄. F. Native of the South of Brazil, Sello. Shrub, much branched, densely leafy; branches pubescent. Leaves glabrous, glandular, Corolla pubescent inside.

Cut-leaved Cunila. Shrub.

3 C. angustifòlia (Benth. lab. p. 361.) shrubby, glabrous; leaves on short petioles, elliptic-linear, quite entire or serrated: floral leaves conform, exceeding the flowers; whorls loose, few-flowered; flowers minute. ♄. F. Native of the South of Brazil, Sello. Shrub densely leafy, with glabrous branches. Leaves glabrous, minutely glandular. Corolla pubescent inside.

Narrow-leaved Cunila. Shrub.

4 C. inca'na (Benth. lab. p. 361.) shrubby; leaves on short petioles, ovate-oblong or obovate, obtuse, quite entire, clothed with hoary tomentum on both surfaces; floral leaves similar to the others, exceeding the flowers; whorls 2-6-flowered. ♄. F. Native of the South of Brazil, Sello. Habit of *Micromèria obovàta*. Corolla downy outside.

Hoary Cunila. Shrub.

5 C. leuca'ntha (Benth. lab. p. 361.) herbaceous, glabrous; leaves on short petioles, ovate-oblong, quite entire, rounded at the base; cymes scarcely pedunculate, rather loose, many-flowered. ♃. F. Native of Mexico. Stems erect, many from the same root. Leaves furnished with minute yellow resinous dots. Whorls loose: lower ones remote, 16-20-flowered. Pedicels and calyxes pubescent. Corollas white, pilose outside.

White-flowered Cunila. Pl.

6 C. polya'ntha (Benth. lab. p. 362.) herbaceous; stem erect, pubescent; leaves on short petioles, ovate, sub-serrated, rounded at the base; whorls loose, many-flowered, disposed in long racemes. ♃. F. Native of Mexico, Berlandier. Leaves downy. Whorls 40-50-flowered. Branches of cymes divaricately dichotomous. Corolla white, size of those of *C. Mariàna*.

Many-flowered Cunila. Pl. 1 to 1½ foot.

7 C. lythrifòlia (Benth. bot. reg. vol. 15. lab. p. 362.) herbaceous; stem erect, pubescent; leaves oblong-lanceolate, serrated; whorls dense, many-flowered, spicate; lower ones distinct; calyxes very villous. ♃. F. Native of Mexico, near Real del Monte. Leaves 1½ to 2 inches long, pubescent from

short tomentum, as well as the branches. Corollas similar to *C. Mariana*.

Loosestrife-leaved Cunila. Pl. 1 to 1½ foot.

8 C. STRI'CTA (Benth. lab. p. 362.) herbaceous; stem erect, strict; leaves linear, obtuse, quite entire, stiff; whorls dense, many-flowered, approximate into a terminal spike, which is interrupted at the base. ♃. F. Native of Brazil, in marshes near Rio6 de Senelon; also in the Missions of the Uruguay, St. Hil. Habit of *Keithia*. Plant quite glabrous. Leaves 1 to 1½ inch long, glandular. Floral leaves bractea-formed, ciliated. Corolla white, having the lower lip dotted with purple.

Strict Cunila. Pl. 1 to 2 feet.

9 C. SPICA'TA (Benth. lab. p. 362.) herbaceous, procumbent; branches villous; leaves on short petioles, obovate-oblong, obtuse, remotely serrated, narrowed at the base; whorls densely many-flowered, approximating into terminal spikes. ♃. F. Native of the South of Brazil, Sello. Stem beset with simple subfasciculate villi. Leaves scarcely ½ an inch long, subfasciculate in the axils while young, clothed with adpressed pili above, and glandular beneath, and ciliated on the nerves with long hairs. Lower whorls remote. Calyxes ciliated. Tube of corolla villous inside.

Spiked-flowered Cunila. Pl. procumbent.

10 C. MENTHOI'DES (Benth. lab. p. 363.) herbaceous, procumbent: branches villous; leaves petiolate, broad-ovate, obtuse, scarcely crenated, rounded at the base; whorls densely many-flowered, distinct, or the upper ones are approximate. ♃. F. Native of the South of Brazil, Sello. Leaves ½ an inch, downy above, glandular on both surfaces, ciliated on the nerves beneath. Corolla villous inside.

Mint-like Cunila. Pl. procumbent.

11 C. GALIOI'DES (Benth. lab. p. 363.) suffruticose, procumbent; leaves small, fascicled, lanceolate, bluntish, quite entire, whorls many-flowered, dense, approximate into an elongated spike, which is a little interrupted at the base. ♄. F. Native of Brazil, in fields and marshes in the province of St. Paul, from Castro to Curitiba, St. Hil.; South of Brazil, Sello. Branches pubescent, and upper surfaces of leaves. Leaves 2-3 lines long, glabrous and glandular beneath. Corolla pale blue, pubescent outside, twice as long as the calyx; throat villous inside.

Galium-like Cunila. Shrub procumbent.

12 C. FASCICULA'TA (Benth. lab. p. 363.) suffruticose, procumbent; branches piloscly hispid; leaves nearly sessile, fascicled, oblong, obtuse, quite entire, with revolute edges, hispid on both surfaces; whorls dense, many-flowered, collected into ovoid terminal heads. ♄. F. Native of the South of Brazil, Sello. Inner bracteas linear, striated, ciliated. Corolla downy outside, and villous inside.

Fascicled-leaved Cunila. Shrub procumbent.

13 C. MICROCE'PHALA (Benth. lab. p. 364.) procumbent; branches scarcely pubescent; leaves petiolate, oblong or obovate, obtuse, quite entire, or subsinuately serrated, narrowed at the base, glabrous, flat; whorls dense, many-flowered, forming small, globose, nearly terminal heads. ♃. G. Native of the South of Brazil and Peru. Stems much branched. Leaves distant, subfasciculate in the axils, glandular beneath. Corolla white; throat villous inside.

Small-headed Cunila. Pl. procumbent.

14 C. VERTICILLA'TA (Mœnch, ex Steud. nom. p. 899.) this plant is entirely unknown at the present day. Ziziphora verticillata, Steud. nom.

Whorled Cunila. Pl.?

Cult. A light rich soil is the best for these plants; and the species may either be increased by cuttings, seeds, or by dividing at the root. All of them require protection in winter.

Tribe V.

MELISSI'NEÆ (the genera contained in this tribe agree with *Melissa* in the characters given below.) Benth. lab. p. 365. Calyx 13, rarely 10-nerved, 5-toothed, bilabiate, rarely equal; upper lip tridentate; lower lip bifid. Tube of corolla exserted, rarely inclosed, exannulate inside; limb bilabiate: upper lip straight, entire, or emarginately-bifid, flattish, rarely galeate: lower lip spreading, with flat, nearly equal lobes, or the middle lobe is generally the broadest, entire or emarginate. Stamens ascending, didynamous; superior ones the shortest, and sometimes abortive.

XLVII. HEDEO'MA (a Greek name for Mint.) Pers. ench. 2. p. 134. Benth. lab. p. 365. Cunila species of Lin. Ziziphora species of Rœm. et Schultes.

LIN. SYST. *Diándria, Monogýnia.* Calyx ovate-tubular, somewhat gibbous below at the base, 13-striped, bilabiate; upper lip tridentate, or rather trifid: lower lip bifid; throat villous inside. Tube of corolla equalling the calyx, or a little exserted; limb bilabiate: upper lip erect, entire, emarginate or almost bifid, flat: lower lip spreading, trifid, with nearly equal lobes, or the middle lobe is rather the broadest, entire, or emarginate. Stamens 2, fertile, ascending; anthers 2-celled: cells diverging or divaricate; rudiments of the two upper stamens wanting or sterile, short, subulate, and capitate. Lobes of style nearly equal, or the lower one is elongated, or a little flattened, stigmatiferous at top and margin, involving the upper one at the base, which is very short. Achenia dry, smooth.—Herbs or subshrubs. Leaves small, quite entire, or a little toothed. Whorls loose, few-flowered, axillary, approximating into terminal racemes.

SECT. I. MÓSCA (the Nipalese name of *H. Nepalénsis.*) Benth. lab. p. 366. Calyx ovate; upper lip spreading, flattish, shortly tridentate.—Herbs, with toothed leaves.

1 H. NEPALE'NSIS (Benth. lab. p. 366.) stem herbaceous, erect, branched, almost glabrous; leaves petiolate, ovate, narrowed at both ends, serrated, flat, nearly glabrous; floral leaves small; whorls 2-flowered, secund, loosely racemose. ☉.? H. Native of the Himalaya, Deyra Dhoon, and Cashmere. Cunila Nepalénsis, D. Don, prod. fl. nep. p. 107. Lycópus dianthèra, Roxb. fl. ind. 1. p. 145. Melissa Nepalénsis, Benth. in Wall. pl rar. asiat. 1. p. 66. Mósla ocymoides, Hamilt. mss. Cunila Buchanàni, Spreng. syst. 1. p. 54. Stem roughish on the angles. Leaves ½ to 1 foot, green above, and paler beneath. Corolla hardly equalling the calyx.

Nipaul Hedeoma. Pl. 1 to 3 feet.

2 H. PULEGIOI'DES (Pers. ench. 2. p. 131.) stem herbaceous, erect, branched, pubescent; leaves petiolate, ovate, narrowed at the base, subserrated, flat, pubescent; floral leaves similar to the others; whorls axillary, 6-flowered; corolla equalling the calyx. ☉. H. Native from Canada to Carolina, in dry fields, and on the mountains. Melissa pulegioides, Lin. spec. ed. 1st. p. 593. Cunila pulegioides, Lin. spec. p. 30. Ziziphora pulegioides, Rœm. et Schultes, syst. 1. p. 209. Habit of *Melissa Clinos.* Leaves ½ an inch long. Corolla downy outside, bluish: upper lip subemarginate. Rudiments of upper filaments short, subulate, capitate. Lower lobe of style elongated.

Pennyroyal-like Hedeoma. Pl. ½ foot.

3 H. PIPERI'TA (Benth. lab. p. 730.) stem herbaceous, pubes-

cent; leaves nearly sessile, ovate, obtuse, a little crenated, rounded at the base, almost glabrous; floral leaves almost similar to the others; whorls axillary, about 6-flowered; corolla exceeding the calyx. ♀. G. Native of New Spain, Moçino et Sessé. Cunila piperita, Moc. et Sessé, mss. Stem with a perennial base, branched. Corollas purplish. Upper lobe of style very short. Habit of *Melissa*, sect. *Acinos*.

Pepper Hedeoma. Pl.?

Sect. II. Hedeòma (see genus for derivation.) Benth. lab. p. 367. Calyx tubular, terete: teeth all subulate.—Suffruticose plants, with quite entire leaves.

4 H. Gillie'sii (Benth. lab. p. 367.) stem suffruticose, glabrous; leaves nearly sessile, linear, obtuse, quite entire, narrowed at the base, glabrous; whorls 2-flowered; corolla hardly exceeding the calyx, which is glabrous. ♄. G. Native of Chili, near Mendoza, at Cerro de Achiras. Leaves like those of *Thymus vulgàris*, dotted, glandular, subfasciculate. Corolla violaceous; upper lip shortly emarginate: middle lobe of lower lip entire. Lower lobe of style flattened, recurved: upper lobe very short. Rudiments of sterile stamens short.

Gillies's Hedeoma. Shrub ¼ to ½ foot.

5 H. polygalæfòlia (Benth. lab. p. 367.) stem suffruticose at the base, much branched; leaves numerous, sessile, ovate, obtuse, quite entire, narrowed at the base, coriaceous, glabrous; flowers approximate at the tops of the branches; corolla half as long again as the calyx, which is glabrous. ♄. G. Native of the South of Brazil, Sello. Stems procumbent at the base, densely tufted. Leaves dotted. Corolla downy outside; upper lip emarginately bifid: lobes of lower lip entire. Lower lobe of style subulate, involving the upper one at the base. Rudiments of sterile stamens none.

Milkwort-leaved Hedeoma. Shrub ¼ to ½ foot, tufted.

6 H. multiflòra (Benth. lab. p. 367.) stem suffruticose, much branched at the base; branches pubescent; leaves nearly sessile, linear, quite entire, with revolute margins, scabrous from dots, shortly hispid; whorls axillary, 2-6-flowered; corolla about twice as long as the calyx, which is hispid. ♄. G. Native of the South of Brazil, Sello. Habit of *Micromèria Græ'ca*. Stems floriferous almost their whole length. Corolla pubescent outside; upper lip emarginate: middle lobe of lower lip entire. Lower lobe of style subulate, involving the upper one. Rudiments of sterile stamens wanting.

Many-flowered Hedeoma. Shrub ½ foot.

7 H. Drummóndi (Benth. lab. p. 368.) stem suffruticose, much branched; branches pubescent; leaves petiolate, oblong-linear, quite entire; whorls 6-10-flowered; corolla hardly exceeding the calyx, which is hispid. ♄. F. Native of Mexico, at Monterey, in the province of Texas. Leaves ½ an inch long, obtuse, pubescent. Corollas minute.

Drummond's Hedeoma. Shrub ¼ to ½ foot.

8 H. hi'spida (Pursh, fl. amer. sept. 2. p. 414.) annual, erect; branches rather villous: leaves sessile, linear, obtuse, quite entire; floral leaves conforming to the others, exceeding the flowers; whorls about 6-flowered; bracteas lanceolate-subulate, equalling the calyxes; calyx ciliately hispid, deeply bilabiate; corolla scarcely exceeding the calyx. ☉. H. Native of North America, at the Missouri, Mississippi, and among the Rocky Mountains. Cunila hispida, Spreng. syst. 1. p. 54. Zizíphora hispida, Roem. et Schultes, syst. mant. 1. p. 179. Hedeòma hirta, Nutt. gen. amer. 1. p. 16. Plant much branched, densely leafy. Leaves ½ an inch long, green. Whorls numerous: upper ones approximate. Calyx gibbous at the base: teeth awned.

Hispid Hedeoma. Pl. ¼ to ½ foot.

Cult. The annual species, like other half hardy annuals, are reared on a hot-bed, and afterwards planted out into the open ground about the end of May. The shrubs should be grown in pots in light rich earth; and they will be readily increased by cuttings and seeds.

XLVIII. MICROMERIA (from μικρος, *mikros*, small; and μερις, *meris*, a part; probably from the small parts of the plants.) Benth. in bot. reg. vol. 15. lab. p. 368.—Saturèia and Thymus species of Lin. and other authors.—Sabbàtia, Mœnch, meth. p. 386. but not of Pursh.—Piperélla, Presl, fl. sic.? without character.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular, 13, rarely somewhat 15-nerved, 5-toothed; teeth nearly equal, straight, or scarcely disposed into 2 lips; throat usually villous inside. Tube of corolla equal, straight, naked inside, usually shorter than the calyx; limb bilabiate: upper lip erect, flattish, entire or emarginate; lower lip spreading, with flat, nearly equal lobes, or the middle lobe is broadest, entire or emarginate. Stamens 4, didynamous: lower ones the longest, ascending, approximating by pairs at the apex, rarely a little divergent; filaments toothless; anthers free, 2-celled: connective usually thickened; cells distinct, parallel, diverging, or a little divaricate. Lobes of style sometimes equal, subulate, with minute, terminal stigmas: sometimes the superior lobe is very short, and the lower one elongated, recurved, and flattened, with a stigmatiferous margin. Achenia dry, smooth.—Undershrubs or herbs. Whorls axillary or spicate, rarely cyme-formed, sohpaided. Flowers generally small, purplish or white. This genus is nearly allied to *Saturèia* and *Melissa*; and differs from the first by the nervation of the calyx and stamens; and from the last chiefly in the calyx, which is less bilabiate.

Sect. I. Hesperothy'mus (from ἑσπερος *hesperos*, the evening; and θυμος, *thymos*, thyme; probably from their exhaling a stronger scent in the evening.) Benth. lab. p. 371. Flowers solitary, on axillary pedicels, 1-3 on both sides; pedicels longer than the calyxes. Common peduncle wanting, rarely elongated. —American herbs, having the leaves usually crenated.

1 M. glabe'lla (Benth. lab. p. 371.) glabrous; stem herbaceous, erect, small; leaves sessile, oblong-linear, obtuse, quite entire; whorls about 6-flowered; pedicels elongated, naked; calyx sub-bilabiate: teeth all subulate: throat villous inside. ♃. H. Native of North America; in Canada; near New York; and on rocks along the rivers St. Lawrence, Ohio, Tennessee, and Mississippi. Cunila glabélla, Michx. fl. bor. amer. 1. p. 18.? Hedeòma glàbra, Nutt. gen. amer. 1. p. 16. Zizíphora glabélla, Roem. et Schultes, syst. 1. p. 209. Stem stoloniferous at the base. Upper lip of corolla, and middle segment of the lower lip entire. Style about equally bifid.?

Glabrous Micromeria. Pl. small.

2 M. Arkansa'na (Benth. lab. p. 730.) stem branched; leaves linear-lanceolate, serrated in front: upper ones quite entire; whorls about 4-flowered; pedicels bibracteate at the base. ♃. H. Native of the Arkansas, Nuttal. Hedeòma Arkansàna, Nutt. in trans. amer. phil. soc. n. s. 5. p. 186. Habit of *M. glabélla*, with the scent of Pennyroyal. The whole plant is glabrous and glandular. Pedicels equalling the cylindrical calyxes; teeth of calyx setaceous. Corolla sub-campanulate, blue, with a white palate.

Arkansas Micromeria. Pl. ¼ to ½ foot.

3 M. bracteola'ta (Benth. lab. p. 371.) pubescent; stems simple, slender; leaves linear-lanceolate, acute at both ends,

quite entire; pedicels with setaceous bracteoles, 3-5-flowered; calyx oblong, equal; corolla minute. ♃. H. Native of Carolina, Nuttall. Hedeòma bracteolàta, Nutt. gen. amer. addenda. Ziziphora bracteolàta, Roem. et Schultes, syst. mant. 1. p. 179.

Bracteolate Micromeria. Pl. ¼ to ½ foot.?

4 M. stolonífera (Benth. lab. p. 371.) stems herbaceous, prostrate, radicant, glabrous; leaves sessile, ovate-roundish, obtuse, subcrenated, and somewhat cordate at the base, glabrous; pedicels elongated, naked; teeth of calyx ovate-lanceolate: throat villous inside. ♃. F. Native of New Spain, Moçino et Sessé. Nearly allied to *M. Brównei*; but differs in the more firm, acutely tetragonal stems, and broader sessile leaves.

Stoloniferous Micromeria. Pl. prostrate.

5 M. brównei (Benth. lab. p. 372.) stems herbaceous, prostrate, glabrous; leaves petiolate, ovate-rounded, obtuse, a little crenated, glabrous; pedicels elongated, naked; teeth of calyx ovate-lanceolate; throat villous inside. ♃. F. Native of Florida, Jamaica, Santa Fe de Bogota, and Brazil. Thymus Brównei, Swartz, fl. ind. occ. 2. p. 1011. prod. p. 89. Stems usually creeping, and rooting at the base. Leaves truncate or subcordate at the base. Whorls 2-flowered. Corollas pale purple, small. Tube a little exserted.

Browne's Micromeria. Pl. prostrate.

6 M. Xalapénsis (Benth. lab. p. 372.) stems herbaceous, prostrate, pilose; leaves nearly sessile, ovate, a little crenated, ciliated; pedicels elongated, naked; teeth of calyx ovate-lanceolate; throat villous inside. ♃. F. Native of Mexico, between Pikla and Xalapa, in humid places. Thymus Xalapénsis, H. B. et Kunth, nov. gen. 2. p. 316. Allied to *M. Brównei*; but differs in the nearly sessile leaves, which are ovate, not rounded, and in the hairs of the stem being long and white; and from *M. stolonífera*, in the narrower pilose leaves.

Xalapa Micromeria. Pl. prostrate.

7 M. Cunninghámii (Benth. lab. p. 730.) stems herbaceous, prostrate, finely pubescent; leaves petiolate, rounded, almost quite entire; pedicels elongated, naked; calyx hairy, with ovate-lanceolate teeth, and a naked throat. ♃. F. Native of New Zealand, on the west coast, at the river Mangamaka Hokianga, Cunningham. Habit of *M. Brównei*. Teeth of calyx villous inside, but the throat is naked. Tube of corolla inclosed.

Cunningham's Micromeria. Pl. prostrate.

8 M. Douglásii (Benth. lab. p. 372.) stems herbaceous, prostrate; leaves petiolate, ovate-rounded, obtuse, crenated, roundedly truncate at the base, glabrous on both surfaces; peduncles elongated, bracteate at the base or middle; teeth of calyx subulate: throat naked inside. ♃. F. Native of North West America, at the river Columbia. Thymus Douglásii, Benth. in Linnæa, 6. p. 80. Thymus Chamissónis, Benth. in Linnæa, 6. p. 80. Branches very long, prostrate, creeping, pubescent. Corolla purple, downy outside: upper lip emarginate; and the middle lobe of lower lip entire. Lobes of style unequal.

Douglas's Micromeria. Pl. prostrate.

Sect. II. Pipere'lla (a dim. of *Piper*, pepper.) Benth. lab. p. 373. Flowers almost sessile, or collected into sessile or pedunculate heads. Pedicels almost wanting, or shorter than the calyxes. Whorls axillary or subspicate.—Undershrubs, rarely herbs. Leaves quite entire, veiny, often hard; floral leaves almost similar to the cauline ones.

* *Species natives of Europe and Africa.*

9 M. Julia'na (Benth. lab. p. 373.) pubescent, suffruticose; branches erect, strict; leaves sessile: lower ones ovate: upper ones lanceolate-linear, all obtuse, and quite entire, with revolute edges; fascicles of flowers dense, on short peduncles; bracteas about equal in length to the sessile calyxes; calycine teeth subulate, stiff, hardly so long as the breadth of the tube: throat naked inside. ♄. F. Native of the region of the Mediterranean, on dry and stony hills; as in Sicily, Naples, Dalmatia, and several of the Grecian islands. Saturèia Juliàna, Lin. spec. 798. Sibth. et Smith, fl. græc. 6. p. 32. t. 540. Tenore, fl. nap. t. 151. f. 3. Sabbàtia corymbòsa, Mœnch. meth. p. 386.—Ger. emac. 576. f. 3.—Park. theatr. 5. f. 3.—Mor. hist. 3. p. 412. sect. 11. t. 17. f. 4.—Lob. icon. 245. Stems procumbent, much branched. Corollas very minute, pale red. Upper lobe of style the shortest. Plant with a fragrant smell.

Var. β, hirsùta (Benth. lab. p. 373.) hairy, hard, a foot high, or more, a little branched. ♄. F. Native of Sicily. Saturèia Juliàna, var. canéscens, Guss. prod. fl. sic. 2. p. 114. Saturèia hirsùta, Presl, del. prag. p. 79.

St. Julian's Micromeria. Fl. May, Sept. Clt. 1596. Shrub ½ to 1 foot.

10 M. Græ'ca (Benth. lab. p. 373.) pubescent; branches erect or ascending; leaves sessile: lower ones ovate, obtuse: superior ones lanceolate-linear, all quite entire, with revolute margins; fascicles of flowers loose, almost secund, pedunculate; bracteas, for the most part, one half shorter than the calyxes; calycine teeth subulate, longer than the breadth of the tube: throat villous inside. ♄. F. Native of the region of the Mediterranean, on dry stony hills; as of Portugal, Spain, Corsica, Italy, Naples, Sicily, Syria, and many of the Grecian islands, &c. Saturèia Græ'ca, Lin. spec. 794. Sibth. et Smith, fl. græc. 6. p. 34. t. 542. Tenore, fl. nap. t. 151. f. 2. Saturèia micrántha, Hoffm. et Link, fl. port. 1. p. 142. Thymus hírtus, Russ. nat. hist. alep. 2. p. 256. Thymus micránthus, Brot. phyt. p. 30. t. 13.—Alp. exot. 265. t. 264.—Mor. hist. 3. p. 411. sect. 11. t. 17. f. 2. This is a very variable plant. Stem woody at the base, procumbent. Corolla exceeding the calyxes a little, pale purple: upper lip shortly emarginate. Lobes of style equal.

Var. β, longiflòra (Guss. prod. fl. sic. 2. p. 117.) corolla twice as long as the calyx. ♄. F. Native of Sicily and Naples. Saturèia Consentina, Tenor. fl. nap. 3. p. 151. f. 9. syll. p. 279. This is distinguished from the species by the greater stature and larger flowers.

Var. γ, densiflòra (Benth. lab. p. 373.) fascicles of flowers more dense, and on shorter peduncles; throat of calyx less villous inside. ♄. F. Saturèia tenuifòlia, Tenore, fl. nap. t. 151. f. 4. prod. p. 33. Guss. prod. fl. sic. 115. Micromèria tenuifòlia, Rchb. fl. germ. exc. p. 310. Saturèia hirta, Host, fl. austr. 2. p. 134.? Thymus virgàtus, Tenor. fl. nap. t. 155. f. 3. syll. 296. Saturèia congésta, Horn. hort. hafn. Spreng. syst. 2. p. 720.

Grecian Micromeria. Fl. June, July. Clt. 1759. Shrub ¾ foot.

11 M. parviflòra (Rchb. fl. germ. exc. p. 859.) almost glabrous; branches erectish; leaves sessile, all linear, quite entire, with revolute margins; peduncles equalling the leaves, loosely 3-flowered; bracteas minute; calycine teeth subulate: the upper ones the broadest: throat villous inside. ♄. F. Native of Dalmatia, on the confines near Albania, among the mountains of Patrovitch. Saturèia parviflòra, Vis. pl. rar. dalm. in bot. zeit. 1829. Saturèia inodòra, Host, fl. austr. 2. p. 135. but not of Salzm. This is a very distinct species from *M. Græ'ca*; the leaves are much narrower and glabrous; the flowers are on long pedicels, and fewer; the form and length of the calycine teeth are unequal.

Small-flowered Micromeria. Shrub.

12 M. TE'NUIS (Benth. lab. p. 374. and 731.) suffruticose, procumbent; branches ascending, clothed with floccose wool; leaves sessile, linear, acute, quite entire, with revolute margins, woolly; whorls 2-6-flowered; calyxes sessile: teeth subulate, stiff, longer than the breadth of the tube. ♄. F. Native of the Canary Islands, on the mountains. Saturèia tènuis, Link, in L. de Buch, beschr. can. ins. p. 143. M. lanàta, Benth. lab. p. 374. Floriferous branches densely leafy. Flowers usually solitary, axillary, rather shorter than the floral leaves. Corolla hardly exceeding the calycine teeth.

Slender Micromeria. Shrub procumbent.

13 M. LANA'TA (Benth. lab. p. 731.) suffruticose, procumbent; branches ascending, clothed with floccose wool; leaves sessile, linear, obtuse, quite entire, with revolute margins, woolly; whorls 6-10-flowered; cymes pedunculate; calyxes sessile: teeth short, soft, tomentose. ♄. F. Native of the Canary Islands, on the mountains. Saturèia lanàta, Link, in L. de Buch. beschr. can. ins. p. 143. M. tènuis, Benth. lab. p. 374. Very nearly allied to *M. tènuis*.

Woolly Micromeria. Shrub procumbent.

14 M. VA'RIA (Benth. lab. p. 374.) suffruticose, procumbent, pubescent, or villous; leaves sessile: lower ones ovate: upper ones lanceolate, subfasciculate in the axils, all obtuse, with revolute edges, rather canescent beneath; flowers minute, sessile, disposed in pedunculate or sessile fascicles; bracteas minute; calyx tubular, pubescent, shorter than the floral leaves: throat villous inside. ♄. F. Native of the Canary Islands, very common. Saturèia vària, Berth. et Webb, mss. Thymus ericæfòlius, Roth. cat. 2. p. 50. ex Willd. enum. 624, Thymus inodòrus, Benth. in Linnæa, 6. p. 77. but not of Desf. Saturèia thymoides, Lowe, prim. fl. mader. p. 19. Stems much branched. Calyx often purplish. Corolla purplish, hardly exceeding the calyx.

Various Micromeria. Fl. June, Aug. Clt. 1806. Pl. procumbent.

15 M. APPROXIMA'TA (Rchb. fl. germ. exc. p. 859.) suffruticose, procumbent, pubescent, or villous; leaves sessile, lanceolate; superior leaves linear, somewhat fascicled, all bluntish, with subrevolute edges; flowers on short pedicels; bracteas equalling the pedicels; calyx tubular, pubescent: throat villous inside. ♄. F. Native of the region of the Mediterranean, on dry hills; as of Sicily, Naples, Albania. Saturèia fasciculàta, Ralin. prec. p. 39. Saturèia approximàta, Biv. manip. 5. p. 13. Thymus fruticulòsus, Bert. incon. ital. p. 101. Very nearly allied to *M. vària*; but differs in the flowers being almost twice the size; and in the leaves being longer. Corolla purple, twice as long as the calyx.

Approximate-leaved Micromeria. Fl. June, Aug. Clt. 1822. Shrub procumbent.

16 M. INODÒRA (Benth. lab. p. 375.) suffruticose; branches pubescent; leaves sessile, very numerous, fascicled, small, lanceolate, obtuse, with revolute edges, canescent, ciliated; whorls few-flowered; flowers almost sessile, among the fascicles of the leaves; bracteas minute; calyx tubular, almost glabrous: throat villous inside. ♄. F. Native of Algiers, on arid hills, and the Balearic Islands. Thymus inodòrus, Desf. fl. atl. 2. p. 30. t. 129. Shrub much branched, erect. Corolla purple, longer than the calyx: lobes all obtuse, entire. This differs from *M. vària*, in the stem being more erect; in the leaves being smaller, more numerous, and narrower. This is probably the same as the preceding.

Scentless Micromeria. Shrub 1 foot.

17 M. DENSIFLÒRA (Benth. lab. p. 375.) suffruticose, diffuse, glabrous; branches short; leaves approximate, sessile, lanceolate-linear, acute, with revolute margins; floral leaves equalling the calyxes; whorls about 10-flowered, densely approximate into ovate spikes; calyxes sessile, tubular, almost glabrous, having the throat villous inside, and the teeth lanceolate-subulate, erect, scarcely so long as the breadth of the tube. ♄. F. Native of the Canary Islands, Broussonet. Habit of *Thymus Serpyllum*, var. *angustifòlia*. Leaves green above, and canescent beneath. Calyx purplish. Corolla purple, a little longer than the calyx, glabrous. Style almost equally bifid.

Dense-flowered Micromeria. Shrub diffuse.

18 M. FORBE'SII (Benth. lab. p. 376.) pubescent, suffruticose, procumbent; branches ascending; leaves almost sessile, ovate, obtuse, rounded at the base, flat, or with subrevolute edges, pubescent on both surfaces; floral leaves exceeding the flowers a little; whorls dense, few-flowered; calyxes almost sessile, ovate-cylindrical: teeth short, setaceous, shorter than the corolla: throat villous inside. ♄. F. Native of the Island of St. Nicholas, one of the Cape Verds. This differs from *M. Teneriffæ*, in the pubescence, stronger branches, larger, more numerous leaves, and shorter, almost sessile calyxes.

Forbes's Micromeria. Shrub.

19 M. CANE'SCENS (Guss. pl. rar. p. 228. t. 42. prod. fl. sic. 2. p. 120.) canescent from villi; stem slender; lower leaves ovate: upper ones lanceolate-linear, acute; peduncles axillary, 2-7-flowered, solitary or twin, rather secund; bracteas short, about equal in length to the pedicels; calyx very villous. ♄. F. Native of Sicily, on arid calcareous hills. Corolla purple. Allied to *M. Græca*.

Canescent Micromeria. Shrub ½ to 1 foot.

20 M. NERVÒSA (Benth. lab. p. 376.) pubescent, suffruticose; branches ascending; leaves sessile, all ovate, acute, quite entire, flat, or with rather revolute margins; whorls many-flowered: superior ones approximate; fascicles of flowers loose, scarcely pedunculate; bracteas very short; calyx pilose, with spreading setaceous teeth: throat rather villous inside. ♄. F. Native of the region of the Mediterranean, on dry arid hills, and in the fissures of rocks; as of Mount Atlas, South of Sicily; Naples, by the sea side; Grecian Islands, and Lybia. Saturèia nervòsa, Desf. fl. atl. 2. p. 9. t. 121. f. 2. Saturèia filifórmis, Tenor. prod. and marin. viag. bot. 1. p. 299. ex Tenore, syll. p. 279. Thymus filifórmis, Sieb. pl. cret. exs. but not of Lin. Thymus Mastichina, Smith, prod. fl. græc. but not of Lin. Branches simple. Corollas hardly longer than the calyx, red: upper lip shortly emarginate.

Nerved Micromeria. Shrub ½ to 1 foot.

21 M. MICROPHY'LLA (Benth. lab. p. 377.) suffruticose, nearly glabrous, pubescent, or villously canescent; branches filiform; leaves small, ovate or oblong, obtuse, flat, or with subrevolute margins; fascicles of flowers pedunculate, loose, many-flowered; bracteas about equal in length to the pedicels; calyxes ovate, almost glabrous, or covered with short villi: throat rather villous inside. ♄. F. Native of the region of the Mediterranean; as in the fissures of rocks on Mount Atlas; Sicily, on arid hills; Naples, and Island of Melita. Stems decumbent. Corollas purple.

Var. α, glabriúscula (Benth. lab. p. 377.) small, pale green, nearly all glabrous. ♄. F. Saturèia microphýlla, var. *α*, Guss. prod. fl. sic. 2. p. 120. Thymus Teneriffæ, Hortul. but not of Pers. Saturèia Teneriffæ, Link, enum. 2. p. 101.

Var. β, villòsa (Benth. lab. p. 377.) plant firmer, often purplish or canescent; stems and calyxes villous. ♄. F. Saturèia microphýlla, b. c. d. Guss. prod. fl. sic. 2. p. 120, 121. Thymus microphýllus, D'Urv. enum. in mem. soc. Lin. par. 327. Saturèia filifórmis, Desf. fl. atl. 2. p. 8. t. 121. f. 1.?

Small-leaved Micromeria. Fl. June, July. Clt.? Shrub ½ to 1 foot.

22 M. ova'ta (Benth. lab. p. 377.) suffruticose, procumbent; branches ascending, villous; leaves sessile, ovate, bluntish, subcordate at the base, with revolute edges, pubescent on both surfaces; floral leaves shorter than the peduncles, or the upper ones are longer; fascicles of flowers pedunculate, loose; teeth of calyx setaceous; throat of calyx villous inside. ½. F. Native of Abyssinia, Salt. Saturèia ovàta, R. Br. in append. to Salt, abyss. Allied to *M. Forbèsii* and *M. microphýlla*; it differs from the first in the branches being more slender; in the flowers being smaller; and in the fascicles being pedunculate; and from the latter, in the leaves being broader at the base; in the margins being very revolute, and in the floral leaves being narrower.

Ovate-leaved Micromeria. Shrub procumbent.

23 M. filifórmis (Benth. lab. 378.) suffruticose, diffuse, glabrous; branches filiform; leaves nearly sessile, ovate: lower ones cordate: superior ones rounded at the base, all bluntish, and quite entire, flat; whorls about 2-flowered; pedicels minutely bracteate at the base, about equal in length to the calyxes; calyx tubular, declinate, or nutant: teeth subulate, rather shorter than the corolla: throat rather villous inside. ½. F. Native of the region of the Mediterranean; as of Spain and the Balearic Islands. Thýmus filifórmis, Ait. hort. kew. 2. p. 313. Piperélla filifórmis, Presl, fl. sic. p. 36. Cunìla thymoides, Gowan, herb. ex Benth. Habit of *M. microphýlla*, but the branches are more slender and the leaves more remote. Leaves generally purplish. Corollas purplish. Style about equally bifid.

Filiform Micromeria. Fl. June, July. Clt. 1770. Shrub diffuse.

24 M. puncta'ta (Benth. lab. p. 378.) suffruticose, branches elongated, slender, finely pubescent; leaves nearly sessile: lower ones ovate, acute: superior ones oblong, obtuse, narrowed at the base, with scarcely revolute edges: uppermost leaves about equalling the flowers; fascicles of flowers on short peduncles; bracteas minute; calyxes sessile, nearly glabrous, small, ovate, cylindrical, with short setaceous teeth: throat villous inside. ½. F. Native of Abyssinia, Salt. Saturèia punctàta, R. Br. in append. to Salt, abyss. Habit of *M. Græ'ca*, with the flowers of *M. Teneriffæ*. Leaves distant. Peduncles 3-6-flowered.

Dotted Micromeria. Shrub.

25 M. Teneríffæ (Benth. lab. p. 378.) suffruticose, diffuse, almost glabrous; branches stiff, slender, pubescent above; leaves sessile, ovate, acute, rigid, glabrous, flat: lower ones broader and somewhat plicate: superior ones almost lanceolate, about equal in length to the flowers; fascicles of flowers dense, on short peduncles; bracteas very short; calyxes sessile, pubescent, cylindrical; teeth setaceous, about equal in length to the corolla: throat villous inside. ½. F. Native of Teneriffe, plentiful. Thýmus Teneriffæ, Poir. dict. 7. p. 650. Thýmus terebinthinàceus, Willd. enum. p. 624. Allied to *M. microphýlla*, but differs in the branches being elongated and woody, and in the leaves being more acute, stiffer, and longer; in the flowers being sessile, and in the calyx being elongated and more slender. Corollas small, purple.

Teneriffe Micromeria. Shrub ½ to 1 foot.

26 M. biflòra (Benth. lab. p. 378.) suffruticose, much branched, tufted; branches ascending, pubescent or pilose; leaves sessile, ovate, acute, flat, with sub-revolute edges, stiff, glabrous, rather cordate at the base: superior ones shorter than the flowers; whorls loosely few-flowered; bracteas about equal in length to the pedicels; calyxes pedicellate, sub-secund, finely pubescent, or rather pilose: throat villous inside. ½. F. Native of Nipaul and Kamaon, Wall; Mussooree, Royle; Nielgherri, Wight. Thýmus biflòrus, Hamilt. in D. Don. prod. fl. nep. p. 112. Stems densely branched at the base; branches densely leafy. Corolla half as long again as the calyx: upper lip emarginate. Lobes of style nearly equal. Hardly differing from *M. Teneriffæ*, unless in habit, and in the larger, stiffer leaves.

Two-flowered Micromeria. Shrub ½ foot.

27 M. subcordà'ta (Vis. mss. ex Benth. lab. p. 379.) suffruticose; branches short, erectish, nearly simple, pubescent; leaves sessile, flat, broad-ovate, obtuse, broadly and truncately cordate at the base: floral leaves narrower; fascicles of flowers secund; peduncles few-flowered; calyx cylindrical, pubescent, with subulate teeth and a naked throat; corollas exserted. ½. F. Native of Dalmatia. Stems many, woody at the base; erect or procumbent at the base. Bracteas short, lanceolate. Corolla equal in length to the calycine teeth.

Subcordate-leaved Micromeria. Pl. ¼ to ½ foot.

28 M. piperè'lla (Benth. lab. p. 379.) suffruticose, branches ascending, pubescent; leaves sessile, broad-ovate, obtuse, rounded or sub-cordate at the base, glabrous on both surfaces: upper leaves oblong, small; fascicles of flowers loose, pedunculate, secund, few-flowered; bracteas small, oblong; calyxes nearly sessile, tubular, pubescent, with subulate teeth, the 3 superior teeth spreading; throat naked inside. ½. F. Native of the South of Europe; as of Piedmont, and Croatia. Thýmus piperélla, All. ped. 1. p. 21. t. 37. f. 3. bad. Waldst. et Kit. pl. rar. hung. 2. p. 169. t. 156. but not of Lin. Thýmus marginàtus, Smith, in Dicks. pl. sic. no. 71. Thýmus Croáticus, Pers. ench. 2. p. 130. Calamíntha Croática, Host, fl. austr. 2. p. 132. Branches herbaceous. Whorls remote. Peduncles 3-5-flowered. Calyx and Corolla purplish and pubescent.

Small Peppermint Micromeria. Shrub ½ foot.

29 M. Forskœ'lii (Benth. lab. p. 379.) stems decumbent, imbricate; leaves ovate, acute; flowers axillary, solitary, sessile. ½. F. Native of Kurma, Forsk. Thýmus imbricàtus, Forsk. fl. ægypt. p. 168. Calyx striated, having the throat closed with villi, 5-toothed. Flowers red. Leaves ciliated on the keels, ex Benth.

Forskœl's Micromeria. Shrub procumbent.

30 M. Sina'ica (Benth. lab. p. 380.) suffruticose; branches elongated, almost simple; leaves almost sessile, ovate, flat, or with revolute edges: superior ones exceeding the flowers; fascicles of flowers dense, scarcely pedunculate; calyxes almost sessile, ovate, with short setaceous teeth; corollas minute. ½. F. Native of Arabia, among rocks, in the desert of Sinai, Bové. Habit of *M. Græ'ca*, but is distinguished from it by the leaves, dense whorls, and small ovate calyxes. Leaves remote. Whorls 12-30-flowered, all remote. Flowers smaller than in any other species.

Sinai Micromeria. Shrub ½ to 1 foot.?

* * *Species natives of Australia.*

31 M. satureioìdes (Benth. lab. p. 380.) glabrous; stems erect, branched; leaves nearly sessile, rather elliptic or lanceolate, obtuse, flat; whorls loose, 3-10-flowered; calyxes finely pubescent, cylindrical, with short lanceolate teeth, and with the throat villous inside; corollas scarcely exceeding the calyxes. ½.? F. Native of New Holland, at Lake George, Cunningh.; about Port Jackson, R. Br. Méntha satureioìdes, R. Br. prod. p. 505.? Stems slender, rooting at the base. Flowers on short pedicels, 3-5 in each fascicle. Bracteas scarcely equalling the pedicels.

Savory-like Micromeria. Shrub ¼ to ½ foot.

32 M. Austra'lis (Benth. lab. p. 380.) stems ascending, with marginate scabrous angles; leaves lanceolate; calyxes tomentose: teeth obsoletely bearded inside at the base; flowers verticillate; stamens exserted; superior lip of corolla 2-lobed. ½.? F. Native of New South Wales, about Port Jackson; and of Van Diemen's Land. Méntha austràlis, R. Br. prod. p. 505.

Southern Micromeria. Shrub.?

33 M.? GRA'CILIS (Benth. lab. p. 830.) glabrous, or clothed with fine down, pale green; stems erect; leaves on short petioles, ovate, or the superior ones are ovate-lanceolate, obtuse, flat; whorls about 6-flowered; calyxes pubescent, cylindrically campanulate, with lanceolate, acute teeth, which are shorter than the breadth of the tube, and the throat is naked inside; corollas scarcely exceeding the calyxes. ♄.? F. Native of Van Diemen's Land. Méntha grácilis, R. Br. prod. p. 505.? but not of Smith. Méntha Diemémica, Spreng. syst. 2. p. 724. This differs principally from *M. satureioides* in the broader bases of the leaves, pubescence, and in the calyxes being larger and sessile, and in the throat being naked inside. This species differs from the characters of the genus in the stamens being distant and straight, not ascending.

Slender Micromeria. Shrub.?

* * * *Species natives of America.*

34 M. OBOVA'TA (Benth. lab. p. 881.) stem shrubby, divaricate, much branched; leaves obovate, obtuse, quite entire, narrowed at the base, with revolute margins, wrinkled, canescent on both surfaces; flowers almost sessile. ♄. S. Native of Jamaica. Saturèia viminea, Lin. amœn. 5. p. 399. Swartz. obs. p. 220. Saturèia incàna, Spreng. syst. 2. p. 719. Zygis aromática, Desv. in Hamilt. prod. fl. ind. occ. p. 46. Xenópnna obovàtum, Willd. ex Colla. hort. rip. p. 147. t. 25. Mentha viminea, &c. Browne, jam. 258. Leaves half an inch long. Corolla about twice as long as the calyx, whitish. Lower lobe of style long and flattened.

Obovate-leaved Micromeria. Fl. June, July. Clt. 1789. Shrub 2 to 12 feet.

35 M. NUBIGENA (Benth. lab. p. 881.) procumbent, much branched, hispid; leaves small, petiolate, broad-ovate, obtuse, quite entire; whorls 2-flowered; flowers nearly sessile; calycine teeth nearly equal, acute, and the throat villous inside. ♄.? G. Native of Peru, in rugged places, on the burning mounts Paracé and Rucu-Pichincha, and at Surucucha. Thymus nubigenus, H. B. et Kunth, nov. gen. 2. p. 316. Habit of *Thymus Serpyllum*. Stems rather woody at the base. Branches pubescent at the base. Corolla about twice as long as the calyx, pubescent outside.

Cloud-growing Micromeria. Shrub procumbent.

36 M. GILLIE'SII (Benth. lab. p. 881.) procumbent, finely clothed with pubescence; leaves sessile, oblong, obtuse, quite entire; whorls generally 2-flowered; flowers nearly sessile; calycine teeth stiff, sub-revolute, and the throat rather villous inside. ♄. F. Native of Chili, near Mendoza, Gillies. Whorls rarely so much as 6-flowered. Bracteas small, setaceous. Corolla quite glabrous, scarcely longer than the calyx; upper lip emarginate. Lobes of style flattened, at length revolute.

Gillies's Micromeria. Shrub procumbent.

37 M. BOLIVIA'NA (Benth. lab. p. 731.) glabrous or clothed with fine down; leaves nearly sessile, oblong, obtuse or obovate, quite entire, flat; whorls few-flowered; flowers nearly sessile; calycine teeth short, obtuse, erect, and the throat naked inside. ♄. F. Native of Bolivia. Nearly allied to *M. obovàta*, but differs in the leaves being much smaller, flat, and in the calyxes being shorter. Leaves greenish on both surfaces. Corolla smaller than in *M. obovàta*, scarcely half as long again as the calyx.

Bolivia Micromeria. Shrub.

SECT. III. PSEUDOMELI'SSA (ψευδος, *pseudos*, *falsehood*, and μελισσα, *melissa*, a bee, also the name of balm.) Benth. lab. p. 383. Cymes of whorls elongated, pedunculate, sub-dichotomous. Leaves often toothed.—European herbs. The species are probably referrible to the genus *Melissa* ex Benth.

38 M. RULE'GIUM (Benth. lab. p. 382.) herbaceous, ascending, pubescent: leaves petiolate, ovate, toothed, green on both surfaces; racemes coarctate, secund; cymes sub-dichotomous, few-flowered; teeth of calyx setaceous, nearly equal, and the throat villous inside. ♃.? H. Native of Austria and Hungary. Melissa Pulègium, Rochel, del. pl. rar. bannat. p. 62. t. 22. f. 8. Calamíntha origanifòlia, Host, fl. austr. 2. p. 120. Melissa subnùda, Waldst. et Kit. pl. rar. hung. 3. p. 296. t. 262.? Calamíntha subnùda, Host, fl. austr. 2. p. 130. Thymus subnùdus, Spreng. syst. 2. p. 698. Stems erect, almost simple, hoary from short reflexed pili. Calyx cylindrical. Corolla about twice as long as the calyx, form of *Saturèia*, purple.?

Pennyroyal Micromeria. Pl. ascending.

39 M. MARIFO'LIA (Benth. lab. p. 382.) plant hoary, ascending; leaves ovate or oblong, obtuse, almost quite entire, canescent above, and white beneath; racemes loose, many-flowered; teeth of calyx obtuse, nearly equal: throat villous inside; corolla about twice as long as the calyx. ♄. F. Native of Portugal, Spain, Syria, Tauria, Piedmont, &c., in dry rocky places. Melissa fruticòsa, Lin. spec. 828. Melissa Crética, Lam. dict. 4. p. 79. and of many authors, but not of Lin. Calamíntha Crética, Lam. fl. fr. 2. p. 395. Népeta Crética, Dietr. ex Steud. nom. p. 521. Thymus Crèticus, D. C. fl. fr. 3. p. 564, but not of Brot. Thymus Barrelièri, Spreng. syst. 2. p. 698. Melissa marifòlia, Pers. ench. 2. p. 132. Népeta marifòlia, Cav. icon. 6. p. 55. t. 576. Bystropògon marifòlius, Juss. ex Steud. nom. p. 521. Thymus marifòlius, Willd. enum. 2. p. 624. Népeta serpyllifòlia, Bieb. fl. cauc. 2. p. 40. cent. pl. ross. 1. t. 28. Népeta parvifòlia, Hortul.—Barr. icon. 1166. Corolla milk-coloured, spotted with purple, more than twice as long as the calyx. Habit of *Micromèria*, sect. *Calamíntha*, but the calyx is altogether that of *Micromèria*.

Cut-thyme-leaved Micromeria. Fl. June, Sept. Cult. 1800. Shrub 1 to 2 feet.

Cult. The greater number of the species of *Micromèria* are under-shrubs, very few herbaceous annuals. They are too tender to stand the open air in this country; they should therefore be grown in pots, and placed among other Alpine plants, so that they may be sheltered under glass in winter; but they will grow very well in summer on rockwork, and probably might survive our milder winters in such a situation. A light, rich earth is the best soil for them, and the pots should be well drained with sherds. The seeds of annual kinds may be sown in the open ground in April, in a warm, sheltered situation.

XLIX. MELI'SSA (from μελισσα, *melissa*, a bee; from μελι, honey: bees are said to gather abundance of honey from this plant.) Benth. lab. p. 383. Melissa Clinopòdium and Thymus species of Lin. and other authors. Calamíntha and A'cinos, Mœnch. and other authors.

LIN. SYST. *Didynàmia, Gymnospérmia*. Calyx tubular, 13-nerved, usually striated, bilabiate; upper lip generally spreading, tridentate: lower lip bifid; throat naked or villous inside. Tube of corolla straight or incurvedly ascending, naked inside, usually exserted; throat generally inflated; limb bilabiate; upper lip erect, flattish, entire, or emarginate: lower one spreading, with flat lobes, the middle lobe usually the broadest, entire, or emarginate. Stamens 4, didynamous, ascending, approximate by pairs at apex, or rarely a little distant, lower two the longest: the superior 2 sometimes sterile; filaments toothless; anthers free, 2-celled: connective often thickened; cells distinct, parallel, diverging. Lobes of style sometimes equal, subulate, with minute terminal stigmas; sometimes the lower lobe is elongated, recurved, flattened, with stigmatiferous margins. Achenia dry,

smooth.—Under shrubs, but usually herbs, with variable inflorescence. Flowers purplish, white or yellow.

Sect. 1. Calamíntha (from *καλος, kalos*, beautiful; and *μενθα, mintha*, mint; in reference to the beauty of the plants and their affinity to *Méntha*.) Benth. lab. p. 386. Calamíntha, Mœnch. meth. 408. Racemes loose, rather secund. Cymes of whorls, pedunculate, dichotomous. Bracteas minute. Calyx almost terete, striated, hardly gibbous at the base: throat villous inside.

1 M. incàna (Benth. lab. p. 386.) herbaceous or suffruticose at the base, procumbent; branches ascending, clothed with hoary tomentum; leaves petiolate, small, orbicular, almost entire, clothed with hoary tomentum on both surfaces; racemes rather secund; whorls few-flowered; cymes hardly dichotomous; calyxes shortly bilabiate, and the throat naked inside; corolla hardly twice as long as the calyx. ♃. H. Native of the Grecian Archipelago, frequent, and about Athens; also of Syria, near Aleppo. Melissa, Crética, Russel, nat. hist. alep. but not of Lin. Thymus incànus, Sibth. et Smith, fl. græc. 6. p. 62. t. 577. This species is intermediate between *Melissa* and *Micromèria*. Upper whorls dense; lower ones more loose.

Hoary Balm. Pl. ½ to 1 foot.?

2 M.? Cre'tica (Lin. spec. p. 828.) herbaceous, humble, procumbent at the base; branches ascending, pilosely hispid; leaves petiolate, small, roundish, obtuse, almost quite entire, clothed with soft villi on both surfaces; racemes sub-secund; cymes scarcely dichotomous, few-flowered; calyx shortly bilabiate, the throat villous inside; corolla scarcely twice as long as the calyx. ♃. H. Native of Candia. Thymus hírtus, Sieb. pl. exs. but not of others.—Barr. icon. t. 1166.—Bauh. hist. 3. p. 230. f. 2.—Park. theatr. p. 36. t. 37. f. 4. Allied to *M. incàna*, but differs in the stem and leaves being villous, not tomentose. Corolla white, purplish.?

Cretan Balm. Fl. June, July. Clt. 1596. Shrub ½ to 1 foot.

3 M. thymifo'lia (Benth. lab. p. 386.) stems herbaceous, ascending, clothed with hoary pubescence; leaves petiolate, ovate, obtuse, hardly crenated, cuneated at the base or rounded, rather canescent; racemes loose, secund; cymes dichotomous; flowers small; calyx shortly bilabiate, with acute teeth; corolla about twice as long as the calyx. ♃. H. Native of Carniola, on rocks and old walls. Saturèia thymifòlia, Scop. fl. carn. 1. p. 428. ex. Host. Calamíntha thymifòlia, Host, fl. austr. 2. p. 132. Thymus origanifòlius, Vis. in bot. zeit. 1850. 1. p. 15. It appears intermediate between *Micromèria marifòlia* and *Melissa Népeta*. Leaves hardly ½ an inch long, sometimes quite entire, full of glandular dots, canescent beneath from tomentum. Corolla pale purplish: upper lip emarginate.

Thyme-leaved Balm. Pl. 1 foot.

4 M. glandulòsa (Benth. lab. p. 387.) stems herbaceous; branches almost glabrous; leaves petiolate, broad-ovate, acutish, coarsely serrated, rounded at the base, nearly glabrous; racemes very loose, few-flowered, secund; cymes dichotomous: calyx bilabiate, with acute teeth; corolla hardly larger than the small calyx. ♃. H. Native of Corsica, Requien; of Sardinia, Moris. Thymus glandulòsus, Req. in ann. sc. nat. ser. 5. p. 386. Branches slender, slightly downy. Throat of calyx closed by villi. Corolla white or pale purple.

Glandular Balm. Shrub ½ to 1 foot.

5 M. ne'peta (Lin. spec. 823.) stems herbaceous; branches procumbent, ascending, or erectish, villous; leaves petiolate, broad-ovate, obtuse, crenated, rounded at the base, villous on both surfaces, pale beneath; raceme elongated, loose, many-flowered, secund; cymes dichotomous; calyx shortly bilabiate, with subulate teeth; corolla half as long again as the calyx, hardly twice as long. ♃. H. Native of the Southern parts of Europe, in dry situations, among rubbish, and by way-sides; as in the South of France, Portugal, Piedmont, Naples, Grecian Islands, South of Tauria, &c. Thymus Népeta, Smith, fl. brit. 2. p. 642. engl. bot. t. 1414. Hook. fl. lond. vol. 1. with a figure. Calamíntha parviflòra, Lam. fl. fr. 2. p. 396. Calamíntha trichòtoma, Mœnch. meth. p. 409. Thymus diffùsus, Hortul. Thymus Braunèanus, Hoppe. Calamíntha rotundifòlia, Host, fl. austr. 2. p. 131. Calamíntha obliqua, Host, fl. austr. 2. p. 131. Calamíntha Népeta, Hoffm. et Link, fl. port. Calamíntha canéscens, Presl, fl. sic. p. 37. Melissa obtusifòlia, Pers. ench. 2. p. 122.—Black, herb. t. 167.—Riv. mon. t. 47. —Lob. icon. t. 513. Leaves ½ to 1 inch long, deep green above, and hoary beneath. Throat of calyx bearded. Corolla white and pale purple. The plant has a strong aromatic smell, approaching to that of pennyroyal, and a moderately pungent taste, somewhat like spearmint, but warmer. Infusions of the leaves were given as tea in weaknesses of the stomach, flatulent cholics, &c.

Var. β, Athónica (Benth. lab. p. 387.) more humble and more glabrous; leaves greener. ♃. H. Native of Mount Athos. Thymus Athónicus, Bernh. ex Rchb. pl. germ. exc. p. 329. under no. 2242. Calamíntha Athónica, Rchb. l. c. Melissa Athèos, Hortul.

Cat-mint Balm or Field Balm. Fl. July, Oct. England. Pl. 1 to 1½ foot.

6 M. calami'ntha (Lin. spec. p. 827.) stems herbaceous; branches ascending, villous; leaves petiolate, broad-ovate, bluntish, serrately crenated, rounded or truncated at the base, green on both surfaces, villous; raceme loose, secund; cymes very loose, subdichotomous, few-flowered; calyx distinctly bilabiate, with subulate teeth: lower teeth elongated; corolla more than twice as long as the calyx. ♃. H. Native of Middle and South Europe, and Middle Asia; as of England, France, Germany, Portugal, Spain, Italy, Greece, Armenia, and Siberia, &c., on hills and in open woods. Thymus Calamíntha, Scop. fl. carn. ed. 2d. no. 733. Smith, engl. bot. t. 1676. Calamíntha montàna, Lam. fl. fr. 2. p. 396. Cal. officinàlis, Mœnch. meth. 409. Cal. menthæfòlia, Host, fl. austr. 2. p. 129. Thymus umbròsus, Spreng. cent. pl. nov. cogn. p. 41. T. moschatéllus, Poll. fl. veron. p. 15. ex Poir, supp. 5. p. 304. Cal. umbròsa, Rchb. fl. germ. exc. p. 329.? exclusive of numerous synonymes. Melissa intermèdia, Bauing.? ex Rchb. Melissa umbròsa, of German authors. Cal. vulgàris, Sweet. Melissa foliòsa, Opiz. ex unio. itin. Stems more erect and firm than in *M. Népeta*. Leaves larger, usually an inch and a half long. Flowers fewer. Calyx twice the size, and more deeply bilabiate. Corolla red, marked with deeper spots.

Var. β, villosíssima (Benth. lab. p. 388.) plant more villous; leaves smaller, but the calyx and corolla are about the same size. ♃. H. Native of Spain and the Canary Islands. Thymus calamintholdes, Rchb. fl. lus. mad. exsic.

Calamint or Mountain Balm. Fl. July, Aug. Clt. England. Pl. ½ to 1½ foot.

Sect. II. Calomeli'ssa (from *καλος, kalos*, beautiful, and *μελισσα, melissa*, a bee, also the name given to balm; so called on account of the beauty of the plants.) Benth. lab. p. 388. Whorls many-flowered, nearly equal, condensed. Bracteas ovate or oblong. Throat of calyx villous inside.

7 M. Carolinia'na (Benth. lab. p. 388.) herbaceous, glabrous; leaves petiolate, ovate, obtuse, a little crenated, narrowed at the base; whorls nearly equal, many-flowered, condensed; corolla twice as long as the calyx. ♃. H. Native of Carolina, Georgia; and Louisiana, at Covington. Thymus Caroliniànus, Michx. fl. bor. amer. 2. p. 9. Calamíntha Caroliniàna, Sweet, hort. brit. p. 409. Cal. grandiflòra, Pursh, fl. amer. sept. 2. p.

414. Thýmus grandiflòrus, Sims, bot. mag. t. 997. Floriferous branches elongated, twiggy, glabrous, or pubescent. Leaves half an inch long. Corolla an inch long, glabrous, pale red.

Carolina Balm. Fl. June, July. Clt. 1804. Pl. 1 foot.

Sect. III. A'cinos (from ακινος, *akinos*, the Greek name of a balsamic plant now unknown.) Benth. lab. p. 389. A'cinos, Mœnch. meth. 407. Whorls about 6-flowered; pedicels erect, short, stiff. Bracteas minute or wanting. Calyx gibbous beneath at the base, nearly tercte, deeply striated, and the throat villous inside.

8 M. A'cinos (Benth. lab. p. 389.) herbaceous, annual, erectish, pubescent or villous; leaves ovate, sub-serrated: floral leaves similar to the others, exceeding the flowers, which are almost sessile; whorls 6-flowered; lips of calyx short; corolla hardly exceeding the calyx. ☉. H. Native of Europe, in corn fields; as of Britain, Sweden, Portugal, Naples, Greece, about Petersburgh, and of the Caucasus. Thýmus A'cinos, Lin. spec. 826. Hook. fl. lond. vol. 1. with a figure, Smith, engl. bot. t. 411. A'cinos thymoides, Mœnch. meth. 407. A'cinos vulgàris, Pers. ench. 2. p. 131. Thýmus heterophýllus, Poir. dict. 7. p. 648. Thýmus canéscens, Dumort, floral. belg. 47. Calamíntha arvénsis, Lam. fl. fr. 2. p. 394.—Lob. icon. 1. t. 506. f. 1. —Riv. mon. t. 43. f. 2.—Mor. hist. 3. p. 404. sect. 11. t. 18. f. 1. Stems branched, usually procumbent at the base; branches usually purplish, more or less villous. Whorls distant. Corollas purplish blue: upper lip entire. Lower lobe of style flattened. This plant has a pleasant aromatic smell.

Basil Balm, or Basil Thyme. Fl. June, Aug. Britain. Pl. ½ foot.

9 M. Patavi'na (Benth. lab. p. 389.) herbaceous, ascending, pubescent; leaves petiolate, ovate, acute, scarcely serrated, veiny, almost glabrous: floral ones similar to the rest, longer than the calyxes; lips of calyx shorter than the tube; corollas scarcely twice as long as the calyxes. ♃. H. Native of the South of Europe; as of Spain, South of France, Italy, Piedmont, Naples; and on Mount Parnassus. Thýmus Patavìnus, Jacq. obs. bot. 4. p. 7. t. 87. A'cinos Patavìnus, Pers. ench. 2. p. 131. Calamíntha Patavìna, Host, fl. austr. 2. p. 133. Melissa marjoranæfòlia, Mill. dict. no. 7. Thýmus suavèolens, Smith, prod. fl. græc. 1. p. 420. Thýmus acinoides, Tenore, prod. fl. nap. p. 85. syll. 296.—Bocc. mus. t. 45. f. 3. Larger and firmer plant than *M. A'cinos*, with the flowers twice the size; and smoother and more erect than *M. alpìna*, to which it is more nearly allied. Corollas pale red, or purplish red.

Paduan Balm. Fl. June, Aug. Clt. 1776. Pl. ½ to ¾ foot.

10 M. microphy'lla (Benth. lab. p. 390.) suffruticose, small, diffuse, nearly glabrous; leaves petiolate, roundish, quite entire: floral ones similar to the others; whorls 4-6-flowered; flowers almost sessile; lips of calyx much shorter than the tube; corolla almost twice as long as the calyx. ♄. F. Native of Corsica, on the mountains. Thýmus Córsicus, Pers. ench. 2. p. 131. Plant small, much branched; branches short, pilose while young. Leaves small, glabrous, or a little pilose. Flowers similar to those of *M. Patavìna*, but the calyxes are longer and slenderer.

Small-leaved Balm. Shrub small.

11 M. alpi'na (Benth. lab. p. 390.) perennial, diffuse, pubescent, or villous; leaves petiolate, roundish, or ovate, hardly serrated; floral leaves about equal in length to the calyxes; whorls 4-6-flowered; flowers almost sessile; lips of calyx shorter than the tube; corolla more than twice as long as the calyx. ♃. H. Native of the South of Europe, in mountainous and shady places; as of the South of France, Germany, Italy, &c. Thýmus alpìnus, Lin. spec. 826. Sims. bot. mag. 2152. Jacq. austr. 1. p. 60. t. 97. A'cinos alpìnus, Mœnch. meth. p. 407. A'cinos diffùsus, Bonningh. fl. monast. ex Bot. zeit. 1825. 1. p. 338.? Thýmus nummulariæfòlius, Loiz. ex herb. D. C. Thýmus montànus, Crantz, stirp. austr. p. 278. Thýmus villosíssimus, Tausch, in syll. pl. ratisb. 2. p. 248.?—Bocc. mus. 2. p. 50. t. 45. Stem much branched at the base, rather woody; floriferous branches ascending, usually villous. Leaves smaller, but generally broader than those of *M. A'cinos*, and *M. Patavìna*. Calyx purplish. Corollas larger than those of *M. Patavina*, purplish-blue; upper lip and middle lobe of lower lip shortly emarginate. Lower lobe of style flattened.

Alpine Balm. Fl. June, Sept. Clt. 1731. Pl. ½ foot.

12 M. grave'olens (Benth. lab. p. 390.) herbaceous, annual, erect, villous; leaves petiolate, ovate, a little serrated: floral leaves similar to the rest, exceeding the flowers; whorls 6-flowered; flowers almost sessile; lips of calyx incurved, equalling the tube; corolla scarcely half as long again as the calyx. ☉. H. Native of Caucasus, Naples, Island of Cyprus, Transylvania, Tauria, and Iberia; frequent about Madrid, and between Bagdad and Kermancha, &c. Thýmus gravèolens, Bieb. fl. cauc. 2. p. 60. pl. rar. ross. 1. t. 38. A'cinos gravèolens, Link, enum. hort. berol. 2. p. 117. Thýmus cànus, Stev. ex. Hoffm. in comm. soc. phys. med. mosq. 1. p. 46. ex Bieb. Thýmus exígnus, Sibth. et Smith, fl. græc. 6. p. 61. t. 575. A'cinos cànus, Rchb. fl. germ. exc. p. 327. Herb simple or branched. Leaves like those of *M. Patavìna*, but more villous. Flowers larger than in *M. A'cinos*, but smaller than in *M. Patavina*, purplish blue.

Strong-scented Balm. Fl. June, Aug. Clt. 1820. Pl. ½ foot.

† *Species evidently belonging to sect.* III., *but are not sufficiently known.*

13 M. purpura'scens (Benth. lab. p. 391.) stem branched, divaricate, tomentose; leaves ovate, a little serrated: upper ones crowded, coloured; whorls 1-2-flowered, rather approximate. ☉. H. Native of Spain, Clemente. A'cinos purpurascens, Pers. ench. 2. p. 13. Thýmus purpuráscens, Poir. dict. 7. p. 654. Leaves reddish violet, especially the veins. Corollas rather large, red. Apparently an intermediate plant between *M. vulgàris* and *M. alpinus*, and probably only a variety of the latter.

Purplish Balm. Fl. June, July. Clt. 1820. Pl. ½ foot.

14 M. rotundifòlia (Benth. lab. p. 391.) leaves orbicular, mucronate, having the veins prominent beneath; stems procumbent, villous at top as well as the calyxes. ♃.? H. Native of Hungary. A'cinos rotundifòlius, Pers. ench. 2. p. 131. Thýmus rotundifòlius, Poir. dict. 7. p. 654. Thýmus melissoides, Bernh. ex Rchb. fl. germ. exc. p. 327.

Round-leaved Balm. Pl. procumbent.

Sect. IV. Clinopòdium (from κλινη, *kline*, a bed; and πους *pous podos*, a foot; heads of flowers like turned bed-feet.) Benth. lab. p. 391. Clinopòdium, Lin. and other authors. Whorls many-flowered or loosely few-flowered, equal; common pedunceles almost wanting; pedicels filiform, not flattened. Bracteas subulate, sometimes minute, sometimes equalling the calyxes. Calyx gibbous on the under side at the base or almost equal: throat naked, or a little villous inside.

15 M. de'bilis (Benth. lab. p. 391.) plant herbaceous, small, weak, glabrous; leaves petiolate, ovate, serrated: floral leaves smaller; whorls few-flowered; pedicels elongated, filiform; bracteas minute; throat of calyx naked inside. ♃. H. Native of Altaia, in shady places, near Alexandrowsk; and in the Soongarian desert, about Mount Kent. Thýmus débilis, Ledeb. fl. alt. 2. p. 391. fl. ross. alt. ill. t. 439. Herb hardly 3-4 inches high, quite glabrous. Leaves ⅓ inch long, narrowed a long way into the petioles at the base. Corolla shorter than the calyx.

Weak Wild Basil. Pl. ¼ to ½ foot.

16 M. umbròsa (Bieb. fl. cauc. 2. p. 63. but not of German authors) plant herbaceous, diffuse, pubescent or villous; leaves petiolate, ovate, serrately crenated, rounded at the base; whorls equal, globose, many-flowered; bracteas minute, or the outer ones are subulate, one half shorter than the calyxes. ♃. H. Native of Iberia, in woods; Caucasus, on the Talusch mountains; Himalaya, Wall. Royle; mountains in the Peninsula of India, Wight; Ceylon, Walker; Cashmere, Jacquemont. Clinopòdium rèpens, β, Benth. in Wall. pl. rar. asiat. 1. p. 66. Stems procumbent, creeping at the base. Leaves scarcely an inch long. Whorls 20-40-flowered. Corolla purplish, scarcely half as long again as the calyx.

Shaded Wild Basil. Pl. procumbent.

17 M. rèpens (Benth. lab. p. 392.) herbaceous, diffuse, rooting at the base, pubescent or villous; leaves petiolate, ovate, obtuse, serrately crenated, rounded at the base; whorls equal, globose, many-flowered; bracteas subulate, numerous, equalling the calyxes. ♃. H. Native of Nipaul. Clinopòdium rèpens, α, Wall. pl. rar. asiat. 1. p. 66. Thymus rèpens, D. Don, prod. fl. nep. p. 113. Habit of *M. umbròsa*. Bracteas more dense, and more hairy, ciliated. Corolla purplish.

Creeping Balm. Pl. procumbent.

18 M. origanifòlia (Benth. lab. p. 392.) suffruticose; stems ascending, branched, hispid; leaves ovate, quite entire, hispid; whorls nearly sessile: lower ones on long peduncles, emulating branches; bracteas linear-lanceolate, hispid, scarcely longer than the calyxes. ♄. H. Native of Mount Lebanon. Clinopòdium origanifòlium, Labill. pl. syr. dec. 4. p. 14. t. 9. Corolla rather hairy, purplish.?

Marjoram-leaved Balm. Fl. June, Aug. Clt. 1825. Shrub 1½ foot.

19 M. Clinopòdium (Benth. lab. p. 392.) herbaceous, erect, villous; leaves petiolate, ovate, obtuse, crenated a little, rounded at the base; whorls equal, globose, many-flowered; bracteas subulate, numerous, equalling the calyxes. ♃. H. Native throughout Europe and Middle Asia, in woods, hedges, and by waysides; from Scotland and Sweden to Spain, Sicily, Greece, and Caucasus; and North America; but probably introduced from Europe to the latter country. Clinopòdium vulgàre, Lin. spec. p. 821. Smith, engl. bot. t. 1401. Clinopòdium Ægyptiacum, Lam. dict. 2. p. 50. Mill. dict. no. 6. fig. t. 95. Clinopòdium atropurpùreum, and C. variegàtum, Hortul. Clinopòdium plumòsum, Sieb. in bot. zeit. 1822. t. 242.? Thymus sylvàticus, Bernh. ex Steud. nom. p. 208.—Riv. mon. irr. t. 43.—Sabb. hort. rom. 3. t. 65, 66.—Mor. hist. sect. II. t. 8. f. 1. Stems simple, or a little branched. Leaves petiolate, 1-2 inches long, pale or canescent beneath, with entire or obscurely crenulated margins: floral ones smaller, sessile. Calyxes and bracteas very pilose. Corolla twice as long as the calyx, bright red.

Bed-foot or Common Wild Basil. Fl. June, Aug. Britain. Pl. 1 to 2 feet.

Sect. V. Melìphyllum (from μελι, *meli*, honey; and φυλλον, *phyllon*, a leaf; so called from the sweet-scented leaves.) Benth. lab. p. 393. Melissa, Lin. and other authors. Whorls few-flowered, rather loose, secund. Bracteas few, usually ovate. Calyx scarcely gibbous at the base, spreading; upper lip almost glabrous; throat naked inside, or villous. Corolla white or yellowish; tube recurvedly ascending.

20 M. officinàlis (Lin. spec. 827.) herbaceous, erect, branched; leaves broad-ovate, crenated, truncate at the base, or cordate; floral leaves almost similar to the cauline leaves; whorls axillary, loose, secund; bracteas few, ovate; corolla a half again as long as the calyx. ♃. H. Native of the South of Europe and Middle Asia, in mountain woods; as of Portugal, Spain, South of France, Italy, Sicily, Greece, about Aleppo, Tauria, Iberia, and Caucasus. Woodv. med. bot. t. 147. M. gravèolens, Host, fl. austr. 2. p. 128. M. foliòsa, Opiz, ex Rchb. fl. germ. exc. p. 329. M. occidentàlis, Rafin. M. Córsica, Host. —Sabb. hort. rom. 3. t. 61.—Blackw. herb. t. 27.—Lob. icon. t. 277. Plant very variable in hairiness, size, form, and bases of leaves, and length of corollas. Leaves from ½ to 2-3 inches long, those of the stems and sterile branches truncate or cordate at the base: upper floral and rameal ones smaller, rounded or cuneated at the base, all obtuse, or the upper ones are acute, more or less villous on both surfaces. Whorls distant. Cymes distinct, 3-6-flowered. Corolla white or pale yellow, twice as long as the calyx.

Balm, in its recent state, has a weak, roughish, aromatic taste, and a pleasant smell, somewhat of the lemon kind. It is now little used, unless for making a simple balm tea, which affords a grateful diluent drink in fevers, and for forming a light agreeable beverage, under the name of balm wine. Anciently it was generally recommended in hypochondriacal affections, and by Paracelsus promised a complete renovation of man. From the fondness of bees for this plant, it was named *Apiástrum*, *Melissa*, *Melissophyllum*; and was directed by the ancients, among other herbs, to be rubbed upon the hive, to render it agreeable to the swarm.

Var. β, villòsa (Benth. lab. p. 393.) leaves shorter; plant more villous; odour disagreeable. ♃. H. Native of Italy, about Rome, Greece, &c. M. Romàna, Mill. dict. no. 2. M. hirsùta, Balb. M. cordifòlia, Pers. ench. 2. p. 132. M. Taúrica, Hortul. M. altissima, Sibth. et Smith, fl. græc. 6. p. 63. t. 579. Corollas white, smaller than those of the species.

Officinal or Common Balm. Fl. June, Oct. Clt. 1573. Pl. 2 to 4 feet.

21 M. hirsùta (Blum. bijdr. p. 830.) heads verticillate, axillary; leaves ovate-oblong, bluntly serrated, and are, as well as the calyxes, hairy. ♃. H. Native of Java, on the top of Mount Tjerimai, in the province of Cheribon. Allied to *M. officinàlis*.

Hairy Balm. Pl. 2 to 3 feet.?

22 M. parviflòra (Benth. in Wall. pl. rar. asiat. 1. p. 65. lab. p. 394.) herbaceous, erect, nearly glabrous; leaves ovate or ovate-lanceolate, acute, somewhat serrated, rounded at the base or cuneated; floral leaves similar to the others; whorls axillary, loose, secund; bracteas few, small, oblong-linear; corollas scarcely longer than the calyxes. ♃. H. Native of Nipaul and Kamaon, Wall.; Deyra Dhoun, Royle. Scutelària Japónica, Burm. fl. ind. p. 130. Geniósporum axillàre, Benth. in Wall. pl. asiat. rar. 2. p. 18. This has the character of *M. officinàlis*, but the habit is very different. The whole plant is purplish and glabrous, except a few hairs on the angles of the stem and nerves of the leaves. Leaves hardly an inch long. Inflorescence of *M. officinàlis*. Corollas blue, hardly exserted.

Small-flowered Balm. Pl.

23 M. flàva (Benth. in Wall. pl. rar. asiat. 1. p. 65. lab. p. 394.) herbaceous, erect, nearly glabrous; leaves ovate or ovate-lanceolate, acute, serrately crenated, rounded at the base; floral leaves similar to the rest; whorls axillary, loose, secund; bracteas few, oblong-linear; corolla about thrice as long as the calyx. ♃. H. Native of Nipaul, Wall. Habit of *M. parviflòra*. Calyxes coloured at top. Corolla yellow, incurvedly ascending.

Yellow-flowered Balm. Pl.?

Sect. VI. Macromelìssa (from μακρος, *makros*, long; and μελισσα, *melissa*, balm; so called in reference to the long corollas.) Benth. lab. p. 394. Whorls very loose, usually few-

flowered; cymes umbel-formed; peduncles elongated, scarcely dichotomous. Throat of calyx spreading, almost naked inside: lips very deep, spreading. Corolla elongated, purplish: tube dilated. Stamens rather distant at apex.

24 M. grandiflòra (Lin. spec. 827.) herbaceous, erectish, sparingly pilose; leaves petiolate, ovate, acute, coarsely toothed, rounded or cuneated at the base, green on both surfaces; racemes loose, few-flowered; cymes pedunculate, hardly dichotomous, few-flowered; corolla ample, more than twice the length of the calyx. ♃. H. Native of Europe, in shady woods; as of the Pyrenees, Cevennes, Piedmont, Switzerland, Germany, Mounts Athos, and Olympus; South of Tauria, about Baldar. Bieb. Curt. bot. mag. 208. Calamintha grandiflòra, Mœnch. meth. p. 408. Thymus grandiflòrus, Scop. carn. ed. 2d. no. 732. D. C. fl. fr. 3. p. 562.—Riv. mon. t. 46.—Mor. hist. sect. 11. t. 21. f. 1.—Besl. hort. eyst. 7. t. 7. f. 1. Stems branched at the base, and decumbent. Branches erectish. Whorls few, subsecund. Leaves 2-3 inches long. Corolla 1 to 1½ inch long, purplish; throat much inflated. Stamens loosely approximate. There is a variety of this with white flowers, and another with red flowers; both much inferior to the purple: there is also a variety with variegated leaves. The leaves, when bruised, have the smell of common balm.

Great-flowered Balm. Fl. June, July. Clt. 1596. Pl. 1 foot.

25 M. macrostè'ma (Moc. et Sessé, mss. ex Benth. lab. p. 395.) shrubby; branches divaricate, villous in the young state; leaves petiolate, ovate, or oblong, acute, roundly cuneated at the base, serrated, green above, and pale beneath, nearly glabrous, or rather hispid on both surfaces; whorls loose, rather secund, few-flowered; peduncles and pedicels elongated; calyxes glabrous; upper lip spreading. ½. H. Native of New Spain. Leaves distant, ½ to 1 inch long. Cymes generally 2-3-flowered. Corolla downy, about 4 times the length of the calyx, with a dilated tube: upper lip, and middle lobe of lower lip emarginate, like the preceding.

Long-crowned Balm. Shrub 1 to 2 feet.?

Sect. VII. Heteromelí'sson (from ἑτερος, *heteros*, variable; and μελισσα, *melissa*, a bee, also the name given to balm.) Benth. lab. p. 395. Whorls irregular, few or many-flowered, rather secund, usually ending in leafy branches. Bracteas subfoliaceous. Calyx elongated, not gibbous at the base, scarcely bilabiate: teeth straight, setaceous: throat almost naked inside. Corolla elongated, purple: tube erectish.

26 M. longicau'lis (Wall. mss. ex Benth. lab. p. 395.) suffruticose; branches elongated, decumbent, pubescent; leaves ovate-oblong, obtuse, a little toothed, cuneate, or narrowed at the base, rather villous: floral ones similar to the rest; whorls few-flowered, irregular, secund; calyx elongated, a little declinate, with lanceolate, subulate teeth. ♃. H. Native of Nipaul, Wall. Thymus piperìtus, D. Don, prod. fl. nep. p. 112. Thymus origanifòlius, D. Don, prod. fl. nep. p. 112. Clinopòdium longicaule, Benth. in Wall. pl. rar. 1. p. 66. Stems weak, woody at the base; branches purplish at top. Leaves scarcely ½ an inch long, quite entire, or furnished with 1 or 2 crenæ on both sides. Bracteas foliaceous. Corolla violaceous, hardly twice as long as the calyx. Superior stamens usually abortive. Probably a proper genus, intermediate between *Hedeòma* and *Melissa*.

Long-stemmed Balm. Pl. decumbent.

† *Doubtful species.*

27 M. rugòsa (Lour. coch. p. 368.) annual, erect, much branched; leaves very rugose, roundish, acuminated; racemes crowded, axillary and terminal. ☉. H. Native of Cochinchina. Stem tetragonal. Leaves serrated, petiolate. Corolla white, tinged with red. The whole plant is obscure green, except the corollas.

Wrinkled-leaved Balm. Pl. 1½ foot.

28 M. obtusifòlia (Pers. ench. 2. p. 132.) leaves broad-ovate, obsoletely serrated, rounded at apex; stem villous; peduncles simply divided and solitary, much shorter than the leaves; corolla pale violet. ♃.? G. Native of South America, Michx.

Blunt-leaved Balm. Pl.?

29 M. veronicæfòlia (Pers. ench. 2. p. 132.) leaves broad-ovate, serrated, petiolate; stem branched, diffuse; peduncles elongated, branched. ♃. H. Native of the Bahamas. Thymus veronicæfòlius, Spreng. syst. 2. p. 698. Stem villous. Leaves nearly glabrous. Calyx glabrous. Corolla purplish inside, variegated with violaceous and white spots. Habit of *Verónica arvénsis*.

Speedwell-leaved Balm. Pl. ½ foot.?

† † *Doubtful Clinopòdia of authors.*

30 M. Asia'tica; leaves oblong, nerved, wrinkled, tomentose beneath; spikes verticillate, terminal. ½. G. Native of Cochinchina. Clinopòdium Asiáticum, Lour. coch. p. 374. Stem suffruticose, tetragonal, simple, villous. Leaves ovate-oblong, blunt, serrated. Flowers violaceous, disposed in an oblong, compound, terminal spike. Calyx bilabiate, entire, unequal, very pilose. Upper lip of corolla concave, equally trifid: lower lip refracted, quite entire, longer.

Asiatic Balm. Shrub 2½ feet.

31 M. nu'milis; plant humble, branched; leaves wrinkled; heads flattened. ♃. H. Native of Carolina. Clinopòdium hùmile, Mill. dict. no. 4.

Humble Balm. Pl. dwarf.

32 M. Carolinia'na; stem erect, not branched; leaves villous beneath; whorls fewer; bracteas longer than the calyxes. ♃. H. Native of Carolina. Clinopòdium Caroliniànum, Mill. dict. no. 5.

Carolina Balm. Pl. 1 foot.?

Cult. All the species of Balm will grow in common garden earth, and are of easy culture. The perennial herbaceous kinds are readily increased by parting the roots; the suffruticose species by cuttings or parting; and seeds of annual kinds may be sown either on rockwork or in the open border. The species belonging to section *Acinos* are all well fitted for decorating rockwork.

L. GARDO'QUIA (dedicated to Don Diego Gardoqui, Minister of Finance under Charles IV. of Spain, who greatly promoted the publication of the "Flora Peruviana.") Ruiz, et Pav. prod. fl. per. et chil. p. 130. syst. veg. per. p. 149. D. Don, in Sweet, fl. gard. n. s. 3. t. 271. Benth. lab. p. 397. Rizòa, Cav. icon. 6. p. 56.—Cunila species, Nutt.—Melissa species, Spreng.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular, 13-nerved, a little incurved, with an equal or oblique mouth; teeth short, straight, nearly equal or sub-bilabiate. Tube of corolla much exserted, straight, or incurved, naked inside; limb bilabiate: upper lip erect, flattish, emarginate: lower one spreading a little, with flat lobes, the middle lobe the broadest. Stamens 4, subdidynamous, loosely ascending, rather distant at apex: lower ones the longest: superior ones now and then abortive; filaments toothless; anthers 2-celled; cells distinct, parallel, or somewhat divergent. Lobes of style nearly equal. Achenia

dry, smooth.—Much branched, leafy, shrubs or under-shrubs, often procumbent. Flowers beautiful, usually scarlet. This genus is not distinct from *Micromèria*, unless in the length of the corolla, and erect lobes of the limb.

1 G. multiflòra (Ruiz, et Pav. syst. veg. fl. per. et chil. p. 149.) shrubby, nearly glabrous; leaves petiolate, ovate, bluntish, crenated a little, rounded at the base, green, pale beneath; floral leaves conforming to the others; whorls loose, subsecund; cymes pedunculate, scarcely dichotomous; calyx almost glabrous, with acute teeth, and the throat naked inside; corolla 3 times as long as the calyx. ♄. G. Native of Chili, in the province of Conception, in fields. Rizòa ovatifòlia, Cav. icon. 6. p. 56. t. 578. bad. Stems hard at the base, but scarcely woody. Branches, leaves, and calyxes glabrous, or clothed with fine pubescence. Leaves an inch long. Corolla more than an inch long, beautiful, scarlet or purple. Stamens a little exserted.

Many-flowered Gardoquia. Shrub 1 foot.

2 G. rugòsa (Benth. lab. p. 399.) shrubby, villous; leaves petiolate, ovate-rhomboid, serrately toothed, rounded at the base, coriaceous, wrinkled, villous on both surfaces, hardly canescent beneath; whorls loose, many-flowered; calyx villous, with subulate ciliated teeth, and with the throat almost naked inside; corolla scarcely twice as long as the calyx. ♄. G. Native of Peru, Ruiz, et Pav. Hairs rufous. Leaves 1 to 1½ inch long. Cymes on short peduncles. Corolla villous. Anthers approximating by pairs.

Wrinkled Gardoquia. Shrub.

3 G. ellíptica (Ruiz, et Pav. syst. fl. per. p. 149.) shrubby, erect; branches glabrous; leaves petiolate, ovate, acutish, serrately crenated, rounded at the base, or cuneated, green on both surfaces, glabrous, or a little ciliated; floral leaves smaller; whorls usually 6-flowered; calyx green, pilose, with acute teeth, and with the throat naked inside; corolla about 4 times as long as the calyx. ♄. G. Native of Peru, towards Cheuchin and Sayan, Ruiz et Pav.; in the valley of Canta, between Obrajillo and Pacron, Chruikshanks. Leaves about an inch long. Corolla about 1½ inch long, pubescent, scarlet: lobes short. Stamens exserted.

Elliptic-leaved Gardoquia. Shrub erect.

4 G. thymoi'des (H. B. et Kunth, nov. gen. amer. 2. p. 314.) shrubby; branches pubescent; leaves ovate, acute, subcordate, with revolute, subserrated margins, nearly glabrous above, but clothed with hoary pubescence beneath; whorls many-flowered, distant; calyx pubescent, with unequal, acuminately subulate segments; corolla about 3 times the length of the calyx. ♄. G. Native on the Andes of Quito. ? Leaves 3 lines long. Flowers pedunculate. Corolla yellow? pubescent outside; throat bearded with long hairs behind; limb spotted with purple.

Thyme-like Gardoquia. Shrub.

5 G. e'legans (H. B. et Kunth, nov. gen. amer. 2. p. 315.) shrubby; branches pubescent, clothed with white tomentum while young; leaves roundish-rhomboid, obtuse, serrated, pubescent above, and clothed with white tomentum beneath; peduncles axillary, usually 3-flowered; calyx tomentose, with unequal acuminated teeth. ♄. G. Native of Quito, on the declivity of the burning mount Catopaxi, between Mulalo and Pansache. Shrub aromatic. Leaves entire towards the base, 9 lines long. Corolla red, downy outside: throat yellow, spotted with red.

Elegant Gardoquia. Shrub 3 to 4 feet.

6 G. pulche'lla (H. B. et Kunth, l. c.) shrubby; branches pubescently tomentose; leaves ovate or roundish-ovate, obtuse, cuneated at the base, with subrevolute crenated margins, rather scabrous above, and clothed with white tomentum beneath; peduncles usually 3-flowered; calyx clothed with tomentose pubescence, with acuminately-subulate, unequal teeth. ♄. G. Native of Peru, in hot places between Cascas and Contumassay. Leaves 8-9 lines long. Flowers on long pedicels.

Neat Gardoquia. Shrub 3 to 4 feet.

7 G. tomentòsa (H. B. et Kunth, l. c. p. 314.) shrubby; branches pubescent; leaves roundish-ovate, acutish, rather truncate at the base, with revolute serrated margins, pubescent above, and clothed with white tomentum beneath; peduncles axillary, usually 3-flowered; calyx clothed with tomentose pubescence, with unequal acuminated teeth; corolla 3 times as long as the calyx. ♄. G. Native of the kingdom of Quito, near Llactacunga, Hambato, and Riobamba Nuevo. Shrub aromatic. Leaves hardly ½ an inch long. Flowers pedicellate, Corolla pale red, pubescent outside; tube short; throat bearded by long hairs. Stamens inclosed.

Tomentose Gardoquia. Shrub 3 feet.

8 G. grandiflòra (H. B. et Kunth, l. c.) branches pubescent; leaves roundish-ovate, obtuse, acute at the base, toothed towards the apex, pubescent above, and clothed with hoary tomentum beneath; flowers axillary, solitary; calyx clothed with hoary tomentum, with acuminated nearly equal teeth; corolla 4 times as long as the calyx. ♄. G. Native of South America, in the valley of the river Chambo, between Mount Tunguragua and Penipe. Leaves ⅓ an inch long. Flowers on short peduncles. Corolla yellow, downy outside; throat bearded inside. Stamens a little exserted. From the description, this does not appear to differ from *G. incàna*, unless in the leaves being serrated at apex.

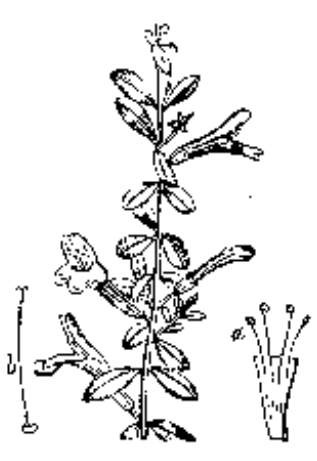
Great-flowered Gardoquia. Shrub 3 feet.

9 G. brevifiòra (Benth. lab. p. 401.) shrubby, hoary; leaves on short petioles, roundish-ovate, obtuse, with scarcely revolute margins, pubescent above, and clothed with hoary pubescence beneath; floral leaves similar to the rest, equalling the calyxes; whorls 2-6-flowered, secund; calyx a little coloured, with lanceolate-acute teeth, and with the throat naked inside; corolla exceeding the calyx a little. ♄. G. Native of Peru, Ruiz et Pavon. Habit of *G. incàna*; but the leaves are shorter, broader, and greener above, obtuse, or shortly mucronate. Hardly distinct from the genus *Micromèria*, in consequence of the corolla hardly exceeding the calyx.

Short-flowered Gardoquia. Shrub.

10 G. inca'na (Ruiz et Pav. syst. fl. per. p. 150.) shrubby, hoary; leaves on short petioles, ovate, obtuse, quite entire, flat, pale above, and clothed with hoary tomentum beneath; floral leaves similar to the others, equalling the calyxes; whorls 2-6-flowered; calyx hoary, with an oblique mouth, and short acute teeth, and with the throat naked inside. ♄. G. Native of Peru. Ruiz et Pav. fl. per. ined. 4. t. 493. f. 4. Leaves of *Helianthemum cànum*, ½ an inch long. Corolla beyond an inch in length, yellow. Genitals a little exserted.

FIG. 80.



Hoary Gardoquia. Shrub.

11 G. Hooke'ri (Benth. lab. p. 401.) shrubby, quite glabrous; leaves obovate, quite entire, narrowed into the short petioles at the base, green on both surfaces; peduncles 2-3-flowered; calyx glabrous, subbilabiate, having the upper lip shortly tridentate, erect: throat clothed by villi inside. ♄. G. Native of Florida. D. Don, in Sweet. fl. gard. n. s. 3. t. 271.

Cunila coccinea, Nutt. ex Hook. exot. fl. 3. t. 168. Melissa coccinea, Spreng. syst. 2. p. 224. Leaves ½ an inch long, 1-3 nerved, glandularly dotted. Peduncles sometimes short and 1-flowered. Corolla scarlet, clothed with glandular pubescence. Stamens distant, a little exserted. (fig. 80.)

Hooker's Gardoquia. Fl. June, Oct. Clt. 1834. Shrub 1 to 2 feet.

12 G. sericea (Presl, mss. ex Benth. lab. p. 402.) suffruticose, procumbent, clothed with silky tomentum; leaves sessile, linear, quite entire, with revolute margins, clothed with silky wool on both surfaces; floral leaves and bracteas similar to the cauline leaves, but smaller; flowers axillary, solitary; calyx silky, with short, nearly equal teeth: throat naked inside. ♄. G. Native of Peru, in the valleys of the Cordillera. Leaves 3-5 lines long. Corolla 10-11 lines long, scarlet, pubescent. Stamens exserted: superior ones inclosed or abortive.?

Silky Gardoquia. Shrub procumbent.

13 G. argentea (H. B. et Kunth, nov. gen. amer. 2. p. 313.) shrubby, clothed with silky silvery pubescence; leaves oblong-lanceolate, obtuse, with revolute, quite entire margins; flowers axillary, solitary; calyx bilabiate, silky, with acute teeth, and a naked throat; corolla 3 times as long as the calyx. ♄. G. Native of Peru, on the Andes near Micuipampa. Leaves 2-3 lines long. Calyx tridentate. Corolla scarlet, downy outside; throat bearded below. Stamens inclosed.

Silvery Gardoquia. Shrub.

14 G. discolor (H. B. et Kunth, nov. gen. 2. p. 312.) branchlets clothed with canescent pubescence; bark soluble; leaves oblong, acute, cuneated at the base, quite entire, puberulous above, but clothed with silky hoary pubescence beneath; flowers axillary, solitary; calyx villous, having the throat closed with white hairs: the limb bilabiate, with lanceolate-acute, unequal segments; corolla 2-4 times as long as the calyx. ♄. G. Native of the Spanish Main, on Silla de Caracas. Leaves on short petioles, 4-8 lines long. Throat of corolla naked. Corolla purple.

Discoloured-leaved Gardoquia. Fl. April, July. Clt. 1827. Shrub.

15 G. Gillie'sii (Graham, in edinb. phil. journ. 1831. sept. 377. Benth. lab. p. 402.) suffruticose; branches divaricate, pubescent; leaves oblong-linear or cuneated, obtuse, quite entire, narrowed at the base, green on both surfaces, flat; floral leaves similar to the others, and are, as well as the bracteas, rather shorter than the calyxes; whorls few, many-flowered, rather loose, irregular; calyx elongated, erect, with lanceolate-subulate, nearly equal teeth, and the throat naked inside. ♄. G. Native of Chili, near Valparaiso. G. Chilénsis, Hook. et Arn. in Beech. voy. pt. bot. p. 58. Stems divaricate or procumbent. Branches ending each in a long terminal raceme. Leaves 3-6 lines long. Calyx bilabiate. Corolla pubescent, scarlet.

Gillies's Gardoquia. Fl. April, July.? Clt. 1828. Shrub procumbent.

16 G. obova'ta (Ruiz, et Pav. syst. fl. per. p. 150.) shrubby; branches canescent; leaves obovate-oblong, narrowed at the base, with revolute, quite entire margins, smoothish above, pale and few-veined beneath, glabrous on both surfaces; whorls about 2-flowered, secund; calyx nearly glabrous, with short obtuse teeth, and with the throat villous inside. ♄. G. Native of Peru, at Cheuchin. Ruiz, et Pav. fl. per. ined. 4. t. 494. f. a. Leaves 3-4 lines long, on very short pedicels. Corolla about 3 times as long as the calyx, very villous. Stamens much exserted.

Obovate-leaved Gardoquia. Shrub 3 feet.

17 G. glabra'ta (H. B. et Kunth, nov. gen. 2. p. 313.) branches pubescent; leaves lanceolate-oblong, acute at both ends, with revolute serrated margins, glabrous, full of glandular dots beneath; flowers axillary, solitary; calyx glandularly dotted, bilabiate, with acuminated, nearly equal teeth, or the 3 upper teeth are longest; corolla twice as long as the calyx. ♄. G. Native near Quito. Leaves on short petioles, scarlet, shining above, ⅓ an inch long. Corolla downy outside, with a pilose throat. Stamens inclosed.

Glabrous Gardoquia. Shrub.

18 G. taxifo'lia (H. B. et Kunth, l. c. p. 312.) branches clothed with hoary villi; leaves linear-lanceolate or oblong, obtuse, narrowed at the base, quite entire, glabrous, dotted beneath; flowers axillary, solitary; calyx bilabiate, with acuminated, nearly equal teeth, and having the throat closed by hairs. ♄. G. Native of New Granada, on the Andes, especially on the declivity of Paramo de Saraguro, near Oña. Leaves 4-5 lines long. Corolla red,? pubescent outside, with a rather pilose throat. Genitals exserted.

Yew-leaved Gardoquia. Shrub.

19 G. stria'ta (Ruiz, et Pav. syst. fl. per. p. 148.) shrubby; branches clothed with wool-like villi; leaves small, ovate, quite entire, flat, or complicate, quite glabrous on both surfaces, striated or ciliated on the back; whorls 2-flowered, secund; calyx glabrous, with short obtuse teeth, and the throat rather villous inside. ♄. G. Native of Peru, on arid hills in the provinces of Tarma and Huanuco. Ruiz, et Pav. fl. per. ined. 4. t. 494. f. b. Leaves sessile, 2 lines long, rounded or subcordate at the base: upper ones obtuse. Corolla scarlet, downy outside, 3 times the length of the calyx. Stamens a little exserted.

Striated-leaved Gardoquia. Shrub 3 feet.

20 G. microphy'lla (H. B. et Kunth, l. c. p. 311.) branches crowded, pubescently pilose while young; leaves ovate, obtuse, cordate, with revolute, quite entire margins, glabrous, having the margins and middle nerve ciliated; flowers axillary, solitary; calyx rather scabrous, bilabiate, with acute, ciliated, unequal teeth, and a naked throat; corolla 5 times as long as the calyx. ♄. G. Native of the Andes of Pasto, in frigid places near Rio Blanco, between Guachucal and Tulcan. Leaves on short petioles, hardly a line long. Pedicels short. Corolla red, downy outside; throat bearded. Stamens hardly exserted.

Small-leaved Gardoquia. Shrub 2 to 3 feet.

21 G. Jameso'ni (Benth. lab. p. 404.) shrubby, procumbent, glabrous; leaves small, broad-ovate, obtuse, quite entire, flat, or conduplicate, green and glabrous on both surfaces; whorls about 2-flowered; calyx glabrous, with short obtuse teeth, and with the throat naked inside. ♄. G. Native of Peru, at Paramo de Antisana, Jameson. Leaves hardly a line long, numerous, sessile. Corolla smaller than that of *G. revoluta*, pale red, pubescent outside. Stamens all fertile.

Jameson's Gardoquia. Shrub procumbent.

22 G. revolu'ta (Ruiz, et Pav. syst. fl. per. p. 149.) suffruticose, procumbent; branches pubescent; leaves small, roundish, very blunt, quite entire, cordate at the base, with revolute margins, glabrous above, clothed with white tomentum beneath; whorls about 2-flowered; calyx tomentose, with short broad teeth, and the throat almost naked inside. ♄. G. Native of Peru, in the fissures of rocks towards Huassa-huassi, Panao, and Huariaca, Ruiz, et Pav.; Cordilleras, Hænke and Mathews. Leaves numerous, sessile, hardly a line long, blistered. Flowers usually solitary, but sometimes 3 on each peduncle. Corolla scarlet, 10-11 lines long, pubescent, a little incurved. Stamens all fertile.

Revolute-leaved Gardoquia. Shrub procumbent.

† *Doubtful species.*

23 G. capita'ta (Spreng. syst. cur. post. p. 225.) heads

ovate, on long peduncles; bracteas and calyxes spinose; leaves fascicled, linear-oblong, with revolute, quite entire margins, hispid, as well as the stem, which is branched. ♄.? G. Native of Rio Grande.

Capitate-flowered Cardoquia. Shrub.?

24 G. SPICA'TA (Spreng. l. c.) spikes terminal, villous; leaves subfascicled, spatulate, almost quite entire, rough. ♄. G. Native of Rio Grande.

Spiked-flowered Cardoquia. Shrub.?

Cult. Most of the species of *Gardóquia* bear large scarlet blossoms, and are, therefore, showy, and worth cultivating. A light rich soil, or one composed of equal parts of sand, loam, and peat, will suit the species well. Cuttings strike root readily in the same kind of soil, with a hand-glass placed over them.

LI. GLE'CHON (from γληχων, *glechon*, the Greek name for Pennyroyal; this genus has been so called from its similarity to Pennyroyal.) Spreng. syst. cur. post. p. 227. Benth. lab. p. 405.

Lin. syst. *Diándria, Monogýnia.* Calyx ovate or tubular, 13-nerved, equal or sub-bilabiate, 5-toothed, the 2 lower teeth usually the longest. Tube of corolla equalling the calyx, naked inside; limb bilabiate; upper lip emarginate or semi-bifid, falcate, arched or galeate, erect, or lying on the lower lip; lower lip spreading, with flat entire lobes: lateral lobes the broadest, often adhering to the upper lip at the base. Two lower stamens fertile, ascending under the upper lip, or exserted a little from the notch; filaments glabrous; anthers 2-celled: cells linear, parallel, diverging, or at length divaricate. Style glabrous, having the upper lobe very short, and the lower one elongated and flattened. Achenia oblong, smooth, dry.—Usually canescent, suffruticose plants. Leaves for the most part small; floral leaves similar to the others, rarely smaller, and bractea-formed. Whorls axillary, 2-6-flowered, rarely disposed in short racemus towards the tops of the branches. Corollas yellowish, flesh-coloured, or blue. The galeate upper lip of the corolla in this genus separates it from all other genera of tribe *Melissineæ*.

1 G. SPATULA'TA (Benth. lab. p. 406.) leaves petiolate, roundish-spatulate, subcrenated, thick, clothed with canescent tomentum on both surfaces; teeth of calyx short, the 2 lower ones the longest; upper lip of corolla erect, subgaleate. ♄. F. Native of Brazil, near Anjo, in the Missions of the Uruguay; and near Santa Maria, in the province of Rio Grande do Sul, very plentiful. Shrub procumbent at the base; branches ascending, clothed with tomentose pubescence. Floral leaves conforming to the rest, shorter than the flowers. Corolla pubescent.

Spatulate-leaved Glechon. Shrub procumbent.

2 G. THYMOI'DES (Spreng. syst. cur. post. p. 227.) leaves petiolate, obovate, subcrenated, greenish on both surfaces, and nearly glabrous; calycine teeth very short, nearly equal; upper lip of corolla large, galeate. ♄. F. Native of the South of Brazil, Sello. Branches clothed with hoary pubescence. Leaves obtuse or emarginate, glandular beneath: floral ones similar to the others. Whorls 2-flowered. Corolla twice as long as the calyx, downy outside.

Thyme-like Glechon. Shrub.

3 G. SERPYLLIFÒLIA (St. Hil. mss. ex Benth. lab. p. 407.) leaves small, petiolate, ovate, obtuse, quite entire, greenish on both surfaces, glabrous; calycine teeth subulate, rather unequal: longer ones equalling the tube; upper lip of corolla large, falcate. ♄. F. Native of Brazil, in the province of Cisplatin, among stones from Santa Theresa to Rocha. Branches prostrate, glabrous, or finely tomentose. Leaves 2-3 lines long, form of those of *Thymus Serpyllum*, glandularly dotted; floral leaves conforming to the others, but usually a little larger, exceeding the calyxes. Whorls 2-flowered. Corollas flesh-coloured, size of those of *G. thymoides*, but the upper lip is less incumbent. Perhaps a variety of *G. marifólia*.

Serpyllum-leaved Glechon. Shrub prostrate.

4 G. MARIFÒLIA (Benth. lab. p. 407.) leaves on short petioles, ovate, quite entire or scarcely crenated, pale on both surfaces, and finely tomentose; calycine teeth setaceous, nearly equal, about equal in length to the tube; upper lip of corolla erect, subgaleate. ♄. F. Native of the South of Brazil, Sello. Shrub procumbent, rooting at the base; branches clothed with hoary tomentum. Adult leaves nearly glabrous, glandular on both surfaces; floral leaves conforming to the others. Whorls 2, rarely many-flowered. Corollas size of those of *G. thymoides*, pubescent outside.

Cat-Thyme-leaved Glechon. Shrub procumbent.

5 G. CANE'SCENS (St. Hil. mss. ex Benth. lab. p. 407.) leaves nearly sessile, roundish, sub-crenated, canescent on both surfaces; calycine teeth setaceous, nearly equal, equalling the tube in length; upper lip of corolla erect, subgaleate. ♄. F. Native of Brazil, in the Missions of the Uruguay, in sandy places, among palms, near Carapuru, Villanova, &c.; also in the provinces Cisplatin and St. Catharine. G. *cándida*, Benth. mss. in mus. berol. Rooting at the base; branches elongated, clothed with hoary tomentum as well as the leaves; floral leaves conforming to the others. Whorls 2-6-flowered. Corolla flesh-coloured or yellowish, dotted with purple. Perhaps a variety of *G. marifólia*.

Canescent Glechon. Shrub 1½ to 2½ feet.

6 G. ORIGANIFÒLIA (Benth. lab. p. 408.) stem hairy; leaves sessile, broad-ovate, or roundish, crenated, cordate at the base, green on both surfaces, tomentosely pubescent, or villous; calycine teeth subulate, lower ones longer than the tube; corolla hardly exceeding the calycine teeth; upper lip galeate. ♄. F. Native of Brazil, in the province of Minas Geraes, on the Jaruoca mountains, and near Villa Rica, St. Hil.; South of Brazil, Sello. Procumbent; branches elongated. Floral leaves conforming to the others, rather shorter than the flowers. Whorls 6-10-flowered. Corolla white or yellowish.

Marjoram-leaved Glechon. Shrub procumbent.

7 G. SQUARRÒSA (Benth. lab. p. 408.) leaves almost sessile, ovate, rounded at the base, or sub-cordate, stiff, complicate, glabrous, or ciliated; calycine teeth subulate: lower ones equal in length to the tube; upper lip of corolla galeate. ♄. F. Native of Brazil, in humid pastures, near Carrancas, in the province of Minas Geraes; and in the Campos Geraes, in the province of St. Paul, St. Hil.; South of Brazil, Sello. Procumbent at the base; branches ascending or erect, glabrous, pubescent, or villous. Leaves 3-4 lines long, glandular on both surfaces; floral leaves conforming to the rest, shorter than the flowers. Whorls about 6-flowered. Corolla white or pale blueish, villous outside, exceeding the calycine teeth.

Squarrose Glechon. Shrub.

8 G. CILIA'TA (Benth. lab. p. 408.) stem pilose; leaves ovate or oblong, quite entire, narrowed at the base, green on both surfaces, ciliated; calycine teeth subulate, longer than the tube; upper lip of corolla galeate. ♄. F. Native of Brazil, in the province of Rio Janeiro,? Sello. Procumbent at the base; branches erect, pubescent, or pilose. Leaves ½ an inch long; superior and floral leaves almost sessile: lower ones on short petioles, quite entire, or furnished with 1 or two teeth, glandular on both surfaces; floral ones twice the length of the flowers. Whorls about 6-flowered. Corolla longer than the calycine teeth, villous outside.

Ciliated-leaved Glechon. Shrub procumbent.

9 G. ri'gens (Benth. lab. p. 409.) leaves petiolate, ovate, quite entire, rather canescent on both surfaces; floral leaves small; calycine teeth lanceolate, shorter than the tube; corolla 3 times the length of calyx: upper lip elongated, falcate. ½. F. Native of the South of Brazil, Sello. Shrub clothed with hoary tomentum, with the habit of *Helianthemum halimifolium*. Leaves glandular; floral leaves shorter than the calyxes. Corolla downy outside. Whorls 6-10-flowered.

Ringent-flowered Glechon. Shrub erect.

10 G. myrtoi'des (St. Hil. mss. ex Benth. lab. p. 409.) branches villous; leaves ovate, crenated, narrowed at the base, green on both surfaces, or rather canescent beneath, roughish; calyx tubular, with lanceolate, acute teeth, which are shorter than the tube; upper lip of corolla erect, arched. ½. G. Native of Brazil in elevated places, on Serra do Papagaio, in the province of Minas Geraes. Shrub much branched. Floral leaves conforming to the others, equalling the calyxes. Corolla blue, about half again as long as the calyx. Odour of *Méntha Pulégium*. Habit between *Glechon* and *Keithia rubiácea*.

Myrtle-like Glechon. Shrub 3-4-feet.

Cult. For culture and propagation, see *Gardòquia*, p. 787.

LII. KEI'THIA (named in honour of the Rev. Patrick Keith, F. L. S., a distinguished physiological botanist, and author of "System of Physiological Botany," two vols. 8vo. London, 1816.) Benth. lab. p. 409.

Lin. syst. *Diándria, Monogýnia*. Calyx tubular, about 13-nerved, striated, with an equal or oblique mouth, and 5 nearly equal teeth; throat naked, or villous inside. Corolla with an exserted tube, and a bilabiate limb: upper lip erect, emarginate, flat: lower lip spreading, trifid, with flat nearly equal lobes. Two lower stamens fertile, ascending, without any vestiges of the upper ones; anthers 2-celled, with a thick connective and distinct divaricate cells. Lobes of style nearly equal, or the lower one is longest and flattened, involving the base of the upper one.—Herbs, sub-shrubs, or shrubs. Whorls sometimes axillary and sometimes approximating into terminal spikes. Corollas usually scarlet. This genus differs from *Melissa* in the more regular calyx, and the abortion of the 2 upper stamens, which latter character alone separates it from *Gardòquia*.

Sect. I. Eriothy'mus (from *εριον, erion*, wool; and *θυμος, thymos*, thyme; woolly thyme.) Benth. lab. p. 410. A shrub, with divaricate leafy branches. Cymes pedunculate, few-flowered. Throat of calyx villous inside. Upper lip of corolla bifid. Perhaps a proper genus.

1 K. rubia'cea (Benth. lab. p. 410.) shrubby; branches and leaves nearly glabrous; cymes umbel-formed, clothed with soft hairs; calyx acutely toothed. ½. G. Native of Brazil, in the province of Minas Geraes, on mountains at Villa Ricca and elsewhere. Angles of branches pubescent. Leaves ½ an inch long, sessile, ovate, obtuse, quite entire, glabrous, rounded or sub-cordate at the base. Throat of calyx closed by a ring of hairs. Stamens exserted.

Rubiaceous Keithia. Shrub.

Sect. II. Kei'thia (see genus for derivation.) Benth. lab. p. 410. Branches herbaceous, elongated, procumbent, leafy. Whorls axillary, few-flowered. Throat of calyx naked inside. Upper lip of corolla scarcely emarginate.

2 K. scutellarioi'des (Benth. lab. p. 410.) branches glabrous or ciliated on the angles; leaves glabrous; flowers nearly sessile; corolla hardly twice as long as the calyx. ¼. G. Native of Brazil, in the province of Minas Geraes, on the top of Mount Itambe, Mart.; and in marshes near Silio, &c., South of Brazil, Sello. Leaves sessile, lanceolate, crenated, cordate at the base. Whorls usually 6-flowered, secund. Corolla downy outside, purple. Stamens equalling the corolla.

Skull-cap-like Keithia. Pl. procumbent.

3 K. pilòsa (Benth. lab. p. 411.) branches, leaves, and calyxes pilose; flowers almost sessile; corolla more than twice the length of the calyx. ¼.? G. Native of Brazil, in humid pastures, at Morangava and near Castro in Campos Geraes, in the province of St. Paul, St. Hil.; South of Brazil, Sello. Habit of the preceding, but the flowers are generally solitary, and twice the size. Corolla deep purple, 9-10 lines long.

Pilose Keithia. Pl. procumbent.

4 K. ciliа'ta (Benth. lab. p. 732.) erect; leaves and calyxes ciliated with long stiff hairs; whorls sub-racemose; flowers sessile; corolla half again as long as the calyx. ¼.? F. Native of Texas. Herb a little branched; branches clothed with fine tomentose pubescence. Leaves ½ to 1 inch long. Whorls 6-flowered.

Ciliated Keithia. Pl. ½ foot.

Sect. III. Rhabdocau'lon (from *ραβδος, rhabdos*, a twig; and *καυλον, kaulon*, a stem; in reference to the twiggy branches.) Benth. lab. p. 411. Under shrubs or herbs; branches twiggy, erect, leafy at the base, or nearly altogether naked. Whorls approximating into terminal spikes. Calyx acutely toothed; throat very villous inside.

5 K. villòsa (Benth. lab. p. 411.) stem erectish, branched, clothed with hoary villi; leaves sessile, oblong-linear, obtuse, with revolute margins, villous on both surfaces; racemes spike-formed, dense, a little branched; whorls 6-flowered; flowers sessile; corolla about twice as long as the hoary villous calyx. ¼.? F. Native of the South of Brazil, Sello. Leaves ½ an inch long. Corollas villous outside. Stamens hardly exserted.

Villous Keithia. Pl. 1½ foot.

6 K. lavanduloi'des (Benth. lab. p. 411.) stem erect, branched, clothed with silky tomentum; leaves sessile, oblong-linear, acute, with sub-revolute edges, silky on both surfaces; racemes spike-formed, dense, interrupted at the base; whorls many-flowered; flowers sessile; corolla half again as long as the calyx. ¼.? G. Native of Brazil, in the province of Minas Geraes, in fields near Congonhas do Campo; and in humid places near Fazenda de Carapicuva, in the province of St. Paul, St. Hil.; South of Brazil, Sello. Nearly allied to *K. villòsa*, but differs in the pubescence being short, silky, and adpressed, and in the corollas being shorter, &c.

Lavender-like Keithia. Pl. 1½ foot.?

7 K. oka'ensis (Benth. lab. p. 412.) stem herbaceous; branches erect, tetragonal, almost naked, nearly glabrous; raceme terminal; whorls remote, 2-6-flowered; teeth of calyx acute. ¼.? F. Native of Brazil, in grassy fields, in the provinces of Minas Geraes, St. Paul, and Rio Grande do Sul. Stems nearly simple, glabrous, or with lines of pubescence. Leaves few, 2-3 lines long; floral ones and bracteas hardly a line long. Corolla purplish, pubescent, half as long again as the calyx. Stamens inclosed.

Slender Keithia. Pl. 1 to 1½ foot.

8 K. dendra'ta (Benth. lab. p. 412.) stem herbaceous; branches erect, somewhat articulated, nearly naked, glabrous; racemes short, terminal, dense; flowers pedicellate; corolla more than twice as long as the calyx, which is pubescent. ¼.? F. Native of Brazil, in dry desert fields, in the province of Minas Geraes, Mart. and St. Hil.; South of Brazil, Sello. Stems rising from a hard base, almost simple. Leaves few, ses-

sile, 6-8 lines long, linear, obtuse, quite entire, glabrous: floral ones smaller. Racemes branched a little. Corolla clothed with silky villi outside. Stamens hardly exserted.

Naked-branched Keithia. Pl. 2 to 3 feet.

SECT. IV. GYMNOCY'LIX (from γυμνος, *gymnos*, naked; and κυλιξ, *kylix*, a calyx; in allusion to the throat of the calyx being naked inside.) Benth. lab. p. 412. Herbs, with erect, strict, nearly naked branches. Whorls few-flowered, distinct, sub-racemose. Calyx bluntly toothed; throat naked inside.

9 K. COCCI'NEA (Benth. lab. p. 412.) branches tetragonal, like other species, but sub-articulated, glabrous; whorls few, sub-racemose towards the tops of the branches. ♃.? C. Native of Brazil, in the province of Minas Geraes, on Mount Itambe, Mart.; and in marshes on Serra da Ibitipoca, St. Hil. Branches and leaves altogether as in *K. denudàta*. Whorls usually 2-flowered. Flowers on short pedicels. Corolla scarlet, more than an inch long, about 3 times as long as the calyx. Stamens exserted.

Scarlet-flowered Keithia. Pl. 2 to 3 feet.

Cult. For culture and propagation, see *Gardòquia*, p. 787.

LIII. THY'MBRA (θυμβρα, *thymbra*, is the Greek name for a sweet-scented herb.) Lin. gen. no. 708. Schreb. gen. no. 962. Juss. gen. 115. Benth. lab. 413.

LIN. SYST. *Didynàmia, Gymnospérmia*. Calyx erect, oblong, flat above, bilabiate; upper lip tridentate, erect; lower lip bifid; throat villous inside. Tube of corolla a little exserted; upper lip erect, emarginate, flattish; lower lip spreading trifid, with flat lobes, middle lobe rather the largest. Stamens 4, ascending under the upper lip, lower ones the longest; anthers approximate by pairs, 2-celled: cells distinct, parallel. Style about equally bifid at apex; lobes subulate, stigmatiferous at top. An under shrub, with the habit of *Hyssòpus*, and the characters of *Melissa*.

1 T. SPICA'TA (Lin. spec. 795.) ½. F. Native of the region of the Mediterranean, on dry hills, among heath; as of Achaia, Melos, Samos, Cyprus, Candia; Asia Minor, about Smyrna, and of Palestine. Sibth. et Smith, fl. græc. 6. p. 57. t. 546. T. verticillàta, Lin. spec. p. 796.; this is a monstrous garden variety.? T. ambìgua, Clarke, trav. 4. p. 289.—Barr. icon. 281. t. 1230.—Pluk. phyt. t. 116. f. 5. A stiff, hard, procumbent shrub, with ascending hardly pubescent branches. Leaves of the sterile branches small, decussate, obtuse; those of the fertile branches an inch long, linear, acute, stiff, flat or complicate, ciliated. Whorls many-flowered, disposed in spikes, which are sometimes interrupted. Floral leaves and bracteas broad-lanceolate, acute, coloured, ciliated, and closely imbricated with the flowers, and covering the calyxes. Calyx glabrous or ciliated on the nerves. Corolla purple.

Spicate-flowered Thymbra. Fl. June, July. Clt. 1699. Shrub ½ to 1 foot.

Cult. This is a plant well fitted for rockwork, or to be grown in pots among other Alpine plants. A poor stony or gravelly soil suits it best; for in no other soil will it survive our winter without shelter. The plant is readily propagated by young cuttings and by seed.

LIV. DICERA'NDRA (from δις, *dis*, twice, κερας, *keras*, a horn, and ανηρ ανδρος, *aner andros*, a male; the anthers are 2-horned, each of the cells being spurred at top.) Benth. in bot. reg. vol. 15. lab. p. 413. Ceranthèra, Elliott, bot. car. 2. p. 93. but not of Beauv.

LIN. SYST. *Didynàmia, Gymnospérmia*. Calyx about 13-nerved, tubular, striated, bilabiate; upper lip spreading, entire, or shortly tridentate; lower lip bifid; throat pilose inside. Corolla bilabiate, with an exserted, straight tube, which is naked inside. Stamens 4, didynamous, ascending, approximate: lower ones the longest; anthers 2-celled: cells divaricate, spurred at top: spurs in both cells equal, straight, acute, and length of the cells. Style villous, bifid at top; lobes subulate, equal, stigmatiferous at top. This genus is readily distinguished by the form of the anthers.

1 D. LINEA'RIS (Benth. l. c.) ♄.? F. Native of Carolina, between the rivers Flint and Chatahouchie, Elliott. Ceranthèra linearifòlia, Elliott, l. c. Habit of the narrow-leaved variety of hyssop. Stems erect, twiggy, pubescent. Leaves sessile, narrow, ½ to 1 inch long, quite entire, glabrous, fascicled in the axils. Whorls 6-flowered. Corolla twice as long as the calyx, downy.

Linear-leaved Dicerandra. Pl.?

Cult. For culture and propagation, see *Thymbra*, above.

LV. POGO'GYNE (from πωγων, *pogon*, a beard; and γυνη, *gyne*, a female; in reference to the villous style.) Benth. lab. p. 414.

LIN. SYST. *Didynàmia, Gymnospérmia*. Calyx about 13-nerved, campanulate, striated; teeth straight, lanceolate, the 2 lower ones twice as long as the 3 upper ones; throat naked inside, Corolla bilabiate; tube exserted, straight, naked inside; upper lip erect, flattish, entire; lower lip spreading, trifid, with flat entire lobes. Stamens 4, didynamous, ascending, approximate at apex, lower 2 the longest; anthers 2-celled: cells parallel, distinct, mutic. Style villous, bifid at apex; lobes subulate, equal, stigmatiferous at top.—Herbs. Whorls densely spicate at the tops of the branches. Floral leaves, bracteas, and calyxes ciliated with long white hairs.

1 P. DOUGLA'SII (Benth. lab. p. 414.) floral leaves and bracteas exceeding the flowers; stamens shorter than the corolla; lower calycine teeth more than twice as long as the tube. ♃.? F. Native of North California, Douglas. Stems a little branched, quite glabrous. Leaves petiolate, 1 to 1½ inch long, oblong, obtuse, quite entire, green, glabrous. Corolla purplish?; throat pilose inside.

Douglas's Pogogyne. Pl. 1 foot.

2 P. MULTIFLÒRA (Benth. lab. p. 414.) floral leaves and bracteas shorter than the corollas; stamens exserted. ♃.? F. Native of North California, Douglas. This differs from *P. Douglàsii*, in the stem being divaricately branched; in the spikes being smaller, and more numerous; and in the flowers being smaller. Lower calycine teeth hardly twice as long as the tube.

Many-flowered Pogogyne. Pl. 1 foot.?

3 P. PARVIFLÒRA (Benth. lab. p. 414.) floral leaves exceeding the flowers; stamens shorter than the corolla; lower calycine teeth hardly longer than the tube. ♃.? F. Native of North California, Douglas. Allied to *P. Douglàsii*; but the spikes are hardly an inch long; the leaves narrower and smaller, and the flowers one half smaller.

Small-flowered Pogogyne. Pl. 1 foot.?

Cult. For culture and propagation see *Prunélla*, p. 791.

Tribe VI.

SCUTELLARI'NEÆ (this tribe contains plants agreeing with the genus *Scutellària* in the characters given below.) Benth. lab. p. 416. Calyx bilabiate; upper lip truncate, entire, or sub-tridentate. Tube of corolla exserted, ascending, annulate inside or naked; upper lip of limb arched. Stamens 4, ascend-

ing under the upper lip, didynamous: the 2 lower ones the longest.

LVI. PRUNE'LLA (from the German die Braune, a disease of the jaws and throat which this plant is said to cure.) Lin. gen. no. 785. Schreb. gen. no. 990. Benth. lab. p. 416. Brunélla, Tourn. inst. t. 84. Juss. gen. p. 116. Mœnch, meth. F. Hamilt. mon. in Ser. bull. bot. 1. p. 153.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx tubularly campanulate, irregularly somewhat 10-nerved, and reticulately veined, flat above, bilabiate; upper lip flat, broad, truncate, shortly tridentate: lower lip semi-bifid, with lanceolate segments: throat naked inside. Tube of corolla ample, exserted, ascending, annulate inside, near the base, with short hairs or scales, inflated under the throat beneath, and a little contracted at the throat; upper lip erect, galeate, rather carinated above, entire; lower lip dependent, with the lateral lobes oblong and deflexed, and the middle lobe roundish concave and crenulated. Stamens 4, didynamous, ascending: lower 2 the longest; filaments toothless at the base, glabrous, shortly bidentate at top, especially the upper ones; the lower tooth antheriferous. Anthers approximate by pairs under the upper lip, free, 2-celled: cells distinct, divaricate. Style glabrous, bifid at top; lobes subulate, stigmatiferous at the extremity. Achenia oblong, dry, smooth. —Herbs. Whorls 6-flowered, densely spicate. Floral leaves bractea-formed, orbicular, permanent, equalling the calyxes, and imbricated with them.

1 P. hyssopifòlia (Lin. spec. 837. Lam. fl. fr. 2. p. 366. under Brunella.) leaves sessile, oblong, or lanceolate, quite entire, strigosely hispid; lateral teeth of upper lip of calyx lanceolate. ♃ H. Native of Spain, South of France and Piedmont, in dry open places. Brunélla Canadénsis. Mill. dict. no. 2. P. hyssopifòlia, Rchb. icon. bot. eur. 3. p. 42. t. 243.—Mor. hist. 3. p. 564. sect. 11. t. 5. f. 7. Stems ascending, and like the leaves stiffer than in *P. vulgàris*. Superior leaves somewhat stem clasping. Corollas smaller than those of *P. grandiflòra*, but larger than those of *P. vulgàris*, purple, rarely white.

Hyssop-leaved Self-heal. Fl. July, Aug. Clt. 1731. Shrub ½ to 1 foot.

2 P. grandiflòra (Lin. spec. p. 837. Mœnch. meth. 414. under Brunella.) leaves petiolate, ovate, quite entire or toothed; lateral teeth of upper lip of calyx lanceolate; corollas large, more than twice as long as the calyxes. ♃ H. Native throughout Europe, along with P. vulgàris, in woods and other shady places. Jacq. austr. 4. t. 377. Curt. bot. mag. t. 337. and 2014. P. speciòsa, Wender. schrift. nat. gesel. marb. ex Benth. P. hastæfòlia, Brot. fl. lus. 1. p. 181. This hardly differs from *P. vulgàris*, unless in the size of the flowers. Herb glabrous or villous. Leaves usually toothed at the base, sometimes sub-hastate, and sometimes quite entire. Corolla more than an inch long, violet or purple, seldom white.

FIG. 81.



Great-flowered Self-heal. Fl. July, Sept. Clt. 1598. Pl. ½ to ¾ foot.

3 P. vulga'ris (Lin. spec. p. 837.) leaves petiolate, ovate or oblong, entire, toothed or deeply pinnatifid; teeth of upper lip of calyx truncate, awned or almost mutic, rarely sub-lanceolate: corolla half as long again as the calyx, or scarcely twice as long as the calyx. ♃ H. Native throughout the world in temperate regions, Europe, Asia, Africa, America, and Australia. Stems branched from the base; branches decumbent at the base. Plant glabrous or pilose. Corollas violaceous, purple, white, rarely pale red.

Var. α, hispida (Benth. lab. p. 417.) stem and leaves villously hispid; leaves almost entire. ♃ H. Native of the mountains of India and South of Europe. P. hispida, Benth. in Wall. pl. asiat. rar. 1. p. 66. P. hirsùta, Wender. schrift, nat. gesel. marb.? P. hirta, Bernh.? ex Benth. Corollas violaceous.

Var. β, vulgàris, (Benth. lab. p. 417.) leaves entire, ovate or oblong, glabrous or sparingly hispid. ♃ H. Native of Europe and Asia, very plentiful, America, Australia. P. vulgàris, Lin. spec. p. 837. Hook. fl. lond. vol. 3. icon. Curt. lond. 4. t. 42. Fl. dan. 910. Mart. fl. rust. t. 197. Smith, engl. bot. t. 961. Sabb. hort. rom. 3. t. 32. P. officinàlis, Crantz, fl. austr. 279. P. intermèdia, Brot. fl. lus. 1. p. 180. but not of Rchb. P. latifòlia, Donn. hort. cant. P. réptans, Dumort, fl. belg. p. 44. P. surrécta, Dumort, fl. belg. p. 44. P. Fischeriàna, F. Hamilt. mon. p. 164.? P. Pennsylvánica, Willd. enum. p. 631. P. Caroliniàna, Mill. dict. no. 6. P. æquinoxiàlis, H. B. et Kunth, nov. gen. amer. 2. p. 323. t. 162. P. ovàta, Pers. ench. 2. p. 137. Riv. mon. t. 29. f. 1. Mill. fig. t. 70. f. 2. Corolla violaceous, seldom white or red. This plant being astringent, it was formerly used in fluxes and in gargarisms, for aphthæ and inflammations of the fauces. It was considered as one of the best vulnerary herbs, but is now out of use.

Var. γ, elongàta, (Benth. lab. p. 417.) leaves entire, oblong-lanceolate, glabrous or sparingly villous. ♃ H. Native of North America, plentiful, but rare in Asia and Europe. P. elongàta, Dougl. mss. B. Pennsylvánica, Willd. enum. p. 631. B. Australácica, Moric. ex Hamilt. mon. p. 162. t. 7. f. A. B. P. angustifòlia, Wender. schrift, nat. gesel. Marb.? ex Benth. Corollas violaceous.

Var. δ, parviflòra, (Benth. lab. p. 417.) leaves almost entire, ovate, sparingly hispid; corolla scarcely exceeding the calyx. ♃ H. Native of Europe, in the region of the Mediterranean. B. parviflòra, Poir. suppl. 1. p. 711.

Var. ε, pinnatífida (Benth. lab. p. 418.) cauline leaves all or many of them cut or pinnatifid; corollas purple. ♃ H. Native of the South of Europe. P. longifòlia, Pers. ench. 2. p. 137. Rchb. icon. bot. eur. 6. p. 21. t. 588. P. pinnatífida, Pers. ench. 2. p. 137. P. incìsa, Link, enum. 2. p. 121.? P. dissécta, Wender. schrift. nat. gesell. Marb.? P. vulgàris pinnatífida, Rchb. icon. bot. eur. 3. p. 39. t. 239.

Var. ζ, laciniàta (Benth. lab. p. 418.) cauline leaves deeply pinnatifid, or the lower ones are entire; corollas white or cream-coloured. ♃ H. Native of Europe, plentiful, but rare in North America. P. laciniàta, Lin. spec. p. 837. Jacq. fl. austr. 4. p. 41. t. 378. Rchb. icon. bot. eur. 3. p. 38. t. 289. B. sulfùrea, Mill. dict. no. 5. P. álba, Pall ex Bieb. fl. cauc. 2. p. 67. B. verbénæ foliis, Vaill. bot. par. t. 5. f. 1.

Common Self-heal. Fl. July, Sept. Britain. Pl. ½ to 1 foot.

Cult. All the species and varieties of *Prunélla* are showy when in blossom, and are therefore well fitted for decorating the front of flower borders, or ornamenting rockwork. They grow in any common garden soil, but prefer a moist, shady situation; for in rich land, or in an open situation, they seldom continue more than two years. They are readily increased by division and by seed. The seed should be sown in autumn as soon as gathered, and the plants will rise early in spring; but if the sowing be deferred till spring, the plants seldom rise until the spring of the following year.

LVII. CLEO'NIA (probably adopted by Linnæus from Cleonicum of Pliny, and κλεωνικον of Dioscorides.) Lin. gen. no. 736. Schreb. gen. no. 991. Gærtn. fruct. 1. t. 66. Brunélla species, Lam. et Juss.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, 10-nerved, obliquely bilabiate; upper lip broad, shortly tridentate: lower lip bifid, with pilose sinuses. Tube of corolla slender, exserted, ascending, naked inside, and the throat a little dilated; upper lip erect, galeate, keeled, entire; lower lip short, dependent, with oblong, erectish, lateral lobes, and a spreading, emarginately bifid middle lobe. Stamens 4, didynamous, ascending; lower two longest; filaments toothless at the base, glabrous, but shortly bifurcate at apex, the upper fork subulate, and the lower fork a little flattened and antheriferous; anthers approximate by pairs, 2-celled: cells divaricate. Style shortly quadrifid at apex, with nearly equal subulate lobes, which are stigmatiferous at top. Achenia large, orbicular, a little compressed. This genus has most of the characters of *Prunélla*, with the corolla of *Scutellària*.

1 C. Lusita'nica (Lin. spec. p. 837.) ☉. II. Native of Spain, in the sterile fields of Arragon; Portugal, Barbary. Mill. fig. t. 70. f. 1. Prunélla intermèdia, Rchb. icon. bot. eur. 3—4. t. 205, but not of Brot. Búgula, Gærtn. fruct. 1. p. 318. t. 66. f. 7.—Mor. hist. 3. p. 363. and 391. sect. 11. t. 5. f. 4. Habit of *Prunélla vulgàris*, var. laciniàta. Stem branched at the base; branches hispid. Leaves sessile, oblong-lanceolate or linear, green, rather hispid. Whorls 6-flowered, disposed in loose spikes. Corollas form and size of those of *Scutellària galericulàta*, blue or violet, pubescent outside, 3 times as long as the calyx.

Portugal Cleonia. Fl. June, July. Clt. 1710. Pl. ½ to 1 foot.

Cult. The seeds of *Cleònia* should be sown in autumn, and the plants will come up the following spring; as seeds sown in the spring frequently take a whole year to vegetate.

LVIII. SCUTELLA'RIA (from *scutella*, a little saucer; in reference to the form of the calyx.) Lin. gen. no. 734. Schreb. gen. no. 989. Juss. gen. no. 117. Benth. lab. p. 419. Cássida, Tourn. inst. t. 84. Mœnch.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, bilabiate; lips entire, from the coalition of the sepals, closed after the falling of the corollas, and at length cleft even to the base: superior lip furnished with a dilated scale at top, which is concave above, falling away at maturity; lower lip permanent. Tube of corolla much exserted, naked inside, straight or usually recurvedly ascending beyond the calyx, dilated into the throat above; limb bilabiate; upper lip entire at apex, or emarginate; lower lip spreadingly dilated, convex, emarginate at apex; the lateral lobes sometimes free and spreading, but usually joined to the upper lip, rarely to the lower lip. Stamens 4, ascending under the galea, didynamous; the 2 lower ones the longest. Anthers approximate by pairs, ciliated, those of the lower stamens dimidiate, and those of the superior stamens 2-celled, cordate; cells sub-divaricate. Superior lobe of style very short; lower one stigmatiferous at top. Ovarium oblique, elevated upon the incurved gynophore. Achenia dry, naked, tuberculed, glabrous or clothed with adpressed tomentum.—Annual or perennial herbs, rarely shrubs. Inflorescence sometimes tetragonally spicate, with membranous, sub-imbricated coloured floral leaves; sometimes racemose, with small floral leaves; sometimes axillary, with the floral leaves almost similar to the cauline leaves. Peduncles solitary, 1-flowered in the axils of the floral leaves, short, usually opposite, except in sect. *Heteranthèsia*, in which both the floral leaves and flowers are scattered. Bracteas almost wanting. Corollas blue or yellow, rarely purple or scarlet.

Sect. I. Lupulina'ria (so called from containing *S. lupulina.*) A. Hamilt. mon. p. 11. Benth. lab. p. 423. § 1. Spicàtæ, Benth. in bot. reg. vol. 18. Floral leaves usually membranous. Flowers disposed in tetragonal spikes; or sub-racemose, and scarcely secund.

1 S. orienta'lis (Lin. spec. p. 834.) stems procumbent; leaves petiolate, ovate, deeply toothed or pinnatifid, hoary beneath; floral leaves membranous, entire, sub-imbricated; spikes tetragonal, oblong. ♃. H. Native of the South-east of Europe and Middle Asia, among rocks and on calcareous mountains; as of Croatia, Syria, Persia, Armenia, Tauria, and Caucasus; Altaian mountains, Himalaya, Kamaour, &c. Sibth. et Smith, fl. græc. 6. p. 64. t. 580. Rchb. icon. bot. eur. 1. p. 10. t. 8. f. 17. Sims, bot. mag. 2120. S. Sievérsii, Bunge, in Led. fl. alt. 2. p. 394. fl. ross. alt. ill. t. 123. S. Caucásica, Arth. Hamilt. mon. 141.—Tourn. itin. 3. p. 306. icone.—Comm. rar. 30. icone.—Mart. cent. t. 18. Stems much branched, radicant, creeping; branches ascending, clothed with fine hoary tomentum. Leaves obtuse, cuneately truncate at the base. Corolla yellow, pubescent. The floral leaves vary much in size. (*fig. 82.*)

FIG. 82.



Var. β, pinnatifida (Lin. spec. p. 834. Rchb. icon. bot. eur. 1. p. 10. t. 8. f. 16.) leaves smaller, deeply pinnatifid. ♃. H. Native of the region of the Mediterranean. S. orientàlis incàna, foliis laciniatis, flore luteo, Tourn. cor. 11.

Eastern Skullcap. Fl. July, Sept. Clt. 1729. Pl. ½ foot.

2 S. grandiflòra (Sims, bot. mag. t. 635.) stems procumbent; leaves petiolate, ovate-roundish, deeply toothed, hoary from soft tomentum beneath, or on both surfaces; floral leaves entire, rather membranous, imbricate; spikes tetragonal, oblong. ♃. H. Native of the Altaian mountains, in stony places at the river Tschuja. S. pulchélla, Bunge, enum. crit. pl. alt. ined. Allied to *S. orientàlis*, but with a different habit and leaves. Branches smoothish. Leaves not half the size of those of *S. orientàlis*. Floral leaves greenish, pubescent. Corollas red, with a yellow lip, about the size of those of *S. orientàlis*.

Great-flowered Skullcap. Fl. July, Aug. Clt. 1804. Pl. ½ foot.

3 S. prostra'ta (Jacquemont, mss. ex Benth. lab. p. 783.) stems prostrate; leaves petiolate, broad-ovate, deeply crenated, green on both surfaces, and clothed with soft pubescence; floral leaves quite entire, rather membranous, imbricate; spikes tetragonal, oblong. ♃. H. Native of the North of India, about Pangui, Rarang, and Choupienna, Jacquemont. Habit and form of leaves of *S. grandiflòra*, and the flowers of *S. orientàlis*; but differs from both in the leaves being green on both surfaces. Corolla yellowish, size of that of *S. orientàlis*: upper lip violaceous above.

Prostrate Skullcap. Pl. prostrate.

4 S. frutiòsa (Desf. cat. hort. par. p. 69.? Benth. lab. p. 424.) stems suffruticose; branches ascending, clothed with hoary tomentum or wool; leaves on short petioles, ovate-cordate, deeply crenated; floral leaves ovate, quite entire, wrinkled, hoary, and rather woolly; flowers opposite, subsecund? racemose. ½. F. Native of Syria, near Aleppo, Russel; Persia, Persoon.? Stems numerous, branched a little, clothed with white wool on the upper part. Leaves similar to those of *S.*

orientàlis. Corollas size of those of *S. orientàlis*, with a yellow tube, and blueish-yellow lips.

Shrubby Skullcap. Shrub ascending.

5 S. PINNATI'FIDA (Arth. Hamilt. mon. 16. t. 2. f. 2.) the whole plant pilose; leaves ovate, of the same colour on both surfaces, petiolate, pinnatifid: lobes oblong, obtuse; flowers loosely imbricated into a spike; bracteas ovate, toothed, coloured a little. ♃. H. Native of the Levant, between Kermancha and Amadan. This differs from *S. orientàlis*, in the flowers being a little larger; in the bracteas being pinnatifid; in the leaves being deeply cut, and in being covered with wool on both surfaces.

Pinnatifid-leaved Skullcap. Pl. ½ foot.?

6 S. ALPI'NA (Lin. spec. p. 834.) stems procumbent; leaves nearly sessile, or on short petioles, ovate, serrately crenated, of the same colour on both surfaces; floral leaves membranous, imbricated; spikes tetragonal, oblong. ♃. H. Native of the Pyrenees, Switzerland, Upper Italy, Calabria, Croatia, Galicia, Siberia, in all temperate parts, and on the Altaic mountains. All. ped. p. 142. t. 26. f. 3. Waldst. et Kit. hung. 2. p. 146. t. 137. Sweet, fl. gard. 1. t. 90. Bot. reg. 1460. S. Altàica, Fisch. cat. hort. gorenki. p. 39. Sweet, fl. gard. 1. t. 45. S. variegàta, Spreng. fil. tent.—Gmel. sib. 3. p. 229. no. 52. t. 48. S. compréssa, Arth. Hamilt. mon. p. 29. Habit of *S. orientàlis*. Branches pilose or pubescent. Leaves green, pubescent, or pilose; floral leaves coloured, pilose. Corolla altogether purple, or the tube and lower lip is yellow, 12-15 lines long.

Var. β, lùtea; flowers yellow. ♃. H. S. lupulina, Lin. spec. p. 835. Schmidt, icon. t. 73. Bot. reg. 1493. S. vérna, Bess. prim. fl. gal. 2. p. 43.

Alpine Skullcap. Fl. June, Oct. Clt. 1752, β. 1731. Pl. procumbent.

Sect. II. Heteranthe'sia (from ἕτερος, *heteros*, variable; and ἄνθος, *anthos*, a flower; in allusion to the flowers being scattered, not opposite, as in the other sections.) Benth. lab. p. 425. § 2. Racemosæ, floribus sparsis, Benth. in bot. reg. vol. 18. Floral leaves small, green. Flowers racemose, second, all or only the upper ones scattered, not opposite.

7 S. LONGIFÒLIA (Benth. in bot. reg. vol. 18. lab. p. 425.) glabrous; stems erect; leaves petiolate, ovate-lanceolate, acuminated, remotely toothed, roundly cuneated at the base; floral leaves linear, minute, deciduous; racemes elongated, a little branched; flowers secund, scattered; corolla 8 times as long as the calyx, which is glabrous. ♃. F. Native of New Spain. Leaves 3 inches long. Corolla scarlet, pubescent, more than an inch long: lips short, erect.

Long-leaved Skullcap. Pl. 1½ foot.

8 S. MULTIFLÒRA (Benth. l. c. lab. p. 426.) stems erect, finely pubescent; leaves petiolate, ovate, acuminated, bluntly and sinuately toothed, roundly truncate at the base; floral leaves lanceolate-linear, rather longer than the calyxes; racemes elongated, simple; flowers secund, scattered; corolla 5 times the length of the calyx, which is villous. ♃. F. Native of New Spain, Moçino et Sessé. Stem a little branched. Leaves similar to those of *S. longifòlia*, but broader; floral leaves permanent. Flowers sometimes alternate, usually many, and collected into false whorls. Corolla purple? 10-11 lines long, incurved, villous.

Many-flowered Skullcap. Pl. 1 foot.?

9 S. ATRIPLICIFÒLIA (Benth. l. c. lab. 426.) plant clothed with hoary pubescence; leaves petiolate, broad-ovate, bluntish, almost quite entire or repand, truncate at the base, and subcordate, rather fleshy; floral leaves ovate, acuminated, rather longer than the calyxes; racemes elongated, simple; flowers secund, scattered; corolla about 6 times the length of the calyx. ♃.? G. Native of Peru? Pavon. Lower flowers opposite: upper ones falsely verticillate. Floral leaves deciduous. Corolla about an inch long, almost straight, nearly glabrous.

Atriplex-leaved Skullcap. Pl. 1 foot.?

10 S. COCCI'NEA (H. B. et Kunth, nov. gen. amer. 2. p. 335.) stems erect, branched, downy; leaves oblong, obtuse at both ends, quite entire, glabrous, of a violet-purple colour beneath; racemes terminal; flowers scattered. ♃. G. Native of New Granada.? Roots fascicled, terete, nearly simple. Leaves sometimes puberulous beneath, about 2 inches long. Pedicels and petioles pubescent. Bracteas lanceolate, obtuse, pubescent, equalling the pedicels. Corolla scarlet, smoothish.

Scarlet-flowered Skullcap. Pl. 1 foot.?

11 S. INCARNA'TA (Vent. choix. t. 39.) stems erect, pubescent, branched; leaves cordate, toothed, tomentose beneath; spikes terminal, secund; bracteas linear-lanceolate, equalling the pedicels. ♃.? G. Native near Santa Fe de Bogota. Leaves petiolate, 1-3 inches long, pubescent above. Calyx tubular, compressed, villous, nearly entire. Corolla pubescent, of a beautiful red, 6 times the length of the calyx.

Flesh-coloured-flowered Skull-cap. Pl. 1 foot.?

12 S. TURIFLÒRA (Benth. l. c. lab. p. 427.) stems ascending, branched, pubescent; leaves petiolate, ovate, obtuse, coarsely crenated, rounded at the base, rather hispid above, and clothed with soft pubescence beneath; floral leaves ovate, imbricate before the expansion of the flowers; racemes simple; flowers secund, scattered; corolla 6 times as long as the calyx. ♃.? G. Native of the South of Brazil, Sello. Herb many-stemmed; branches terete. Leaves an inch long, pubescent; floral leaves rather large. Corolla an inch long, with a slender tube.

Tube-flowered Skullcap. Pl. 1 foot.?

13 S. ULIGINÒSA (St. Hil. mss. ex Benth. lab. p. 427.) stems ascending or erect, branched, pubescent; leaves petiolate, ovate, coarsely crenated, rounded or subcordate at the base, almost glabrous on both surfaces; floral leaves small, loose; racemes simple; flowers subsecund, scattered; corolla 5 times as long as the calyx. ♃.? G. Native of Brazil, in boggy parts of woods in the province of St. Paul, St. Hil. Branches terete. Leaves twice the size of those of *S. tubiflòra*, sometimes glabrous, and sometimes rather pilose; the upper surfaces hispid. Floral leaves oblong, rather shorter than the calyxes, glabrous. Corolla scarcely ½ an inch long, blue, with a white palate and slender tube.

Bog Skullcap. Pl. ½ to 1 foot.

14 S. BREVIFLÒRA (Benth. l. c. lab. p. 427.) glabrous; stems erect; leaves petiolate, ovate, acuminated, bluntly and sinuately toothed, roundly truncate at the base; floral leaves lanceolate-linear, rather longer than the calyxes; racemes elongated, simple, loose; flowers secund, scattered; corolla about 3 times as long as the calyx, which is glabrous. ♃. G. Native of Peru, Pavon. Intermediate between *S. multiflòra* and *S. uliginòsa*. Leaves 1½ to 2 inches long. Corolla glabrous, bluish, 4-5 lines long, with a spreading limb.

Short-flowered Skullcap. Pl. 1½ foot.

15 S. PURPURA'SCENS (Swartz, fl. ind. occ. 2. p. 1013.) stems erectish, humble, finely pubescent, or almost glabrous; leaves petiolate, broad-ovate, obtuse, sinuately crenated, very broadly truncate at the base, rounded or subcordate, rather hispid above, glabrous beneath, or on both surfaces; floral leaves minute, deciduous; racemes loose; flowers secund, scattered, or the lower ones are opposite; calyxes shorter than the pedicels, large, and nearly glabrous in the fructiferous state. ♃. G. Native of Brazil, in the province of Bahia; and of Caracas; also of the West Indies, in Guadaloupe and St. Vincent. S. Pelisbérti, Nees et Mart. in nov. act. bonn. 11. p. 77. Herb slender,

flaccid. Floral leaves minute. Corolla half an inch long, pubescent, purplish.

Purplish-flowered Skullcap. Fl. June, July. Clt. 1820. Pl. ½ foot.

16 S. agrestis (St. Hil. mss. ex Benth. lab. p. 428.) stems erectish, finely pubescent; leaves petiolate, ovate-roundish, obtuse, sinuately crenated, cordate at the base, rather hispid above, and nearly glabrous beneath; floral leaves minute, almost wanting; racemes short, simple; flowers scarcely secund, scattered. ♃. G. Native of Brazil, at San Miguel da Jetiquinhonha, in the province of Bahia. Herb much branched at the base. Branches, petioles, and nerves of leaves, canescent from fine tomentum. Leaves ½ to 1 inch long, green on both surfaces. Corolla blue, about 4 lines long. Nearly allied to the preceding.

Field Skullcap. Pl. ¼ to ½ foot.

17 S. discolor (Colebr. in Wall. pl. rar. asiat. 1. p. 66.) stems rooting at the base, leafy, ascending, almost naked above; leaves petiolate, ovate, obtuse, crenated, roundly cuneated at the base; lower leaves cordate: floral ones minute; racemes elongated, somewhat branched at the base; flowers secund, scattered. ♃. F. Native of Nipaul and Silhet. *S. indica*, D. Don, prod. fl. nep. p. 109. but not of Lin. Leaves 1½ to 2 inches long, pubescent on both surfaces, usually purplish beneath. Corolla hardly downy outside, violaceous, ½ an inch long.

Two-coloured-leaved Skullcap. Pl. 1 to 1½ foot.

Sect. III. Stachydiaceæ (from σταχυς, *stachys*, a spike; and μακρος, *macros*, long; in reference to the long spikes or racemes of flowers.) Arth. Hamilt. mon. p. 17. Benth. lab. 428. § 2. Racemosæ, * * floribus oppositis, Benth. in bot. reg. vol. 18. Floral leaves green, small, different in form from the cauline leaves. Flowers racemose, secund, opposite.

18 S. indica (Lin. spec. p. 839. but not of D. Don.) stems procumbent at the base; branches ascending, villous; leaves small, petiolate, roundish, crenated, cordate at the base, clothed with soft pubescence on both surfaces; floral leaves minute; racemes almost simple, dense; flowers opposite, secund; floriferous calyxes pubescent, shorter than the pedicels; lower lip of corolla very broad. ♃. G. Native of China, near Macao, Sir G. Staunton; Japan, Thunb.; Java, in hedges about Tugu, in the province of Buitenzorg, Blume.—Pluck. alm. t. 441. f. 1.? Leaves scarcely ½ an inch long, form of those of Ground-ivy. Corolla smoothish, white, ex Thunb. Anthers of upper stamens bearded.

Indian Skullcap. Pl. ½ to 1 foot.

19 S. japonica (Morren, et Decaisne, in ann. sc. nat. par. 1834. 2. p. 315.) stems prostrate at the base; branches ascending, quadrifariously puberulous; leaves ovate, obtuse, coarsely crenated, rounded at the base, glabrous, petiolate; floral leaves becoming gradually smaller; flowers opposite, loose; calyx rather pilose; corolla pubescent, blue. ♃. H. Native of Japan, Siebold.

Japan Skullcap. Pl. ascending.

20 S. Colebrookiana (Wall. pl. rar. asiat. 1. p. 67.) stem erect, branched, finely pubescent; leaves petiolate, ovate-roundish, obtuse, crenated; lower leaves cordate at the base: upper leaves deltoid, roundly truncate at the base, all finely pubescent on both surfaces: floral leaves minute; raceme simple, loose; flowers opposite, secund; floriferous calyxes pubescent, shorter than the pedicels, but increased and glabrous in the fructiferous state; lower lip of corolla very broad. ♃. G. Native of the Peninsula of India. Allied to *S. violacea*; but the stem is firmer and more branched, and the form of the leaves is different. Leaves scarcely an inch long.

Colebrooke's Skullcap. Pl. ½ to 1 foot.

21 S. violacea (Heyne, ex Wall. pl. asiat. rar. 1. p. 66. Benth. lab. p. 429.) stem erect or ascending, pubescent; leaves petiolate, cordate-ovate, crenated, rather hispid above, and pubescent beneath, or glabrous; floral leaves sessile, ovate, shorter than the pedicels; raceme loose, nearly simple; flowers opposite, secund. ♃. G. Native of the Indian Peninsula, Ceylon, &c. *S. indica*, Roxb. hort. beng. p. 45. but not of Lin. Stem a little branched, hispid, or pubescent, rarely almost glabrous. Corolla ½ an inch long, violaceous.

Var. β, *hispidior* (Benth. lab. p. 429.) plant more hispid. ♃. G. *S. Wightiana*, Benth. in Wall. pl. rar. asiat. 1. p. 67. *S. nodulosa*, Arth. Hamilt. mon. p. 26.?

Violaceous-flowered Skullcap. Pl. ½ to 1 foot.

22 S. oblonga (Benth. in bot. reg. vol. 18. lab. p. 429.) stems ascending, pubescent; leaves petiolate, oblong-elliptic, acutish, subserrated at apex, rounded at the base, and quite entire, almost glabrous; floral leaves ovate, minute; raceme loose, almost simple; flowers opposite, secund; calyxes equalling the pedicels: fructiferous ones large, nearly glabrous; lower lip of corolla very broad. ♃. S. Native of Ceylon, Macrae. Very nearly allied to *S. violacea*, but differs in stature, inflorescence, and flowers. Leaves scarcely an inch long.

Oblong-leaved Skullcap. Pl. procumbent.?

23 S. incurva (Wall. pl. asiat. rar. 1. p. 67. Benth. lab. p. 430.) stems ascending, branched, pubescent; leaves almost sessile, oblong-elliptic, acute, remotely serrated, nearly glabrous; floral leaves minute; racemes terminal, simple; flowers opposite, secund; pedicels 3 times as long as the calyxes; tube of corolla slender, incurved; lips of corolla deeply cleft: the upper lip large, cucullate, the lower one shorter. ♃. S. Native near Ava, on Mount Taong Dong.

Incurved-flowered Skullcap. Pl. ascending.

24 S. grossa (Wall. l. c. Benth. l. c.) stems procumbent at the base; branches ascending, villous; leaves petiolate, ovate, acuminated, crenated, roundly truncate at the base, almost glabrous; floral leaves petiolate: lower ones almost similar to the cauline leaves: upper ones scarcely exceeding the calyxes; racemes loose, simple; flowers opposite, secund; corollas elongated, slender. ♃. S. Native of the mountains of Kamaon and Syen, &c. Stem rather woody at the base. Leaves 1 to 1½ inch long, pubescent on the nerves. Corolla 9 lines long, hardly pubescent.

Coarse Skullcap. Pl. procumbent.

25 S. Columnæ (All. pedem. 1. p. 40. t. 84. f. 2.) stems erect, branched, pubescent; leaves petiolate, ovate, crenated, broadly-cordate or truncate at the base, scarcely wrinkled, finely pubescent; floral leaves ovate, shorter than the fructiferous calyxes; raceme elongated, loose, branched a little, pilose; flowers opposite, secund; pedicels shorter than the fructiferous calyxes, which are large and pilose; corolla 6 times longer than the calyx. ♃. H. Native of the South of Europe, in woods and in fields; as near Paris, North of Sicily; Italy, from Piedmont to Naples; Hungary, Dalmatia, Island of Cyprus, and near Constantinople. Sweet, fl. gard. 1. t. 52. *S. peregrina*, Sibth. et Smith, fl. græc. 6. p. 66. t. 582. but not of Lin. *S. altissima*, Arth. Hamilt. mon. 18. and many other authors, and probably of Lin. *Cassida racemosa*, Moench. meth. 414.? *S. pallida*, Guss. fl. sic. prod. 2. p. 137.? but not of Bieb.—Column. ecphr. 1. p. 187. t. 189. Leaves 2 inches long. Corolla dark purple, pubescent, almost an inch long: lips white.

Columna's Skullcap. Fl. June, Aug. Clt. 1806. Pl. 2 to 3 feet.

26 S. Tournefórti (Benth. in bot. reg. vol. 18. lab. p. 431.) quite glabrous; stems erect, branched; leaves petiolate, ovate, or ovate-lanceolate, coarsely crenated: lower ones broadly subcordate at the base: superior ones roundish, truncate: floral leaves ovate-lanceolate, rather shorter than the fructiferous calyxes; racemes elongated, loose, glabrous; flowers opposite, secund; calyxes longer than the pedicels: fructiferous ones large, glabrous; corolla 6 times longer than the calyx. ♃. H. Native of Persia; and at the Caspian Sea, near Lenkoran. This is very nearly allied to *S. commutàta*, but differs in the cordate leaves, and larger, glabrous corollas.

Tournefort's Skullcap. Pl. 1 to 2 feet.

27 S. commuta'ta (Guss. prod. fl. sic. 2. p. 136.) stems erect, branched, nearly glabrous; leaves petiolate, ovate, or ovate-lanceolate, crenated, broadly cordate at the base, scarcely wrinkled, glabrous; floral leaves ovate, rather shorter than the fructiferous calyxes; racemes elongated, loose, a little branched, glabrous; flowers opposite, secund; calyxes longer than the pedicels, large and glabrous in the fructiferous state; corolla 4 times longer than the calyx. ♃. H. Native of the South-east of Europe, and Middle Asia, in groves; as of Hungary, Dalmatia, Tauria, and Caucasus. S. peregrina, Waldst. et Kit. pl. rar. hung. 2. p. 154. t. 125. but not of Lin. S. altissima, Lin. spec. p. 836.? Benth. in bot. reg. vol. 18. Nearly allied to *S. Colúmnæ*; but differs from it in smoothness, and in the corollas being half the size. Corollas purple. There are several plants in the gardens similar to this; one with dark purple, pubescent, dense flowers, *S. altissima*, Hort.; another with bluish purple flowers, having the lower lip whitish, *S. colúmnæ*, Hort.; and a third with the flowers altogether blue, *S. peregrina*, Hort.

Changed Skullcap. Fl. June, Oct. Clt. 1683. Pl. 2 feet.

28 S. peregri'na (Lin. spec. p. 836.) stems procumbent; branches elongated, glabrous or pubescent at top; leaves petiolate, ovate, obtuse, crenated, roundly truncate at the base, glabrous; floral leaves bractea-formed, petiolate, ovate-oblong, acute at both ends, quite entire, pubescent; racemes elongated, loose; flowers nearly sessile, opposite, secund; calyxes large, rather pilose; corolla pubescent outside. ♃. H. Native of Tauria and Sicily. S. rubicúnda, Horn. hort. hafn. Spreng. syst. 2. p. 702. Stems dark purple, or reddish. Whorls almost an inch distant. Corolla violaceous, hardly 5 lines long.

Foreign Skullcap. Fl. June, Oct. Clt. 1823. Pl. 2 feet.

29 S. a'lpina (Lin. mant. p. 248.) branches divaricate, pubescent; leaves petiolate, broad-ovate, obtuse, crenated, roundly truncate at the base, or the lower ones are cordate, finely pubescent; floral leaves petiolate, ovate-oblong, acute at both ends, quite entire, pilose, exceeding the calyxes; racemes elongated, loose; flowers nearly sessile, opposite, secund; calyxes very pilose; corolla villous outside. ♃. H. Native of the South-east of Europe, and Middle Asia, in mountain woods; as of the Bithynian Olympus; near Constantinople, Candia, Mount Lebanon, South of Tauria, Siberia, &c. Arth. Hamilt. mon. 21. t. 1. Sibth. et Smith, fl. græc. 6. p. 65. t. 581. S. Crética, Mill. dict. S. nigréscens, Spreng. syst. 2. p. 702. S. pállida, Bieb. fl. cauc. 2. p. 65. but not of Gussone.—Sab. hort. rom. 3. t. 29. Rachis of raceme villous. Corolla half an inch long, dirty white.

Whitish-flowered Skullcap. Fl. June, Aug. Clt. 1771. Pl. 1 to 2 feet.

30 S. hi'rta (Sibth. et Smith, fl. græc. 6. p. 66. t. 589.) very hairy; leaves petiolate, ovate, obtuse, crenated, roundly truncate at the base, or cordate, hairy on both surfaces, scarcely wrinkled; floral leaves petiolate, oblong, about equal in length to the calyxes; racemes loose; flowers nearly sessile, opposite, secund; fructiferous calyxes inflated, very pilose; corolla villous outside. ♃. H. Native of Candia, and Mount Lebanon. Stem branched. Corollas almost of *S. Colúmnæ*.

Hairy Skullcap. Fl. June, July. Clt. 1825. Pl. 1 foot.

31 S. salviæfo'lia (Benth. lab. p. 433.) stems ascending, hispid; leaves petiolate, ovate, subcordate at the base, much wrinkled, hispid; floral leaves bractea-formed, petiolate, oblong, wrinkled, about equal in length to the calyxes; racemes loose; flowers opposite, secund; calyxes villous. ♃. H. Native of Greece. Corollas pubescent, size of those of *S. peregrina*, or a little larger.

Sage-leaved Skullcap. Pl. ½ foot.

32 S. versi'color (Nutt. gen. amer. 2. p. 38.) stems erect, branched, pubescent; leaves petiolate, broadly-ovate, crenated, deeply cordate at the base, pubescent on both surfaces, wrinkled; floral leaves sessile, broad-ovate, quite entire, rather longer than the calyxes; raceme simple, or a little branched, elongated, many-flowered; flowers opposite, subsecund; calyxes hairy. ♃. H. Native of the flats and open woods of Ohio and Arkansas, Nuttall; at Lexington, in Kentucky, Torrey; Louisiana, Drummond. S. cordifólia, Muhl, cat. The whole plant pubescent, the racemes viscid. Leaves 2-4 inches long. Corolla pubescent, with a slender tube, a dilated blue throat, and a white lower lip.

Var. β, bracteàta (Benth. lab. p. 433.) floral leaves larger, and coloured a little. ♃. H. Native of Texas, at Rio Brazos.

Party-coloured-flowered Skullcap. Pl. 3 to 4 feet.

33 S. cane'scens (Nutt. gen. amer. 2. p. 38.? Benth. lab. p. 433.) stems tall, branched, pubescent; leaves petiolate, ovate, or ovate-lanceolate, acute, crenated, narrowed at the base, rounded, or the lower ones are cordate, pubescent on both surfaces, hoary beneath: floral leaves oblong, exceeding the calyxes; racemes loose, panicled, canescent; flowers opposite, secund; calyxes clothed with hoary tomentum; corolla pubescent outside. ♃. H. Native of Canada, Ohio, Kentucky, Upper Louisiana, &c., in open woods. S. serràta, Spreng. syst. 2. p. 703. and many other authors, but not of Andr. S. pubéscens, Muhl, cat.? S. incàna, Spreng. in Steud. nom. p. 757.? Leaves 2-3 inches long. Corolla blue, 8-9 lines long.

Canescent Skullcap. Pl. 2 to 3 feet.

34 S. serra'ta (Andr. bot. rep. t. 494.) stem tall, branched, glabrous; leaves petiolate, ovate, acutish, crenately serrated, cuneated at the base, quite entire, nearly glabrous on both surfaces; floral leaves oblong-lanceolate: upper ones scarcely longer than the pedicels; racemes loose, nearly simple; flowers opposite, secund; calyxes strigosely pubescent; corollas large, pubescent outside. ♃. H. Native of North America, Andrews; near Fredericstown, Herb. monac. Leaves purplish above, and pale beneath. Racemes glabrous or pubescent. Corolla blue, beyond an inch long.

Serrated-leaved Skullcap. Fl. June, Sept. Clt. 1800. Pl. 4 feet.

35 S. pilo'sa (Michx. fl. bor. amer. 2. p. 11.) stem erect, almost simple, pubescent; leaves remote, on short petioles, ovate, obtuse, crenated: lower ones rounded at the base; superior ones cuneated, or narrowed, pubescent on both surfaces, or pilose; floral leaves obovate-lanceolate, about equal in length to the calyxes; racemes loose, a little branched, panicled; flowers opposite, secund; calyxes villous; corollas pubescent outside: throat a little dilated. ♃. H. Native of Pennsylvania; at West Chester, Virginia, Carolina, Georgia, &c., in shady woods. S. Caroliniàna, Walt. fl. car. p. 163. S. ellíptica, Muhl, cat.? Leaves 1½ inch long. Corolla blue, 8-9 lines long, pubescent.

Var. β, pubéscens; plant clothed with fine pubescence, not

pilose. ♃. H. Native of New Jersey, at Princetown, Torrey. S. ovalifòlia, Pers. ench. 2. p. 136. ?

Pilose Skullcap. Fl. June, Aug. Clt. 1825. Pl. 1 to 3 feet. ?

36 S. villòsa (Elliott, bot. car. 2. p. 90.) stem erect, branched, villous; leaves large, lanceolate, acute at both ends, coarsely toothed, villous beneath, rather hispid above; racemes panicled, crowded with flowers. ♃. H. Native of Georgia, between the rivers Oakmalgu and Flint, Elliott.

Villous Skullcap. Pl. 2 to 3 feet. ?

37 S. integrifòlia (Lin. spec. 836.) stems erect, almost simple, pubescent; leaves remote, on short petioles, oblong-lanceolate or linear, obtuse, quite entire, or the lower leaves are toothed, nearly glabrous; floral leaves exceeding the calyxes; racemes a little branched, loose; flowers opposite, secund; calyx pubescent; corolla almost glabrous, having the top of the tube and the throat widely dilated. ♃. H. Native from Pennsylvania and New York, to Carolina and Georgia, in dry or humid places. S. polymórpha, Arth. Hamilt. mon. p. 38. S. hyssopifòlia, Lin. spec. p. 836. S. Caroliniàna, Lam. dict. 7. p. 706, ill. t. 515. f. 3. S. ovalifòlia, Pers. ench. 2. p. 136. ?—Pluckn. phyt. t. 313. f. 4. Habit of *S. pilòsa*, but the leaves and flowers are very different. Leaves purplish beneath: upper ones 1 to 1½ inch long, glabrous or pubescent. Corollas large, blue, 8-9 lines long, the lower lip marked with deeper spots.

Var. β, hispida (Benth. lab. p. 435.) stems hispid; corollas villous. ♃. H. Native of New Orleans.

Entire-leaved Skullcap. Fl. June, Sept. Clt. 1731. Pl. 1 to 2 feet.

38 S. linea'ris (Benth. in Wall. pl. rar. asiat. 1. p. 66. lab. p. 435.) stems procumbent; leaves nearly sessile, oblong-linear, obtuse, almost entire, with subrevolute margins, canescent beneath; floral leaves ovate, concave, rather longer than the calyxes; racemes simple, dense; flowers opposite, subsecund; calyxes pilose; corollas almost glabrous. ♃. H. Native of Kamaon. Stems numerous from a thick woody base, pilosely pubescent. Leaves 6-9 lines long, almost glabrous above. Corollas cream-coloured, nearly an inch long: lips broad, purplish. Genitals a little exserted.

Linear-leaved Skullcap. Pl. procumbent, ½ foot.

39 ? S. visci'dula (Bunge, enum. pl. chin. p. 52.) stems decumbent; leaves sessile, linear-oblong, obtuse, quite entire, flat, green on both surfaces, viscid; floral leaves ovate, concave, rather longer than the calyxes; calyxes pilose; corollas nearly glabrous. ♃. H. Native of the North of China, in gravelly places between Jui-lin and Zsimin-i, Bunge. Habit of *S. linearis*; but differs in the leaves being green on both surfaces, and viscid, and a little broader. Corollas cream-coloured. Perhaps this species, with *S. linearis*, should have been placed in section *Lupulinària*.

Viscid Skullcap. Pl. decumbent.

40 S. macra'ntha (Fisch. Rchb. icon. bot. eur. 5. p. 52. t. 488. Benth. lab. p. 436.) stems procumbent at the base, ascending, almost glabrous; leaves sessile, lanceolate, obtuse, quite entire, rounded at the base, nearly glabrous, ciliated; floral leaves longer than the calyxes; racemes simple; flowers opposite, secund; calyxes pilose; corolla ample, pubescent outside, the tube dilated above. ♃. H. Native of Daburia, North of China. S. grandiflora, Bunge, but not of Sims. Scutellària, &c., Gmel. sib. 3. p. 228. no. 50. Stems usually purplish, having the angles usually ciliated, the rest glabrous. Leaves deep green above, glabrous, or with a few short hairs, paler beneath, and quite glabrous. Corolla an inch long, blue. This species connects sections *Stachymórpha* and *Galericulàta*, but has the habit of the latter.

Long-flowered Skullcap. Fl. July, Sept. Clt. 1827. Pl. ½ to ¾ foot.

Sect. IV. Galericula'ta (from *galericulus*, a narrow-brimmed hat; in reference to the form of the calyx.) Arth. Hamilt. mon. p. 31. Benth. lab. p. 436. § 3. Axillàres, Benth. in bot. reg. vol. 18. Floral leaves green, similar to the cauline leaves, but gradually smaller. Flowers opposite, secund, axillary, or the upper ones are somewhat racemose.

41 S. angustifòlia (Pursh, fl. amer. sept. 2. p. 412.) nearly glabrous; stems erect, almost simple; lower leaves petiolate, ovate, toothed: superior ones nearly sessile, oblong-linear, quite entire, all roundly cuneated at the base; floral leaves similar to the rest: upper ones sterile; flowers axillary, opposite, secund; calyxes shorter than the pedicels. ♃. H. Native of North-west America, along the river Kooskoosky, Pursh; at Fort Vancouver, on the Columbia, Douglas. Herb glabrous, or finely pubescent. Corolla 8 lines long, blue. ?

Narrow-leaved Skullcap. Pl. ½ foot.

42 S. scordifòlia (Fisch, ind. sem. hort. petrop. p. 62. Trev. in nov. act. bonn. 13. p. 185.) glabrous; stems branched; leaves on short petioles, oblong-lanceolate, obtuse, quite entire, or remotely serrated, rounded or cuneated at the base; floral leaves similar to the rest; flowers axillary, opposite, secund. ♃. H. Native of the Altaic mountains, and at Lake Baikal, and of Kamtschatka. S. Adámsii, Spreng. syst. 2. p. 701. ? Arth. Hamilt. mon. p. 34. t. 2. f. 3. Scutellària, &c., Gmel. sib. 3. p. 229. no. 51. t. 47. ? Cássida, &c., Amm. stirp. 43. t. 55.—A species intermediate between *S. angustifòlia* and *S. galericulàta*. Corollas blue, longer than those of *S. angustifòlia*.

Var. β, Adámsii (Benth. lab. p. 437.) leaves less toothed; floral leaves smaller; flowers subracemose. ♃. H.

Scordium-leaved Skullcap. Fl. June, July. Clt. 1817. Pl. ½ foot.

43 S. galericula'ta (Lin. spec. p. 835.) stems branched, divaricate; leaves on short petioles, ovate-lanceolate, acute, roundly cordate at the base, crenated: floral leaves similar; flowers axillary, opposite, secund, on short pedicels. ♃. H. Native of Europe, Asia, and North America, in humid places, by the sides of ditches, ponds, rivers; almost in every part of Europe; plentiful in Britain. Smith, engl. bot. t. 523. Hook. fl. lond. vol. 2. with a figure. Curt. lond. 3. t. 36. Fl. dan. t. 637. S. epilobiifòlia, Arth. Hamilt. mon. p. 32.—Riv. mon. t. 77. f. 1.—Sabb. hort. rom. 3. t. 30.—Mör. hist. sec. 11. t. 20. f. 6. ord. 3. Cássida galericulàta, Scop. carn. no. 741. Hall. helv. no. 23. Mœnch. meth. p. 413. Plant very variable in stature and pubescence, but readily distinguished by the form of the leaves and flowers. Corolla 7-8 lines long, blue, whitish underneath. The plant was formerly considered a cure for certain fevers.

Hooded or Common Skullcap. Fl. June, Sept. Britain. Pl. ½ to 1 foot.

44 S. hastifòlia (Lin. spec. p. 835.) stems ascending, nearly simple, glabrous; leaves on short petioles, ovate-lanceolate, obtuse, quite entire, truncate at the base, and hastately sub-lobate: floral ones similar to the rest; flowers opposite, secund, subracemose; calyxes pubescent; corolla elongated, with a dilated throat: galea shorter than the lower lip. ♃. H. Native of France, Austria, and Germany, Sweden; and Caucasus, at the river Kuma. Cássida hastifòlia, Scop. fl. carn. 1. p. 439.—Riv. mon. irr. t. 77. f. 2. This differs from *S. galericulàta* in the leaves being hastate at the base, in the corollas being a little longer, and more approximate into a terminal raceme. Corollas blue.

Halbert-leaved Skull-cap. Fl. June, July. Clt. 1798. Pl. ½ foot.

45 S. RIVULA'RIS (Wall. pl. rar. asiat. 2. p. 66. Benth. lab. p. 438.) quite glabrous; stem procumbent at the base; branches ascending, almost simple; lower leaves petiolate, ovate-roundish, and the middle ones ovate-lanceolate, obtuse, crenated, dilated and cordate at the base: superior and floral leaves smaller, narrowed at the base; flowers opposite, secund, sub-racemose; calyxes and corollas glabrous. ♃. H. Native of Nipaul and China, by sides of rivulets and rivers. S. peregrina, Roxb. hort. beng. p. 45. but not of Lin. S. barbàta, D. Don. prod. fl. nep. p. 109. S. squamulòsa, Arth. Hamilt. mon. p. 35. Stems rooting at the base. Lower cauline leaves an inch long, those of the sterile branches hardly ½ an inch. Corolla 4 lines long, bluish, hairy.

Rivulet Skullcap. Pl. ½ to 1 foot.

46 S. RUMICIFÒLIA (H. B. et Kunth, nov. gen. amer. 2. p. 324.) quite glabrous; stems humble, diffuse, branched; lower leaves petiolate, broad-ovate, hastately cordate at the base: middle ones lanceolate, acute, hastate at the base: upper and floral leaves nearly sessile, lanceolate, or linear, rounded or narrowed at the base; flowers minute, opposite, secund. ♃. F. Native of Mexico, at the Hacienda de la Laguna; Santa Fe de Bogota; Montevideo; Brazil, at Rio Pardo, in the province of Rio Grande do Sul; Mendoza, Valparaiso, and Buenos Ayres. Herb small, much branched, and rooting at the base. Leaves of sterile branches, often shaped like those of *Rùmex acetocélla*. Lower cauline leaves ½ an inch long: upper 3 lines long. Corolla hardly 3 lines long, downy outside. Genitals a little exserted.

Sorrel-leaved Skullcap. Pl. ½ to 1 foot.

47 S. MI'NOR (Lin. spec. p. 835.) plant humble, glabrous; leaves on short petioles: lower ones broad-ovate: middle ones ovate-lanceolate, cordate at the base, sub-hastate: upper and floral leaves lanceolate, rounded at the base, all obtuse; flowers small, axillary, opposite, secund; corolla almost glabrous, with the throat hardly dilated. ♃. H. Native of Europe and Siberia; plentiful in Britain in moist places, as by the sides of rivulets, rivers, canals, ponds, &c. Smith, engl. bot. t. 524. Hook. fl. lond. vol. 2. icone. Curt. fl. lond. 4. t. 43. S. breviflòra, Turez. mss.—Mor. hist. sect. 11. t. 20. f. 8. Leaves like that of *S. galericulàta*, but the plant is of lower stature. Leaves a little toothed or entire. Corolla 3 lines long, red.

Smaller Skullcap. Fl. July, Aug. Britain. Pl. ¼ to ½ foot.

48 S. HAVANE'NSIS (Jacq. obs. 2. p. 5. t. 29.) stem branched, procumbently erect; leaves cordate-ovate, obtuse, crenated, nearly glabrous; flowers axillary; both lips of corolla trifid. ♃. G. Native of Cuba, among rocks; near Havana, by the sea-side. Jacq. amer. pict. 85. t. 165. Leaves hardly ½ an inch long. Corolla nearly an inch long, blue.

Havana Skullcap. Fl. May, June. Clt. 1793. Pl. proc.

49 S. MICROPHY'LLA (Moc. et Sesse, ex Benth. lab. p. 439.) pubescent; stem diffuse, humble, branched; leaves petiolate: lower ones roundish, sinuately crenated: superior leaves ovate: uppermost ones almost quite entire, narrowed at both ends; flowers small, axillary, opposite, secund; pedicels longer than the calyxes. ♃. F. Native of New Spain. Very nearly allied to *S. humilis*, but villous. Corollas size of those of *S. minor*.

Small-leaved Skullcap. Pl. humble.

50 S. NU'TANS (R. Br. prod. p. 507.) plant strigosely pubescent; stem humble; leaves on short petioles: lower ones rounded, deeply crenated: upper ones ovate, roundly dilated, sub-hastately lobed, all cordate at the base: upper floral leaves hardly exceeding the calyxes; flowers small, axillary, opposite, secund. ♃. F. Native of New South Wales, about Port Jackson; and of Van Diemen's Land. Leaves hardly 3-4 lines long. Corolla twice as long as the calyx. Genitals a little exserted.

Humble Skullcap. Fl. June, July. Clt. 1823. Pl. ¼ foot.

51 S. PA'RVULA (Michx. fl. bor. amer. 2. p. 12.) stem humble, divaricate, branched, pubescent; lower leaves on short petioles, ovate-roundish: middle, superior, and floral leaves sessile, ovate, or ovate-lanceolate, all obtuse, quite entire, rarely toothed, subcordate at the base; flowers small, axillary, opposite, secund; corolla nearly glabrous, with a scarcely dilated throat, hardly twice as long as the calyx. ♃. H. Native of Canada, on the banks of rivers, and in other humid places, Virginia, banks of Missouri; at Lexington in Kentucky; Texas, at Rio Brazos. Hook. exot. fl. 2. t. 106. S. ambìgua, Nutt. gen. amer. 2. p. 37. Herb densely leafy, more or less pubescent. Leaves small. Corollas small pale blue. Genitals a little exserted.

Small Skullcap. Fl. June, Aug. Clt. 1822. Pl. ¼ foot.

52 S. RESINÒSA (Torrey, in ann. lyc. 2. p. 232.) clothed with minute glandular pubescence; stem humble, erect, much branched; leaves scarcely petiolate, broad-ovate, obtuse, quite entire, rounded at the base: floral leaves similar to the rest; flowers axillary, opposite, secund; corolla villous, more than 4 times as long as the calyx. ♃. H. Native of North America, at the river Canadian, among the Rocky Mountains. Habit of *S. párvula*, but more stiff and more branched. Leaves 4-5 lines long. Corolla blue, size of those of *S. galericulàta*, villous.

Resinous Skullcap. Pl. ½ foot.

53 S. ANTIRRHINOI'DES (Benth. lab. p. 440.) stem diffuse, branched, glabrous; leaves on short petioles, ovate, obtuse, quite entire, narrowed at the base, thickish, glabrous or finely pubescent; floral leaves similar to the rest: upper ones sterile; flowers axillary, opposite, secund; calyxes shorter than the pedicels. ♃. H. Native of North-west America, near Fort Vancouver, on the Columbia river. Habit of *Antirrhìnum serpyllifòlium*. Leaves ½ an inch long. Flowers similar to those of *S. angustifòlia*.

Snap-Dragon-like Skull-cap. Pl. diffuse.

54 S. NERVÒSA (Pursh, fl. amer. sept. 2. p. 412.) stem almost simple, glabrous; lower leaves petiolate, rounded: middle ones sessile, broad-ovate, dentately crenated, cordate at the base: upper floral leaves ovate-lanceolate, quite entire, all glabrous or rather hispid above, with scabrous margins; flowers small, axillary, opposite, secund; corollas almost glabrous, twice or thrice longer than the calyxes. ♃. H. Native of North America, among bushes on the banks of the rivers Schuylkill, Susquehanna, Missouri, and Ohio. Herb slender, pale green. Largest leaves 10-12 lines long. Corollas full a little larger than those of *S. párvula* or *S. minor*, blue.

Nerved-leaved Skullcap. Fl. July, Aug. Clt. 1826. Pl. ½ to 1 foot.

55 S. DRUMMÓNDI (Benth. lab. p. 441.) stems ascending, a little branched, villous; leaves petiolate, ovate, obtuse, crenated, cuneated at the base: floral leaves more entire, smaller, all villous on both surfaces; flowers small, axillary, opposite, secund; corolla villous, scarcely thrice as long as the calyx. ♃. F. Native of Texas, at Rio Brazos. Leaves ½ an inch long. Corolla 3-4 lines long, blue.

Drummond's Skullcap. Pl. ½ foot.

56 S. MÒLLIS (R. Br. prod. p. 507.) stem nearly simple, pubescent; leaves petiolate, ovate-roundish, obtuse, coarsely crenated, broadly cordate at the base: upper and floral leaves ovate-lanceolate, acute, all clothed with soft villi on both surfaces; flowers opposite, secund, axillary, or the upper ones are sub-racemose; corolla twice as long as the calyx, which is shorter than the pedicels. ♃. H. Native of New Holland. Stem a little branched. Corolla 3-4 lines long.

Soft Skullcap. Pl. 1 to 1½ foot.

57 S. TUBERÒSA (Benth. lab. p. 441.) stem humble, simple, erect, villous; leaves petiolate, broad-ovate, obtuse, coarsely

crenated, roundly truncate at the base: floral leaves oblong, all villous on both surfaces; flowers axillary, opposite, secund; corolla villous, more than 4 times as long as the calyx. ♃. H. Native of North California, Douglas. Stems simple, rising from a tuberous root. Leaves 4-5 lines long: floral ones shorter than the flowers, but exceeding the calyxes. Corolla size of that of *S. galericulàta*, with a slender tube.

Tuberous-rooted Skullcap. Pl. 1-3 inches.

58 S. cerúlea (Moc. et Sessé, ex Bench. lab. p. 442.) stem nearly simple, pubescent; leaves on short petioles, ovate-rhomboid, obtuse, crenated, rounded at the base: floral leaves nearly similar to the others but narrower, the uppermost ones lanceolate, almost quite entire, all pubescent above; flowers opposite, secund, axillary, or the uppermost ones are sub-racemose, nearly sessile; corolla 6 times longer than the calyx. ♃. F. Native of Mexico. Stems ascending. Lower leaves small: middle ones an inch long. Corolla 8-9 lines long, pubescent, blue.

Var. β. Leaves pubescent on both surfaces. ♃. F. Mexico, near Tlalpuxuhua.

Blue-flowered Skullcap. Pl. ½ to 1 foot.

59 S. Mocinia'na (Benth. lab. p. 442.) branches ascending, ? villous at the base; leaves petiolate, ovate, somewhat sinuately crenated, green on both surfaces, rather hispid above, and almost glabrous beneath: lower floral leaves similar to the rest: uppermost ones small and oblong; flowers opposite, secund; corolla 6 times longer than the calyx, which is pedicellate. ♃. F. Native of New Spain. Branches rather woody at the base. Leaves an inch long. Corolla showy, scarlet, 1½ inch long, nearly glabrous.

Mocino's Skullcap. Pl. ?

60 S. malvæflòra (H. B. et Kunth, nov. gen. 2. p. 325.) stem branched, pubescent; leaves roundish, ovate, obtuse, coarsely serrate-crenated, beset with adpressed hairs above, and glabrous beneath; flowers opposite, pedicellate, sub-spicate. ♃. G. Native of New Granada, in bushy, mountain places, near St. Anna, in the province of Mariquito. Leaves petiolate, 8-10 lines long. Calyx pubescent. Corolla blue. ? This species with the two following probably belong to the genus *Perilòmia*.

Mallow-flowered Skull-cap. Pl.

61 S. Cumane'nsis (H. B. et Kunth, l. c.) shrubby; leaves ovate, or ovate-orbicular, obtuse, rounded at the base or cuneated, crenated, clothed with hairy pubescence on both surfaces, canescent beneath; flowers opposite, pedicellate. ♄. G. Native of America, in dry places near Cumana and Bordones. Leaves 8-12 lines long. Pedicels and calyxes pubescent. Corolla 5 times as long as the calyx, pubescent.

Cumana Skullcap. Shrub.

62 S. volu'bilis (H. B. et Kunth, l. c.) twining; leaves elliptic, rounded at both ends, crenated, pubescent above, but clothed with soft pilose tomentum beneath and hoary; flowers opposite, pedicellate. ♃. ? ◠. S. Native of New Granada, in woods, near Loxa and Gonzanama. Leaves petiolate, reticulately 5-nerved, 14-16 lines long. Stem pilose. Calyx pilosely pubescent. Corolla downy, red. ?

Twining Skullcap. Pl. twining.

Sect. V. Maschalóstachys (from μασχάλη, *maschale*, an axil, and στάχυς, *stachys*, a spike; in reference to the axillary spikes.) Benth. lab. p. 443. § 4. Lateriflòræ, Benth. in bot. reg. vol. 18. Floral leaves green, similar to the lower cauline leaves: upper ones small, bractea-formed. Flowers opposite, secund, disposed in axillary and terminal racemes.

63 S. re'pens (Hamilt. in D. Don. prod. fl. nep. p. 110.) clothed with hoary pubescence, clammy above; branches scandent; leaves petiolate, ovate, crenated, rounded at the base, subcordate: uppermost ones acute, rather cuneated at the base: floral leaves ovate, obtuse, rather exceeding the calyxes; racemes numerous, axillary, and terminal, short, loose; flowers opposite, secund. ♄. ◠. G. Native of the East Indies, in Nipaul, Kamaon, Ava, &c. S. càna, Wall. pl. asiat. rar. 1. p. 67. S. Wallichiàna, Arth. Hamilt. mon. 28. t. 2. f. 1. Leaves 1½ inch long. Corolla 7-8 lines long, yellow.

Creeping Skullcap. Shrub climbing.

64 S. scá'ndens (Hamilt. in D. Don. prod. fl. nep. p. 110.) stem scandent; branches glabrous, very acutely tetragonal; leaves on short petioles, ovate-lanceolate, acuminated, crenated, roundedly cordate at the base, glabrous; floral leaves broad-ovate, acuminated, hardly exceeding the calyxes; racemes axillary and terminal, pubescent; flowers opposite, secund. ♄. ◠. G. Native of Nipaul and Kamaon. S. angulòsa, Benth. in Wall. pl. asiat. rar. 1. p. 67. S. cæltidifòlia, Arth. Hamilt. mon. p. 27. Branches often glaucescent. Corolla an inch long, hairy.

Climbing Skullcap. Shrub climbing.

65 S. lateriflòra (Lin. spec. p. 835.) glabrous; stems erect, fleshy; leaves petiolate, ovate-lanceolate, acuminated, rounded at the base: upper floral leaves hardly exceeding the calyxes; racemes axillary and terminal, flowers opposite, secund. ♃. H. Native of North America, on margins of ponds, lakes, and ditches, from New York to the North-west coast, and from Canada to Carolina. Cássida lateriflòra, Mœnch. meth. Plant glabrous. Stem much branched. Corolla blue, hardly 3 lines long. Achenia tubercled.

Lateral-flowered Skullcap. Fl. June, Sept. Clt. 1752. Pl. 1 foot.

Cult. Most of the species of *Scutellària* are very pretty while in blossom, and are therefore well fitted for decorating the fronts of flower borders, being short in stature. They will grow in any common soil, and are readily increased by division and by seed. Those species marked greenhouse and frame require protection in winter, but answer well when planted out into the open ground during the summer months. The shrubby kinds will be readily increased by young cuttings.

LIX. PERILO'MIA (from περι, *peri*, around, and λωμα, *loma*, a fringe; in allusion to the membranaceously winged achenia.) H. B. et Kunth, nov. gen. 2. p. 328. Benth. lab. p. 445.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, bilabiate; lips entire, closed after the falling of the corolla, at length cleft even to the base: the upper lip furnished with a short scale, deciduous: lower lip permanent. Corolla with an exserted, recurvedly ascending tube, which is naked inside, a rather dilated throat, and a short bilabiate limb, having the upper lip erectish, emarginately bifid, and the lower lip trifid; the lateral lobes short and spreading a little, and the middle lobe larger, spreading, and emarginate. Stamens 4, ascending, didynamous, the lower ones the longest; anthers approximate by pairs, glabrous, those of the lower stamens dimidiate, and those of the upper stamens 2-celled. Upper lobe of style very short; lower one stigmatiferous at apex. Ovarium nearly sessile, on a thick disk, which is usually increased into an obtuse tooth. Achenia dry, with membranaceously winged margins.—Herbs or shrubs. Flowers axillary, solitary. Floral leaves almost similar to the cauline ones. This genus differs from *Scutellària*, in the form of the corolla and winged achenia.

1 P. scutellarioi'des (H. B. et Kunth, nov. gen. 2. p. 327. t. 157.) glabrous; leaves petiolate, ovate, rounded at the base or subcordate, those of the panicle, branches, and floral ones small; racemes slender; flowers secund; corolla scarcely 3 times as long as the calyx, which is glabrous. ♃. S. Native of Peru, Jos. de Jussieu. Stems apparently scandent. Leaves 1½ inch

long, coarsely crenated; upper and floral ones hardly 2-3 lines long. Panicle like that of *Odontites rùbra*. Flowers opposite, scarlet, ? clothed with rufous pubescence outside.

Skullcap-like Perilomia. Pl. climbing.

2 P. ocymoi'des (H. B. et Kunth, l. c. p. 328.) glabrous or scarcely pubescent; leaves petiolate, ovate, crenated, roundedly truncate at the base: floral leaves similar to the rest, but gradually smaller; racemes elongated; corolla 4-5 times longer than the calyx. ♃. G. Native of Peru, in dry places, near Alausi, Humb. et Bonpl.; near Obrajillo, Cruikshanks; at Cuesta de Parrochuta, Mathews. Leaves ½ to 1½ inch long. Corolla scarlet, 7-8 lines long.

Basil-like Perilomia. Pl. erect.

3 P. frutico'sa (Schiede et Deppe, in Linnæa, 5. p. 102.) pubescent or hairy; leaves ovate or elliptic, acuminated, coarsely and unequally serrated, and almost entire, pale beneath; racemes 3-9-flowered. ♄. G. Native of Mexico, among bushes at Jalapa, and on Serro Colorado. Leaves 1 to 4 inches long. Flowers opposite. Corolla showy, scarlet, about 15 lines long, pubescent underneath.

Shrubby Perilomia. Shrub.

4 P. tomentò'sa (Benth. lab. p. 446.) leaves ovate, pubescent above, clothed with white tomentum beneath; corolla about 3 times longer than the calyx, which is clothed with woolly villi. ♃. G. Native of Mexico, Moçino et Sessé. Habit of *P. ocymoides*. Flowers a little smaller. Perhaps woody.

Tomentose Perilomia. Shrub. ?

† *A doubtful species.*

5 P. pu'bia (Spreng. syst. 2. p. 704.) leaves ovate-oblong, acute, serrated; calyxes and fruit pubescent. ♃. ? S. Native of Brazil, Sello.

Doubtful Perilomia. Pl. ?

Cult. For culture and propagation, see *Prostanthèra*, p. 800.

Tribe VII.

PROSTANTHE'REÆ (this tribe contains genera agreeing with the genus *Prostanthèra*, in the characters given below.) Benth. lab. p. 447. Calyx campanulate, sometimes bilabiate; lips flat, entire, or the lower lip is bidentate or bifid; sometimes equal and 5-toothed; throat naked inside. Corolla with a short ample tube, a campanulate throat, and a bilabiate limb; lips flattish; upper lip emarginate or bifid; lower lip trifid. Stamens 4, didynamous, shorter than the corolla; lower ones sometimes the longest and sometimes abortive. Achenia coriaceous, wrinkled reticulately. Style almost permanent.

LX. CHILO'DIA (from χειλος, *cheilos*, a lip, and ὀδους, *odous*, a tooth; application not evident.) R. Br. prod. p. 507. Benth. lab. p. 447.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, bilabiate; tube short, 13-nerved; upper lip entire; lower lip emarginate; throat naked inside. Corolla with a short ample tube and a campanulately sub-bilabiate limb: upper lip erect, flattish, emarginately bifid: lower lip trifid, the middle lobe the largest and bifid, all flat and spreading. Stamens 4, nearly equal, shorter than the tube; filaments glabrous, naked; anthers 2-celled: cells parallel, glabrous, naked, mutic. Style shortly bifid at apex; lobes unequal, stigmatiferous at apex.—A shrub, with the habit of *Prostanthèra*.

1 C. scutellarioi'des (R. Br. p. 507.) ♄. G. Native of New Holland, about Port Jackson. Prostanthèra empetrifòlia, Sieb. pl. nov. holl. exs. no. 187. A shrub, with glabrous or pubescent branches. Leaves sessile, scarcely ½ an inch long, linear or lanceolate, acute, quite entire, with sub-revolute edges, green on both surfaces, glabrous or finely downy beneath in the young state; floral leaves exceeding the flowers. Pedicels axillary, bibracteate. Calyxes ciliated. Corolla blue, glabrous, exceeding the calyx a little.

Skull-cap-like Chilodia. Shrub.

Cult. For culture and propagation, see *Prostanthèra*, p. 800.

LXI. CRY'PHIA (from κρυφιος, *kryphios*, hidden; in allusion to the inclosed corollas.) R. Br. prod. p. 508. Benth. lab. p. 448.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx bilabiate, bibracteate, closed; lips entire, equal. Corolla inclosed, ringent; upper lip or galea very short; middle segment of the lower lip rather the largest. Anthers mutic.—Glandular, strong-scented shrubs. Leaves small, entire, size of those of *Thymus Serpyllum*. Peduncles axillary, solitary, 1-flowered. Intermediate between *Chilòdia* and *Prostanthèra*.

1 C. serpyllifò'lia (R. Br. p. 508.) leaves oblong-linear, flattish, and are, as well as the calyxes, glabrous, scarcely longer than the fructiferous peduncles; branchlets almost glabrous; down very fine and adpressed. ♄. G. Native of New Holland, on the South Coast.

Wild Thyme-leaved Cryphia. Shrub.

2 C. microphy'lla (R. Br. p. 508.) leaves oval, convex, very minute, fascicled, and are, as well as the calyxes, pubescent; much longer than the peduncles; branches pubescent; down spreading, curved. ♄. G. Native of New Holland, on the south coast. Probably only a variety of the preceding.

Small-leaved Cryphia. Shrub.

Cult. For culture and propagation, see *Prostanthèra*, p. 800.

LXII. PROSTANTHE'RA (from προσθηκη, *prosthèke*, an appendage, and ανθηρα, *anthera*, an anther; in reference to the connectives of the anthers being spurred underneath.) Labill. nov. holl. 2. p. 18. R. Br. prod. p. 508. Benth. lab. p. 448.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate; tube short, 13-striped; lips undivided, closing the fruit; throat naked inside. Corolla with a short ample tube, a campanulate throat, and a bilabiate limb; upper lip erect, flattish, emarginately bifid; lower lip spreading, 3-lobed, the middle lobe the largest, entire, or bifid. Stamens 4, ascending, scarcely didynamous: lower ones rather the longest; filaments glabrous, naked; anthers all approximate, 2-celled: cells parallel, having the connective spurred beneath. Style shortly bifid at apex: lobes nearly equal, stigmatiferous at apex. Achenia nucumentaceous, rather baccate, coriaceous, and reticulately wrinkled in the dried state. Albumen wanting or small.—Strong-scented shrubs, beset with sessile glands. Leaves opposite. Flowers sometimes racemose, terminal, the floral leaves soon falling off; sometimes solitary in the axils of the floral leaves, which are similar to the cauline ones. Bracteas small, under the calyx.

1 P. lasia'nthos (Labill. nov. holl. 2. p. 18. t. 157.) shrubby; leaves oblong-lanceolate, dentately serrated, glabrous; racemes panicled; corolla hairy; longer spur of anther exceeding the cell: shorter one equal in length to the cell, adnate. ♄. G. Native of New South Wales, about Port Jackson; and of Van Diemen's Land. Andr. bot. rep. t. 641. Ker. bot. reg. t. 143. Sims, bot. mag. t. 2434. Branches nearly glabrous. Leaves green. Corolla white, tinged with red; throat spotted with red inside.

Woolly-flowered Prostanthera. Fl. June, July. Clt. 1808. Shrub 3-6 feet.

2 P. cæru'lea (R. Br. prod. p. 508.) shrubby; leaves lanceolate, dentately serrated, glabrous; racemes rather panicled, divided a little; corolla beardless outside; spurs of anthers nearly equal, adnate, scarcely exceeding the cells. ♄. G. Native of New South Wales, about Port Jackson, &c. Habit of *P. lasiánthos*. Leaves narrower. Corolla glabrous, blue, size of those of *P. lasiánthos*.

Blue-flowered Prostanthera. Shrub 3 to 4 feet.?

3 P. inci'sa (R. Br. prod. p. 509.) branchlets nearly glabrous; leaves ovate-oblong, narrowed at the base, toothed or cut, glabrous, glandular on both surfaces; racemes few-flowered; upper lip of calyx narrower, and twice as long as the lower lip; spurs equal, adnate, shorter than the cells. ♄. G. Native of New South Wales, about Port Jackson. Leaves ½ to ¾ inch long. Floral leaves small: upper ones wanting or deciduous. Corolla twice as long as the calyx, nearly glabrous.

Cut-leaved Prostanthera. Shrub 3 to 5 feet.?

4 P. Sieber'i (Benth. lab. p. 451.) branchlets nearly glabrous; leaves ovate-oblong, deeply toothed, narrowed a long way at the base, glabrous: racemes loose, few-flowered; lips of calyx equal; spurs of anthers equal, adnate, shorter than the cells. ♄. G. Native of New South Wales, from Port Jackson towards the south. P. incisa, Sieb. fl. nov. holl. exs. 189. but not of R. Br. Leaves on long petioles, nearly an inch long; floral leaves smaller: upper ones minute. Very like *P. incisa*.

Sieber's Prostanthera. Shrub 6 feet.

5 P. prunelloi'des (R. Br. prod. p. 508.) leaves thick, ovate, entire, or coarsely toothed, glabrous: floral leaves bracteaformed, deciduous; racemes terminal, a little panicled; corolla hairy outside; longer spur of anther twice as long as the cell. ♄. G. Native of New South Wales, about Port Jackson; frequent on stony hills at Hunter river. Angles of stem denticulated. Leaves an inch long: floral leaves ciliated, deciduous. Corolla twice as long as the calyx. Flowers almost like those of *P. lasiánthos*.

Prunella-like Prostanthera. Shrub.

6 P. ovalifo'lia (R. Br. prod. p. 509.) branches clothed with fine down; leaves oval, glabrous, entire, and sometimes with a few crenatures; racemes short, terminal, and axillary; calyx glabrous, glandular; spurs of anthers equal, adnate, equal in length to the cells. ♄. G. Native of New Holland, on the east coast, within the tropic, and on the north-west coast. Leaves 4-6 lines long.

Oval-leaved Prostanthera. Shrub humble.

7 P. atriplicifo'lia (Cunningh. mss. ex Benth. lab. p. 451.) branchlets tomentose; leaves ovate-oblong, quite entire, glabrous; racemes loose, terminal; calyxes glabrous; spurs of anthers equal, adnate, equal to the cells in length. ♄. G. Native of the interior of New Holland; on arid, sterile hills at the river Lachlan. Shrub dense, sweet-scented. Leaves on short petioles, 4-6 lines long. Corollas purple. Very nearly allied to *P. ovalifo'lia*.

Atriplex-leaved Prostanthera. Shrub.

8 P. cotinifo'lia (Cunningh. mss. ex Benth. lab. p. 452.) branches tomentose; leaves orbicular, thickish, glabrous, quite entire, retuse, or emarginate at apex; racemes elongated; lips of calyx quite entire. ♄. G. Native of New Holland, in the interior. Very nearly allied to *P. rotundifo'lia*, but differs in the leaves being never crenated, and in the longer racemes.

Cotinus-leaved Prostanthera. Shrubs.

9 P. rete'sa (R. Br. prod. p. 509.) leaves orbicular, crenated, glabrous, glandular on both surfaces; flowers axillary; lower lip of calyx retuse; spurs of anthers scarcely exceeding the cells. ♄. G. Native of Van Diemen's Land. Very nearly allied to *P. rotundifo'lia*.

Retuse-leaved Prostanthera. Shrub.

10 P. rotundifo'lia (R. Br. prod. p. 509.) branchlets tomentose; leaves orbicular or spatulate, thickish, glabrous, entire, or crenated; flowers sub-racemose; calyx glabrous, with quite entire lips; spurs of anthers equal, adnate, shorter than the cells. ♄. G. Native of Van Diemen's Land. Leaves 3-4 lines long. Racemes sub-secund, simple or compound. Corolla large, nearly glabrous outside.

Round-leaved Prostanthera. Clt. 1824. Shrub 3 to 6 feet.

11 P. ni'vea (Cunningh. mss. ex Benth. lab. p. 452.) quite glabrous; leaves linear, quite entire, with smooth revolute margins; racemes loose, terminal; calyx glabrous, having the upper lip large, ciliated, one half shorter than the lower lip; one spur of each anther twice as long as the cell; the other shorter, adnate. ♄. G. Native of the interior of New Holland, on sterile rocky mountains. Leaves ½ to 1 inch long. Flowers sub-secund. Corolla snow-white, twice as long as the calyx, downy outside.

Snow-white-flowered Prostanthera. Shrub 3 feet.

12 P. Baxte'ri (Cunningh. mss. ex Benth. lab. p. 452.) branches clothed with white tomentum; leaves linear, quite entire, with smooth revolute edges, glabrous; flowers sub-axillary; calyx clothed with silky tomentum; upper lip large, lower one shorter. ♄. G. Native of New Holland, at King George's Sound, Baxter. Leaves ½ an inch long. Flowers in the axils of the floral leaves.

Baxter's Prostanthera. Shrub.

13 P. linea'ris (R. Br. prod. p. 509.) quite glabrous; leaves linear, quite entire, glabrous, smooth, with sub-recurved margins; racemes terminal; calyxes glabrous, finely ciliated; longer spur of each anther twice as long as the cell. ♄. G. Native of New South Wales, at Port Jackson, R. Br.; on rocks at Springfield and elsewhere, Cunningh. Leaves about an inch long, obtuse. Corolla a little longer than the calyx, downy outside, with a villous throat.

Linear-leaved Prostanthera. Clt. 1824. Shrub 3 to 4 feet.

14 P. denticula'ta (R. Br. prod. p. 509.) branchlets scabrous from pubescence; leaves linear, entire, glabrous, glandular beneath, tuberculately denticulated above, near the recurved margin; calyxes ciliated, rather pilose; longer spur of anther rather exceeding the cell. ♄. G. Native of New South Wales, about Port Jackson, and on mountains near Bathurst. Habit of *Westringia*. Branches nearly terete. Leaves sessile. Racemes loose, secund, terminal. Corolla twice as long as the calyx.

Denticulated-leaved Prostanthera. Clt. 1824. Shrub 3 to 4 feet.?

15 P. cryptanthoi'des (Cunningh. mss. ex Benth. lab. p. 453.) glabrous; leaves lanceolate or linear, obtuse, quite entire or denticulated, fascicled in the axils: floral leaves similar to the rest; flowers few, axillary; calyx glabrous, having the upper lip tridentate; longer spur of anther twice the length of the cell. ♄. G. Native of New Holland, on rocks at Hunter's river.—An humble, glandular, rather clammy shrub, glabrous, or furnished with a few scattered hairs. Leaves scarcely 2-3 lines long. Bracteas foliaceous, equalling the calyxes. Corolla more than twice as long as the calyx.

Cryptantha-like Prostanthera. Shrub humble.

16 P. aspalathoi'des (Cunningh. mss. ex Benth. lab. p. 453.) branches pubescent; leaves small, linear, quite entire, with revolute margins, nearly glabrous, fascicled; floral leaves similar to the others; flowers few, axillary, nearly sessile; calyx glabrous, with nearly equal, quite entire lips. ♄. G. Native of the interior of New Holland, on sterile hills at the river Lachlan. Shrub decumbent. Branches clammy. Leaves 1-2 lines long, furnished with a few hairs while young. Corolla scarlet, glabrous outside, more than twice as long as the calyx.

Aspalathus-like Prostanthera. Shrub decumbent.

17 P. Cale'yi (Benth. lab. p. 454.) branches pubescent;

leaves small, ovate-elliptic, obtuse, with revolute edges, fascicled in the axils, scarcely pubescent; floral leaves conforming to the others; flowers few, axillary, pedicellate; calyx pubescent, with quite entire lips; longer spur of anther about equal in length to the cell. ♄. G. Native of New Holland, Caley. Allied to *P. aspalathoides*, but distinct. Leaves 1-2 lines long, convex. Corolla hardly exceeding the calyx.

Caley's Prostanthera. Shrub humble.

18 P. microphy'lla (Cunningh. mss. ex Benth. lab. p. 454.) branches almost glabrous: leaves small, thick, all obtuse, quite entire, spreadingly recurved, glabrous: floral leaves similar to the others; flowers few, axillary; calyx pubescent, with nearly equal, quite entire lips; spurs of anthers adnate: longer one scarcely exceeding the cell. ♄. G. Native of the interior of New Holland, in desert places near the river Lachlan.—A humble, much branched shrub. Leaves numerous, scarcely a line long: the floral ones and bracteas similar. Corolla scarlet, hardly twice as long as the calyx, pubescent outside.

Small-leaved Prostanthera. Shrub humble.

19 P. saxi'cola (R. Br. prod. p. 509. Benth. lab. p. 454.) leaves linear-oblong, quite entire, thick, rather pilose while young; floral leaves similar to the others, exceeding the flowers: flowers axillary; calyx hairy at top; longer spurs of anther twice the length of the cell. ♄. G. Native of New South Wales, about Port Jackson; and on rocks near Bathurst, on the west side of the Blue Mountains. Stem diffuse, suffruticose at the base, R. Br.—A slender shrub, with twiggy, hairy branches. Leaves sessile, 3-6 lines long, obtuse. Corolla twice as long as the calyx, pubescent outside, ex Benth. Lips of calyx nearly equal, R. Br.

Stone Prostanthera. Shrub diffuse.

20 P. marifo'lia (R. Br. prod. p. 509.) branches hairy; leaves ovate, or elliptic-lanceolate, quite entire, with revolute edges, hispid on both surfaces; flowers axillary, subracemose; calyx hairy, with nearly equal lips; lower lip retuse; spurs of anthers exceeding the cells a little. ♄. G. Native of New South Wales, at Port Jackson, and on the Blue Mountains. Leaves distant, nearly sessile, 2-4 lines long; floral leaves equalling the calyxes. Calyx bluish at top. Corolla a little longer than the calyx.

Cat-Thyme-leaved Prostanthera. Shrub 1 to 1½ foot.

21 P. thymifo'lia (Cunningh. mss. ex Benth. lab. p. 455.) branchlets finely pubescent; leaves ovate, roundish, few-crenated, glabrous, with recurved margins; flowers shortly racemose; calyx almost glabrous, with quite entire lips; spurs of anthers equal, adnate, shorter than the cells. ♄. G. Native of New South Wales, near Port Jackson; and at Springwood. P. retusa, Sieb. fl. nov. holl. exs. but not of R. Br. Leaves on short petioles, 1-2 lines long, glabrous, or ciliated with a few hairs on the nerves beneath: floral leaves minute, deciduous. Calyx glabrous, or ciliated on the stripes. Corolla white, glabrous, exceeding the calyx a little. Nearly allied to *P. violacea*.

FIG. 83.



Thyme-leaved Prostanthera. Shrub.

22 P. viola'cea (R. Br. prod. p. 509.) leaves roundish, crenated, with revolute edges, pubescently hairy on both surfaces, as well as on the branches; racemes dense, few-flowered: calyx pubescently hairy, with quite entire lips: lower lip twice as long as the upper, and narrower; spurs of anthers equal, rather shorter than the cells. ♄. G. Native of New South Wales, at Port Jackson. Bot. reg. 1072. Leaves 3-4 lines long; floral leaves small: upper ones minute. Corolla violaceous, twice as long as the calyx. (Fig. 83.)

Var. β, glàbrior (Benth. lab. p. 455.) leaves smaller, and more glabrous. ♄. G. Native of New South Wales, near Port Jackson; at Springwood, and on the Blue Mountains. This appears to be an intermediate plant between *P. violàcea* and *P. thymifòlia*.

Violaceous-flowered Prostanthera. Fl. May, Aug. Clt. 1820. Shrub 4 to 6 feet.

23 P. inca'na (Cunningh. mss. ex Benth. lab. p. 455.) leaves ovate, obtuse, crenated, bullately wrinkled, hispid from villi on both surfaces, as well as the branches; racemes very short, dense; spurs of anthers equal, adnate, shorter than the cells. ♄. G. Native of New South Wales, on the Blue Mountains; and on rocks at the junction of the rivers Nepean and Warragumba. Shrub divaricately branched. Leaves ¼ an inch long; floral leaves smaller, sometimes coloured a little. Flowers almost sessile. Corolla purple, scarcely pubescent outside, exceeding the calyx a little.

Hoary Prostanthera. Shrub 5 to 6 feet.

24 P. rugo'sa (Cunningh. mss. ex Benth. lab. p. 456.) leaves crenated, bullately wrinkled, hispid from villi on both surfaces, as well as the branches; flowers few, axillary; calyx hispid: upper lip somewhat tridentate, and the lower one emarginate; spurs of anthers shorter than the cells. ♄. G. Native of New Holland, at the river Hunter. Habit and leaves that of *P. violàcea*, but more hispid; but the inflorescence and calyx are very distinct. Corolla almost glabrous outside.

Wrinkled-leaved Prostanthera. Shrub 5 to 6 feet. ?

25 P. rhombea (R. Br. prod. p. 509.) leaves rhombeo-orbicular, quite entire, shining above in the adult state, glandular beneath; branches and calyxes pubescent; flowers axillary; spurs of anthers shorter than the cells. ♄. G. Native of New South Wales, about Port Jackson. Branches divaricate, sparingly pilose. Leaves almost sessile, bullately convex above, 2-4 lines long; floral leaves similar to the rest, on short pedicels. Corolla scarcely exceeding the calyx.

Rhomb-leaved Prostanthera. Clt. 1823. Shrub 3 to 4 feet. ?

Cult. All the species are showy when in blossom. A light rich soil, or one composed of equal parts of loam, peat, and sand, will answer. Cuttings of young wood strike root readily in the same kind of soil, with a hand-glass over them.

LXIII. HEMIA'NDRA (from *ἡμι, hemi*, a half; and *ανηρ ανδρος, aner andros*, a male; so called in allusion to the dimidiate anthers.) R. Br. prod. p. 502. Benth. lab. p. 456.

Lon. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, striated at the base; lips flat, closed over the fruit: upper lip entire, mucronate: lower one semi-bifid. Corolla with a short ample tube, a campanulate throat, and a bilabiate limb; lips flat, spreading: upper one bifid: lower one 3-lobed, the middle lobe emarginate. Stamens 4, loosely ascending, didynamous: lower ones the longest; filaments glabrous, naked; anthers dimidiate: fertile cell ascending, and the sterile cell slender, and descending on the filament. Style almost equally bifid at apex; lobes subulate, stigmatiferous at tops.—A small shrub, with the habit of *Prostanthèra*.

1 H. pu'ngens (R. Br. prod. p. 502.) ♄. G. Native of New Holland, on the south coast, R. Br.; on hills near Swan River, Fraser.—A stiff, decumbent, densely leafy shrub; branches hard, glabrous or pubescent at the base. Leaves ses-

sile, lanceolate, very acute, pungent, quite entire, glabrous, rigid, 1-3-nerved beneath; floral leaves similar, exceeding the calyxes. Corolla glabrous, twice as long as the calyx, white, tinged or dotted with purple. Plant without any scent when dried, not aromatic like the species of *Prostanthèra*.

Pungent-leaved Hemiandra. Shrub decumbent.

Cult. For culture and propagation see *Prostanthèra*, p. 800.

LXIV. HEMIGE'NIA (from ἡμι, *hemi*, a half, and γενεα, *genea*, an offspring; in reference to only one of the cells of each anther being fertile.) R. Br. prod. p. 502. Benth. lab. p. 457.

Lin. syst. *Didynàmia*, *Gymnospèrmia*. Calyx subcampanulate, deeply 5-cleft, equal. Corolla with a short tube, which is naked inside; a wide throat, and a sub-bilabiate limb: upper lip flat, sub-bifid: lower lip spreading, trifid, the middle lobe semi-bifid. Stamens 4, somewhat ascending, didynamous: lower ones the longest. Anthers approximate; one of the cells ascending and polliniferous; the other descending, of a different form, and empty. Style shortly bifid at apex. Achenia reticulately wrinkled.—Shrubs, with the habit of *Westringia* or *Macrocòrys*. Flowers axillary, solitary. Beard of upper anthers very short, similar to the crest of the spurs in *Prostanthèra*.

1 H. purpu'rea (R. Br. prod. p. 502.) leaves 3 in a whorl; corolla shorter than the calyx. ♄. G. Native of New South Wales, at Port Jackson.—A slender shrub, with twiggy, leafy, glabrous branches. Leaves sessile, half an inch long, or longer, linear, acute, nearly terete, glabrous. Corolla bluish-purple, glabrous outside; but the lower lip is villous above.

Purple-flowered Hemigenia. Shrub.

2 H. Sieberi (Benth. lab. p. 457.) leaves 4 in a whorl; corolla exceeding the calyx. ♄. G. Native of New South Wales, about Port Jackson. H. purpùrea, Sieb. pl. nov. holl. exs. no. 191. Shrub more rigid, and larger than *H. purpùrea*. Leaves thicker, broader, and blunter, often mucronulate. Lower lip of corolla densely villous.

Sieber's Hemigenia. Shrub.

Cult. For culture and propagation see *Prostanthèra*, p. 800.

LXV. WESTRINGIA (named, by Sir J. E. Smith, after J. P. Westring, physician to the king of Sweden.) Smith, tracts, p. 277. t. 3. R. Br. prod. p. 501. Benth. lab. p. 457.

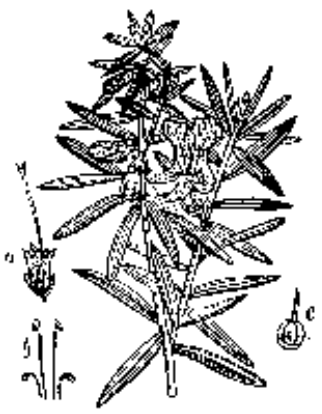
Lin. syst. *Didynàmia*, *Gymnospèrmia*. Calyx campanulate, 10-nerved, equal, 5-toothed; throat naked inside. Corolla with a short tube, which is naked inside: a wide throat, and a sub-bilabiate limb; upper lip flat, bifid, rather spreading; lower lip spreading, 3-lobed, the middle lobe rather bifid. Stamens 4, erect, distant, inclosed in the tube of the corolla; superior 2 fertile, bearing dimidiate, 1-celled, glabrous anthers: lower 2 sterile, bearing bipartite anthers, the lobes linear, dependent, and empty. Style about equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia coriaceous, reticulately wrinkled.—Shrubs. Leaves permanent, 3-4 in a whorl, quite entire; floral leaves similar to the rest, with 1-flowered axils. Flowers 3-4 in a whorl, sometimes distant, and sometimes approximate into a short terminal raceme. Bracteas minute, adpressed to the calyx.

1 W. rosmarinifórmis (Smith, tracts. p. 277. t. 3.) leaves 4 in a whorl, lanceolate, with revolute edges, almost glabrous above, and silvery beneath; floral leaves about twice as long as the calyxes; calyx silvery, having the teeth one half shorter than the tube. ♄. G. Native of New South Wales, frequent on sandy hills about Port Jackson, Botany Bay, and towards the South. Andr. bot. rep. t. 214. Conila fruticòsa, Willd. spec. 1. p. 122. Young branches covered with dense silky hairs. Leaves an inch long, sessile. Flowers 4 in a whorl, like the leaves. Corollas villous outside, and bearded inside by a few hairs, white; lower lip spotted. Filaments villous.

Rosemary-formed Westringia. Fl. May, Aug. Clt. 1791. Shrub 1 to 3 feet.

2 W. Dampie'ri (R. Br. prod. p. 501.) leaves 4 in a whorl, linear, with revolute margins, nearly glabrous above, and cinereous beneath; floral leaves twice as long as the calyxes; calyx silvery, having the teeth one half shorter than the tube. ♄. G. Native of New South Wales, about Port Jackson; and on sandy hills at King George's Sound. Hook. bot. mag. t. 3308. Hardly to be distinguished from *W. rosmarinifórmis*, except in the more numerous, narrower, longer leaves, which are less silky beneath. Corolla white; lower lip spotted with red and yellow. (*Fig* 84.)

FIG. 84.



Dampier's Westringia. Fl. May, Aug. Clt. 1803. Shrub 1 to 3 feet.

3 W. brevifòlia (Benth. lab. p. 459.) leaves 4 in a whorl, elliptic-lanceolate, with revolute margins, shining above and silvery beneath; floral leaves rather shorter than the calyxes; calyx silvery, having the teeth one half shorter than the tube. ♄. G. Native of Van Diemen's Land, Gunn. Very similar to *W. rosmarinifórmis*; but differs from it in the much smaller, more glabrous leaves, and smaller flowers.

Short-leaved Westringia. Shrub.

4 W. ri'gida (R. Br. prod. p. 501.) leaves 3 in a whorl, linear-lanceolate, with revolute edges, glabrous above, and cinereous beneath, as well as the calyxes; teeth of calyx one half shorter than the tube. ♄. G. Native of New Holland, on the south coast; frequent on rocks by the sea side in Rottnest Island; and at the mouth of Swan River, on the west coast. Very nearly allied to *W. Dampièri*; but differs in the shorter leaves being 3 in a whorl, and usually shortly mucronate.

Stiff Westringia. Fl. May, Aug. Clt. 1823. Shrub 1 to 3 feet.

5 W. cine'rea (R. Br. prod. p. 501.) leaves 3 in a whorl, linear-lanceolate, divaricate, mucronate, pungent, with revolute margins, cinereous on both surfaces, as well as the calyxes; calycine teeth very short. ♄. G. Native of New Holland, on the south coast, R. Br.; on the south-west coast, at King George's Sound; and in the Dirk Hartog Island, on the west coast, Cunningham. Hook. bot. mag. t. 3307.—A much branched, humble shrub. Leaves form of those of *W. Dampièri*. Flowers sessile. Upper lip of corolla villous, pale purple; but the lower lip is white; both lips are spotted with purple dots.

Cinereous Westringia. Fl. May, Aug. Clt. 1821. Shrub humble.

6 W. angustifòlia (R. Br. prod. p. 501.) leaves 3 in a whorl, linear; spreading, with revolute edges, scabrous above in the adult state, and cinereous beneath, as well as the calyxes; calycine teeth one half shorter than the tube. ♄. G. Native of Van Diemen's Land.

Narrow-leaved Westringia. Fl. May, Aug. Clt. 1823. Shrub.

7 W. erem'cola (Cunningh. mss. ex Benth. lab. p. 459.)

leaves 3 in a whorl, linear, with revolute margins, cinereous beneath; calyxes clothed with silky pubescence, having the teeth rather longer than the tube. ♄. G. Native of New Holland, in the interior; in deserts near the river Lachlan, and on rocks near Bathurst, Cunningh.; at the river Macquarie, and in the valleys of Lushington and Glen Finlas, ex herb. Hook. Branches divaricate, very leafy. Leaves scarcely ½ an inch long.

Desert Westringia. Shrub.

8 W. LONGIFÒLIA (R. Br. prod. p. 501.) leaves 3 in a whorl, linear, with recurved margins, and are, as well as the calyxes, green on both surfaces; calycine teeth length of tube. ♄. G. Native of New South Wales, about Port Jackson, on the banks of rivulets. Prostanthèra linearis, Sieb. fl. nov. holl. exs. but not of R. Br. Angles of branches rough. Leaves an inch long, rather scabrous above, and pilose beneath while young.

Long-leaved Westringia. Clt. 1823. Shrub 1 to 3 feet.?

9 W. GLA'BRA (R. Br. prod. p. 501.) leaves 3 in a whorl, linear-lanceolate, flat, glabrous on both surfaces, as well as the calyxes. ♄. G. Native of tropical New Holland. Allied to *W. longifòlia*; but the leaves are broader, and flat, and the whole plant quite glabrous. Leaves about an inch long. Flowers nearly sessile.

Glabrous Westringia. Clt. 1824. Shrub.

10 W. RUBIFÒLIA (R. Br. prod. p. 501.) leaves 4 in a whorl, elliptic, flattish, quite glabrous, shining; calyx nearly glabrous, having the teeth rather longer than the tube. ♄. G. Native of Van Diemen's Land. This differs from *W. rosmariniformis* in its smoothness, acuter calycine teeth, shorter, broader leaves, with the edges almost flat. Whorls 6-8-flowered.

Madder-leaved Westringia. Clt. 1820. Shrub.

Cult. For culture and propagation see *Prostanthèra*, p. 800.

LXVI. MICROCO'RYS (from *μικρος, micros*, small; and *κορυς, korys*, a helmet; probably from the upper lip or galea of corolla.) R. Br. prod. p. 502. Benth. lab. p. 460.

LIN. SYST. *Didynàmia, Gymnospèrmia.* Calyx campanulate, about 10-nerved, equal, 5-toothed; throat naked inside. Corolla with the tube equal in length to the calyx, naked inside: throat widened: limb sub-bilabiate; upper lip flattish, emarginately bifid, erectly spreading: lower lip spreading, trifid. Stamens 4, erect, distant, inclosed in the tube of the corolla: upper 2 fertile, bearing dimidiate, 1-celled, bearded anthers: lower 2 sterile, bearing bipartite anthers, the lobes linear, dependent, and empty. Style almost equally bifid at top; lobes subulate, stigmatiferous at apex.—Shrubs, with the habit of *Westringia*. Leaves 3 in a whorl. Flowers small, white or purple, solitary in the axils of the floral leaves, which are similar to the cauline leaves, and, like them, 3 in a whorl.

1 M. VIRGA'TA (R. Br. prod. p. 502.? Benth. lab. p. 461.) leaves oblong-linear, obtuse, and are, as well as the calyxes, glabrous; bracteas caducous; corolla hairy outside. ♄. G. Native of New Holland, on the south coast; and in boggy places at King George's Sound.

Twiggy Microcorys. Shrub.

2 M. BARBA'TA (R. Br. prod. p. 502.) leaves linear, obtuse, glabrous; calyxes and corollas hairy outside; bracteas caducous. ♄. G. Native of New Holland, on the south coast, R. Br.; at King George's Sound, ex herb. Hook. Very nearly allied to *M. virgàta*, but differs from it in the calyxes being densely villous, &c.

Bearded-flowered Microcorys. Shrub.

3 M. PURPU'REA (R. Br. prod. p. 502.) leaves oval-oblong, with recurved margins, furnished with a few short hairs on both surfaces, dotted beneath; branchlets silky; calyxes greyish; bracteas setaceous, permanent. ♄. G. Native of New Holland, on the south coast.

Purple-flowered Microcorys. Shrub.

Cult. For culture and propagation see *Prostanthèra*, p. 800.

Tribe VIII.

NEPE'TEÆ (the genera contained in this tribe agree with *Népeta* in the characters given below.) Benth. lab. p. 462. Calyx equal, oblique, or sub-bilabiate; upper teeth the largest. Corolla inclosed or exserted; throat usually inflated; upper lip rather arched: lower lip spreading. Stamens 4, didynamous, ascending or diverging, the upper ones the longest. The whole of this tribe may not inappropriately be considered as a single genus, ex Benth.

LXVII. LOPHA'NTHUS (from *λοφος, lophos*, a crest; and *ανθος, anthos*, a flower; in allusion to the crenated or crested middle lobe of lower lip of corolla.) Benth. in bot. reg. vol. 15. lab. p. 462. Hyssòpus species of authors.

LIN. SYST. *Didynàmia, Gymnospèrmia.* Calyx tubular, 15-nerved, rather incurved, with an oblique, 5-toothed mouth; superior teeth rather the longest. Corolla having the tube equalling the calyx, naked inside; and the limb bilabiate; the upper lip erectish, emarginately bifid: lower one spreading a little, trifid, the middle lobe broadly crenated. Stamens 4, didynamous, distant or divaricate: lower ones the shortest; anthers 2-celled: cells parallel, at length rather diverging. Style shortly bifid at apex; lobes nearly equal, subulate, stigmatiferous at apex. Achenia dry, smooth, naked.

SECT. I. CHIASTA'NDRA (probably from *χιαω, cheio*, to scatter abroad, and *ανηρ ανδρος, aner andros*, a male; perhaps from the inequality of the stamens.) Benth. lab. p. 462. Whorls collected into terminal spikes. Upper stamens declinate: lower ones ascending. Leaves entire.

1 L. URTICIFÒLIUS (Benth. lab. p. 462.) glabrous; leaves cordate-ovate, crenated, green on both surfaces; spikes dense, oblong; calycine segments linear-subulate; genitals much exserted. ♃. H. Native of North-west America, at Lewis and Clark's River, frequent. Stem branched. Bracteas rather shorter than the calyxes, coloured. Corollas purplish. Fl. July, Aug. Clt. 1826.

Nettle-leaved Lophanthus. Fl. July, Aug. Clt. 1826. Pl. 3 to 4 feet.

2 L. ANISA'TUS (Benth. in bot. reg. t. 1282.) glabrous; leaves ovate or ovate-lanceolate, acute, crenated, green above and white beneath; spikes cylindrical, interrupted at the base; calycine segments lanceolate, acute; genitals exserted. ♃. H. Native of North America, in bushy places at the rivers Missouri, Nutt.; Saskatchawan, Columbia, and Red River, Douglas. Hyssòpus anisàtus, Nutt. gen. amer. 2. p. 27. Hyssòpus discolor, Desf. cat. hort. par. ed. 3d. p. 97. Stachys foeniculum, Spreng. Pursh, fl. amer. sept. 2. p. 407. Hyssòpus Foeniculum, Spreng. cent. pl. min. cogn. p. 24. Stem branched. Flowers one half smaller than those of *L. urticifòlius*. Corollas blue, incurved. Fl. July, Sept. Clt. 1825.

Anise-scented Lophanthus. Fl. July, Sept. Clt. 1825. Pl. 2 to 3 feet.

3 L. RUGÒSUS (Fisch. et Meyer, ind. sem. hort. petrop. 1835. p. 30.) nearly glabrous; leaves wrinkled, cordate-ovate, caudately acuminated, serrately toothed, of the same colour on both surfaces; spikes dense, oblong; calycine lobes lanceolate,

acutish; genitals much longer than the corolla. ♃. H. Native of China. Stature of *L. urticifolius*; but differs in the leaves being caudately acuminated; in the calycine lobes being acutish. Corollas blue. Odour of Peppermint.

Wrinkled-leaved Lophanthus. Pl. 2 to 4 feet.

4 L. scrophulariæfòlius (Benth. lab. p. 463.) stem pubescent; leaves ovate, serrately crenated, green on both surfaces, glabrous above, and pubescent beneath; spikes cylindrical, interrupted at the base; calycine teeth lanceolate, acute. ♃. H. Native of North America, in shady humid places from Pennsylvania to Virginia, rare, Pursh; at West Chester, Drummond. Hyssòpus scrophulariæfòlius, Willd. spec. 3. p. 48. Hyssòpus catariæfòlius, Hort. par. Habit of *L. nepetàtus*; but differs in the leaves being broader, pubescent beneath, not white; and in the flowers being a little larger. Corolla blue.? Calyx coloured at top.

Scrophularia-like Lophanthus. Fl. July, Aug. Clt. 1800. Pl. 3 to 4 feet.

5 L. nepetoi'des (Benth. lab. p. 463.) glabrous; leaves ovate, acutish, serrately crenated, green on both surfaces, glabrous, or scarcely pubescent beneath; spikes cylindrical, interrupted at the base: calycine teeth ovate, bluntish. ♃. H. Native from Pennsylvania to Virginia, Pursh; near St. Louis, on the Mississippi; and near West Chester, Drummond. Hyssòpus nepetoides, Lin. spec. p. 796. Jacq. hort. vind. 1. p. 28. t. 69. Leaves 1½ to 2 inches long, rounded or subcordate at the base. Corolla yellowish-white, scarcely exceeding the calycine teeth. Achenia villous at top.

Nepeta-like Lophanthus. Fl. Aug. Oct. Clt. 1692. Pl. 3 to 5 feet.

Sect. II. Resupina'ria (so called from the almost resupinate flowers of the species.) Benth. lab. p. 464. Cymes axillary, pedunculate, loose, few-flowered. Flowers almost resupinate. Lower stamens nearly erect; upper ones ascending.

6 L. Chine'nsis (Benth. lab. p. 464.) leaves ovate or oblong, crenated: floral ones similar to the others; cymes axillary, pedunculate, loose, few-flowered. ♃. H. Native of the North of China, ex Lin.; Siberia, about Peslikova, near Nertscha, Patrin. Hyssòpus lophánthus, Lin. spec. p. 796. Jacq. hort. vind. 2. p. 85. t. 182. Hyssòpus resupinàtus, Mœnch. Népeta lophántha, Fisch. Plant rather clammy, glabrous, or scarcely pubescent. Leaves an inch long. Peduncles subsecund, bearing unilateral cymes at apex. Corollas blue: tube shortly exserted. Achenia oblong, smooth.

China Lophanthus. Fl. Aug. Sept. Clt. 1752. Pl. 1½ to 2 feet.

Cult. For culture and propagation see *Népeta*, p. 811.

LXVIII. NE'PETA (a name used by Pliny; derived from *nepa*, a scorpion; being supposed to be efficaceous against the bite of the scorpion. Linnæus derives it from Nepet, a town in Tuscany.) Lin. gen. no. 710. Schreb. gen. no. 964. Juss. gen. p. 113. ed. Usteri, p. 126. Benth. lab. p. 464. Catària, Tourn. inst. p. 202. t. 95. Mœnch. Glechòma, *Lin.*

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular, 13-15-nerved, for the most part incurved, with an obliquely 5-toothed mouth; rarely ovate, straight, with the mouth and teeth equal. Corolla having the tube slender at the base, inclosed or exserted, naked inside, the throat widened, and the limb bilabiate; upper lip straight, and rather concave, emarginate or bifid; lower lip spreading, trifid, the middle lobe large, sometimes sub-bifid, with reflexedly spreading lobes, and sometimes entire, concave, and crenulated. Stamens 4, didynamous, ascending: lower ones the shortest. Anthers usually approximate by pairs, 2-celled; cells diverging, at length divaricate. Style about equally bifid at apex; lobes subulate, stigmatiferous at apex. Achenia dry, smooth, naked.

Sect. I. Schizone'peta (from σχίζω, *schizo*, to cut; and *Népeta*; in allusion to the cut leaves of the species.) Benth. lab. p. 468. Whorls crowded: upper ones approximating into somewhat interrupted terminal spikes; cymes all sessile. Bracteas various. Calyx tubular, straight, but usually incurved, with an equal or oblique mouth. Stamens exserted a little, loosely ascending. Leaves dissected or lobed.

1 N. botryoi'des (Ait. hort. kew. 2. p. 287.) plant ascending, humble, much branched, pubescent; leaves petiolate, deeply sub-bipinnatifid: segments oblong-lanceolate or linear, obtuse, quite entire, or somewhat pinnatifid; floral leaves linear-subulate; spikes cylindrical, hardly interrupted at the base; racemes simple, spike-formed; bracteas and calycine teeth acute. ♃. H. Native of Eastern Siberia, in the Altaic region, at the rivers Katunga and Tschuja, Bunge; in the Kirghisean Steppe, Meyer. N. multífida, Lin. fil. suppl. 273. N. ánnua, Pall. in act. petrop. 1779. 2. p. 268. t. 12. N. bipinnàta, Cav. icon. 1. p. 36. t. 49. Leaves usually bipinnatifid; upper ones simply pinnatifid: floral ones minute. Bracteas minute. Calyx with an oblique mouth. Corolla cream-coloured or white, villous. Stamens rather shorter than the corolla.

Botrys-like Cat-mint. Fl. June, July. Clt. 1779. Pl. ½ to 1 foot.

2 N. tenuifòlia (Benth. lab. p. 468.) stems procumbent, glabrous, or finely pubescent; leaves petiolate, pinnate: segments oblong-linear, acute, a little serrated, narrowed at the base, almost glabrous on both surfaces; upper leaves and floral ones entire; spikes slender, interrupted at the base; corollas minute, exceeding the calyxes a very little. ♃. H. Native of China, between Pekin and Jehol, Sir G. Staunton. This species differs from *N. lavandulácea*, in the leaves, slender spikes, and minute flowers; and from *N. botryoides*, in the elongated, procumbent stems, &c.

Fine-leaved Cat-mint Pl. procumbent.

3 N. lavandula'cea (Lin. fil. suppl. 272.) plant ascending, pubescent; leaves petiolate, deeply pinnatifid at the base, with oblong or ovate, obtuse segments; floral leaves ovate, acuminated; spikes cylindrical, interrupted at the base; calycine teeth very short, ovate; corolla about twice as long as the calyx. ♃. H. Native of Eastern Siberia, in the Altaic region, in dry mountain places frequent. N. multífida, Lin. spec. 799. Rchb. icon. bot. exot. 6. p. 22. t. 530. N. lobàta, Rudolph. ex Stend. nom. p. 552. Lophánthus multífidus, Benth. in bot. reg. vol. 15. under no. 1282. Saussùrea pinnatífida, Mœnch. meth. p. 388. Lavándula foliis ovatis, &c., Gmel. sib. 3. p. 242. t. 55. Stems many, simple. Leaves sometimes all cut into 5-7 segments, sometimes deeply pinnatifid, or nearly entire. Corolla blue, incurved. Mouth of calyx hardly oblique.

Lavender-like Cat-mint. Fl. July, Aug. Clt. 1796. Pl. 1 2 feet.

Sect. II. Pychnone'peta (from πυκνος, *pychnos*, dense; and *Népeta*; so called in allusion to the dense spikes of the species.) Benth. lab. p. 469. Whorls crowded: upper ones, or all, collected into terminal spikes; cymes all sessile. Outer bracteas alone imbricate, equalling the calyxes. Calyx tubular, straight or incurved, with an equal or oblique mouth.

4 N. linea'ris (Royle, ex Benth. in Hook. misc. 3. p. 377.) stems ascending, nearly glabrous; leaves sessile, linear, acutish, quite entire, narrowed at the base, green and glabrous on both surfaces; spikes ovate, few-flowered; bracteas lanceolate-subu-

late; calyx elongated, with lanceolate teeth, which are shorter than the tube. ♃. H. Native of the Himalaya. Stems procumbent at the base. Leaves 1-2 inches long. Spike short, rather interrupted. Teeth of calyx villous. Corolla blue? with a slender exserted tube.

Linear-leaved Cat-mint. Pl. humble.

5 N. connàta (Royle, l. c.) stems erect, villous; leaves sessile, lanceolate, acute, quite entire, cordately stem-clasping at the base, rather connate, green on both surfaces, glabrous; spike oblong, dense, or rather interrupted at the base; bracteas lanceolate-subulate, ciliated, equalling the calyxes; calycine teeth subulate, longer than the tube. ♃. H. Native of the valley of Cashmere, Royle. Stems simple. Leaves 2-3 inches long. Corolla incurved, exceeding the calycine teeth a little.

Connate-leaved Cat-mint. Pl. 1 to 2 feet. ?

6 N. nervòsa (Royle, l. c.) glabrous; stem humble, erect, branched; leaves on short petioles, lanceolate, acute, serrated, rounded at the base, green on both surfaces; spike oblong, dense; outer bracteas ovate, very acute, ciliated, longer than the calyxes; calycine teeth long-subulate, about equal in height to the tube. ♃.? H. Native of the valley of Cashmere, Royle. Herb branched at the base. Leaves 1-2 inches long. Mouth of calyx almost equal. Corolla incurved, twice as long as the calyx.

Nerved-leaved Cat-mint. Pl. ½ to 1 foot.

7 N. erio'stachys (Benth. lab. p. 734.) stem erect, nearly simple, pubescent; leaves almost sessile, ovate, obtuse, crenated, roundly subcordate at the base, green above, and glabrous, hoary beneath; spike oblong, dense; bracteas oblong-linear and subulate, equalling the calyxes; calycine teeth subulate, rather longer than the tube, and are, as well as the bracteas, villous. ♃.? H. Native of Cashmere, in the valleys of Baspa and Paber, in elevated grassy places on the margins of woods, &c., Jacquemont. Allied to *N. connàta* and *N. nervòsa*, but the leaves are very distinct. Leaves 1 to 1½ inch long. Bracteas entire.

Woolly-spiked Cat-mint. Pl. 1 to 2 feet.

8 N. campe'stris (Benth. lab. p. 734.) pubescent, or nearly glabrous; stems ascending, almost simple; leaves almost sessile, lanceolate, acute, serrated, rounded at the base, green on both surfaces; spike elongated, somewhat interrupted at the base; outer bracteas lanceolate, very acute, ciliated, about equal in length to the calyxes; calycine teeth subulate, about equal in length to the tube. ♃. H. Native of Cashmere, in fields, frequent, Jacquemont. Allied in the form of the leaves to *N. nervòsa*; and in the flowers to *N. spicàta*. Spikes and bracteas altogether that of *N. spicàta*.

Field Cat-mint. Pl. 1 to 2 feet. ?

9 N. rùta (Royle, ex Benth. in Hook. bot. misc. 3. p. 378. lab. p. 469.) stem erect, glabrous; leaves petiolate, oblong-ovate, or ovate-lanceolate, crenated, broadly cordate at the base, green and glabrous on both surfaces; spikes oblong-cylindrical, rather interrupted; bracteas lanceolate-subulate, rather shorter than the calyxes; calyx glabrous, with subulate teeth, which are about equal in length to the tube. ♃. H. Native of the Himalaya, at Simlah, and in the valley of Cashmere. Stem a little branched. Leaves 2-3 inches long. Corolla incurved, twice as long as the calyx, with an exserted tube. Plant glabrous in every part except the calycine teeth, which are pubescent; and the petioles and floral leaves, which are somewhat ciliated.

Tall Cat-mint. Pl. 2 to 3 feet.

10 N. spica'ta (Benth. in Wall. pl. asiat. rar. 1. p. 64. lab. p. 470.) plant erect, nearly glabrous; leaves petiolate, ovate, obtuse, crenated, cordate at the base, green on both surfaces; racemes spike-formed, short, dense; bracteas oblong or lanceolate-linear, subulate, acuminated, equalling the calyxes; calycine teeth long-subulate, about equal in length to the tube. ♃. H. Native of Himalaya, in the provinces of Kamaon and Bhuddrinah, Wall.; Valley of Cashmere, Royle, and at Simlah, Lady Dalhousie. Betónica lævigàta, D. Don. prod. fl. nep. p. 110. Stem a little branched, with pubescent angles. Leaves 1 to 1½ inch long: floral leaves broad-ovate, sessile. Calyxes sessile, incurved, with a nearly equal mouth. Corolla incurved, twice as long as the calyx, red.? Bentham has specimens of this gathered in Cashmere by Jacquemont, having the stems and leaves sometimes hispid, and the leaves scarcely cordate at the base.

Spiked Cat-mint. Pl. ½ to 1 foot.

11 N. raphanorhi'za (Benth. lab. p. 734.) stem ascending, pubescent at the base, rather clammy; leaves petiolate, ovate, bluntish, serrately crenated, truncate at the base, rather hispid, green on both surfaces; spike short, dense, somewhat interrupted at the base; outer bracteas oblong, narrowed at both ends, almost equalling the calyxes; teeth of calyx subulate, hispid, unequal, shorter than the tube, which is nearly glabrous. Root ♃. Native of Cashmere, in grassy places, Jacquemont. Root thick, like that of *N. tuberòsa*. Leaves like those of *N. spicàta*, but smaller.

Raddish-rooted Cat-mint. Pl. ?

12 N. bi'color (Royle, ex Benth. in Hook. bot. misc. 3. p. 378. lab. p. 470.) stem ascending, villous at the base; leaves petiolate, ovate, obtuse, crenated, sub-cordate at the base, green above and hoary beneath; spike oblong, dense, or somewhat interrupted at the base; bracteas oblong-linear, very acute, equalling the calyxes; calyx nearly glabrous, with subulate teeth, which are about equal in length to the tube. ♃. H. Native of the Himalaya, Syen, and Mussooree, Royle. Leaves like those of *N. Mussini*, but smaller. Bracteas and calycine teeth ciliated.

Discoloured-leaved Cat-mint. Pl. ascending.

13 N. móllis (Benth. lab. p. 734.) stems ascending, villous; leaves on short petioles, ovate, obtuse, a little crenated, cordate at the base, clothed with soft villi on both surfaces, rather canescent beneath; superior leaves small, remote; spikes slender, rather interrupted; bracteas oblong-linear, very acute, equalling the calyxes; calyx finely pubescent, having the teeth much shorter than the tube. ♃. H. Native of the valley of Cashmere, Jacquemont. Allied to *N. discolor*. Whorls distinct, scarcely 6-flowered. Corolla pale red, the lower lip dotted with purple, not blue, as in the other species of the present section.

Soft Cat-mint. Pl. ascending.

14 N. elli'ptica (Royle, ex Benth. in Hook. bot. misc. 3. p. 378. lab. p. 470.) stem erect, rather villous; leaves sessile, ovate, elliptic, obtuse, toothed, cordate at the base, green on both surfaces, glabrous; spike interrupted at the base; floral leaves and bracteas ovate-lanceolate, very acute, ciliated, rather longer than the calyxes; calycine teeth subulate, about equal in length to the tube. ♃. H. Native of the Himalaya, from Cashmere to Syen, Royle. N. polystachya, Benth. in Hook. bot. misc. 3. p. 378. Leaves elegantly and regularly toothed, an inch long. Calyx and corolla of *N. spicàta*.

Var. β, parviflòra (Benth. lab. p. 470.) flowers smaller. ♃. H. Native of Simlah, Lady Dalhousie.

Elliptic-leaved Cat-mint. Pl. 1 to 2 feet.

15 N. gra'ta (Benth. lab. p. 735.) stem erect, branched, clothed with fine pubescence; leaves nearly sessile, ovate, obtuse, crenated, rounded at the base or sub-cordate, wrinkled, pubescent on both surfaces, or nearly glabrous above, rather canescent beneath; spikes ovate-oblong, thick, interrupted at the base; mouth of calyx very oblique, sub-bilabiate; corolla scarcely twice as long as the calyx. ♃. H. Native of Cash-

mere, in stony, grassy, and humid places, Jacquemont. Very like *N. supina*; odour of *Sálvia officinàlis*.

Grateful-scented Cat-mint. Pl. 1 to 1½ foot.

16 N. multibractea'ta (Desf. fl. atl. 2. p. 11. t. 123.) erect, pubescent; leaves on short petioles, ovate-oblong, crenated, cordate at the base, green on both surfaces; racemes spike-formed, dense, simple, somewhat interrupted at the base; bracteas linear-subulate, coloured, equalling the calyxes; tube of corolla equalling the calycine teeth. ♃. H. Native of Mount Atlas, near Tlemsen. Stems almost simple. Lower leaves 1-2 inches long, striped, purplish; whorls dense, many-flowered: lower ones distant. Corollas purple, similar to those of *N. reticulàta*.

Many-bracteed Cat-mint. Fl. July, Aug. Clt. 1817. Pl. 3 feet.

17 N. Vaillan'ti (Benth. lab. p. 471.) plant erect, nearly glabrous; leaves petiolate, broad-ovate, obtuse, cordate at the base: superior leaves almost sessile, green on both surfaces; raceme simple, interruptedly spike-formed; whorls few-flowered; outer bracteas oblong, bluntish, adpressed, striated, coloured a little, and are, as well as the calyxes, pubescent; tube of corolla shortly exserted. ♃. H. Native of the Levant. Stems many from the same root. Leaves an inch long, broadly crenated, rather pubescent on the veins beneath. Corolla glabrous, incurved, twice as long as the calyx. Calycine teeth linear-lanceolate; upper ones narrower.

Vaillant's Cat-mint. Pl. 1 foot.

18 N. Apu'lea (Ucria, ex Guss. prod. fl. sic. 2. p. 80.) plant erect, nearly glabrous; leaves sessile, ovate-lanceolate, crenated, cordate at the base, green on both surfaces; racemes spike-formed, dense, simple; bracteas oblong-lanceolate, coloured a little, about equal in length to the calyxes; calycine teeth lanceolate, longer than the tube; tube of corolla much exserted. ♃. H. Native of Sicily, on calcareous hills; and of the North of Africa, at Tangiers. N. tuberòsa, Desf. fl. atl. 2. p. 10. but not of Lin. N. rósea, Salzm. pl. tang. exs. ex Benth. lab. p. 471. Stems generally simple, glabrous, or downy. Leaves smaller, shorter, and less wrinkled than in *N. tuberósa*. Calyx 5-toothed, nearly equal. Corolla pubescent, violaceous, middle lobe of lower lip crenulated.

Apulean Cat-mint. Pl. 1 foot.

19 N. tuberósa (Lin. spec. p. 798.) stem erect, simple, rather woolly; lower leaves petiolate; superior ones sessile, ovate-lanceolate, crenated, dilated at the base, cordate, green on both surfaces, or rather woolly beneath, wrinkled; racemes spike-formed, dense, simple, elongated; bracteas broad-ovate, reticulated, coloured, equalling the calyxes; tube of corolla equalling the calycine teeth. ♃. H. Native of the South of Spain, Portugal; Atlas, near Tlemsen, Sicily. N. tuberósa, Rchb. icon. bot. eur. 5. p. 23. t. 439. N. lanàta, Jacq. obs. bot. 3. p. 21. t. 75. N. reticulàta, Desf. fl. atl. 2. p. 11. t. 124. Rchb. icon. bot. eur. 5. p. 23. t. 440. N. violàcea, Brot. N. scábra, Tausch, in bot. zeit. 1831. 1. p. 218. N. fóliosa, Mor. elench. sard. ex Linnæa, 5. p. 69.—Barrel. icon. t. 603.—Ger. emac. t. 685. f. 7. Root fasciculately tuberous. Stems beset with rather clammy loose wool. Leaves 2-3 inches long. Calyx a little incurved, with narrow-lanceolate teeth. Corollas blue, or pale purple; middle lobe of lower lip crenulated.

Tuberous-rooted Cat-mint. Fl. June, Aug. Clt. 1688. Pl. 1 to 2 feet.

20 N. Scordótis (Lin. spec. p. 798.)-plant ascending, tomentose; leaves petiolate, ovate-roundish, obtuse, cordate at the base, villously woolly on both surfaces, wrinkled; raceme simple, rather spike-formed; whorls distinct, densely many-flowered; bracteas ovate, acute, adpressed, and are, as well as the calyxes, villously woolly. ♃. H. Native of Candia. Viv. fl. libye. t. 6. f. 2. N. tomentósa, Sieb. pl. exsic.—Alp. exot. p. 284. t. 283. Leaves scarcely an inch long: floral leaves sessile. Teeth of calyx nearly equal. Corolla glabrous, white?; tube incurved, a little exserted.

Var. β, viridis (Benth. lab. p. 473.) base of plant almost glabrous, and the top very villous; leaves green on both surfaces. ♃. H. Native of Sicily. S. hirsùta, Lin. spec. 798. but not of others. N. Scordòtis, Lin. spec. 798. N. procúmbens, Mill. diet. no. 10.—Bocc. sic. p. 48. t. 25. f. 2. Corollas white.

Scordotis Cat-mint. Fl. June, Aug. Clt. 1817. Pl. 1 to 1½ foot.

21 N. circinna'ta (Willd. enum. p. 602.) stem simple, erect; spikes ovate, solitary; leaves ovate-cordate, crenated, petiolate; bracteas ovate, acute. ♃. H. Native of Cappadocia. Leaves 3 inches long.

Circinnate Cat-mint. Pl. 1 foot.?

22 N. suffi'na (Stev. in mem. soc. nat. car. mosq. 3. p. 165.) stems decumbent; leaves oval, sub-cordate, sessile, villous; bracteas subulate, about equal in length to the calyxes; whorls almost sessile, approximate. ♃. H. Native of Eastern Caucasus, in stony places at the falls of Choodgal, Steven; on Alp Tafandagh, among fragments of schistous. N. fissa, Meyer, verz. pflanz. p. 98. Meyer, in his verz. pflanz. p. 98, gives the following description of the plant: plant villous; root creeping; stem erectish, a little branched; leaves nearly sessile, ovate or oblong, bluntish, crenately toothed; cymes nearly sessile, collected into a terminal head; calyxes membranaceous, exceeding the subulate bracteas, but shorter than the tube of the corolla; lobes acuminated, mucronate. Corollas blue.

Trailing Cat-mint. Pl. decumbent.

23 N. glutinósa (Benth. lab. p. 735.) stem erect, branched, clothed with clammy pubescence; leaves sessile, ovate or lanceolate, deeply toothed, green on both surfaces, clammy, finely pubescent; raceme simple; whorls distant, or the upper ones are sub-spicate; bracteas linear, very acute: outer ones a little shorter than the calyxes; calyx elongated, striated, with short acute teeth; tube of corolla much exserted. ♃. H. Native of the Himalaya, between Poyé and Rici, Jacquemont. Leaves rather bullate above, ⅓ to ¾ inch long, the nerves very prominent beneath; inflorescence almost of *N. Itálica*, and *N. distans*, but the lower cymes are, for the most part, solitary. Calyx clothed with clammy pubescence. Corolla violaceous; tube incurved, twice as long as the calyx; lips short.

Clammy Cat-mint. Pl. 1 to 1½ foot.

Sect. III. Stegione'peta (*from στεγω, stego*, to cover, and *Nepèta*.) Benth. lab. p. 474. Cymes condensed into many-flowered whorls, often pedunculate: superior ones sub-spicate. Racemes simple, rarely remote. Bracteas about equal in length to the calyxes, or exceeding them. Calyx sometimes elongated, incurved, with an oblique mouth, and lanceolate or subulate teeth, the upper teeth the largest; sometimes almost straight, with nearly equal teeth. Corolla having the tube hardly or a little exserted, and the throat inflated.

24 N. Sibthórpi (Benth. lab. p. 474.) plant ascending or erect, branched at the base, tomentose or woolly; leaves petiolate, ovate, obtuse, crenated, cordate, wrinkled, clothed with soft hoary tomentum or wool; whorls dense, many-flowered: lower ones distant: the superior ones crowded into a terminal-oblong spike; bracteas ovate or oblong, subulately awned, equalling the calyxes; calyx ovate, with nearly equal awned teeth, which are equal in length to the tube; corolla hardly twice as long as the calyx. ♃. H. Native on mountains about Athens, and near Zara in Dalmatia. N. Itálica, Sibth. et Smith, fl. græc. 6. t. 548. but not of Lin. Stems decumbent at the base, and woody;

branches erect or ascending. Leaves ½ to 1 inch long; floral leaves sessile. Corollas purplish.

Sibthorp's Cat-mint. Pl. 1 to 2 feet.

25 N. Ita'lica (Lin. spec. p. 798.) erect, tall, clothed with fine hoary pubescence; leaves petiolate, ovate, crenated, cordate, canescent on both surfaces; racemes almost simple; bracteas linear or lanceolate, stiff, rather longer than the calyxes; calyx elongated, a little incurved, with a scarcely oblique mouth, and lanceolate, acute teeth, the superior teeth the largest; corolla hardly twice as long as the calyx. ♃. H. Native of Spain, Pavon; Mogodor, Brouss.; Italy, Lin. but is now wanting in Italian, Neapolitan, and Sicilian floras. Jacq. hort. vind. 2. p. 51. t. 112.; a variety with broader, shorter bracteas. Rchb. icon. bot. cur. 5. p. 50. t. 483. N. teucrioides, Lam. dict. 1. p. 711. N. marrubioides, Willd. enum. 2. p. 603. N. imbricàta, Lag. ex Spreng. syst. 2. p. 729. O. orientàlis, Mill. dict. no. 9. N. calamíntha, Tausch, in bot. zeit. 1831. 1. p. 219.? Catària canéscens, Mœnch. meth. p. 388. N. macrostàchya, Jan. pl. exsic. Leaves hardly an inch long. Whorls all distinct. Corollas reddish white; tube almost inclosed.

Italian Cat-mint. Fl. June, Aug. Clt. 1640. Pl. 1½ to 2 feet.

26 N. di'stans (Royle, ex Benth. in Hook. bot. misc. 3. p. 379. lab. p. 475.) erect, tall; stem villous; leaves petiolate, ovate-lanceolate, obtuse, crenated, deeply cordate at the base, wrinkled, villous beneath; whorls dense: lower ones remote: upper ones approximate; bracteas linear-lanceolate, about equal in length to the calyxes; calyx elongated, incurved, with an oblique mouth: the superior teeth lanceolate: lower ones subulate; all setaceously acuminated; corolla about twice as long as the calyx. ♃. H. Native of the Himalaya, at Mussooree, and Syen, Royle. Allied to *N. Itálica*, but differs in the simple depauperate raceme, in the lower leaves being more wrinkled, densely villous beneath, and in the calycine teeth being all setaceous at top. Superior leaves few, remote, and smaller.

Distant-whorled Cat-mint. Pl. 2 to 3 feet.

27 N. cilia'ris (Benth. in Wall. pl. rar. asiat. 1. p. 64. lab. p. 475.) erect, clothed, with hoary pubescence; leaves petiolate, broadly-ovate, obtuse, crenated, cordate at the base, clothed with hoary tomentum beneath or on both surfaces; racemes almost simple; bracteas ovate or broadly lanceolate: outer ones almost equal in length to the calyxes; calyx elongated, pubescent, incurved, with an oblique mouth, and lanceolate-subulate rather spreading teeth; corolla about twice as long as the calyx. ♃. H. Native of Nipaul, and towards Cashmere. Habit and inflorescence of *N. ruderàlis*, from which it differs in the branches and leaves being usually canescent, &c.

Ciliated Cat-mint. Pl. 1 to 2 feet.

28 N. rudera'lis (Hamilt. ex Benth. in Wall. pl. asiat. rar. 1. p. 64.) erectish, clothed with fine pubescence; leaves petiolate, ovate, obtuse, crenated, cordate at the base, pubescent on both surfaces, rather greenish; racemes nearly sessile, secund; cymes dense: lower ones pedunculate; bracteas subulate: outer ones equalling the calyxes; calyx ovate, pubescent, with an oblique mouth and subulate teeth, the superior teeth the longest; corolla a half longer than the calyx. ♃. H. Native of Nipaul, at the foot of the mountains, Hamilt; Hurdwar and Rajemahl, Wall; Hindostan, Heyne?; Saharumpur and Deyra Dhoon, Jacquemont. Glechòma erécta, Roxb. fl. ind. 3. p. 7. Thymus nepetoides, D. Don. prod. fl. nep. p. 113. Glechòma Hindostàna, Roth. nov. pl. spec. p. 258. Glechòma Indica, Spreng. syst. 2. p. 727. Leaves 1½ inch long. Corollas small, purplish.

Rubbish Cat-mint. Pl. 1 to 2 feet.

29 N. clinopodioi'des (Royle, ex Benth. in Hook. bot. misc. 3. p. 379. lab. p. 476.) plant ascending, clothed with fine pubescence; leaves petiolate, ovate, obtuse, crenated, broadly subcordate at the base, green on both surfaces, and finely pubescent; racemes almost simple; whorls rather loose, many-flowered, subsecund; bracteas subulate, rather shorter than the calyxes; calyx tubular, pubescent, with an oblique mouth; the superior teeth lanceolate; and the lower teeth subulate; corolla scarcely exceeding the calyx. ♃. H. Native of the banks of the river Jumna, Royle. Allied to *N. ruderàlis*, but differs in the calyxes being smaller and slenderer, in the corollas being small, scarcely exceeding the calyxes.

Clinopodium-like Cat-mint. Pl. 1 to 2 feet.?

30 N. leucophy'lla (Benth. lab. p. 476.) plant ascending or erectish; branches clothed with hoary tomentum; leaves petiolate, ovate or roundish, crenated, truncate at the base or cordate, green above, wrinkled, clothed with white tomentum beneath; racemes nearly simple, secund; cymes nearly sessile, dense, many-flowered; bracteas subulate, rather shorter than the calyxes; calyx tubular, clothed, with hoary pubescence, with an oblique mouth and lanceolate-subulate teeth: the superior teeth the longest; corollas a half longer than the calyx. ♃. H. Native of Himalaya, at Mussooree, Royle; Sinlab, Jacquemont. This differs from *N. ruderàlis* in the leaves being small, wrinkled, and white beneath.

White-leaved Cat-mint. Pl. 1 to 2 feet.

31 N. floccòsa (Benth. lab. p. 736.) erect, divaricately branched, clothed with white floccose wool; leaves petiolate, roundish, cordate at the base; racemes very loose, a little branched; cymes head-formed, few, many-flowered, on long peduncles; bracteas linear-subulate, equalling the calyxes. ♃. H. Native of the North of India, between Nako and Chango, Jacquemont. This species is distinguished from *N. ruderàlis* in the wool, form of leaves, and inflorescence. Corolla small, hardly exceeding the calyx.

Floccose Cat-mint. Pl. 1 to 2 feet.?

Sect. IV. Cata'ria (from *catus*, a cat; so called because cats are fond of *N. catària*.) Benth. lab. p. 476. Cymes usually condensed into many-flowered whorls: lower cymes pedunculate. Racemes simple or panicled. Bracteas shorter than the calyxes, usually very short. Calyx elongated, incurved, with an oblique, rarely erectish mouth, and lanceolate teeth, the superior teeth generally the largest. Tube of corolla a little exserted, with an inflated throat.

32 N. gracilifló'ra (Benth. in Wall. pl. rar. asiat. 1. p. 65. lab. p. 476.) ascending, glabrous, or finely pubescent; leaves petiolate, ovate or lanceolate, obtuse, crenated, cordate at the base, finely pubescent on both surfaces, rather canescent beneath; racemes branched; cymes very loose, dichotomous; peduncles and branches elongated, filiform; bracteas subulate, shorter than the calyxes; calyx ovate-tubular, with an oblique mouth and subulate teeth; corolla scarcely twice as long as the calyx. ♃. H. Native of the East Indies, in the province of Hurdwar, Wall; Deyra Dhoon, Royle. Stem branched at the base; branches very slender. Leaves on long petioles, scarcely an inch long. Corollas small, blue. This is intermediate between Sect. *Catària* and Sect. *Stagionépeta*.

Slender-flowered Cat-mint. Pl. 1 to 2 feet.

33 N. micra'ntha (Bunge, in Ledeb. fl. alt. 2. p. 401.) plant ascending, humble, pubescent, or glabrous; leaves petiolate, ovate, obtuse, crenated, rounded at the base, pale on both surfaces; racemes loose, branched; bracteas scarcely longer than the pedicels; calyx tubular, incurved, pubescent, with an oblique mouth; corolla scarcely exceeding the calyx. ☉. H. Native of Siberia in Altaia; on the mountains of Arkaul and Dolenkara. Ledeb. fl. ross. alt. ill. t. 412. Corollas blue.

Small-flowered Cat-mint. Pl. 1 foot.

34 N. Cata'ria (Lin. spec. p. 796.) plant erect, tall, clothed

with hoary pubescence; leaves petiolate, ovate, acute, deeply crenated, cordate at the base, green above, but clothed with hoary tomentum beneath; racemes a little branched; whorls dense, many-flowered; bracteas scarcely longer than the pedicels; calyx ovate, pubescent, a little incurved, with an oblique mouth and lanceolate-subulate rather spreading teeth; corolla one half longer than the calyx. ♃. H. Native almost throughout the whole of Europe, and Middle Asia, on walls, in hedges, and in waste places; plentiful in Britain. Smith, engl. bot. t. 137. Fl. dan. t. 580. Catària vulgàris, Mœnch. meth. p. 387. N. vulgàris, Lam. fl. fr. 2. p. 398. N. citriodòra, Becker, fl. francof. p. 218. N. minor, Mill. dict. no. 2. N. Americàna, Mœnch. ex Steud. nom. bot. p. 552. ?—Sabb. hort. rom. 3. t. 80.—Ioh. icon. 511. f. 1. Pubescent or tomentosely canescent. Leaves 1½ inch long. Lower cymes on short peduncles. Corollas white, with a tinge of red, spotted with purple. The whole plant has a strong scent between mint and pennyroyal. It is called cat-mint, because cats are very fond of it, especially when it is withered, when they will roll themselves on it, tear it to pieces, and chew it with great pleasure. Ray observes, that plants, which he transplanted from the field into his garden, were always destroyed by cats, unless he protected them with thorns till they had taken root and came into flower, but that they never meddled with plants raised from seed; hence the old saying: "if you set it the cats will eat it; if you sow it the cats don't know it." Mr. Miller has confirmed this by his own experience, having frequently set a plant from another part of the garden within two feet of others which came up from seed, when the former was torn in pieces and destroyed by the cats, whilst the latter remained untouched. The true reason of this difference is assigned by Ray; that cats are fond of it in a withering state, or when the peculiar scent of the plant is excited by being handled or bruised in gathering or transplanting.

An infusion of Cat-mint is deemed a specific in chlorotic cases. Two ounces of the expressed juice may be given for a dose. Sheep are said to eat it; but all other domestic animals are said to refuse it.

Var. β, cándida (Benth. lab. p. 477.) leaves deeply crenated, pale above and white beneath. ♃. H.

Cat-mint, Common. Fl. July, Sept. Britain. Pl. 2 to 4 feet.

35 N. Nepetélla (Lin. spec. p. 797.? Benth. lab. p. 477.) plant erect, pubescent, or clothed with hoary tomentum; leaves on short petioles, lanceolate, crenated, rounded or cordate at the base, clothed with hoary pubescence or tomentum on both surfaces; racemes many-flowered, nearly simple; bracteas scarcely longer than the pedicels; calyx tubular, incurved, with an oblique mouth; corolla twice as long as the calyx. ♃. H. Native of the South of Europe, especially on the mountains; as of Spain, Provence, Switzerland; Italy, from Piedmont and Liguria to Naples. This is a very variable plant, especially in gardens. Corollas usually twice the size of those of *N. Catària*, white, purplish, or blue.

Var. α, màjor (Benth. lab. p. 477.) raceme elongated, many-flowered; flowers white or purplish. ♃. H. Native of shady places. N. Nepetélla, All. ped. 1. p. 37. t. 2. f. 1. bad. Rchb. icon. bot. eur. 3. p. 35. t. 261. Catària Nepetélla, Mœnch. meth. p. 388. N. amethýstina, Desf. ex Poir. suppl. 3. p. 206. N. paniculàta, Mill. dict. no. 4. Stems 3-4 feet high. Whorls as in *N. Catària*, large and dense, many-flowered, disposed in a long raceme.

Var. β, hùmilis (Benth. lab. p. 478.) racemes short, dense; flowers white or purplish. ♃. H. Native in dry exposed places. N. lanceolàta, Lam. dict. 1. p. 710. Rchb. icon. bot. eur. 6. p. 20. t. 536. N. angustifòlia, Vahl, symb. 1. p. 41. N. graveolens, Vill. dauph. 2. p. 366. N. Arragonénsis, Lam. dict. 1. p. 703. Plant humble. Racemes 2-3 inches long.

Var. γ, incàna (Benth. lab. p. 478.) leaves clothed with hoary tomentum, and more wrinkled. ♃. H. N. incàna, Ait. hort. kew. 2. p. 285.

Small-Nepeta Cat-mint. Fl. July, Sept. Clt. 1728. Pl. 1 to 4 feet.

36 N. ovánea (Stev. in mem. soc. nat. cur. mosq. 3. p. 265. Benth. lab. p. 478.) ascending, humble, paniculately branched; branches clothed with hoary tomentum; leaves petiolate, small, ovate or oblong, crenated, wrinkled, clothed with hoary tomentum on both surfaces; racemes numerous, short, secund; bracteas very short; calyx tubular, incurved, clothed with hoary tomentum; corolla scarcely longer than the calyx: tube inclosed. ♃. H. Native of Eastern Caucasus, in gravelly places at the Falls of Chodgal, Steven; at the Falls of the Terek, and in stony places near Nartzana, C. A. Meyer. N. incàna, Bieb. fl. cauc. 2. p. 40. 3. p. 392. Rchb. icon. bot. eur. 4. t. 305. and numerous other authors, but not of Aiton. N. acinifòlia, Spreng. pug. 1. p. 41. syst. 2. p. 727. N. mollissima, Tausch, in bot. zeit. 1831. 1. p. 219.? Stems trichotomously paniculed, as in *N. Ucràinica*, but the branches are terminated by short unilateral racemules, not corymbs. Corollas small, blue or white.

Blue-flowered Cat-mint. Pl. 1 foot.?

37 N. Meyéri (Benth. lab. p. 478.) plant humble, ascending; branches finely pubescent; leaves petiolate, ovate, obtuse, crenated, cordate at the base, greenish on both surfaces, pubescent beneath; racemes nearly simple, many-flowered; bracteas much shorter than the calyxes; calyx elongated, incurved, pubescent, with an oblique mouth; corollas scarcely half as long again as the calyx, with an inclosed tube. ♃. H. Native of Caucasus, in dry, stony places on the Talusch mountains near Swant. N. micrántha, Meyer, verz. pflänz. p. 91. but not of Bung. An intermediate plant between *N. Mussini* and *N. Catària*. Cauline leaves an inch long; upper floral leaves minute. Corollas like those of *N. Catària*.

Meyer's Cat-mint. Pl. ½ to 1 foot.

38 N. agrestis (Lois. nouv. not. 25.? Benth. lab. p. 479.) erect, almost glabrous; leaves petiolate, ovate-lanceolate, deeply toothed, subcordate at the base, nervosely wrinkled, green on both surfaces; racemes elongated, nearly simple; bracteas scarcely longer than the pedicels; calyx elongated, incurved, villous, with an oblique mouth; corolla scarcely twice as long as the calyx, having the tube shortly exserted. ♃. M. Native of Corsica and Spain, on Mount Urchillo, near Orcelia. Stem a little branched, clammy. Leaves ½ to 1 inch long, rather clammy. Calyx clammy, villous. Corollas white, a little larger than those of *N. Catària*.

Field Cat-mint. Pl. 2 feet.

39 N. azurea (R. Br. in append. to Salt. abyss. Benth. lab. p. 479.) plant erect; leaves sessile, ovate or ovate-oblong, crenated, subcordate at the base, wrinkled, canescent beneath; racemes simple; cymes nearly sessile; whorls dense, the upper ones subspicate; bracteas minute; calyx subovate, incurved, pubescent, with an oblique mouth; corolla twice as long as the calyx. ♃. H. Native of Abyssinia, Salt. Stems finely tomentose. Leaves green above. Corolla blue, with the tube a little exserted, and attenuated at the base.

Azure-flowered Cat-mint. Pl. 1 to 2 feet.

40 N. racemòsa (Lin. spec. 1. p. 711.) plant erect, pubescent; leaves petiolate, ovate, obtuse, crenated, cordate at the base, green and wrinkled above, and canescent beneath; racemes loose, nearly simple; cymes almost sessile, or the lower ones are pedunculate, few-flowered; bracteas much shorter than the calyxes; calyx elongated, incurved, clothed with soft wool, with

an oblique mouth; corolla twice as long as the calyx, with a shortly exserted tube. ♃. H. Native of the Levant, Tournefort. Rchb. icon. bot. eur. 6. p. 19. t. 585. This species differs from *N. Mussini* in the erect stem.

Racemose-flowered Cat-mint. Pl.

41 N. Mussi'ni (Henkel, adumb. pl. p. 15. Benth. lab. p. 480.) diffuse; branches ascending, clothed with hoary pubescence; leaves petiolate, ovate, obtuse, crenated, cordate at the base, green and wrinkled above, and canescent beneath; racemes loose, simple, secund; cymes nearly sessile, few-flowered; bracteas much shorter than the calyxes; calyx elongated, incurved, clothed with soft wool, with an oblique mouth; corolla twice as long as the calyx, with a shortly exserted tube. ♃. H. Native of Caucasus and Iberia, on stony hills. Rchb. icon. bot. eur. 6. p. 20. t. 587. N. longiflòra, Sims, bot. mag. t. 923.? had, but not of Vent. N. salviæfòlia, Pers. ench. 2. p. 115. N. cyanótricha, Tausch, in bot. zeit. 1831. 1. p. 218.? N. argéntea, N. diffùsa, N. incàna, N. lamiifòlia, N. teucrioìdes, N. violàcea, N. Willdenoviàna, &c. &c. Hort. Corollas pale blue, a little smaller than those of *N. coloràta*. The leaves in the cultivated specimens are very like those of *N. coloràta*, but those of the wild specimens are much smaller, more wrinkled, and more woolly beneath.

Mussin's Cat-mint. Fl. May, Aug. Clt. 1804. Pl. diffuse, 2 feet.

42 N. grandiflòra (Bieb fl. cauc. 2. p. 42.) erect, almost glabrous; leaves on short petioles, ovate, obtuse, crenated, cordate at the base, green above, and pale and canescent beneath; racemes a little branched at the base; cymes pedunculate, many-flowered; bracteas much shorter than the calyxes; calyx elongated, incurved, nearly glabrous, with an oblique mouth; corolla twice as long as the calyx, with a shortly exserted tube. ♃. H. Native throughout Caucasus, in grassy mountain woods; island of Melos. Rchb. icon. bot. eur. 3. p. 68. t. 279. N. melissæfòlia, Pers. ench. 2. p. 115. and many other authors, but not of Lam. N. lamiifòlia, Hoffm. hort. mosc. ex Bieb. N. coloràta, Willd. enum. 2. p. 602. N. argéntea, N. grándis, N. incàna, N. teucrioìdes, N. violàcea, &c. Hortul. Stems many feet high, branched, glabrous or pubescent towards the tops. Corollas blue, 7 lines long, incurved. This with *N. Mussini* have produced various hybrids in the gardens.

Great-flowered Cat-mint. Fl. June, Aug. Clt. 1806. Pl. 4 to 6 feet.

43 N. betonicæfòlia (Meyer, verz. pflanz. p. 92.) erect, almost simple, villously tomentose; lower leaves petiolate: superior ones sessile, ovate-lanceolate, crenated, cordate at the base, green on both surfaces, and clothed with soft pubescence; racemes short, simple; whorls all dense; bracteas much shorter than the calyxes; calyx elongated, villous, with a scarcely oblique dilated mouth; corolla twice as long as the calyx, with an exserted tube, which is attenuated at the base. ♃. H. Native of Caucasus, on the Talusch mountains. This differs from *N. grandiflòra*, in the superior part of the stem, leaves, calyxes, and corollas being clothed with soft tomentum; and in the racemes being short and spike-formed.

Betony-leaved Cat-mint. Pl. 2 to 4 feet.?

44. N. salviæfòlia (Royle, ex Benth. in Hook. bot. misc. 3. p. 379.) erect, clothed with hoary tomentum; leaves petiolate, ovate, or ovate-lanceolate, obtuse, crenated, wrinkled at the base, clothed with soft tomentum on both surfaces, canescent above and white beneath; racemes loose, almost simple; cymes pedunculate, elongated, many-flowered; bracteas very short; calyx oblong, erect, pubescent, with an oblique mouth; corolla more than twice as long as the calyx. ♃. H. Native of the Valley of Cashmere, Royle; on the mountains of Pyr-Pundjal and Illamabad, Jacquemont. Leaves hardly an inch long. Corolla slender, 6-7 lines long.

Sage-leaved Cat-mint. Pl.

45 N. melissæfòlia (Lam. dict. 1. p. 711. but not of Bieb.) plant erect, pubescent; leaves petiolate, ovate, obtuse, crenated, cordate at the base, green on both surfaces, villous: the superior ones sessile, acute; racemes loose, nearly simple; bracteas shorter than the calyxes; calyx elongated, incurved, pubescent, with an oblique mouth; corolla scarcely twice as long as the calyx. ♃. H. Native of the Grecian Archipelago, on arid hills; as of Candia and Melos, &c. Desf. in ann. mus. 10. p. 301. t. 23. Allied to *N. grandiflòra*. Hairs on stem rather glandular. Leaves scarcely an inch long. Calyx coloured a little. Corollas blue or purple, a little smaller than those of *N. grandiflòra*. Perhaps this species is referrible to Sect. *Macronépeta*. Branches of root fusiform.

Balm-leaved Cat-mint. Fl. July, Aug. Clt. 1752. Pl. 1 to 2 feet.

Sect. V. Macrone'peta (from μακρος, *macros*, long, and Nepeta; in allusion to the long corollas.) Benth. lab. p. 482. Cymes pedunculate, few-flowered. Racemes terminal, very loose, a little branched. Superior floral leaves or all bracteaformed. Calyx elongated, with an oblique mouth and lanceolate or ovate teeth; the superior teeth rather the broadest. Corolla much exserted, with a slender exserted tube, and an inflated throat.

46 N. macra'ntha (Fisch. hort. gorenk. Benth. lab. p. 482.) erect, branched, nearly glabrous; leaves on short petioles, ovate-lanceolate, serrately crenated, truncate, or subcordate at the base, green on both surfaces; racemes elongated, rather loose; bracteas minute; calyx incurved, with lanceolate teeth; corolla 3 times as long as the calyx, having the tube much exserted and attenuated at the base. ♃. H. Native of Siberia, among the Altaian mountains. Dracocéphalum Sibíricum, Lin. spec. 830. Pall. fl. ross. 3. t. 13. Sims. bot. mag. 2185. Moldávica elàta, Mœnch. meth. p. 410. Moldávica Sibírica, Mœnch. ex Steud. nom. bot. p. 285. Dracocéphalum, &c. Gmel. sib. 3. p. 334. t. 51. Root creeping. Leaves 2-3 inches long. Corolla showy, 1 to 1½ inch long, blue.

Long-flowered Cat-mint. Fl. June, Aug. Clt. 1760. Pl. 1 to 2 feet.

47 N. Govania'na (Benth. lab. p. 482.) plant erect, branched, clothed with fine pubescence; leaves on short petioles, ample, oblong-elliptic, crenated, rounded at the base; racemes elongated, loose, a little branched, bracteas minute; calyx a little incurved, with lanceolate teeth; corolla 4 times as long as the calyx, with a very slender much exserted tube. ♃. H. Native of the Himalaya; as in Cashmere, Kidarkonta, and Kanaour, Royle; Sirmore and Kamaon, Wall. Dracocéphalum Govaniànum, Wall. pl. rar. asiat. 2. p. 65. Allied to the preceding. Corollas yellowish.

Govan's Cat-mint. Pl. 2 to 3 feet.?

48 N. ere'cta (Benth. lab. p. 482.) stem erect, pubescent; leaves petiolate, ovate-lanceolate, obtuse, crenated, wrinkled, cordate at the base, rather canescent beneath; racemes elongated, rather loose; bracteas minute; calyx rather incurved; corolla more than twice as long as the calyx, having the tube much exserted and attenuated at the base. ♃. H. Native of Kamaon, on the mountains, Royle. Dracocéphalum erèctum, Royle, ex Benth. in Hook. bot. misc. 3. p. 380. Allied to *N. macrántha*, but differs in the leaves being wrinkled and canescent beneath, and in the flowers being a little smaller. Perhaps both this and the preceding are varieties of *N. macrántha*. Corolla violaceous.

Erect Cat-mint. Pl. 2 to 3 feet.?

49 N. pérsica (Meyer, verz. pflanz. p. 93.) erectish, quite glabrous; leaves petiolate, ovate-roundish, broadly subcordate at the base, deeply crenated, green on both surfaces; racemes very loose, few-flowered, a little branched; calyx incurved, with oblong teeth; corolla 3 times longer than the calyx, with a very slender much exserted tube. ♃. H. Native of Caucasus, in stony places on the Talusch mountains. N. láxa, Benth. lab. p. 483. Stems decumbent at the base. Leaves scarcely an inch long. Corollas blue, 10-12 lines long.

Cleft Cat-mint. Pl. 2 to 3 feet.

50 N. longiflòra (Vent. hort. cels. t. 66.) plant, ascending, rather canescent; leaves on short petioles, superior ones sessile, all ovate, crenated, cordate at the base, wrinkled, pale on both surfaces; racemes elongated, few-flowered; bracteas scarcely equalling the pedicels; calyx a little incurved, with lanceolate teeth; corolla about 3 times as long as the calyx, with a very slender much exserted tube. ♃. H. Native of Persia, between Teheran and Ispahan, and of Caucasus. Stems decumbent at the base. Calyx blue, as well as the corolla. (fig. 77.)

Fig. 77.



Long-flowered Cat-mint. Fl. June, Aug. Clt. 1802. Pl. 1 to 2 feet.

51 N. brevifòlia (Meyer, verz. pflanz. p. 93.) decumbent, pubescent; leaves on long petioles, roundish, crenated, broadly cordate, clothed with hoary pubescence on both surfaces, or only beneath; racemes few-flowered, loose; bracteas shorter than the calyxes; calyx incurved, pubescent, with lanceolate teeth; corolla more than twice as long as the calyx, with a slender much exserted tube. ♃. H. Native of Eastern Caucasus, on the Alps of Tafandagh. N. longiflòra, Fisch. ex Hortul. Habit of *N. longiflòra*, but more humble. Calyx coloured at top. Corollas blue, 8-9 lines long, form of those of *N. longiflòra*.

Short-leaved Cat-mint. Pl. decumbent.

52 N. cal'sea (Willd. spec. 3. p. 50.) erect,? pubescent; leaves petiolate, ovate, obtuse, deeply crenated, cordate at the base, clothed with hoary pubescence on both surfaces: racemes nearly simple; bracteas scarcely longer than the pedicels; calyx elongated, incurved, villous, with an oblique mouth; corolla twice as long as the calyx, with a shortly exserted slender tube. ♃. H. Native of the Levant. Allied to *N. Cataria*, but differs in the smaller stature, in the leaves being hoary on both surfaces, and in the flowers being twice as long; and from *N. Mussini* in the racemes being scarcely secund, in the calyxes being villous, not woolly, and in the cymes being almost sessile. Corollas blue. Very nearly allied to *N. brevifòlia*, but the racemes are more dense.

Curled-leaved Cat-mint. Fl. July, Aug. Clt. 1800. Pl. 2 feet.?

53 N. septemcrena'ta (Ehrenb. mss. ex Benth. lab. p. 484.) erect, clothed with rather clammy villi; lower leaves petiolate, superior ones sessile, all roundish, obtuse, crenated, cordate at the base, green on both surfaces; racemes elongated, few-flowered; bracteas scarcely longer than the pedicels; calyx a little incurved, with lanceolate teeth; corolla more than twice as long as the calyx, with a very slender much exserted tube. ♃. H. Native of Egypt, Ehrenberg; in the desert of Sinai, Bové. Leaves like those of ground-ivy, but thinner. Corolla 7-8 lines long, blue, slender.

Septemcrenate Cat-mint. Pl. 1 foot.

54 N. teucrifòlia (Willd. enum. p. 602.) ascending; leaves ovate, cordate, obtuse, petiolate, toothed, pubescent; cymes pedunculate, few-flowered; corolla with a very long filiform tube. ♃. H. Native of Armenia. Leaves on long petioles not serrated, but furnished with 4-6 deep teeth on each side, half an inch long. Racemes composed of dense few-flowered cymes. Corollas blue or purple.

Germander-leaved Cat-mint. Fl. July, Aug. Clt. 1816. Pl. ascending, 1½ foot.

55 N. lamiifòlia (Willd. enum. p. 602.) ascending, pubescent; leaves ovate, cordate, obtuse, petiolate, serrated; cymes pedunculate, many-flowered; tube of corolla filiform, curved. ♃. H. Native of Armenia. Habit of *Lámium amplexicaúle*. Flowers verticillately capitate at the tops of the branches.

Dead-nettle-leaved Cat-mint. Fl. July, Aug. Clt. 1806. Pl. ½ foot.

Sect. VI. Glechòma (from γληχων, *glechon*, the Greek name of a kind of thyme.) Benth. lab. p. 484. Glechòma, Lin. and other authors. Chamæclèma, Moench, meth. 387. Whorls axillary, few-flowered. Floral leaves conforming to the cauline leaves. Calyx tubular, a little incurved, with an oblique mouth and lanceolate-awned teeth, the superior teeth drawn out. Corolla exserted, having the tube dilated beyond the calyx.—Creeping herbs.

56 N. Glechòma (Benth. lab. p. 485.) procumbent, creeping; leaves petiolate, roundish, crenated, cordate at the base, green on both surfaces; bracteas hardly equalling the pedicels; calyxes villous; corollas 3 times as long as the calyx. ♃. H. Native throughout Europe and the North of Asia, in hedges, ditches, in woods and waste places; plentiful in Britain. Glechòma hederàcea, Lin. spec. p. 802. Hook. fl. lond. vol. 2. with a figure. Woodv. med. bot. t. 28. Fl. dan. t. 789. Mart. fl. rust. t. 61. Smith, engl. bot. t. 853. Calamíntha hederàcea, Scop. carn. no. 780. Chamæclèma hederàcea, Moench. meth. p. 393. Chamæclèma vulgàre, Vaill. bot. par. t. 6. f. 4-5-6. Glechòma micrántha, Bonningh. ex Rchb. fl. germ. exc. p. 316. Stems more or less villous. Leaves about an inch long; superior ones smaller, but similar. Corollas blue, 6-7 lines long, varying to white. The leaves of ground ivy were formerly thrown into the vat with ale to clarify it and to give it a flavour. This was called gill-ale, ground ivy being named gill or gell, and creep by ground, in some places. From this use of the plant and the form of its leaves, it has also the names *ale-hoof* and *tun-hoof*, but it has gradually grown into disuse since the introduction of hops. The expressed juice, mixed with a little wine, and applied morning and evening, destroys the white specks upon horses' eyes. Ground ivy has a peculiar strong smell and a bitterish taste, somewhat aromatic. It was formerly in considerable credit for pectoral, detergent, aperient, diuretic, corroborant, and other qualities, and was recommended particularly in pulmonary and nephritic complaints. In obstinate coughs it is still a favourite remedy with the common people. It acts also as an errhine, and is consequently useful in headache. It is usually taken in the form of an infusion or tea; the expressed juice is also used with honey in coughs; a conserve or syrup is also made with it. A plant so common and so much esteemed by the multitude has, of course, many local names besides those mentioned.

Var. β, hirsùta, (Benth. lab. p. 485.) plant hairy in every part. ♃. H. Native of Germany and Hungary, in shady mountain places. Glechòma hirsùta, Waldst. et Kit. pl. rar. hung. 2. p. 124. t. 119. Glechòma mágna, Merat, fl. par. p. 225.

Var. γ, parviflòra (Benth. lab. p. 485.) all parts of the plant smaller and more glabrous than the species. ♃. H. Glechòma heterophýlla, Opiz, ex Rchb. fl. germ. exc. p. 316. Glechòma intermèdia, Schrader.

Ground Ivy, Common. Fl. April, June. Britain. Pl. creeping.

57 N. nivàlis (Benth. lab. p. 737.) root creeping; stems humble; leaves sessile, roundish, wrinkled, green on both surfaces; bracteas scarcely equalling the pedicels; corollas resupinate, with a twisted tube; superior stamens exserted. ♃. H. Native of the north-east of India, on high, gravelly mountains about Yurpo, Jacquemont. Glechòma nivàlis, Jacquem. mss. Habit, inflorescence, and scent, almost the same as that of *N. Glechòma*. Stems branched at the base; floriferous ones erectish, simple, pubescent. Superior cauline leaves and floral ones approximate, ½ to 1 inch long, hardly pubescent, cordately stem-clasping. Corollas pale blue.

Snowy Ground-ivy. Pl. ½ foot.

58 N. Thibe'tica (Benth. lab. p. 737.) stems diffuse, humble, much branched; leaves roundish, on short petioles, truncately cuneated at the base, rather coriaceous, pubescently woolly; bracteas longer than the pedicels; corollas straight, with a dilated throat; genitals shorter than the corolla. ♃. H. Native of the north-eastern parts of India, near Koo-Khio-ghung, and Lari, Jacquemont. Glechòma Thibética, Jacquem. mss. Very nearly allied to *N. nivàlis*, but differs in the corollas being larger, and in the calyxes and bracteas being clothed with soft villi.

Thibet Ground-ivy. Pl. diffuse.

59 N. longibractea'ta (Benth. lab. p. 737.) stems diffuse, humble, much branched; leaves petiolate, ovate-roundish, truncately cuneated at the base, clothed with soft villi; whorls dense, crowded at the tops of the branches; bracteas linear, equalling the corollas; calyx tubular, having the teeth equal in length to the tube; corolla straight, having the throat a little dilated; genitals inclosed. ♃. H. Native of the north-east of India, in stony places, near Kang-rang-ghan, Jacquemont. This is an intermediate plant between Sect. *Glechòma* of *Népeta*, and the genus *Marmorìtis*. Habit more loose than in *N. nivàlis* and *N. Thibética*. Corollas azure blue, pubescent outside.

Long-bracteed Ground Ivy. Pl. diffuse.

Sect. VII. Orthone'peta (from ὀρθος, *orthos*, straight, and Népeta; in reference to the straight calyxes of the species.) Benth. lab. p. 485. Cymes of flowers dense, on short peduncles. Whorls distant, racemose. Racemes simple, but usually paniculately branched. Calyx ovate-tubular, erectish, with nearly equal, subulate, stiff, but not pungent, teeth. Corollas exserted. Tall herbs, with nearly sessile leaves.

60 N. latifòlia (D.C. fl. fr. 3. p. 528.) erect, tall, pubescent; leaves sessile, ovate, obtuse, crenated, rather cordate at the base, green on both surfaces; racemes elongated, many-flowered; bracteas lanceolate-subulate, shorter than the calyxes; calyx pubescent; corolla twice as long as the calyx. ♃. H. Native of Spain, the Eastern Pyrenees, and the Canary Islands. N. grandiflòra, Lapeyr. abr. p. 329. N. cerùlea, Ait. hort. kew. 2. p. 285. Allied to *N. nùda*. Plant pubescent, often clammy. Leaves twice the size and more wrinkled than those of *N. nùda*. Cymes dichotomous. Corollas blue, pubescent outside.

Broad-leaved Cat-mint. Fl. June, Aug. Clt. 1777. Pl. 2 to 4 feet.

61 N. nu'da (Lin. spec. p. 797.) erect tall, nearly glabrous; leaves sessile or scarcely petiolate, oblong, crenated, subcordate at the base, green on both surfaces; racemes panicled, many-flowered; bracteas scarcely longer than the pedicels; calyx pubescent; corolla half again as long as the calyx, or twice as long. ♃. H. Native of the South of Europe and Siberia, in woods; as of Spain, Provence, Piedmont, Naples, Mount Parnassus, South of Germany, Austria, Hungary, Podolia, Tauria, Caucasus, Altaian mountains, &c. Plant glabrous or pubescent. Leaves 1½ to 2 inches long, usually glabrous, but sometimes downy beneath. Corolla white or blueish, 4-6 lines long.

Var. α, grandiflòra (Benth. lab. p. 486.) corollas usually purplish or blueish. ♃. H. N. Pannónica, Jacq. fl. austr. 2. p. 18. t. 129. and other authors, and probably of Lin. spec. p. 797.? N. paniculàta, Crantz. stirp. p. 270. N. violàcea, Vill. fl. dauph. 2. p. 367. and many other authors, and probably of Lin. spec. 797.? Catària nùda, Mœnch, meth. p. 388. Catària violàcea, Mœnch, ex Steud. nom. p. 553.—Bocc. mus. 2. t. 136.

Var. β, parviflòra (Benth. lab. p. 486.) corollas usually white. ♃. H. N. Pannónica, Lin. spec. 797.? N. nùda, Jacq. austr. 1. p. 17. t. 24. N. Ucràtica, Bieb. fl. cauc. 2. p. 41. and of many other authors, but not of Lin. N. álba, Desf. ex Steud. nom. p. 552. Catària paniculàta, Mœnch, meth. ex Steud. nom. p. 553.

Naked Cat-mint. Fl. July, Oct. Clt. 1683. Pl. 2 to 4 feet.

Sect. VIII. Oxyne'peta (from ὀξυς, *oxys*, sharp, and Népeta; in reference to the pungent teeth of the calyx.) Benth. lab. p. 486. Flowers distinct, or collected at the tops of the branches, corymbosely panicled. Calyx tubular, erectish, with nearly equal, subulate, rather pungent teeth. Teeth of corolla equalling the calycine teeth, or scarcely exceeding them.—Humble herbs. Leaves usually petiolate. The plants contained in this section are very distinct in habit from the species of the other sections.

62 N. parviflòra (Bieb. fl. cauc. 2. p. 41.) plant erectish, panicled, villous; leaves petiolate, ovate or ovate-lanceolate, obtuse, serrately crenated, rounded at the base or cordate, green on both surfaces; cymes loose, trichotomously panicled; bracteas linear, equalling the calyxes; calyx pubescent, having the teeth exceeding the corolla. ♃. H. Native of Tauria and Caucasus; also of Iberia, on dry hills and fields, Bieb.; near Cherson, Besser, Odessa, Lang and Szovits. Lower leaves 1 to 1½ inch long, pubescent or nearly glabrous above, and villous beneath. Flowers 3-5 at the tops of the branches of the panicle. Corollas minute, blue,? pubescent outside.

Small-flowered Cat-mint. Fl. June, Aug. Clt. 1820. Pl. 1 foot.

63 N. Ucra'nica (Lin. spec. p. 797. ex Benth. lab. p. 487. but not of other authors.) erect, panicled, nearly glabrous; cauline leaves nearly sessile, oblong-lanceolate, obtuse, a little toothed, roundly cuneated at the base, green on both surfaces; cymes loose, trichotomously panicled; bracteas linear; calyx elongated and hispid: teeth of calyx about equal in length to the corolla. ♃. H. Native of Siberia, about Orenburgh, Prescot; Kirghisean Steppe, Ledebour. Teùcrium Sibíricum, Lin. spec. p. 788. N. Sibírica, Bieb. fl. taur. 2. p. 41. in obs. Habit of *N. parviflòra*, but the leaves and stems are glabrous, or rather cinescent from very fine tomentum. Corollas blue.

Ukraine Cat-mint. Fl. July, Aug. Clt. 1798. Pl. 1 to 2 feet.

64 N. heliotropifòlia (Lam. dict. 1. p. 711.) erect, paniculed, canescent; leaves on very short petioles, oblong, almost quite entire, narrowed at the base, canescent on both surfaces; cymes loose, trichotomously panicled; bracteas linear; calyx elongated, hispid; the teeth about equal in length to the corolla. ♃. H. Native of the Levant, Lam.; Syria, near Aleppo, Russell. Saturèia stricta, Russ. nat. hist. alep. Very like *N. Ucrànica*; but differs in the nearly entire leaves, which are narrowed at the base; and in the whole plant being canescent from pubescence.

Turnsol-leaved Cat-mint. Pl. 1 to 2 feet.

65 N. PU'NGENS (Benth. lab. p. 487.) erect, nearly glabrous; leaves petiolate, ovate, acute, narrowed at the base, rather fleshy, somewhat canescent on both surfaces; racemes nearly simple; bracteas foliaceous, rather spiny, longer than the calyxes; calyx elongated, with linear, stiff teeth; corolla scarcely exceeding the calyx. ♃. H. Native of Syria, between Bagdad and Kermancha, Olivier, and Bruguiere. Whorls 30-flowered, and more.

Pungent-bracteed Cat-mint. Pl. ½ to 1 foot.

66 N. PUSI'LLA (Benth. lab. p. 488.) dwarf, erect, finely pubescent; leaves small, ovate, acutely serrated; upper floral leaves and bracteas lanceolate-linear, very acute, pungent; flowers cymosely capitate, subcorymbose; calyx tubular, pubescent; teeth of calyx very acute, exceeding the corolla. ♄. H. Native of Altaia, on Mount Arkaul. Ziziphora púngens, Bunge, in Ledeb. fl. alt. 1. p. 23. fl. ross. alt. ill. t. 124. Stems filiform, almost simple. Leaves 3-4 lines long. Corollas minute, slender.

Least Cat-mint. Pl. ¼ to ½ foot.

† *Doubtful species.*

67 N. JAPÓNICA (Willd. spec. 3. p. 52.) stems decumbent, and naked at the base, tomentose at top; leaves petiolate, ovate, acute, serrated, tomentose on both surfaces, white beneath; panicles of flowers axillary, trifid, fastigiate. ♃. H. Native of Japan, on the tops of the mountains called Kosido. N. inclìna, Thunb. jap. p. 244. Leaves ½ an inch long.

Japan Cat-mint. Pl. decumbent.

68 N. MACNOU'RA (Led. ex Spreng. syst. 2. p. 729.) cymes many-flowered, spreading, panicled, almost leafless; calyx hoary, striated; leaves subcordately triangular, on long petioles, serrated, canescent: upper ones quite entire. ♃. H. Native of Siberia. Corollas whitish. The plant in the gardens under this name appears to be hardly distinct from the common form of *N. Catària*.

Long-tailed Cat-mint. Fl. July, Aug. Clt. 1820. Pl. 2 to 4 feet.

69 N. NEPALE'NSIS (Spreng. syst. 2. p. 730.) spikes compound, subsecund; calyxes hoary; leaves lanceolate, serrated in the middle, petiolate, a little reflexed, attenuated at both ends, and quite entire. ♃. H. Native of Nipaul.

Nepaul Cat-mint. Pl.?

†† *Species only known by name.*

1 N. CANE'SCENS (Ræusch. ex Steud. nom. p. 552.) Perhaps nothing but *Hyptis canéscens*.

2 N. PATAVI'NA (Fisch. ex Steud. l. c.) Perhaps *Melissa Patavìna*.

3 N. PAUCIFLÒRA (Spreng. ex Steud. l. c.)

4 N. SIDÆFÒLIA (Ræusch. ex Steud. l. c.) Perhaps *Hyptis polyántha*.

5 N. SUAVE'OLENS (Roem. ex Steud. l. c.) Perhaps *Hyptis suaveòlens*.

Cult. Some of the species are rather pretty when in blossom, and are therefore well fitted for flower borders; and others are coarse plants, without beauty. They all grow in common garden soil, but prefer one light and dry. They are increased by dividing at the root in spring or autumn, or by seeds.

LXIX. MARMORITTIS (probably from *μαρμαρος, marmoros*, white, in allusion to the plant being clothed with white tomentum.) Benth. in Hook. bot. misc. 3. p. 377. lab. p. 480.

LIN. SYST. *Didynàmia, Gymnospérmia.* Calyx 13-15-nerved, tubularly campanulate, deeply 5-toothed: teeth equal, acute. Corolla shorter than the calyx; upper lip erect, bifid, flat; lateral lobes of lower lip erect: middle lobe spreading, broad, crenulated. Stamens 4, ascending, didynamous: lower ones the shortest; anthers 2-celled: cells parallel. Style shortly bifid at apex; lobes nearly equal, subulate, stigmatiferous at apex. Achenia dry, smooth, naked.—A small Himalayan plant, very nearly allied to *Népeta*, of which, like the other genera of this tribe, it might be considered a section.

1 M. ROTUNDIFÒLIA (Royle, ex Benth. in Hook. bot. misc. 3. p. 377. lab. p. 490.) ♃. H. Native of Himalaya, on mountains in the province of Kanaour, Royle. Stem thick at the base, branched. Branches procumbent, nearly simple, clothed with tomentose villi, densely leafy at top. Leaves like those of *Làmium amplexicaùle*, reniform, all petiolate, wrinkled, crenated, clothed with white loose tomentum on both surfaces, but especially beneath. Whorls few-flowered, secund in the axils of the superior leaves, shorter than the petioles.

Round-leaved Marmoritis. Pl. procumbent.

Cult. For culture and propagation see *Népeta* above.

LXX. DRACOCE'PHALUM (from *δρακων, dracon*, a dragon; and *κεφαλη, kephale*, a head; in reference to the ringent corollas.) Lin. gen. no. 729. Schreb. gen. no. 984. Juss. gen. p. 116. Gaertn. fruct. t. 66. Benth. lab. p. 490. Moldávica et Zùrnia, Mœnch, meth. p. 410. Ruyschiàna, Mill. dict. Dracocéphalum and Moldávica, Tourn. inst. t. 83. and t. 85.

LIN. SYST. *Didynàmia, Gymnospérmia.* Calyx tubular, 13-15-nerved, straight, rarely incurved, with a straight or equal 5-toothed mouth; upper tooth the broadest, usually large, the 3 upper teeth sometimes joined into an upper lip. Corolla with the tube slender at the base, inclosed, or more often exserted, with a very wide throat, and a bilabiate limb; upper lip erect, rather concave, emarginate; lower lip spreading, trifid, the middle lobe large, and rather bifid. Stamens 4, didynamous: lower ones the shortest, ascending. Anthers approximating by pairs, 2-celled; cells divaricate. Style about equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia dry, smooth, naked.—Perennial herbs. Whorls many-flowered, axillary, or approximate into a terminal spike. Bracteas usually foliaceous, aristately toothed. Corollas generally large, blue or purplish, rarely white or yellowish. This genus is readily distinguished by the broad toothed bracteas.

SECT. I. KEIMODRA'CON (from *κειμαι, keimai*, to lie down; and *δρακων, drakon*; in reference to the procumbent stems of the species.) Benth. lab. p. 492. Stems procumbent, much branched. Leaves nearly orbicular, deeply crenated, or somewhat palmately pinnatifid. Flowers capitate, or disposed in oblong spikes. Anthers glabrous.

1 D. PALMA'TUM (Steph. in Willd. spec. 3. p. 151.) stems procumbent, villous; leaves petiolate, ovate-roundish, palmately pinnatifid, green on both surfaces, villous; whorls capitately spicate; bracteas small, cuneated, setaceously toothed; upper tooth of calyx broad, truncate; corolla about 3 times longer than the calyx; superior lip elongated, incurved. ♃. H. Native of Eastern Siberia, near Ishinginsk. Stems suffruticose at the base. Floriferous branches ascending. Whorls 2-6-flowered, approximate. Corollas showy, purplish, nearly glabrous.

Palmate-leaved Dragon's-head. Fl. June, Aug. Clt. 1815. Pl. procumbent.

2 D. botryoïdes (Stev. in mem. soc. nat. cur. mosq. 3. p. 266.) stems procumbent, villous; leaves petiolate, ovate-roundish, palmately pinnatifid, greenish on both surfaces, villous; whorls capitate, or in oblong spikes; bracteas cuneated, cut, villous; upper tooth of calyx ovate, acute; corolla a half again as long as the calyx: the upper lip short and straight. ♃. H. Native of Eastern Caucasus. Nepeta pinnatifida, Fisch. cat. hort. gorenk. 1812. p. 22. ex Bieb. This differs from *D. palmàtum*, in the larger leaves, and in the whorls being 6-10-flowered, and more densely spicate, &c. Corollas purple, villous outside.

Botrys-like Dragon's-head. Fl. July, Aug. Clt. 1822. Pl. procumbent.

3 D. discolor (Bunge, mss. ex Benth. lab. p. 492.) stem procumbent, branched; leaves petiolate, ovate, deeply pinnatifid, green, and nearly glabrous above, and white beneath: margins of segments revolute; whorls oblong-spicate; outer bracteas cuneated, setaceously toothed; upper tooth of calyx broad, truncate, awned; corolla twice as long as the calyx. ♃. H. Native of Altaia, among chalky or schistous mountains in saltish rugged places from the river Tscharysch, to the mouth of the rivers Kerlyk and Kan, Ledebour. D. origanoides, Led. fl. alt. 2. p. 383. but not of Steph. Stems prostrate, rooting; floriferous branches ascending, pubescent or canescent. Leaves 3-4 lines long. Spikes 1 to 1½ inch long. Corollas blue.

Two-coloured-leaved Dragon's-head. Pl. creeping.

4 D. pinnatum (Lin. spec. 829.) stems procumbent, branched; leaves petiolate, ovate-roundish, somewhat palmately pinnatifid, green on both surfaces, rather villous; whorls disposed in capitate spikes; outer bracteas cuneated, deeply toothed; upper tooth of calyx ovate, awned; corolla one half longer than the calyx, about equal in length to the bracteas. ♃. H. Native of Siberia, in stony, rugged, alpine places of Altaia, at the river Tschuja; on Mount Tarbagutai, in the Kirghisean Steppe; and on the island called Olchon, in Lake Baical, Bunge, Ledeb. fl. ross. alt. ill. t. 445. D. pinnatifidum, Lam. dict. 2. p. 319. —Gmel. sib. 3. p. 234. t. 52. Stems prostrate, much branched. Leaves 3-4 lines long. Spikes dense, 1½ inch long, ovate. Corollas small, blue. Bracteas bluish.

Pinnate-leaved Dragon's-head. Pl. prostrate.

5 D. origanoides (Steph. in Willd. spec. 3. p. 151.) stems procumbent; branches villous; leaves petiolate, ovate-roundish, deeply crenated, green on both surfaces, pubescent; whorls disposed in capitate spikes; bracteas large, broad-cuneated, deeply toothed; teeth of calyx all lanceolate, membranous: the upper tooth scarcely broader than the rest; corolla scarcely exceeding the calyx. ♃. H. Native of the tops of the Altaian alps, at the river Tschuja, Bunge. Leaves broader and less cut than in *D. pinnàtum*: floral leaves large. Spikes globose, nearly 1½ inch in diameter. Corollas blue, about equal in length to the bracteas.

Marjoram-like Dragon's-head. Fl. July. Clt. 1820. Pl. procumbent.

Sect. II. Calodra'con (from καλος, *kalos*, pretty; and δρακων, *dracon*; in reference to the beauty of the flowers of the species.) Benth. lab. p. 494. Stems thick at the base; floriferous branches erect, few-leaved. Leaves nearly all radical, on long petioles, crenated. Whorls disposed in capitate or oblong spikes. Anthers glabrous.

6 D. imbe'rbe (Bunge, enum. pl. alt. crit. mss. ex Benth. lab. p. 494.) nearly glabrous; stem erect, humble; radical leaves on long petioles: cauline ones few, on short petioles, all reniform, deeply crenated, green on both surfaces; whorls disposed in capitate spikes; bracteas cuneated, cut, glabrous; upper teeth of calyx oblong; corolla twice as long as the calyx. ♃. H. Native of Siberia, on the tops of the Altaian mountains, at the river Tschuja, Bunge. Stems tufted. Floriferous branches erect, glabrous, or finely pubescent. Floral leaves, bracteas, and calyxes coloured. Corollas blue, an inch long: lips nearly equal. Radical leaves an inch long.

Beardless Dragon's-head. Pl. ½ foot.

7 D. grandiflòrum (Lin. spec. 830.) stems erect, pilose above; radical leaves on long petioles, oblong, obtuse, crenated, cordate at the base; cauline leaves few, on short petioles, ovate, all green, and nearly glabrous; floral leaves orbicular, pilose: the upper ones bractea-formed; whorls disposed in oblong spikes; bracteas large, orbicularly cuneated, deeply toothed; superior teeth of calyx oblong; corolla ample, 3 times as long as the calyx. ♃. H. Native of Siberia, frequent, particularly in the Altaian range. Sims, bot. mag. t. 1009. D. Altaiénse, Laxm. in nov. comm. petrop. 15. p. 556. t. 29. f. 5. Rebb. icon. pl. cult. 1. t. 90. Sweet, fl. gard. n. s. 1. t. 57. Radical leaves 1-2 inches long. Petioles of the cauline leaves short, dilated, subconnate, ciliated. Spikes 2-3 inches long. Bracteas a little coloured. Corollas showy blue, nearly 2 inches long.

Great-flowered Dragon's-head. Fl. July, Aug. Clt. 1759. Pl. ½ to ¾ foot.

8 D. speciòsum (Benth. in Wall. pl. rar. asiat. 2. p. 65.) stems erect, pubescent; radical leaves on long petioles, broadly heart-shaped: cauline ones few, on short petioles, all wrinkled and green on both surfaces, and pubescent beneath; floral leaves orbicular, somewhat bractea-formed; whorls disposed in oblong spikes; bracteas orbicular, deeply crenated, much shorter than the calyxes; upper tooth of calyx ovate; corolla about twice as long as the calyx. ♃. H. Native of the Himalaya, and Nipaul. Leaves scarcely an inch long, and 2 inches broad. Whorls 2-4, dense, subsecund. Corolla very villous outside, purple.

Showy Dragon's-head. Pl. 1 to 1½ foot.

9 D. fra'gile (Turcz. mss. ex Benth. lab. p. 495.) stems decumbent, articulated, rather pilose; leaves petiolate, oblong, obtuse, obscurely crenated, rounded at the base, green on both surfaces, pilose or glabrous; floral leaves and bracteas sessile, elliptic, quite entire, mucronate, membranous, pilose; whorls disposed in oblong spikes, equalling the calyxes; upper tooth of calyx large, ovate; corolla about twice as long as the calyx. ♃. H. Native of Dauria, at Lake Nossogal, Turczaninow. Branches articulated at the nodi. Bracteas ciliated on the veins and edges. Calyxes purplish. Corolla yellowish? incurved.

Brittle Dragon's-head. Pl. procumbent.

10 D. lamiifòlium (Desf. pl. cor. Tourn. in ann. mus. 10. p. 305. t. 26.) stems simple, tufted; leaves petiolate, ovate, obtuse, crenated, rather pilose, as well as the stems; flowers capitate at the tops of the stems; upper lip of corolla bifid, with toothed segments. ♃. F. Native of Candia, in the fissures of rocks. Calyx dilated, with 5 deep, nearly equal, acute segments. Corollas large, rose-coloured, 1½ inch long; lower lip emarginate, crenated, spotted with purple. Perhaps a species of *Nepeta*.

Dead-Nettle-leaved Dragon's-head. Pl. ½ to 1 foot.

Sect. III. Cryptodra'con (from κρυπτος, *cryptos*, hidden; and δρακων, *dracon*, a dragon; so called in consequence of the corolla hardly exceeding the calyx.) Benth. lab. p. 495. Stems erect, branched, leafy. Whorls disposed in capitate spikes. Anthers glabrous.

11 D. parviflòrum (Nutt. gen. amer. 2. p. 35.) stems erect,

branched, pubescent; leaves petiolate, lanceolate, deeply crenated or serrated, green on both surfaces, pubescent beneath; whorls disposed in capitate spikes; bracteas ovate-cuneated, aristately toothed; upper tooth of calyx broad-ovate; corolla scarcely exceeding the calyx. ♃. H. Native of North America, at the river Missouri, near Fort Mandan, Nuttall; Red River, Douglas; and at Cumberland House Fort, on the Saskatschawan, Drummond. Leaves like those of *D. Moldávicum*. Spikes globose or oblong, dense. Corollas small, bluish.

Small-flowered Dragon's-head. Fl. July, Aug. Clt. 1825. Pl. ½ to 1 foot.

Sect. IV. Molda'vica (so called from the first species being originally found in Moldavia.) Benth. lab. p. 496. Stems erect or ascending, leafy. Whorls distant, subracemose. Anthers glabrous.

12 D. Molda'vicum (Lin. spec. p. 880.) stem erect, branched; leaves petiolate, lanceolate, deeply crenated; floral leaves narrower, aristately serrated at the base; whorls distinct, disposed in long racemes; bracteas lanceolate, aristately serrated; calyx bilabiate: upper lip semitrifid: lower one bipartite; corolla more than twice as long as the calyx. ☉. H. Native of Eastern Siberia; and of the East Indies and South America, but probably escaped from gardens. Lam. ill. t. 513. f. 1.—Blackw. herb. t. 551. Moldávica punctàta, Mœnch, meth. p. 410. Herb glabrous, or finely downy. Leaves an inch long. Whorls 6-10-flowered. Corolla blue or white, with a very wide throat.

Moldavian Dragon's-head. Fl. July, Aug. Clt. 1596. Pl. 1 to 1½ foot.

13 D. Heterophy'llum (Benth. lab. p. 738.) stem ascending; leaves petiolate, obtuse, crenated: lower ones rounded, rather reniform, cordate at the base: superior ones oblong; floral leaves narrowed at the base, and are, as well as the bracteas, oblong, and aristately toothed; calyx bilabiate: the upper lip broadly semitrifid, and the lower lip bipartite; raceme subspicate. ☉.? H. Native of the North-east of India, on the mountains of Koo-khio-ghang, Jacquemont. This differs from *D. Moldávicum*, in its humble stature, nearly simple branches, dense spikes, and form of leaves. Upper leaves usually pubescent; cauline leaves never awned. Corollas pubescent, a little larger than those of *D. Moldávicum*.

Various-leaved Dragon's-head. Pl. humble.

14 D. Fœ'tidum (Bunge, in Led. fl. alt. 2. p. 386.) stem humble, divaricate, much branched; leaves petiolate, ovate-oblong, obtuse, crenated; floral leaves narrower, aristately serrated at the base; whorls distinct, disposed on short racemes; bracteas oblong, aristately serrated; calyx bilabiate: upper lip broadly semitrifid; lower lip bipartite; corolla more than twice as long as the calyx. ☉.? H. Native of Siberia, on sandy hills near the river Tschuja, Bunge. Leaves short, on long petioles. Branches and calyxes pubescent.

Fetid Dragon's-head. Pl. ⅓ foot.

15 D. Pelta'tum (Lin. spec. p. 881.) stem erect; leaves petiolate, ovate, obtuse, crenated; floral leaves oblong-lanceolate, more entire; whorls distinct, many-flowered, disposed in long racemes; bracteas orbicular, aristately toothed; upper tooth of calyx ovate: lateral ones oblong: lower ones lanceolate; corollas scarcely exceeding the calyxes. ☉. H. Native of Syria, between Bagdad and Kermancha. Lam. ill. t. 513. f. 2. D. ocymifòlium, Mill. dict. no. 4. Zórnia peltàta, Mœnch, meth. 411. Stem nearly simple, glabrous, or finely tomentose. Leaves 1½ inch long, green, glabrous, gradually becoming narrower to the top, all exceeding the flowers. Whorls 10-12-flowered. Corollas small, blue, nearly glabrous.

Peltate Dragon's-head. Pl. 1 foot.

16 D. Royle'anum (Wall. in pl. rar. asiat. 1. p. 65. Benth. lab. p. 497.) stem erect, strict; leaves petiolate, ovate, crenated; floral leaves narrower: superior ones aristately serrated at the base; whorls distinct, disposed in interrupted spikes; bracteas oblong, aristately toothed; calyx scarcely bilabiate: superior teeth the broadest; corolla hardly exceeding the calyx. ☉.? H. Native of the East Indies, in the province of Kumawur, Royle. Stem glabrous at the base, and pubescent at top. Leaves distant, green, nearly glabrous: floral ones rather longer than the calyxes. Corolla very slender, yellowish.

Royle's Dragon's-head. Pl. ½ to 1 foot.

17 D. Ine'ricum (Bieb. fl. cauc. 2. p. 64.) stem decumbent? leaves petiolate, ovate-oblong, narrowed a long way at the base, a little toothed; floral leaves lanceolate, nearly entire, all glabrous; whorls distinct, disposed in long racemes, about 6-flowered; bracteas linear-cuneated, aristately awned at top; calyx smoothish, having the upper tooth ovate, and the lower ones lanceolate; corollas hardly exceeding the calyxes. ☉.? H. Native of Iberia, Steven; of Caucasus, on the Talusch mountains, near Swant, C. A. Meyer. Allied to *D. Royleánum* and *D. canéscens*; and differs from the first in the narrower, more entire, glabrous leaves, and in the calyxes being twice the size; and from the second in the smoothness, and minute corollas. Corollas blue, slender.

Iberian Dragon's-head. Fl. July, Aug. Clt. 1820. Pl. decumbent.?

18 D. cane'scens (Lin. spec. p. 881.) stem erectish, branched, clothed with fine hoary tomentum; leaves petiolate: lower ones ovate or oblong, rather deeply crenated: floral ones lanceolate, almost quite entire, all canescent from fine tomentum; whorls distinct, disposed in long racemes, usually 6-flowered; bracteas ovate-cuneated, aristately toothed; calyx hoary, having the upper tooth ovate, and the lower ones lanceolate; corolla twice as long as the calyx. ☉. H. Native of Syria, near Aleppo, Russell. Sweet. fl. gard. 1. t. 38. Zórnia canéscens, Mœnch, meth. p. 411.—Mill. fig. t. 129.—Commel. rar. t. 28.—Volk. norib. t. 353. Bracteas shorter than the calyxes. Corollas blue.

Canescent Dragon's-head. Fl. July, Aug. Clt. 1711. Pl. 1 to 1½ foot.

19 D. peregri'num (Lin. spec. p. 829.) decumbent; branches ascending, nearly glabrous; leaves quite glabrous, on short petioles, lanceolate, for the most part few-toothed, the teeth awned; floral leaves, and sometimes all, are quite entire; whorls distinct, few-flowered, secund, disposed in short racemes; bracteas oblong or lanceolate, awned, a little toothed; calyx bilabiate: upper lip broadly tridentate: lower lip narrowly bifid; corolla ample, about 3 times as long as the calyx. ♃. H. Native throughout Siberia, Pallas. Sims, bot. mag. t. 1084. Lher. stirp. nov. 2. t. 28. Ruyschiàna verticillàta, Mill. dict. no. 3.?—Mor. hist. 364. no. 9. sect. 11. t. 5. f. 9. Stems loosely branched at the base, procumbent. Leaves an inch long. Corollas 15-18 lines long, blue: upper lip broad, emarginate.

Foreign Dragon's-head. Fl. July, Aug. Clt. 1759. Pl. ascending, a foot long.

20 D. thymiflòrum (Lin. spec. p. 498.) stem erect; leaves on short petioles, ovate-lanceolate or lanceolate, crenated; floral leaves narrower, more entire; whorls distinct, many-flowered, disposed in long racemes; bracteas ovate-oblong, almost quite entire; upper tooth of calyx broad-ovate: lower ones lanceolate; corolla scarcely exceeding the calyx. ☉. H. Native of the East of Europe; about Upsal, Wahl; about Moscow, Klustine; South of Podolia, Besser. Gærtn. fruct. 1. p. 319. t. 66. Zórnia parviflòra, Mœnch, meth. p. 411.—Gmel. sib. 3. p. 233. t. 50.

Stems a little branched, pubescent. Floral leaves twice the size of the cauline leaves, green, scarcely pubescent. Whorls usually 10-12-flowered. Calyx a little coloured. Corollas very slender, purplish.

Thyme-flowered Dragon's-head. Fl. June, Sept. Clt. 1752. Pl. 1 to 1½ foot.

21 D. nu'tans (Lin. spec. p. 831.) stem erect; leaves petiolate, ovate, crenated; floral leaves oblong-lanceolate, more entire; whorls distinct, many-flowered, disposed in long racemes; bracteas ovate or oblong, almost quite entire; upper tooth of calyx broad-ovate: lower ones lanceolate; corolla more than twice as long as the calyx. ☉. H. Native throughout Siberia. Ker. bot. reg. t. 841. Zórnia nùtans, Mœnch, meth. p. 411.—Gmel. sib. 3. p. 231. t. 49. Habit, leaves, and calyxes of *D. thymiflòrum*, but differs in the longer corollas, &c.

Nutant-racemed Dragon's-head. Fl. July, Aug. Clt. 1731. Pl. 1 foot.

22 D. fruticulòsum (Steph. in Willd. spec. 3. p. 152.) suffruticose, glabrous; leaves nearly sessile, elliptic, mucronate, quite entire, or the superior and floral ones are aristately toothed; whorls few-flowered, the superior ones subspicate; bracteas ovate, aristately toothed; teeth of calyx all lanceolate: the upper one the broadest; corolla scarcely twice as long as the calyx. ♄. F. Native of Siberia, Steven; about Kiachta, Sievers. Stem branched. Leaves 4 lines long. Calyx coloured. Corollas like those of *D. integrifòlium*.

Shrubby Dragon's-head. Shrub dwarf.

23 D. integrifòlium (Bunge, in Ledeb. fl. alt. 2. p. 387.) suffruticose, glabrous; branches erectish; leaves nearly sessile, lanceolate, obtuse, quite entire; floral leaves bractea-formed; whorls racemose, secund; bracteas ovate, aristately toothed; upper tooth of calyx broad-ovate: lower ones lanceolate; corolla about twice as long as the calyx. ♄. F. Native of the Altaia, on the Kurtschum mountains, near Baty, and on rocks near the ruins of Ablakit; also of Dahuria. Habit of *D. nùtans*, but the leaves are very different. Calyx purple. Corollas purplish blue.

Entire-leaved Dragon's-head. Shrub 1 foot.

Sect. V. Ruyschia'na (so named in honour of Dr. Ruysch, who was professor of anatomy and botany at Amsterdam.) Benth. lab. p. 499. Stems erect, leafy. Whorls somewhat interruptedly spicate. Anthers villous.

24 D. Argune'nse (Fisch, ex Link, enum. 2. p. 118.) glabrous; stems erect; leaves linear-lanceolate, quite entire, glabrous; whorls subspicate; bracteas cuneate-elliptic, acute; calyx quite glabrous, bilabiate: upper lip semitrifid: lower one narrowly bipartite; corolla ample, about 3 times as long as the calyx. ♃. H. Native of Dahuria. Rchb. icon. pl. cult. 1. t. 1. Lodd. bot. cab. 797. Nearly allied to the following; but differs in the glabrous calyxes and larger flowers. Leaves nearly sessile, 2-3 inches long, with fascicles of small ones in the axils. Corollas pubescent, blue, showy.

Argun Dragon's-head. Fl. July, Aug. Clt. 1822. Pl. 1 to 1½ foot.

25 D. Ruyschia'num (Lin. spec. p. 830.) stems erect, finely pubescent: leaves linear-lanceolate, quite entire, glabrous; whorls subspicate; bracteas ovate-lanceolate, quite entire; calyx pubescent; upper tooth of calyx ovate: lower ones lanceolate; corollas more than twice as long as the calyxes. ♃. H. Native of Europe and Asiatic Russia, on the mountains; as of Norway, Provence, Dauphiny, Switzerland, Galicia, Caucasus, Altaia, &c. Oed. fl. dan. t. 121. D. hyssopifòlium, Mart. ex Steud. nom. p. 285. Ruyschiàna spicàta, Mill. dict. no. 1. Zórnia linearifòlia, Mœnch, ex Steud. nom. p. 285.—Zanon. nov. t. 146. Ruyschiàna glàbra, Amm. ruth. p. 50. Branched from the base. Leaves 1 to 1½ inch long, nearly sessile, with revolute edges, having young ones in the axils. Whorls approximate, generally 6-flowered. Corolla purplish, an inch long.

Ruysch's Dragon's-head. Fl. June, July. Clt. 1699. Pl. 2 feet.

26 D. Austria'cum (Lin. spec. p. 829.) stems erect, rather pilose; leaves 3-5-cleft, or the rameal ones are almost entire; segments of leaves linear, with revolute edges; whorls somewhat interruptedly spicate; bracteas 3-7-cleft, awned; upper tooth of calyx ovate: lower ones lanceolate; corolla about 3 times as long as the calyx. ♃. H. Native of Europe and Asiatic Russia, on the mountains; as of the Pyrenees, Dauphiny, Switzerland, South of Germany, Galicia, Transylvania, Podolia, Caucasus, &c. Jacq. icon. rar. 1. t. 112. Zórnia partìta, Mœnch, ex Steud. nom. p. 285. Ruyschiàna laciniàta, Mill. dict. no. 2. Ruyschiàna hirsùta, Amm. ruth. p. 50. Habit of *D. Ruyschiàna*, but differs in the leaves being divided. Stem hairy, nearly pinnatifid. Whorls 6-10-flowered, all usually distinct. Floral leaves and bracteas hispid. Corolla showy blue, more than 1½ inch long.

Austrian Dragon's-head. Fl. June, July. Clt. 1597. Pl. 1½ foot.

† *Doubtful species.*

27 D. odorati'ssimum (Poir. suppl. 2. p. 521.) stems slender; branches divaricate; leaves petiolate, small, ovate-oblong, quite entire, narrowed at the base, glabrous; bracteas narrow-lanceolate, ciliated, longer than the flowers; flowers sessile, approximating into a short imbricate spike; calyx striated, ciliated, with 5 very short straight teeth. ♃. H. Native of the Crimea. Branches reddish-grey, with pubescent angles. Leaves 4-5 lines long. Corolla white or purplish, hairy outside; tube slender, scarcely longer than the calyx; throat wide. Pl. ¼ to ½ foot.

Very sweet-scented Dragon's-head.

28 D. Cochinchine'nse (Lour. coch. p. 371.) stem erect, villous; leaves ovate-lanceolate, quite entire, villous, few; bracteas roundish, acute, many-flowered; flowers disposed in a terminal spike. ☉. ? H. Native of Cochinchina. Flowers violaceous; upper lip of corolla concave. Filaments pilose. Pl. 1 foot.

Cochinchina Dragon's-head.

Cult. The greater part of the species of *Dracocéphalum*, being showy when in blossom, are favourites with all lovers of flowers. They are all hardy, and will grow in any common garden soil; they are, therefore, well adapted for decorating flower borders and rockwork. The perennial species are readily increased by divisions of the root and top in spring. The seeds of annual kinds only require to be sown in the open ground in spring. The two shrubby species, *D. fruticulòsum* and *D. integrifòlium*, and all the species belonging to sect. I. *Keimodracon*, will require protection in severe weather in winter; these are all readily propagated by cuttings, under a hand-glass.

LXXI. CEDRONELLA (probably a dim. of *cèdros, cedrus*, the cedar; from the sweet odour of *C. triphýlla*.) Mœnch, meth. p. 411. Benth. lab. p. 501.—Dracocéphalum species, Lin. and other authors.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular or campanulate, about 15-nerved, with an equal or oblique 5-toothed mouth. Corolla with an exserted tube, naked inside, a dilated throat, and a bilabiate limb; upper lip straight, flattish, emarginate or bifid; lower lip trifid: middle lobe large. Stamens 4, ascending, didynamous; lower ones the shortest. Anthers 2-

celled; cells parallel. Style about equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia dry, smooth.—Herbs. Whorls approximate into terminal spikes or racemes. Floral leaves bractea-formed. Bracteas small, setaceous.

1 C. cordà'ta (Benth. lab. p. 502.) herbaceous, stoloniferous; leaves cordate-ovate, crenated; whorls few-flowered, secund, approximating into short spikes or racemes. ♃. II. Native of North America, at the river Ohio, below Pittsburgh, Nuttall. Dracocéphalum cordàtum, Nutt. gen. amer. 2. p. 35. Stems creeping, and rooting at the base. Floriferous branches erect, simple, villous. Leaves 1 to 1½ inch long, form of those of *Lámium*, quite entire, obtuse, pubescent, or nearly glabrous. Cymes on short peduncles, 1-3-flowered. Corolla showy, pale blue, 1½ inch long.

Cordate-leaved Cedronella. Fl. July, Aug. Clt. 1824. Pl. ½ foot.

2 C. Mexica'na (Benth. lab. p. 502.) tall; leaves ovate-lanceolate, cordate at the base, toothed; whorls many-flowered, approximating into a terete, interrupted spike or raceme. ♃. H. Native of Mexico, among corn and in meadows, in the woody region near Valladolid, Pazcuaro, Chalco, and Tlalpuxalma. Dracocéphalum Mexicànum, H. B. et Kunth, nov. gen. amer. 2. p. 302.—Herb glabrous, or finely pubescent. Leaves on short petioles, 1½ to 2 inches long, acuminated, acute, glandular beneath. Whorls loose, 20-40-flowered. Corolla purplish, 3 times as long as the calyx. Genitals exserted.

Mexican Cedronella. Pl. 2 to 3 feet.

3 C. thuthy'lia (Mœnch, meth. 411.) shrubby, tall; leaves ternate; leaflets oblong-lanceolate; whorls loose, collected into terete oblong spikes. ♄. F. Native of America, and probably of the Canary Islands. Dracocéphalum Canariénse, Lin. spec. p. 829. C. Canariénsis, &c., Comm. hort. amst. 2. p. 81. t. 41.—Volk. norib. t. 145. Lateral leaflets sessile, terminal one petiolate, larger, all nearly glabrous, or pubescent beneath. Whorls 10-12-flowered. Corolla white or pale purple, scarcely twice as long as the calyx. The plant was first brought to Europe under the name of *Permenta de Tana*. It is now known under the name of Balm of Gilead, which it has obtained from its rich odour on being gently rubbed.

Three-leaved Cedronella, or Balm of Gilead. Fl. July, Sept. Clt. 1697. Shrub 3 to 4 feet.

Cult. For culture and propagation see *Dracocéphalum*, p. 814, for the herbaceous species, and *Prostanthèra*, p. 800, for the shrubby kind.

Tribe IX.

STACHYDEÆ (this tribe contains genera agreeing with *Stáchys*, in the characters given below.) Benth. lab. p. 503. Calyx irregularly veined or 5-10-nerved, equal, oblique, rarely sub-bilabiate, 5-10-toothed. Tube of corolla inclosed or exserted, often annulate inside; limb bilabiate: upper lip galeate or flat, entire or emarginate: lower lip variously trifid. Stamens 4, ascending, didynamous, all fertile, or the anthers of the lower ones are empty or dimidiate; superior ones short.

LXXII. MELITTIS (from μελιττα, *melitta*, a bee; a name used by Pliny as synonymous with Melissa.) Lin. gen. no. 731. Schreb. gen. 985. Juss. gen. p. 116. Benth. lab. p. 508.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx campanulate, membranaceous, irregularly veined, subbilabiate; upper lip broad, roundish, obscurely 2-lobed or shortly 2-3-toothed; lower lip bifid, with rounded lobes. Corolla, with an ample exserted tube, which is not annulate inside, and a bilabiate limb; superior lip orbicular, entire, rather concave, spreading: lower lip 3-lobed, spreading. Stamens 4, ascending, didynamous, lower ones the longest; filaments without any appendages; anthers approximating by pairs, 2-celled: cells distinct, diverging. Style shortly bifid at apex; lobes ovate, stigmatiferous at apex. Achenia dry, smooth, or finely reticulated.

1 M. melissophy'llum (Lin. spec. p. 892.) ♃. H. Native of Europe, in shady places; as of France, Germany, Portugal, Spain, Sicily, Italy, Greece: in England; as in Devonshire, about Totness, Barnstable, &c.; Hampshire, in the New Forest; Pembrokeshire, about Haverford West, in woods and other shady places. Stems erect, simple, more or less hairy. Leaves on short petioles, 1½ to 2 inches long, ovate, crenated, cordate at the base, or the upper ones are rounded, wrinkled, villous, green on both surfaces; floral leaves narrower; all exceeding the flowers. Whorls about 6-flowered, axillary. Corolla 1½ inch long, red, or red and white. Pedicels rather shorter than the calyxes. Much honey is secreted by a gland that encircles the base of the germ; hence it is a favourite plant with bees.

Var. α, *grandiflòra*; plant pale green; corolla cream-coloured, with the middle of the lower lip violaceous. ♃. H. M. grandiflòra, Smith, fl. brit. 2. p. 644. engl. bot. t. 636. Hook. fl. lond. vol. 2. icone. Rchb. icon. bot. eur. 3. p. 41. t. 242. M. melissophýllum, Curt. lond. no. 64. Mill. fig. t. 32.—Riv. mon. irr. t. 21. f. 1. M. álbida, Guss. prod. fl. sic. 2. p. 140. M. sylvéstris, Lam. fl. fr. 2. p. 401.

Var. β, *melissophýllum*; stems purplish; leaves deep green; flowers altogether purple, and sometimes white. ♃. H. M. melissophýllum, Jacq. fl. austr. 1. t. 26. Smith, engl. bot. t. 577. Rchb. icon. bot. eur. 3. p. 41. t. 241.

Balm-leaved Bastard Balm. Fl. May, June. England. Pl. 1 to 1½ foot.

Cult. Both varieties are very showy when in blossom, and are, therefore, well fitted for decorating flower borders, woods, and shrubberies. They are readily increased by dividing the root in spring or autumn.

LXXIII. PHYSOSTE'GIA (from φυσα, *physa*, a bladder; and στεγω, *stego*, to cover; in allusion to the inflated calyx.) Benth. in bot. reg. vol. 16. lab. p. 504. Dracocéphalum species, Lin. and other authors.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx tubularly campanulate at the time of florescence, but afterwards becoming inflated and campanulate, with about 10 obscure veins, almost equally 5-toothed, or truncate and scarcely toothed at top. Corolla with a long exserted tube, which is exannulate inside, an inflated throat, and a bilabiate limb; upper lip erectish, rather concave, entire, or emarginate; lower lip spreading, trifid, with roundish lobes, the middle lobe large and emarginate. Stamens 4, ascending under the upper lip, somewhat didynamous; lower ones eminent; anthers approximate, 2-celled: cells parallel, distinct, naked. Style about equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia dry, smooth. Habit peculiar.

1 P. Virginia'na (Benth. lab. p. 504.) calyx acutely 5-toothed. ♃. H. Native of North America, from Canada to Texas, in rather humid places: and on the North-west coast at the Columbia river. Dracocéphalum Virginiànum, Lin. spec. 828. Curt. bot. mag. t. 467. D. lancifòlium, Mœnch, meth. p. 410. D. variegàtum, Vent. cels. t. 44. D. denticulàtum, Ait. hort. kew. 2. p. 317. Curt. bot. mag. 214. D. speciósum, Sweet, fl. gard. 1. t. 93. D. obovàtum, Elliott, bot. car. 2. p. 86. D. intermèdium, Nutt, in amer. phil. trans. n. s. 5. p. 187. Prásium purpùreum, Walt. fl. car. p. 166. Prásium coccíneum, Walt. fl. car.

p. 116. Herb usually glabrous, rarely pubescent in the upper part. Stems erect. Leaves sessile, usually lanceolate, sometimes oblong-ovate or obovate, usually acute, irregularly and acutely serrated, narrowed at base, green on both surfaces; upper floral leaves bractea-formed, shorter than the calyxes. Racemes terminal, simple, or paniculately branched. Flowers nearly sessile, approximate, or distant. Corolla flush coloured or purple, showy, 10-11 lines long, and sometimes more than an inch.

Virginian Physostegia. Fl. July, Sept. Clt. 1683. Pl. 1½ to 3 feet.

2 P. imbrica'ta (Hook. bot. mag. 3386.) tall; leaves elliptic-lanceolate, coarsely serrated; spikes panicled, tetragonal; flowers erect, densely imbricate; upper lip of corolla concave: tube scarcely inflated. ♃. H. Native of Texas. Corollas reddish purple above, pale and almost white below.

Imbricate-flowered Physostegia. Fl. July, Sept. Clt. 1834. Pl. 2 to 3 feet.

3 P. trunca'ta (Benth. lab. p. 505.) calyx truncate, obscurely 3-5-lobed; lobes very broad, denticulated. ♃. H. Native of Mexico, in the province of Texas. Stems erect, nearly simple, pubescent. Leaves and inflorescence similar to those of *P. Virginiàna*. Floral leaves broad-ovate at the base, equalling the calyxes. Corollas red.

Truncate-calyxed Physostegia. Fl. July, Sept. Pl. 1½ foot.

Cult. Elegant plants of easy culture, well fitted for decorating flower borders. Any common garden soil suits them, and they are readily propagated by dividing at the root.

LXXIV. MACBRI'DEA (named in memory of James Macbride, M.D. of South Carolina.) Elliott, bot. car. 2. p. 86. Benth. lab. p. 505.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, membranaceous, irregularly veined, 3-lobed; superior lobe oblong, lower ones roundish. Corolla with a long exserted tube, which is exannulate inside, an inflated throat, and a bilabiate limb; upper lip erect, entire, rather concave; lower lip shorter and spreading, with roundish lobes, middle lobe the broadest. Stamens 4, didynamous, ascending under the upper lip, lower ones the longest; anthers approximate by pairs, 2-celled: cells divaricate. Style shortly bifid at apex. A genus closely allied to *Physostègia*.

1 M. pulche'lla (Elliott, l. c.) ♃. H. Native of Carolina, in bogs, Elliott; near Augusta, Wray. Thýmbra Carolinìàna, Walt. fl. car. p. 162. Melíttis Carolinìàna, Sprang. syst. 2. p. 700. Pràsium incarnàtum, Walt. fl. car. p. 165. Stems erect, glabrous. Leaves petiolate, oblong-elliptic, bluntish, obscurely serrated or sinuated, rounded or cuneated at the base, thin, quite glabrous, or furnished with a few scattered hairs above. Whorls 1 or 2 at the top of the stem, about 6-flowered. Corolla 1½ inch long, glabrous, pale red.? Filaments villous.

Neat Macbridea. Pl. 1 foot.

Cult. For culture and propagation, see *Physostègia* above.

LXXV. SYNA'NDRA (from *συν, syn*, together; and *ανηρ ανδρος, aner andros*, a male; in reference to the anthers approximating by pairs.) Nutt. gen. amer. 2. p. 29. Benth. lab. p. 506. Làmium species, Michx.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx inflately campanulate, membranaceous, irregularly veined, with 4 nearly equal teeth. Corolla with a much exserted tube, which is dilated above as well as the throat, and exannulate inside; limb bilabiate: upper lip erect, rather concave, entire: lower lip spreading, 3-lobed: lobes ovate, middle one broader and emarginate. Stamens 4, ascending, didynamous: lower pair the longest; filaments exappendiculate, hairy; anthers approximating by pairs, glabrous, 2-celled: cells distinct, divaricate; upper cells of the superior anthers connate, obtuse, empty; the rest all acute and fertile. Upper lobe of style very short; lower one longer, stigmatiferous almost from the base. Achenia dry, large, somewhat inflatedly compressed, smooth. The want of the upper lobe of the calyx is peculiar to this genus.

1 S. grandiflòra (Nutt, l. c.) ♃.? H. Native of North America; in Kentucky, Torrey; Tenessee, in woods, Michx; in shady places, near Cincinnati, on the Ohio, Nutt. Habit of *Làmium*. Stem nearly simple, beset with long hairs. Leaves few; lower ones on long petioles, broad-ovate, subacuminated, crenated, cordate at the base, thin, green on both surfaces, furnished with a few hairs; superior leaves ovate-lanceolate, quite entire; uppermost ones hardly longer than the calyxes. Whorls few, distant, few-flowered. Corolla showy, cream-coloured, 1½ inch long.

Great-flowered Synandra. Pl. 1 foot.

Cult. For culture and propagation, see *Làmium*, below.

LXXVI. LA'MIUM (from λαιμος, *laimos*, the throat; so called from the ringent flowers.) Lin. gen. no. 716. Schreb. gen. 971. Tourn. inst. t. 85. Juss. gen. p. 113. Benth. lab. p. 507. Orvàla, Lin. gen. 715. Pàpia, Michell, gen. p. 17. Galeóbdolon, Huds. and other authors. Pollíchia, Roth, fl. germ. Erianthèra, Benth. in Hook. bot. misc. 3. p. 350. but not of Nees.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubularly campanulate, about 5-nerved, with an equal or often oblique mouth; teeth 5, nearly equal, or the upper ones are longer, subulate at apex. Corolla with an inclosed or exserted tube, naked or with a hairy ring inside; limb bilabiate; upper lip ovate or oblong, somewhat arched or galeate, for the most part narrowed at the base; throat dilated; lateral lobes truncate at the margins of the throat, rarely oblong, furnished with a tooth-formed appendage or mutic; middle lobe broad, emarginate, contracted at the base, substipitate. Stamens 4, didynamous, lower pair the longest; anthers approximate by pairs, 2-celled: cells at length divaricate, oblong, hairy outside or naked. Style about equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia dry, triquetrous, with acute angles, truncate at apex, smooth or wrinkled from minute tubercles.—Herbs decumbent at the base. Lower leaves on long petioles, small; middle cauline leaves large, usually cordate at the base, wrinkled, for the most part doubly or deeply toothed; floral leaves almost similar to the rest: upper ones smaller and more sessile; all exceeding the calyxes. Whorls dense, axillary; lower ones or all remote, but the superior ones are usually approximate. Bracteas few, shorter than the calyxes, subulate, rarely lanceolate. Corollas red, purplish, white, or yellow.

Sect. I. Orva'la (Orvala is a name applied to *sálvia sclárea* by old botanists, which is probably derived from Orval in France.) Benth. lab. p. 508. Orvàla, Lin. gen. no. 715. Tube of corolla straight, transversely annulate inside; throat very wide. Gales ovate. Anthers glabrous.

1 L. Orva'la (Lin. spec. p. 808.) stems erect; leaves large, broad-ovate, truncate or cordate at the base, rugose, rather villous; tube of corolla straight, exserted, furnished with a ring of hairs inside: throat very wide: galea ovate, entire: lateral lobes very short, mutic. ♃. H. Native of Italy, Pannonia, and Istria, Willd.; Piedmont, Allioni; France, near Nanncte, Ronamy. Curt. bot. mag. t. 172. Mill. fig. t. 158. *L. Pannónicum*, Scop. fl. carn. t. 27. Orvàla lamioides, D.C. fl. fr. 3.

p. 539. L. melissæfòlium, Mill. dict. no. 5.—Mor. hist. sect. 11. t. 11. f. 7.—Till. pis. 92. t. 34. f. 1.—Clus. hist. 2. p. 95. t. 36.—Park. par. p. 387. f. 7. Stem red, hispid, or nearly glabrous. Whorls about 10-flowered. Calyx coloured, nearly glabrous. Corollas red or purple, nearly 1½ inch long. Galea downy outside, with ciliated edges.

Var. β, leaves deeply toothed. ♃. H. Orvàla Gargánica, Lin. spec. p. 807. Pàpia Gargánica, Micheli, gen. 20. t. 17.

Orvala, or Balm-leaved Archangel. Fl. May, July. Clt. 1596. Pl. 1 to 3 feet.

Sect. II. Lamiópsis (so named by Dumort, who considers it a distinct genus, from its resemblance to the true species of Lámium.) Benth. lab. p. 509. Lamiópsis, Dumort, florul. belg. p. 45. Tube of corolla straight, naked inside, or furnished with a transverse ring of hairs; throat very wide. Anthers hairy, outside.

2 L. multi'fidum (Lin. spec. p. 809.) superior leaves deeply lobed, glabrous on both surfaces; tube of corolla straight, exserted, annulate inside? ; galea oblong: throat very wide: lateral lobes very short, mutic. ♃. H. Native of the Levant. L. orientale foliis eleganter laciniatis, Tourn. cor. 11. Commel. rar. t. 26. Stems erect, pubescent. Lower leaves oval, very blunt, quite entire at top; middle leaves crenated, cuneated at the base; superior ones 1½ inch long, obtuse, deeply and bluntly lobed; floral leaves more acute, narrower: all cut and rather shotter than the flowers. Whorls many-flowered, distant. Calyxes villous. Corolla an inch long; galea narrowed at the base, woolly outside. Anthers villous on the back.

Multifid-leaved Archangel. Fl. April, May. Clt. 1782. Pl. ½ to 1 foot.

3 L. rhombor'bicum (Benth. lab. p. 509.) humble, simple; leaves rhomboid, wrinkled, clothed with velvety wool on both surfaces, as well as the calyxes; corolla ample, 3 times as long as the calyx: tube straight, naked inside: throat wide: galea broad: lateral lobes ovate, entire. ♃.? H. Native of the East Indies, in the province of Kamaon, Royle. Erianthèra rhomboídea, Benth. in Hook. bot. misc. 3. p. 880. Plant tomentosely villous. Leaves small; lower floral ones nearly entire; upper ones deeply crenated; all obtuse. Whorls about 2-flowered. Corollas nearly 1½ inch long, downy outside. Very nearly allied to *L. Gargánicum*.

Rhomboid-leaved Archangel. Pl. ½ foot.

4 L. Garga'nicum (Lin. spec. p. 808.) leaves cordate, wrinkled, clothed with soft villi on both surfaces; calyx villous; corolla 4 times as long as the calyx, with an erect tube, which is naked inside, a wide throat, a broad helmet, and the lateral lobes angular or furnished with a very short tooth. ♃. H. Native of Piedmont, on Mount Gargano; Greece, on Mount Hametto; Mountains of Laconia and Candia. Smith, exot. bot. 1. t. 48. L. Micheliànum, Tausch, in bot. zeit. 1831. 1. p. 215.—Till. pis. 93. t. 34. f. 2. act. par. 1717. p. 272. t. 9. Plant canescent or hoary. Leaves form of those of *L. vulgàtum*. Floral leaves for the most part shorter than the flowers. Whorls 10-20-flowered. Corolla 15 lines long, villous outside, red.

Gargano Archangel. Fl. June, Aug. Clt. 1729. Pl. ascending, 1 foot.

5 L. longiflòrum (Tenore, fl. nap. prod. p. 34. syll. 285.) stems nearly glabrous; leaves cordate, wrinkled a little, glabrous, or somewhat villous; whorls many-flowered; calyxes glabrous; corolla about 4 times longer than the calyx: tube straight, naked inside: throat very wide: galea broad: lateral lobes angular, or furnished with a short tooth. ♃. H. Native of the South of Europe, on the mountains; as of the Pyrenees, Provence on Mount Ventoso, Piedmont, Apennines, Naples, Sicily, Greece. L. lævigàtum, D. C. fl. fr. 3. p. 541. and many other authors, but not of Lin. L. Pedemontànum, Rchb. fl. germ. exc. p. 322.? Hardly to be distinguished from *L. Gargánicum*, unless in being glabrous, or nearly so.

Long-flowered Archangel. Pl. ascending.

6 L. galeobdolo'des (Smith, in Rees' cycl. vol. 20. Benth. lab. p. 788.) plant nearly glabrous; leaves small, on long petioles, cordate, crenated, or the superior ones are a little cut; whorls 6-10-flowered; calyx nearly glabrous, with short acute teeth; corolla about 4 times longer than the calyx: tube straight, naked inside: throat very wide: galea oblong: lateral lobes angular, appendiculate by a short tooth. ♃.? H. Native of the Levant, Tournefort. This differs from *L. longiflòrum*, in the small leaves and short calycine teeth, which are broad, not elongated and subulate.

Ground-Ivy-like. Pl. ascending.

7 L. veronicæfòlium (Benth. lab. p. 510.) glabrous; leaves small, on long petioles, reniform, deeply crenated, broadly subcordate at the base; upper leaves approximate, exceeding the flowers, or hardly shorter; corolla 3 times as long as the calyx, which is glabrous: tube straight, slender: throat dilated: galea very long, bifid at apex: lateral lobes angular, furnished with a short obtuse tooth. ♃. H. Native of Greece.—A very distinct species, having the lower leaves like those of *L. amplexicaùle*, and the corolla like that of *L. longiflòrum*. Leaves almost like those of *Verónica hederàcea*. Corolla ½ an inch long, red or purple.?

Speedwell-like Archangel. Pl. ascending.

8 L. stria'tum (Sibth. et Smith, fl. græc. 6. p. 46. t. 557.) leaves ovate, deeply crenated, broadly subcordate at the base: upper ones approximate, exceeding the flowers, or scarcely shorter; corolla 3 times as long as the calyx, which is glabrous: tube straight, slender: throat dilated: galea very long, bifid at apex: lateral lobes angular, appendiculate, by a short blunt tooth. ♃. H. Native of Greece, in waste places plentiful. Habit of *L. vulgàtum*; but the leaves are thinner, smaller, and less cordate at the base; petioles of the floral leaves shorter than the calyxes. Corollas 1½ inch long.

Striated Archangel. Pl. ascending.

9 L. bi'fidum (Cyr. pl. rar. fasc. 1. p. 22. t. 7.) leaves ovate: superior ones acuminated, all deeply lobed, crenately toothed: upper ones approximate, exceeding the flowers, or hardly shorter; tube of corolla straight, naked inside: throat dilated: galea elongated, and divaricately bifid at apex: lateral lobes appendiculate by a short linear tooth. ☉.? H. Native of the region of the Mediterranean; as in Corsica, Sicily, Naples. Tegione, fl. nap. t. 153. f. 2. Habit of *L. purpùreum*. Leaves more, green on both surfaces, or more or less lined with white, and more or less villous. Upper whorls subcapitate: lower ones remote. Corolla white, a little longer than those of *L. purpùreum*.

Var. β, clandestinum (Benth. lab. p. 511.) corollas minute from abortion. ☉. H. L. cryptánthum, Guss. prod. fl. sic. 2. p. 97. Rchb. icon. bot. eur. 8. p. 3. t. 707.

Bifid-helmeted Archangel. Fl. June, July. Clt.? Pl. ½ foot.

10 L. amplexicau'le (Lin. spec. 809.) leaves orbicular: cauline ones petiolate; floral leaves stem-clasping, all deeply crenated; tube of corolla straight, slender, naked inside: throat dilated: galea oblong, entire: lateral lobes mutic. ☉. H. Native of Europe, North of Africa, and Middle Asia, in cultivated fields and waste grounds; plentiful in Britain. Smith, engl. bot. t. 770. Hook. fl. lond. vol. 2. icone. Rchb. icon.

bot. eur. 3. p. 22. t. 224. f. 873. Curt. lond. 2. t. 109. Fl. dan. 752. *L.* palmàtum, Smith, in Rees' cycl. vol. 20. Galeóbdolon amplexicaúle, Mœnch, meth. p. 393. Pollíchia amplexicaúlis, Willd. fl. berol. 198. Roth, fl. germ. 1. p. 254.—Mor. hist. sect. 11. t. 11. f. 12.—Petiv. brit. t. 83. f. 4.—Rivin. mon. t. 63. Herb decumbent, branched at the base. Leaves glabrous, or rather hispid. Whorls densely many-flowered. Corolla purple or red, pubescent.

Var. β, *clandestìnum* (Rchb. icon. bot. eur. 8. p. 3. t. 708.) corollas minute by abortion. ☉. H.

Stem-clasping-leaved Archangel, or Great Henbit. Fl. March, July. Britain. Pl. ½ to 1 foot.

11 *L.* interme'dium (Fries, nov. fl. suec. ed. 1st. p. 105. and 2d. p. 192.) leaves orbicular; cauline leaves petiolate: floral ones stem-clasping, all deeply crenated; calycine teeth subulate, longer than the tube; tube of corolla straight, slender, naked inside: throat dilated: galea oblong, entire: lateral lobes appendiculate by a short tooth. ☉. H. Native of Sweden, North of Germany, and North of Scotland. Rchb. icon. bot. eur. 3. p. 22. t. 224. f. 872. and 8, 9. t. 721. *L.* moluccellæfòlium, Fries, nov. fl. suec. 72. ex Rchb. l. c. Habit and leaves like *L. amplexicaúle*; and scarcely differs from it, unless in the elongated calycine teeth, and lateral lobes of corolla.

Intermediate Archangel. Fl. March, July. Scotland. Pl. ½ to 1 foot.

12 *L.* purpu'reum (Lin. spec. p. 809.) lower leaves orbicular; floral leaves ovate, all crenated: uppermost ones approximate, exceeding the flowers; tube of corolla straight, slender, furnished with a pilose ring inside at the base: throat dilated: galea oblong, entire: lateral lobes appendiculate by a short linear tooth. ☉. H. Native throughout Europe and Asia, in waste and uncultivated grounds, in a light soil; plentiful in Britain. Hook. fl. lond. 2. icone. Smith, engl. bot. t. 769. Curt. lond. 1. t. 42. Fl. dan. t. 523. Martyn, fl. rust. t. 25. *L.* ocymifòlium, Smith, in Rees' cycl. vol. 20. *L.* nùdum, Mœnch, meth. p. 393. Crantz, stirp. austr. p. 259.—Riv. mon. t. 62. f. 2. Herb decumbent at the base. Leaves on long petioles, villous on both surfaces. Whorls densely many-flowered: upper ones approximate. Corolla ¼ an inch long, red. The floral leaves are usually coloured. According to Linnæus, it is boiled in Upland, a province of Sweden, as a pot-herb. The plant was formerly used medicinally, but is now disregarded.

Var. β, *mòlle* (Benth. lab. p. 512.) leaves less wrinkled, blunter, and with fewer crenatures. ☉. ? H. Native of England, in fields; as on road sides about Croydon. Flowers white.

Purple Archangel. Fl. May, Sept. Britain. Pl. ½ to 1 foot.

13 *L.* inci'sum (Willd. spec. 3. p. 89.) lower leaves orbicular; floral leaves broad-ovate, all deeply toothed, or lobed; the uppermost leaves approximate, exceeding the flowers; tube of corolla straight, furnished with a ring of hairs inside at the base: throat dilated: galea oblong, entire: lateral lobes appendiculate by a short linear tooth. ☉. H. Native of Europe, especially of the North, in corn-fields; France, Germany, Sweden; Britain, in many places. Smith, engl. bot. t. 1933. Rchb. icon. bot. eur. 3. p. 21. t. 223. *L.* hybridum, Vill. fl. dauph. 1. p. 251. *L.* dissèctum, With. brit. pl. p. 527. *L.* urticæfòlium, Weihe, ex Rchb. fl. germ. exc. p. 321. *L.* Westphaliànum, Weihe, ex Rchb. l. c. *L.* Coesfeldiæ, Weihe, ex Rchb. l. c. *L.* purpùreum, β, Huds. angl. p. 255.—Pet. brit. t. 83. f. 3. Leaves cut, as in *L. bífidum*. Flowers similar to those of *L. purpùreum*. Whorls sometimes all approximate, and sometimes the lower ones are remote.

Cut-leaved Archangel. Fl. May, Sept. Britain. Pl. ½ to 1 foot.

Sect. III. Lamiotypus (so named because the species contained in this section are the type of the genus.) Benth. lab. p. 513. Lamiotypus, Dumort, florul. belg. p. 45. Tube of corolla transversely annulate inside, contracted under the ring, and dilated above it, rather ventricose, and somewhat recurvedly drawn out; throat a little dilated. Anthers hairy outside.

14 *L.* moscha'tum (Mill. dict. no. 4.) leaves ovate, cordate, nearly glabrous; calycine teeth long, lanceolate-subulate; tube of corolla ample, short, furnished with a pilose ring inside; throat very wide: galea longer than the tube; lateral lobes bluntly acuminated, scarcely appendiculate. ☉. H. Native of the Levant. Leaves blotched with white, and in dry weather have a musky scent, but in wet weather are fetid. Corollas white; galea villous.

Musky-scented Archangel. Fl. April, July. Clt. 1730. Pl. ½ foot.

15 *L.* calve'num (D'Urv. pl. arch. in mem. soc. Lin. par. p. 323.) stem erectish, branched, quite glabrous, fistular; leaves cordate, wrinkled, woolly, pubescent: the upper ones also subpetiolate; calyxes smooth, reticulated, about equal in height to the corollas; calycine teeth very long, arched, subulate, scarcely ciliated; flowers crowded, sessile; whorls numerous: lower ones remote. ☉. H. Native of the Grecian Islands. Corolla villous outside, white.

Large-calyxed Archangel. Pl. ½ to 1 foot.

16 *L.* petiola'tum (Royle, ex Benth. in Hook. bot. misc. 3. p. 381. lab. p. 513.) leaves ovate-lanceolate, acuminated, scarcely cordate at the base; calycine teeth long-subulace; tube of corolla ample, furnished with a pilose ring inside: throat scarcely dilated; galea elongated: lateral lobes mutic, or with a short setaceous appendage: lip very short. ♃. ? H. Native of the Himalaya, plentiful, Royle; Kamaon, Wall. Allied to *L. vulgàtum*, but the leaves and corollas are different. Hairs of stem reflexed. Lower leaves petiolate: floral ones sessile, coarsely and somewhat doubly serrated, green and hispid on both surfaces. Whorls usually many-flowered. Corolla white; galea villous outside.

Petiolate-leaved Archangel. Pl. ascending.

17 *L.* vulga'tum (Benth. lab. p. 514.) leaves ovate, cordate, or truncate at the base, wrinkled, usually villous; calycine teeth long-subulate, glabrous or villous; tube of corolla ample, furnished with a ring of hairs inside: throat dilated a little: galea oblong: lateral lobes appendiculate by a long subulate tooth. ♃. H. Native of Europe, North of Africa, and Middle Asia, in shady mountain places, &c.; in some parts of Scotland. This is a very variable plant, but is readily distinguished from others by the form of the corolla. Leaves petiolate, crenated, doubly toothed, or a little cut, usually green, but often lined and blotched with white, more or less wrinkled, and villous. Whorls 10-20-flowered.

Var. α, *rùbrum* (Benth. lab. p. 514.) corollas purple or red; leaves green or blotched with white. ♃. H. This is more common in the southern regions of Europe than in the northern. *L.* maculàtum, Lin. spec. p. 809. Rchb. icon. bot. eur. 3. p. 12. t. 215. Sibth. et Smith, fl. græc. 6. p. 46. t. 556. with spotted leaves. Smith, engl. bot. t. 2550. with spotless leaves. *L.* rugòsum, Ait. hort. kew. 2. p. 296. Rchb. icon. bot. eur. 3. p. 14. t. 217. but not of Sibth. et Smith, nor Guss. nor Tenore. *L.* rùbrum, Blackw. t. 183. Wallr. sched. crit. p. 300. *L.* mutábile, Dumort, florul. belg. p. 45. ? *L.* hirsùtum, Lam. dict. 3. p. 410. with spotless leaves. *L.* stoloníferum, Lap. abr. pyr. p. 383. with spotless leaves, and many large flowers. *L.* grandiflòrum, Pourr. act. acad. tolos. 3. p. 322. *L.* lævigàtum, Lin. spec. p. 808. Rchb. icon. bot. eur. 3. p. 14. t. 216. but not of all authors—(this is a more glabrous variety.) *L.* melis-

sæfòlium. Mill. dict. no. 5.?—Sabb. hort. rom. 3. t. 34.—Bocc. muss. t. 23.—Colum. ecphr. 1. p. 190, t. 192.

Var. β, *álbum* (Benth. lab. p. 514.) flowers white; leaves spotless, villous. ♃. H. More common in the northern regions of Europe than the southern. L. álbum, Lin. spec. p. 809. Hook. fl. lond. 2. icone. Smith, engl. bot. t. 768. Curt. lond. 2. p. 45. t. 115. Fl. dan. 594. Mart. fl. rust. t. 25.—Riv. mon. t. 62. f. 1. L. níveum, Hort. L. capitàtum, Smith, in Rees' cycl. vol. 20. L. foliòsum, Crantz, stirp. austr. p. 258. This is certainly a distinct species from *L. maculàtum*; the roots of this creep like couch under ground, while the root of *L. maculàtum* is composed of fibres. Linnæus says that the leaves are eaten as a pot-herb in spring. The plant was formerly considered medicinal.

Common Archangel, or Dead-Nettle. Fl. April, Sept. Britain. Pl. 1 to 2 feet.

18 L. mólle (Ait. hort. kew. 2. p. 297.) lower leaves ovate: superior ones ovate-lanceolate, acute, truncate at the base, very rarely cordate; calycine teeth long-subulate; tube of corolla ample, furnished with a hairy ring inside, subrecurved: throat a little dilated: galea oblong: lateral lobes appendiculate by a subulate tooth; anthers hairy. ♃. H. Native country unknown, but common in gardens. L. parietariæfòlium, Benth. lab. p. 739. L. parietariæfòlio, Mor. hloes. 278. Very nearly allied to *L. vulgàtum*; but the lower leaves are rarely cordate: the upper ones much narrower, and often quite entire; and the corollas are smaller, and white.

Soft Archangel. Fl. April, June. Clt. 1683. Pl. ½ to 1 foot.

19 L. tomentòsum (Willd. spec. 3. p. 90.) leaves ovate, cordate, wrinkled, very villous; calycine teeth subulate, plumosely ciliated; tube of corolla ample, furnished with a ring of hairs inside: throat dilated a little: galea oblong: lateral lobes appendiculate by a long subulate tooth. ♃.? H. Native of the South-east of Europe, and Middle Asia; as of the South of Italy, Armenia, Caucasus. L. Colúmnæ, Tenore, ind. sem. hort. nap. 1827. syll. fl. nap. p. 286. Hardly differing from *L. vulgàtum*; except in the smaller, more villous leaves, and in the very villous calycine teeth. Flowers white.

Tomentose Archangel. Fl. May, July. Clt.? Pl. ½ to 1 foot.

Sect. IV. Galéobdolon (from γαλη, *gale*, a weasel; and βδολος, *bdolos*, fetid smell; in allusion to the fetid smell of *L. Galeóbdolon*.) Benth. lab. p. 515. Tube of corolla obliquely annulate inside, contracted under the ring, but dilated and rather ventricose above the ring, somewhat recurvedly stretched out: throat a little dilated: galea oblong, narrowed a long way at the base. Anthers glabrous.

20 L. rubéscens (Sibth. in herb. Banks, ex Benth. lab. p. 515.) leaves ovate, truncate or subcordate at the base: superior leaves acuminated, all wrinkled and villous; corolla reddish purple: galea elongated, entire: lateral lobes angular, having the angle mutic, or with a setaceous appendage. ♃. H. Native of Sicily and Naples. L. rugòsum, Sibth. et Smith, fl. græc. 6. p. 45. t. 555. Guss. fl. sic. prod. 2. p. 94. Tenore, fl. nap. 2. p. 19.? but not of Ait. This species differs from *L. flexuòsum*, in the corollas being one half larger, more villous, and purplish red; and in the leaves being more villous; and the bracteas are usually broader.

Pubescent Dead-Nettle. Pl. ascending.

21 L. flexuòsum (Tenore, fl. nap. 2. p. 19. t. 52. syll. p. 287.) leaves ovate, acuminated, truncate, or subcordate at the base, nearly glabrous, or scarcely villous; corolla white: galea elongated, entire: lateral lobes angular, having the angle mutic, or furnished with a setaceous point. ♃. H. Native of the region of the Mediterranean; as of France, Sicily, Naples, and Barbary. Reich. icon. bot. cur. 8. p. 3. t. 706. L. Petitianum, Guy, ined. Stems procumbent, often rooting at the base; branches ascending. Leaves coarsely and doubly toothed, green, or marked by a white line. Whorls 6-20-flowered.

Flexuous Dead-Nettle. Fl. April, July. Clt. 1824. Pl. ascending.

22 L. Galeóbdolon (Crantz, austr. p. 262. Benth. lab. p. 516.) leaves ovate, acuminated, truncate or subcordate at the base, nearly glabrous, or pilose; corolla yellow: galea elongated, entire: lateral lobes oblong, mutic, or with a very short appendage, hardly shorter than the lip. ♃. H. Native of the North of Europe, in shady places, woods, and under hedges; plentiful in some parts of Britain. Galeópsis Galeóbdolon, Lin. spec. 810. Pollíchia Galeóbdolon, Roth, fl. germ. 1. p. 254. Leonúrus Galeóbdolon, Scop. carn. no. 705. Galeóbdolon lúteum, Huds. angl. p. 258. Hook. fl. lond. 2. icone. Smith, engl. bot. t. 787. Galeóbdolon Galeópsis, Reich. cat. p. 436. Curt. fl. lond. 4. t. 40. Cardiaca sylvática, Lam. fl. fr. 2. p. 384. Pollíchia vulgáris et montána, Pers. ann. bot. 14. p. 39. Galeóbdolon vulgáre, Pers. euch. 2. p. 122.—Riv. mon. irr. t. 20. f. 2.—Mor. hist. sect. 11. t. 11. f. 5, 6. Herb nearly glabrous, but sometimes, especially on the lower leaves and stems, beset with long hairs. Whorls numerous, 6-15-flowered. Leaves deeply toothed. Corolla yellow: middle segment of the lower lip tawny, marked with 3 lines, the whole lower lip beautifully spotted with tawny or deep orange dots.

Galeobdolon, or Yellow-flowered Dead-Nettle. Fl. May, July. Britain. Pl. 1 to 1½ foot.

Doubtful species.

23 L. hírtum (Poir. suppl. p. 296.) leaves ovate-cordate, pubescently hairy, rather hoary; stem and calyxes very hairy; corolla small, nearly glabrous. ♃.? H. Native country unknown, but cultivated in Parisian gardens. Flowers of *L. álbum*, but much smaller. Stems hairy. Leaves soft, with nearly regular, obtuse crenatures, canescent: lower ones on long petioles. Whorls few-flowered. Calycine teeth 5, very short. Corolla white.

Hairy Archangel. Pl. ascending.

24 L. micrán'thum (Weinm. in syll. pl. soc. ratisb. 1. p. 68.) lower leaves petiolate: upper ones sessile, cordate-ovate, obtuse, serrated; whorls 6-flowered. ☺. H. Native of Brazil. Leaves beset in all parts with reflexed or spreading hairs. Calycine teeth equal, ciliated, terminated by a bristle. Corolla small, pale red, about equal in length to the calycine teeth; galea entire. Perhaps *L. purpùreum* or *Stáchys arvénsis*.

Small-flowered Archangel. Pl. 1 foot.

Cult. None of the species are worth cultivating for ornament, except *L. Orvàla* and *L. vulgàtum*, var. *maculàtum*. They are of the most easy culture, and will grow in any soil or situation, even under the drip of trees. The herbaceous perennial kinds are increased by division. The seeds of annual kinds only require to be sown in the open ground in spring.

LXXVII. LAGOCHILUS (from λαγος, *lagos*, a hare; and χειλος, *cheilos*, a lip; in reference to the bifid lower lip, like that of a hare's.) Bunge, mon. gen. molucc. ined. Benth. lab. p. 640.

Lin. syst. *Didynàmia, Gymnospérmia*. Calyx tubularly campanulate, somewhat 5-nerved, with an equal or oblique

mouth: teeth 5, nearly equal, of the superior ones are the longest, rather spinose at top. Corolla having the tube a little exserted, annulate inside, and the limb bilabiate; upper lip oblong, bifid at apex; lower lip erectish, with short, erect, acute, lateral lobes, and a spreading, broadly bifid middle lobe. Stamens 4, ascending: lower ones the longest. Filaments naked at the base; anthers approximate by pairs, 2-celled: cells parallel or diverging, and with the margins of the valvules ciliated. Style about equally bifid at apex: lobes subulate, stigmatiferous at apex. Achenia dry, triquetrous, with acute angles, and a truncate apex.—Herbs? quite glabrous, stiff. Leaves deeply lobed: lobes somewhat spinescent. Whorls axillary, few-flowered. Bracteas subulate, rather spinose.

1 L. diacanthophyl'lus (Benth. lab. p. 641.) leaves tripartite, cut; calyxes erectish, with oblong, mucronulate teeth, which are longer than the tube. ♃. F. Native of the desert of Bucharia, Pallas. Molucélla diacanthophýlla, Pall. nov. act. petrop. 10. p. 380. t. 11. Molucélla grandiflòra, Steph. in Willd. spec. 3. p. 131. Stems numerous, erect, rising from a perennial base. Lobes of lower leaves broad, short, obtuse, mutic, those of the superior ones narrow, ending each in a spiny mucrone; middle lobe of floral leaves sometimes tridentate. Whorls 2-flowered.? Corolla villous, pale red.

Two-spined-leaved Lagochilus. Pl. ⅓ foot.

2 L. Bu'ngei (Benth. lab. p. 641.) leaves petiolate, 3-5-parted, cut: calyx elongated, incurved, with lanceolate, spinose teeth, which are one half shorter than the tube. ♃. F. Native of Siberia, among rocks in Soongaria, at the Irtish, Bunge. L. diacanthophýlla, Bunge, mon. moluce. ined. exclusive of the syn. of Pallas. Stems woody at the base, ascending. Leaves an inch long, cuneated at the base, with spiny or mutic lobes. Corolla pale red, almost 1½ inch long. Whorls remote.

Bunge's Lagochilus. Pl. 1 foot.

3 L. ilicifòlius (Bunge, mon. moluce. ined. ex Benth. lab. p. 641.) leaves sessile, cuneiform, deeply 3-5-toothed at apex; calyxes short, erectish, with oblong, very shortly mucronulate teeth. ♃. F. Native of Mongholia, in stony saltish places, Bunge.—A dwarf, stiff herb, or under-shrub. Stem rather villous under the axils, the rest glabrous. Whorls few-flowered. Corolla 7-8 lines long, pilose outside.

Holly-leaved Lagochilus. Shrub ⅓ foot.

Cult. For culture and propagation see *Làmium*, p. 819.

LXXVIII. LEONURUS (from λεων, *leon*, a lion; and *ουρα*, *oura*, a tail; lion's tail.) Lin. gen. no. 722. Schreb. gen. no. 977. Juss. gen. p. 114. Benth. lab. p. 517.—Cardiaca, Tourn. inst. t. 87.—Cardiaca, Chaitùrus, et Panzèria, Mœnch. meth.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx 5-nerved, turbinate, nearly equal, with a truncate mouth, and 5 teeth, which are subulate, and rather spiny at apex, and at length spreading. Corolla with an inclosed, rarely exserted tube, which is naked, or obliquely annulate inside, and a bilabiate limb: superior lip oblong, quite entire, sometimes flattish, with a narrowed base, and sometimes arched; lower lip spreading, trifid, the lateral lobes oblong, and the middle lobe obcordate. Stamens 4, ascending, didynamous: lower 2 the longest; anthers approximate by pairs, 2-celled: cells parallel, transverse, rarely diverging, with naked valvules. Style about equally bifid at top; lobes subulate, rarely short, and obtuse, stigmatiferous at top. Achenia dry, smooth, triquetrous, truncate at apex, with acute angles.—Erect herbs. Leaves generally deeply lobed: lower ones roundish: floral ones narrower, all exceeding the flowers much. Whorls dense, axillary, distinct. Bracteas subulate. The section *Cardiaca* comes very near to the section *Galeòbdolon* of *Làmium*, and the section *Chaitùrus* to the genus *Marrùbium*, ex Benth.

Sect. 1. Cardi'aca (the Latin name of motherwort, from *cardia*, the heart; in allusion to its supposed efficacy in the cure of cardialgia.) Benth. lab. p. 518. Cardiaca, Mœnch, meth. p. 401. Tube of corolla obliquely annulate inside, rather ventricose above the ring; upper lip flattish, narrowed at the base: lower lip spreading, with the middle lobe entire.

1 L. pubes'cens (Benth. in Wall. pl. asiat. rar. 1. p. 68. lab. p. 518.) finely pubescent; leaves all ovate, acuminated, rather deeply toothed; corolla about 3 times as long as the calyx. ♃. or ♂. H. Native of the mountains of Kumaon, Wall.; Choor and Kunaour, Royle. Leaves more toothed than lobed. Whorls 20-30-flowered, remote. Corollas larger than those of *L. Cardiaca*.

Pubescent Motherwort. Pl.?

2 L. Royle'anus (Benth. l. c.) stem erect, finely tomentose; leaves ovate, acuminated, deeply serrated, or 3-5-lobed, villous above, and clothed with hoary tomentum beneath, as well as the calyxes. ♃. or ♂. H. Native of Mount Choor, Royle. Stem branched, with pilose axils. Whorls many-flowered; lower ones remote: upper ones spicate.

Royle's Motherwort. Pl.?

3 L. Cardi'aca (Lin. spec. p. 817.) pubescent; lower cauline leaves palmatifid: superior leaves ovate, lobate: floral leaves oblong, subtrifid, narrowed a long way at the base: lobes all ovate or lanceolate; calyxes glabrous or villous. ♃. or ♂. H. Native throughout Europe and Middle Asia, on banks or under hedges, in a gravelly or calcareous soil. In several places both in Scotland and England, in like situations. Smith, engl. bot. t. 286. Fl. dan. t. 727. L. campéstris, Andrz. ex Besser, pl. exs. with the segments of the leaves a little narrower. L. Illýricus, Hort. Cardiaca vulgàris, Mœnch, meth. p. 401. Cardiaca trilobàta, Lam. fl. fr. 2. p. 388.—Blackw. t. 171.—Mor. hist. sect. 11. t. 9. f. 13. Stems branched at the base. Whorls 6-15-flowered, distant. Corolla villous outside, pale red or white, and striped with purple veins. The herb is bitter and tonic, with no very pleasant, but pungent smell. It was formerly used in Cardialgia, whence its old name; but it has now become wholly obsolete, except, perhaps, among cow-leeches and farriers. Bees are fond of the flowers. In German, Motherwort is called *Herzgewaus* or *Herzkraut*. In Swedish, *Bonassla*. In French, *Agripaine, Cardiaque, La Cardiale*. In Italian, Spanish, and Portuguese, *Agripalma, Cardiaca*, &c.

Var. β, villòsus (Benth. lab. p. 518.) leaves more wrinkled, and are, as well as the stems, villous; calyxes rather villous. ♃. or ♂. L. villòsus, Desf. cat. hort. par. p. 73. D'Urv. enum. pl. arch. in mem. soc. Lin. par. p. 325. L. condensàtus, Horn. hort. hafn. L. lùcerus, Lindl. hort. trans. 6. p. 296. L. canéscens, Dumort, florul. belg. p. 46. L. neglèctus, Schrauck, in syll. pl. soc. ratisb. 2. p. 61. Corollas red or purple.

Var. γ, crispus (Benth. lab. p. 519.) margins of leaves undulately curled, and lacerately toothed. ♂. H. L. crispus, Murr. comm. gœtt. 8. t. 4. Cardiaca crispa, Mœnch, meth. p. 401.—Sabb. hort. rom. 3. t. 43. Mill. dict. ed. 7th. Corollas pale red or white.

Cardiac or Common Motherwort. Fl. July, Aug. Britain. Pl. 2 to 4 feet.

4 L. glaucescens (Bunge, in Led. fl. alt. 2. p. 409.) canescent from glaucescent pubescence above; cauline leaves palmately parted, cut, with oblong-lanceolate lobes; floral leaves subtrifid, the segments and upper leaves lanceolate-linear, almost quite entire; calyxes clothed with hoary pubescence. ♂. H.

Native of the Altaia, plentiful. Ledeb. fl. ross. atl. ill. t. 179. Habit of *L. Sibíricus*, with the flowers of *L. Cardiaca*. Leaves ample, deeply toothed; floral leaves much narrower, and more deeply cut than in *L. Cardiaca*.

Glaucescent Motherwort. Pl.

5 L. Tatáricus (Lin. spec. p. 818.) glabrous or pubescent at top; cauline leaves palmately parted, cut; floral leaves subtrifid: lobes of all, as well as the upper leaves, lanceolate-linear or linear; calyxes glabrous or villous. ♃. H. Native of Tartary, Lin.; Siberia, about the Kolyvan, Patrin; Altaia, frequent, Ledeb. Rchb. icon. bot. eur. 4. p. 31. t. 338. L. Altàicus, Spreng. syst. 2. p. 738. L. multífidus, Desf. hort. par.—Mill. fig. 53. t. 80. Nearly allied to *L. glaucéscens*, but more slender, more humble, and the leaves more finely cut, and the flowers smaller.

Tartarian Motherwort. Fl. Aug. Oct. Clt. 1756. Pl. 2 to 3 feet.

Sect. II. Chaitu'rus (from χαιτη, *chaite*, a head of hair, and ουρα, *oura*, a tail; in reference to the close whorls of flowers.) Benth. lab. p. 520. Chaitùrus, Mœnch. meth. p. 401. Tube of corolla straight, naked inside: upper lip a little arched: lower lip erectish, with nearly equal lobes, the middle lobe almost entire. Stamens scarcely longer than the tube; cells of anthers diverging. Flowers minute.

6 L. marrubia'strum (Lin. spec. 817.) branches elongated, pubescent; leaves oblong-ovate, somewhat deeply toothed, narrowed at both ends; calyxes nearly glabrous; corollas shorter than the calycine teeth. ☉. H. Native of Europe, especially in the East, and Asiatic Russia, among bushes, and in waste places; as of France, Germany, Piedmont, Hungary, Caucasus, Siberia. Jacq. fl. austr. 5. p. 3. t. 405. Chaitùrus leonuroides, Willd. fl. berol. p. 201. Chaitùrus marrubiástrum, Ehrh. Cardiaca marrubiástrum, Schreb.—Bocc. mus. 2. t. 98. Leaves petiolate, 1 to 1½ inch long, glabrous and green above, pale and canescent beneath, and tomentosely pubescent. Whorls dense, many-flowered, numerous, distant. Calycine teeth subulate, spiny, diverging. Corollas small, white, or pale red, smoothish.

Horehound-like Motherwort. Fl. June, Aug. Clt. 1710. Pl. 1 to 3 feet.

Sect. III. Panze'ria (named after G. Wolf. Fr. Panzer, of Nuremberg, author of several botanical works.) Benth. lab. p. 520. Panzèria, Mœnch. meth. p. 402. Tube of corolla straight, naked inside. Upper lip arched; lower lip straightish, or with the middle lobe spreading a little, obcordate or bifid. Stamens exserted from the tube.

7 L. Sibi'ricus (Lin. spec. p. 818.) erect, tall, glabrous or finely pubescent; leaves pinnately or palmately parted, a little cut; upper floral leaves almost quite entire; calyxes glabrous or clothed with fine tomentum. ♃. H. Native of Asia, Africa, and America, as of India, China, and Japan, Timor, Senegambia, Cuba, Demerara, St. Thomas, Trinidad, Brazil, &c. Rchb. icon. bot. eur. 4. p. 30. t. 337. Smith, exot. bot. 2. p. 67. t. 94. Sweet, fl. gard. 3. t. 204. L. Tatáricus, Burm. fl. ind. 127. but not of Lin. L. occidentàlis, Hortul. L. heterophýllus, Sweet, brit. fl. gard. 2. t. 197. L. occidentàlis, Colla, in mem. acad. taur. vol. 33. p. 154. L. altíssimus, Bunge, nov. gen. et spec. chin. not. ined. L. multífidus, Desf. Panzèria multífida, Mœnch. meth. suppl. p. 137. Panzèria tripartìta, Mœnch. meth. p. 402.? Stáchys Artemisiæ, Lour. coch. p. 368.—Amm. ruth. no 60. t. 8.? Branches usually canescent, at length glabrous and green. Leaves cut to the middle of the limb; cauline leaves usually tripartite; all green and glabrous above, but pale beneath, and pubescent while young. Lower whorls remote; upper ones approximate. Corollas red.

Siberian Motherwort. Fl. June, Aug. Clt. 1759. Pl. 2 to 6 feet.

8 L. lana'tus (Spreng. syst. 2. p. 738.) plant humble, clothed with white wool or villi; leaves all palmate-parted or palmatifid; corolla elongated. ♃. or ♂. H. Native of Siberia, in dry, sterile places, between the river Kan and Jebegan; and at the rivers Katunga and Tschuja, and near Slimon, Ledeb.; Dahuria, Patrin. Rchb. icon. bot. eur. 8. p. 15. t. 736. Ballòta lanàta, Lin. spec. 816. Panzèria lanàta, Pers. ench. 2. p. 126. Panzèria tomentòsa, Mœnch. meth. 402.—Gmel. sib. 3. t. 54. Stems rising from a thick rather woody base. Whorls dense, many-flowered, approximate. Corolla more than an inch long, yellowish.

Woolly Motherwort. Fl. June, Aug. Clt. 1752. Pl. 1 to 2 feet.

† *Species not sufficiently known.*

9 L. Java'nicus (Blum. bijdr. p. 828.) leaves ovate-oblong, unequally toothed; calyxes strigosely pubescent; calycine teeth acuminated, spreading; upper lip of corolla concave, emarginate: middle segment of the lower lip roundish, crenulated: lateral ones acutish. ♃. H. Native of the west of Java, in shady mountain places.

Java Motherwort. Pl.?

10 L. oblongifòlius (Blum. bijdr. p. 828.) leaves oblong, acuminated, unequally denticulated; calyxes very pilose; calycine teeth subulate; middle segment of the lower lip of the corolla roundish, crenulated: lateral ones acute. ♄.? H. Native of Java, on the Salak mountains, on the banks of the river Tjapus.

Oblong-leaved Motherwort. Pl.?

Cult. None of the species are very ornamental; and being generally biennial plants, the seeds of them only require to be sown in the open ground. *L. lanàta* should be grown in a dry sandy soil, or on rockwork.

LXXIX. ANISO'MELES (from ανισος, *anisos*, unequal, and μελος, *melos*, a member; in reference to the anthers of the longer stamens being dimidiate or halved.) R. Br. prod. p. 503. Benth. lab. p. 701. A'juga species, Roxb. Népeta and Ballòta species, Lin.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx ovate, tubular, erectish, 5-toothed. Corolla having the tube equalling the calyx, and furnished with a pilose ring inside, and a bilabiate limb; upper lip erect, oblong, entire; lower lip larger, spreading: lateral lobes ovate, obtuse, the middle lobe emarginately sub-bifid. Stamens 4, ascending, exserted, the lower 2 the longest; anthers approximating by pairs, those of the longer stamens dimidiate, and those of the shorter ones 2-celled: the cells parallel and transverse. Style almost equally bifid at top. Achenia dry, smooth.—Herbs and sub-shrubs, with the habit of *Stáchys*, sect. *Erióstachys*. Whorls sometimes densely many-flowered, racemose; sometimes very loose; constantly composed of cymes on long peduncles; sometimes axillary and few-flowered. Flowers purplish.

1 A. moschà'ta (R. Br. prod. p. 503.) leaves elliptic, and arc, as well as the stem, clothed with cinereous pubescence; whorls few-flowered; calyx greyish-green, glanduliferous. ♄. S. Native of tropical New Holland. Corollas red or purplish.

Musky Anisomeles. Fl. July, Aug. Clt. 1824. Shrub 2 to 3 feet.

2 A. inodòra (R. Br. prod. p. 503.) leaves elliptic, nearly glabrous, dotted beneath; whorls remote; calyxes green, glanduliferous. ♄.? S. Native of tropical New Holland.

Scentless Anisomeles. Shrub.

3 **A. Heyne'na** (Benth. in Wall. pl. rar. asiat. 1. p. 59. lab. p. 702.) glabrous or finely pubescent; leaves remote, oblong-lanceolate, narrowed at the base; cymes of flowers on long peduncles, secund, few-flowered; calycine teeth lanceolate, acute. ♄. ? S. Native of the Indian Peninsula, Heyne; Island of Salcette, on the higher mountains, in shady woods, at the temple of Kennerg, Jacquemont. Leaves serrately crenated, smaller and thinner than the rest, pale green, and usually finely pubescent.

Heyne's Anisomeles. Shrub, ?

4 **A. salviefòlia** (R. Br. prod. p. 503. ? Benth. lab. p. 702.) villous; leaves oblong-elliptic or lanceolate; whorls dense, many-flowered; calycine teeth short, broad-lanceolate, acute. ♄. ? S. Native of tropical New Holland; Island of Timor. Very nearly allied to *A. intermèdia*, and *A. ovàta*, var. *mollissima*, but differs in the smaller stature, slenderer branches, smaller calyxes, and in the teeth being 4 times shorter than the tube.

Sage-leaved Anisomeles. Shrub. ?

5 **A. ova'ta** (R. Br. in Ait. hort. kew. ed. 2. vol. 2. p. 364.) hairy, rarely almost glabrous; leaves ovate, acuminated or roundish or truncately subcordate; whorls dense, many-flowered; calycine teeth lanceolate, acute. ☉. ? S. Native of the hotter parts of Asia, in waste and humid places in most parts. Jacq. fil. ecl. 1. t. 86. Hook. bot. misc. 2. p. 358. t. 19. *A. disticha*, Heyne, ex Roth. nov. spec. p. 254. Népeta Amboinica, Lin. suppl. p. 278. Ballòta disticha, Lin. mant. 83. Ajuga disticha, Roxb. fl. ind. 3. p. 2. Népeta disticha, Blume, bijdr. p. 828. Marrùbium Indicum, Burm. fl. ind. p. 127. et thes. zeyl. t. 71. Monárda Zeylánica, Burm. fl. ind. p. 12. Ballòta Mauritiàna, Pers. ench. 2. p. 126.—Rheed. mal. 10. p. 175. t. 88. Leaves obtuse, broadly crenated. Whorls 10-40-flowered, secund, or nearly equal; lower ones distant; upper ones interruptedly spicate. Corollas purple; lower lip of a deeper colour.

Ovate-leaved Anisomeles. Fl. July, Aug. Clt. 1823. Pl. 2 to 3 feet.

6 **A. ca'nicans** (Benth. in Wall. pl. rar. asiat. 1. p. 59. lab. p. 703.) canescent from pubescence; leaves ovate-oblong or lanceolate, narrowed at the base; whorls many-flowered, rather loose; calycine teeth lanceolate, acute. ♄. ? S. Native of the Birman Empire, on the banks of the Irrawaldi, near Yenangbuen, Wallich. Habit of *A. Malabárica*, but the leaves are a little broader, pubescent on both surfaces, as well as the stems and calyxes. Cymes usually elongated as in *A. Malabárica*, but the flowers are fewer. Calyx elongated, having the teeth as in *A. ovàta*.

Whitish Anisomeles. Shrub. ?

7 **A. interme'dia** (Wight, mss. ex Benth. lab. p. 703.) clothed with tomentose pubescence or subvillous; leaves ovate-lanceolate, cuneated at the base; whorls many-flowered, dense, or the cymes are at length ample and elongated; bracteas subulate; calyx hairy, having the teeth lanceolate at the base, and subulate at apex, very soft. ♄. ? S. Native of the Indian Peninsula, on the mountains of Madura; and of Ceylon, at Peradenia. Habit intermediate, between *A. ovàta*, and *A. Malabárica*, but is more nearly allied to the latter, from which it differs in the broader less tomentose leaves, and broader calycine teeth.

Intermediate Anisomeles. Shrub.

8 **A. Malaba'rica** (R. Br. in. bot. mag. t. 2071.) tomentosely villous; leaves oblong-lanceolate, narrowed at the base; whorls many-flowered, dense, or the cymes are ample, and at length elongated; floral leaves, bracteas, and subulate calycine teeth, very soft. ♄. S. Native of the hotter parts of Asia, in humid places by the sides of rivulets; as of the Indian Peninsula, Burman Empire, Mauritius, Penang, Java, Malabar, &c. Hook. journ. bot. 1. p. 225. t. 127. Népeta Malabárica, Lin. mant. 566. Ajuga fruticòsa, Roxb. fl. ind. 3. p. 1. Stàchys Malabárica, Sieb. fl. maur. exc.—Rheed. mal. 10. p. 155. t. 83.? Branches canescent from short tomentum. Leaves 2-4 inches long, obtuse, serrately crenated in the upper part, quite entire at the base. Whorls distant, disposed in simple racemes. Corolla rose-coloured or purplish: throat of corolla and filaments pilose. Odour of *Stàchys sylvática*.

Malabar Anisomeles. Fl. July, Aug. Clt. 1817. Shrub 2 to 5 feet.

Cult. The species are of the most easy culture and propagation. A light rich soil answers them well; and cuttings strike root readily in the same kind of soil.

LXXX. GALEOPSIS (from γαλη, *gale*, a weasel; and οψις, *opsis*, resemblance; the mouth of the corolla gaping like that of an animal.) Lin. gen. no. 717. Schreb. gen. no. 972. Juss. gen. p. 114. Benth. lab. p. 523. Tetràhit. Dill. gen. 3-4. Mœnch. meth.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubularly campanulate, somewhat 5-nerved, with a nearly equal mouth and 5 nearly equal teeth, or the superior teeth are the longest, somewhat spinescent at apex. Corolla with an exserted tube, which is naked inside, a dilated throat, and a bilabiate limb; upper lip ovate, entire, arched; lower lip spreading, trifid; the lateral lobes ovate, and the middle lobe obcordate or somewhat bifid; palate furnished with an elevated tooth above, at the recess of the lobes. Stamens 4, ascending, the lower two the longest; anthers 2-celled: cells opposite, transversely and bivalvately dehiscent; inner valve roundish, with ciliated edges; outer one larger and naked. Style about equally bifid at top; lobes subulate, stigmatiferous at apex.—Annual divaricately branched erect herbs, rarely decumbent at the base. Floral leaves almost similar to the cauline leaves. Whorls numerous, many-flowered, distinct. Flowers red or cream-coloured, or variegated with both these colours. This genus is readily distinguished from all other labiate genera in the structure of the anthers.

1 **G. ochroleu'ca** (Lam. dict. 2. p. 600.) stem pubescent; leaves oblong or oblong-lanceolate, clothed with soft villi on both surfaces; calyx clothed with glandular villi. ☉. H. Native of Middle Europe; as of Britain, France, and Germany, in sandy corn-fields; in England, as in Cambridgeshire, Nottinghamshire, Yorkshire, Lancashire, and about Bangor in Wales. Relhb. icon. bot. eur. 1. p. 40. t. 46. *G. villòsa*, Smith, fl. brit. 2. p. 629. engl. bot. t. 2353. *G. grandiflòra*, Gmel. syst. p. 205. *G. prostràta*, Vill. dauph. 2. p. 388. *G. dùbia*, Leers herb. no. 453. Tetràhit longiflòrum, Mœnch, meth. p. 395. *G. ségetum*, Relhb. ex Steud. nom. p. 351. *G. Ládanum*, *majus* Krok. fl. siles. no. 932. Stems often decumbent at the base. The whole plant generally clothed with glandular hairs. Corollas large, cream-coloured.

Cream-coloured flowered Hemp Nettle. Fl. July, Aug. Britain. Pl. 1 foot.

2 **G. La'danum** (Lin. spec. p. 810.) stem glabrous or pubescent; leaves oblong-lanceolate, clothed with short tomentose pubescence on both surfaces; calyxes clothed with adpressed pubescence and glandless pili. ☉. H. Native throughout Europe, from Sweden and Scotland to Spain, Italy, South of Russia and the Caucasus; a common weed in corn fields, plentiful in Britain, Smith, engl. bot. t. 884. *G. canéscens*, Sebulres, obs. p. 108. ? *G. angustifòlia*, Ehrh. Tetràhit Ládanum, Mœnch, meth. 394. —Petiv. brit. t. 33. f. 11.—Mor. hist. 3. p. 386. sect. 11. t. 12. f. 18. Plant erect. Branches purplish. Leaves remotely serrate-crenated. Whorls few at the tops of the branches, 6-10-flowered. Corolla red, having the tube and throat generally spotted with yellow: sometimes not above half again as long as the calyx, and sometimes 2 or 3 times as long, pubescent outside.

Var. β, parviflòra, (Benth. lab. p. 523.) corolla about half again as long as the calyx. ☉. H. G. parviflòra, Lam. dict. 2. p. 606. G. intermèdia, Vill. fl. dauph. 2. p. 387. t. 9. Rchb. icon. bot. eur. 1. p. 40. t. 46. G. latifòlia, Hoffm. fl. germ. 4-8. ex D. C. fl. fr. 3. p. 544.

Var. γ, spinòsa (Benth. lab. p. 523.) calycine teeth longer and spinose. ☉. H. G. angustifòlia, Hoffm. fl. germ. 4-8. ex D. C. fl. fr. 3. p. 543.

Ladanum Hemp Nettle. Fl. July, Sept. Britain. Pl. 1 foot.

3 G. Tetra'hit (Lin. spec. p. 810.) stem usually hairy, from stiff bristles or pili, and tumid at the nodi; leaves ovate, and are, as well as the calyxes, glabrous or hairy. ☉. H. Native throughout Europe and Middle Asia, by way-sides, in coppice-woods; in corn-fields and on their margins; plentiful in some parts of Britain. Tetràhit nodòsum, Mœnch, meth. p. 395. Leaves 1-3 inches long, pilose. Whorls 6-30-flowered, distinct, or the upper ones approximate. Corolla sometimes shorter than the calycine teeth; sometimes 4 times as long, purplish, yellowish, or spotted with both colours.

Var. α, parviflòra, (Benth. lab. p. 524.) corolla 2-3 times as long as the calyx. ☉. H. G. Tetràhit, Curt. fl. lond. 5. t. 191. Rchb. icon. bot. eur. 9. p. 28. t. 877. Smith, engl. bot. t. 207. G. bifida, Boenning. ex Lej. fl. belg. p. 241. Rchb. fl. germ. exc. p. 323. G. acuminàta, Rchb. fl. germ. exc. p. 323.—Riv. mon. irr. t. 31.—Petiv. herb. brit. t. 33. f. 8.—Mor. hist. t. 12. f. 13. Corolla purple or white, with a spot on the lower lip, variegated with purple and yellow.

Var. β, pubéscens (Benth. lab. p. 524.) stems scarcely hairy. ☉. H. G. pubéscens, Besser. prim. fl. gal. 2. p. 27. Rchb. icon. bot. eur. 1. p. 40. and 41. t. 47-48. G. Walteriàna, Schlecht. fl. berol.

Var. γ, grandiflòra (Benth. lab. p. 524.) corollas 3-4 times as long as the calyxes. ☉. H. G. versicolor, Lin. spec. p. 810. Curt. fl. lond. 6. t. 38. Rchb. icon. bot. eur. 1. p. 47. t. 57. G. cannàbina, Poll. pal. no. 560. Fl. dan. 929. Willd. spec. 3. p. 393. G. speciòsa, Mill. dict. no. 3. Corolla cream-coloured; lower lip spotted with purple.

Tetrahit or Common Hemp Nettle. Fl. July, Aug. Britain. Pl. 1 to 3 feet.

Cult. All the species are common weeds in corn-fields; and are therefore only cultivated in botanical gardens.

LXXXI. STA'CHYS (from *σταχυς, stachys*, a spike, in reference to the spiked inflorescence.) Benth. lab. p. 525.—Stáchys and Betónica, Lin. and other authors.—Zietènia, Gleditsch, Pers. and other authors.—Eriòstomum, Tetrahitum and Trixàgo, Hoffm. et Link.

Linn. syst. *Didynàmia, Gymnospérmia.* Calyx tubularly campanulate, 5 or 10-nerved, with an equal or oblique 5-toothed mouth; teeth equal, or the superior ones are larger, or the 3 superior ones are combined into an upper lip. Corolla with an equal, inclosed or exserted tube, furnished with a transverse ring of hairs inside or naked, often incurved above; throat not dilated; limb bilabiate; upper lip erect or spreading a little, usually arched a little, entire or scarcely emarginate, rarely elongated and flattish, emarginately bifid; lower lip usually longer, spreading, and 3-lobed; the middle segment large, entire, or emarginate. Stamens 4, ascending, exserted; lower 2 the longest; filaments naked; anthers approximate, 2-celled: cells distinct, parallel, diverging or divaricate. Style about equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia dry, obtuse, not truncate.—Herbs or subshrubs. Whorls 2 or many-flowered, usually disposed in terminal, nearly simple racemes.

Sect. 1. Alopecu'ros (from *αλωπηξ, alopex*, a fox, and *ουρα, oura*, a tail; resemblance in spikes of flowers.) Benth. lab. p. 531.—Betónica species, Lin. and other authors. A perennial villous green herb. Whorls fasciculately many-flowered, approximating into somewhat interrupted spikes. Outer bracteas about equal in length to the calyxes. Corollas yellowish; tube inclosed. Cells of anthers parallel.

1 S. alopecu'ros (Benth. lab. p. 531.) plant ascending, villous; leaves petiolate, broad-ovate, obtuse, crenated, broad-cordate at the base: lower floral leaves sessile, similar to the upper ones, but broader: upper ones and bracteas broad-ovate, acute; corolla one half longer than the calyx, which is amply campanulate. 4. H. Native of South and Middle Europe, on the mountains; as of the Pyrenees, Cevennes, Switzerland, Austria, Provence, Piedmont, Naples, Mount Parnassus. Betónica alopecùros, Lin. spec. p. 811. Jacq. fl. austr. 1. p. 50. t. 78. Rchb. icon. bot. eur. 8. 4b t. 719. Betónica lùtea, Mill. dict. no. 7. Sideritis alopecùros, Scop. carn. no. 711. t. 28. Spikes an inch in diameter. Whorls 20-30-flowered. Corollas cream-coloured, downy outside.

Fox-tail-spiked Betony. Fl. July. Clt. 1759. Pl. 1 to 1½ foot.

Sect. II. Betónica (betonic is the Celtic name of common betony.) Benth. lab. p. 532. Betónica species of Lin. and other authors. Pilose, pubescent, or villous perennial herbs. Whorls fasciculately many-flowered, approximating into subinterrupted spikes. Outer bracteas equalling the calyxes. Corollas purplish, rarely cream-coloured; tube usually exserted; cells of anthers subparallel.

2 S. densiflòra (Benth. lab. p. 532.) erect, hairy; leaves petiolate, ovate-oblong, obtuse, crenated, cordate at the base: lower floral leaves cordate-ovate, on short petioles: superior ones bractea-formed, and are, as well as the bracteas, ovate-lanceolate, mucronate, equalling the calyxes; whorls approximating into a dense oblong spike: the lower whorls remote; corolla twice as long as the calyx. 4. H. Native of the South of Europe in subalpine places; as of Spain, Pyrenees, Switzerland, Appennines, Naples, Hungary, Caucasus. Betónica Monnièri, Osb. p. 146. Gouan, ill. p. 36. Betónica hirsùta, Lin. mant. 248. Murr. comm. gœtt. 1779. vol. 2. p. 13. t. 3. Rchb. icon. bot. eur. 8-5. t. 714. Betónica Dánica, Mill. dict. no. 2. Betónica incàna, Ait. hort. kew. 2. p. 293. Sims. bot. mag. 2125. Rchb. icon. bot. eur. 8. p. 5. t. 713.—Barrel. icon. t. 340. Stems nearly simple. Leaves 2-3 inches long, and 1 to 1½ broad. Spikes thick, dense. Corollas villous outside, purplish, tube exannulate inside. Calycine teeth spinose: superior ones rather the largest.

Dense-flowered Betony. Fl. June, July. Clt. 1710. Pl. 1½ foot.

3 S. Betónica (Benth. lab. p. 532.) erect, rather pilose; lower leaves on long petioles, ovate-oblong, obtuse, crenated, cordate at the base: superior leaves remote, and are, as well as the lower floral leaves, sessile, oblong-lanceolate, acute, toothed: uppermost ones linear, quite entire, equalling the calyxes; whorls many-flowered, all approximate into an oblong subinterrupted spike, or the lower whorls are distinct: bracteas ovate, mucronate, equalling the calyxes; corolla twice as long as the calyx. 4. H. Native throughout Europe and Russian Asia, in woods, heaths, and pastures, among bushes; plentiful in Britain, in like situations. Betónica officinàlis, Lin. spec. p. 810. Hook. fl. lond. vol. 2. with a figure. Smith, engl. bot. t. 1113. Fl. dan. 726. Rchb. icon. bot. eur. 8. p. 4. t. 710. Betónica hirta, Leyss. Rchb. icon. bot. eur. 8. p. 4. t. 711. Betónica legítima, Link, handb. p. 476. Betónica stricta, Ait. hort. kew. 2. p.

299. Rchb. icon. bot. eur. 8. p. 5. t. 712. Betónica alpìna, Mill. dict. no. 3. Betónica foliòsa, Presl. fl. sic. 37.? Betónica affìnis, Wender. in bot. zeit. 1826. 1. p. 353. Betónica serótina, Host, fl. austr. vol. 2. Betónica divúlsa, Tenore, syll. fl. nap. append. p. 641.?—Sabb. hort. rom. t. 82.—Riv. mon. irr. t. 28. —Mor. hist. sect. 11. t. 5. f. 1.—Petiv. herb. brit. t. 32. f. 6. Very like *S. densiflòra*, but differs in the more slender stems, longer petioles, remote smaller leaves, the more starved spike, &c. Corolla purple or white. Betony was formerly much used in medicine, but it is discarded from present practice. When fresh it intoxicates. The leaves and flowers, according to Lewis, have a herbaceous, roughish, and somewhat bitterish taste, with a weak aromatic flavour. An infusion of them or light decoction may be drunk as tea. The roots are bitter and very nauseous; in small doses they act as an emetic and aperient. The plant dyes wool of a fine dark yellow colour.

Var. β, màjor (Benth. lab. p. 532.) spike elongated and thicker, and the habit more like that of *S. densiflòra*, but the superior leaves are lanceolate, not ovate. ♃. H. This is the garden variety.

Betony, Common. Fl. July, Sept. Britain. Pl. 1 to 1½ foot.

4 S. LONGIFÒLIA (Benth. lab. p. 533.) erect, villous; leaves petiolate, oblong-lanceolate, obtuse, crenated, deeply cordate at the base: lower floral leaves similar to the rest, sessile: upper floral ones bractea-formed, and are, as well as the bracteas, ovate-lanceolate, acuminated, shorter than the calyxes; whorls many-flowered: lower ones remote: upper ones approximate into a cylindrical spike; corolla twice as long as the calyx, which is tubular. ♃. H. Native of Caucasus. Betónica orientàlis, *Lin. spec. p. 811. Lam. ill. t. 507. f. 2.?* Leaves 4-6 inches long, and ½ but scarcely 1 inch broad, deeply and hastately cordate at the base. Spike loosish, ½ foot long, interrupted at the base. Corollas reddish, purple; tube exannulate inside.

Long-leaved Betony. Fl. June, July. Clt. 1737. Pl. 1 to 2 feet.

5 S. GRANDIFLÒRA (Benth. lab. p. 533.) erect, villous; leaves petiolate, broad-ovate, obtuse, crenated, broadly cordate at the base: floral leaves sessile, stem-clasping, almost similar to the rest, gradually becoming smaller as they ascend, till the upper ones become almost bractea-formed; whorls many-flowered, distinct: the lower ones remote; bracteas ovate-lanceolate, acute, longer than the calyxes; corolla about 3 times as long as the calyx, which is tubularly campanulate: throat dilated. ♃. H. Native of Siberia, at the river Terek; also of Caucasus. Betónica grandiflòra, Willd. spec. 3. p. 96. Curt. bot. mag. t. 700. Rchb. icon. bot. eur. 8. p. 6. t. 715. Betónica orientàlis, Thuil. fl. par. p. 293. but not of Lin. Whorls 10-20-flowered. Corolla violaceous, 12-14 lines long, glabrous; tube exannulate inside.

Great-flowered Betony. Fl. June, July. Clt. 1803. Pl. 1 foot.

6 S. BICOLOR (Benth. lab. p. 533.) ascending, villous; leaves petiolate, oblong-lanceolate, deeply crenated, wrinkled above and hairy, but clothed with white wool beneath: lower floral leaves similar to the rest, sessile: upper floral leaves bractea-formed, lanceolate, equalling the calyxes; whorls many-flowered, rather distinct, few; corolla more than twice as long as the calyx, which is tubularly campanulate: throat dilated. ♃. H. Native of Eastern Caucasus, in stony places. Betónica nívea, Stev. in mem. soc. nat. car. mosq. 3. p. 266. Betónica macroùra, Otto.? This is a very elegant species, of the size, and with the flowers of *S. grandiflòra*. Leaves form of those of *S. hirsùta*, green above. Calyx woolly. Corollas large.

Var. α, rósea; flowers rose-coloured. ♃. H.

Var. β, ochroleùca; flowers cream-coloured. ♃. H.

Two-coloured-leaved Betony. Fl. June, July. Clt. 1820. Pl. 1 to 1½ foot.

SECT. II. ERIÓSTACHYS (from *eprov, erion*, wool, and *σταχυς, stachys*, a spike; spikes woolly.) Benth. lab. p. 534. *Eriostachys* Benth. lab. p. 534. Rchb. fl. germ. exc. p. 319. Perennial or biennial herbs, clothed with soft villi or wool. Whorls many-flowered. Outer bracteas alone equalling the calyxes or hardly shorter than them.

7 S. HERBA'CEA (All. ped. 1. p. 51. t. 84. f. 1.) erect, woolly from very long hairs; leaves petiolate, oblong, obtuse, crenated, subcordate at the base: floral leaves very broadly ovate, quite entire, and broadly cordate at the base, scarcely exceeding the calyxes; whorls many-flowered, distinct; bracteas ovate or oblong: outer ones equalling the calyxes; calyx woolly, with ovate, very acute subspinose teeth. ♃. H. Native of Europe, in the region of the Mediterranean, in dry uncultivated places; as of Spain, Eastern Pyrenees, France about Rhodes, Provence, Piedmont, Italy, Sicily, &c. Sideritis Heráclea, Col. ecphr. 1. t. 131. ex Allion. S. intermèdia, Tenore, fl. nap. p. 84. ex D. C. but not of Ait. S. barbàta, Lapeyr. abr. p. 536. S. phlomoides, Willd. enum. suppl. p. 41. Betónica Heráclea, Lin. syst. 535. mant. p. 83. Stems many, from a thick perennial base. Cauline leaves 2-5 inches long, and hardly 1 inch broad. Racemes simple. Corolla twice as long as the calyx, purple, form of that of *S. Germánica*.

Var. β, lútea (Benth. lab. p. 534.) flowers yellow. ♃. H. Native of Croatia, Dalmatia, and near Constantinople. S. obliqua, Waldst. et Kit. hung. 2. p. 142. t. 134. S. Crética, Forsk. fl. const. p. 28. but not of Lin. S. orientàlis, Vahl. symb. 2. p. 64. Sibth. et Smith, fl. græc. 6. p. 48. t. 134. This only differs from the species in the colour of the flowers.

Heraclean Hedge Nettle. Fl. June, July. Clt. 1816. Pl. 1 foot.

8 S. MOLLI'SSIMA (Willd. hort. berol. 60. t. 60.) humble, erect, clothed with soft villi; leaves petiolate, broad-ovate, crenated, cordate at the base, wrinkled, greenish on both surfaces, very villous; whorls many-flowered; bracteas linear, equalling the calyxes; calyx campanulate, villous, with acute, rather spinose teeth; corolla pubescent outside, half again as long as the calyx. ♃. H. Native of Spain, and of the Island of Corfu. Leaves like those of *S. alpìna*, but smaller. Corollas pale purple. ?

Very soft Hedge Nettle. Fl. July, Aug. Clt. 1806. Pl. ½ to ¾ foot.

9 S. PO'MILA (Russ. nat. hist. alep. 2. p. 255. t. 10.) perennial or suffruticose, humble; leaves almost radical, petiolate, ovate, obtuse, cordate at the base, wrinkled, clothed with hoary tomentum on both surfaces; whorls few, many-flowered; outer bracteas about equal in length to the calyxes; calyx nearly glabrous, with lanceolate-subulate teeth, which are about equal in length to the tube. ♃. or ♄. F. Native of Syria, near Aleppo, Russell. Stems rising from a short woody base. Radical leaves almost like those of *Sálvia pomífera*. Floriferous branches 2-4 inches high, bearing 2-4 whorls. Floral leaves roundish, wrinkled. Whorls 15-20-flowered.

Dwarf Hedge Nettle. Pl. ¼ to ½ foot.

10 S. SWAINSÒNII (Benth. lab. p. 535.) herbaceous, ? pilosely woolly, procumbent at the base, much branched; leaves petiolate, ovate, obtuse, crenated, rounded at the base, wrinkled, very soft; whorls 2-10-flowered; bracteas one half shorter than the calyxes, rarely minute; calyx campanulate, villous, with lanceolate, very acute, rather spinose teeth; corolla twice as long as the calyx. ♃.? H. Native of Greece, on Mount Parnassus, Swainson; Ithaca, P. B. Webb. Prásium hirsútum, Poir. dict. 5. p. 611. This species is allied to sect. *Zietènia*. Leaves about ½ an inch long. Racemes dense. Corolla villous outside. Ring of tube rather oblique.

Swainson's Hedge Nettle. Pl. ½ foot.

11 S. Zuccarini (Benth. lab. p. 535.) herbaceous, silky and woolly from adpressed pili; branches elongated, erect, a little branched; leaves few, linear, quite entire; whorls 2-flowered; bracteas shorter than the calyxes; calyx tubularly campanulate, with spinose teeth, which exceed the tube of the corolla. ♃.? H. Native of Greece, Zuccarini. Branches almost naked. Leaves scarcely an inch long, acutish: floral leaves small, sessile, lanceolate. Calyxes sessile.

Zuccarini's Woundwort. Pl. 2 to 3 feet.

12 S. lanàta (Jacq. icon. rar. 1. p. 11. t. 107.) clothed with dense silky wool; leaves oblong-elliptic, narrowed at both ends, scarcely crenulated, wrinkled: floral leaves smaller: upper floral leaves shorter than the whorls; whorls many-flowered, the uppermost ones approximating into a spike; bracteas linear-lanceolate, about equal in length to the calyxes; calyx incurved, with scarcely unequal acute mutic teeth which are woolly inside; corolla woolly outside, with an inclosed tube. ♃. H. Native of Tauria, in dry exposed fields, plentiful, and throughout Caucasus. Eriòstomum lanàtum, Hoffm. nachtr. 1. p. 60. Leaves thick. Whorls above, 30-flowered. Corollas purple, smaller than in *S. Germánica*.

Woolly Woundwort. Fl. June, Sept. Clt. 1782. Pl. 1 to 1½ foot.

13 S. lusítica (Milt. diet. no. 8.) erect, clothed with hoary tomentum; leaves nearly sessile or on short petioles, oblong-lanceolate, narrow, obtuse, crenulated, narrowed at the base, rarely subcordate, wrinkled: floral leaves ovate-lanceolate, quite entire, rather longer than the whorls; whorls many-flowered, distinct; upper ones approximate; bracteas linear-lanceolate, equalling the calyxes; calyx a little incurved, with acute spinose teeth, which are densely woolly inside; corolla woolly outside, with an inclosed tube. ♃. H. Native of Europe, in the region of the Mediterranean; as of Italy, Etruria, and near Parma. S. salviæfòlia, Tenore, fl. nap. 2. p. 29. t. 53. syll. p. 291. Eriòstomum salviæfòlium, Presl. fl. sic. p. 37. This species differs from *S. Germánica* in the more humble stature, narrower leaves, which are rarely cordate at the base, and more tomentose than woolly. Corollas purplish.

Var. β, púngens (Benth. lab. p. 537.) plant more humble; leaves fewer; whorls few, spicate at the tops of the stems. ♃. H. Native of Dalmatia, at Zara; Syria, near Aleppo. S. púngens, Russel, nat. hist. alep. S. salviæfòlia, Vis. pl. dalm. Sideritis hirsùta, Sieb. pl. exsic. exs.

Italian Woundwort. Fl. June, July. Clt.? Pl. 1 to 1½ foot.

14 S. Germánica (Lin. spec. 812.) herbaceous, tall, clothed with loose white wool; cauline leaves petiolate, ovate or ovate-lanceolate, obtuse, usually cordate at the base, crenated; lower floral leaves sessile, half stem-clasping, crenated, the uppermost ones lanceolate, acute, and quite entire, rather longer than the whorls; whorls many-flowered, distinct, racemose: upper whorls approximate; bracteas linear-lanceolate, equalling the calyxes; calyx a little incurved, with acute, rather spinose teeth, woolly inside, upper teeth the largest; corolla woolly outside, with an inclosed tube. ♃. H. Native of Europe, Middle Asia, and North Africa, in dry, arid, and stony places; in several parts of England, but hardly indigenous. Jacq. fl. austr. 4. p. 10. t. 319. Smith, engl. bot. t. 829. Bot. reg. t. 1259. Rchb. icon. bot. eur. 10. p. 18. t. 950. Oed. fl. dan. t. 684. S. lanàta, Crantz, austr. 267, but not of Jacq. Eriòstomum Germánicum, Hoffm. et Link, fl. port. S. tomentòsa, Gat. fl. mont. p. 107. S. Crética, Lin. syst. 812.? Sibth. et Smith, fl. græc. 6. p. 47. t. 558. Walth. hort. p. 108. t. 19. S. spectábilis, Choisy, in D. C. pl. rar. hort. gen. 1. p. 27. S. dasyántha, Rafin. prec. des. decouv. p. 39. S. biémnis, Roth, Rchb. icon. bot. eur. 10. p. 17. t. 949. S. polystàchya, Tenore. fl. nap. 2. p. 23. t. 53. syll. p. 297. Eriòstomum polystàchyum, Presl. fl. sic. p. 37. Eriòstomum Lusitánicum, Hoffm. et Link, fl. port. S. Lusitánica, Steud. nom. p. 806. S. Pannónica, Lang. pl. exs. S. argéntea, Tausch, in bot. zeit. 1831. 1. p. 217. S. álba, Mill. diet. no. 4.? S. heterophýlla, Mœnch. ex Steud. nom. p. 806. S. cinèrea, S. elongàta, S. excélsa, S. intermèdia, S. orientàlis, S. Sibírica, S. verbascifòlia, &c. Hortul. S. montàna, Riv. mon. irr. t. 27. f. 1.—Barrel. icon. t. 207. This species is very variable in wooliness and size of flowers. Whorls 15-20-flowered. Corollas reddish purple.

German Woundwort or Hedge Nettle. Fl. July. Britain. Pl. 1 to 4 feet.

15 S. floccòsa (Benth. lab. p. 799.) herbaceous; stem tall, clothed with dense floccose wool; cauline leaves petiolate, ovate-lanceolate, obtuse, crenated, cordate at the base, clothed with soft villi above, and dense white floccose wool beneath; lower floral leaves crenulated; superior ones lanceolate, quite entire, pungent, rather shorter than the calyxes; whorls many-flowered, distinct, racemose: upper ones approximate; bracteas lanceolate, equalling the calyxes; calyx a little incurved, with acute pungent teeth, which are rather woolly inside, the upper teeth the largest; tube of corolla inclosed. ♃. H. Native of the North of India, on the mountains near Hirpur, Jacquemont. This species differs from its nearest allies, *S. Germánica* and *S. lanàta*, in the leaves being deeply cordate at the base, and in the wool of the stem and lower surfaces of the leaves being dense and floccose, not long and silky.

Floccose Woundwort. Pl. 1 to 3 feet.

16 S. alpìna (Lin. spec. p. 812.) herbaceous, tall; stem erect, pilose, rather woolly; leaves petiolate, ovate, serrately crenated, cordate at the base, green on both surfaces, villous: floral leaves narrower, gradually becoming smaller as they ascend, acute, serrated; whorls all remote, many-flowered; bracteas linear, about equal in length to the calyxes; calyx rather pilose, with lanceolate-ovate acute spinose teeth; corolla woolly outside, about twice as long as the calyx. ♃. H. Native of the mountainous parts of Europe; as of the Pyrenees, France, Switzerland, Upper Italy, Germany, &c. Lapeyr. fl. pyr. 1. p. 14. t. 8. Eriòstomum alpìnum, Hoffm. et Link, fl. port.—Sabb. hort. rom. 3. t. 41. This plant varies much in gardens, but is at all times readily distinguished from *S. Germánica* in the leaves being green on both surfaces, in the whorls being fewer and more remote, and in the raceme being much less woolly. Corollas, like those of *S. Germánica*, obscure purple, or reddish brown.

Var. β, intermèdia (Benth. lab. p. 537.) larger; leaves more wrinkled, rather woolly beneath. ♃. H. Native of Caucasus and Siberia. S. intermèdia, Ait. hort. kew. 2. p. 209. S. Crética, Lin. spec. p. 812. from the description. S. orientàlis, Lin. spec. p. 813. S. Sibírica, Link, enum. 2. p. 109. Sweet, fl. gard. t. 100. S. curviflòra, Tausch, in bot. zeit. 1831. 1. p. 216. S. urticæfòlia, Tausch, l. c. S. fúsca, Mœnch.?

Alpine Woundwort. Fl. July, Aug. Clt. 1597. Pl. 1 to 3 feet.

17 S. serìfera (Wall. pl. rar. asiat. 1. p. 64. Benth. lab. p. 557.) herbaceous, tall; stem erect, very pilose; leaves petiolate, ovate or ovate-oblong, bluntish, crenated, cordate at the base, villous on both surfaces, green above, pale or hoary beneath, clothed with silky wool while young; whorls all distant, 10-15-flowered; bracteas linear, about equal in length to the calyxes; calyx woolly, with ovate-lanceolate very acute spinose teeth. ♃. H. Native of Central Asia, on the mountains; Caucasus, on the Talusch mountains, in woods; Persia, on the mountains of Gilan; Nipaul, Kamaoon, and Himalaya. S. Pérsica, Gmel. jun. ex Meyer, verz. pflanz. p. 94. Hardly distinct from *S. alpìna*, unless in being more villous, and in there being fewer flowers in

each whorl. Racemes many-flowered, woolly from long loose hairs. Leaves white from wool beneath, or green on both surfaces.

Silky Woundwort. Pl. 1 to 2 feet.?

18 S. SETI'FERA (Meyer, verz. pflanz. p. 94.) herbaceous, tall; stem erect, pilose, rather woolly; leaves on short petioles, oblong or oblong-lanceolate, rounded at the base: floral leaves gradually smaller as they ascend, all green on both surfaces, wrinkled, clothed with soft villi, aristately mucronate at apex; whorls many-flowered, distant; bracteas lanceolate, awned; calyx villous, with lanceolate, acute, spinose teeth; corolla downy outside, exceeding the calyx a little. ♃. H. Native of Caucasus, on the Talusch mountains, in rather humid places near Swant. Allied to *S. sericea*, but differs in the leaves being nearly sessile, narrow, awned, and in the corollas being more glabrous.

Bristle-bearing Woundwort. Pl. 1 to 2 feet.?

19 S. VESTI'TA (Benth. lab. p. 538.) herbaceous, erect, clothed with soft white villi; leaves nearly sessile, ovate-lanceolate, obtuse, crenulated, cordate at the base, thick, wrinkled, densely clothed with white wool beneath: floral leaves lanceolate, acute, reflexed: upper ones scarcely exceeding the calyxes; whorls about 10-flowered, all distant; bracteas linear, one-half shorter than the calyxes; calyx villous, with lanceolate-acute rather spinose teeth; corolla pubescent outside, about twice as long as the calyx. ♃.? H. Native of Nipaul. Nearly allied to *S. oblongifólia*, but differs from it in the thick woolly leaves and shorter bracteas. Leaves 1 to 1½ inch long, green above. Tube of corolla scarcely exserted.

Clothed Woundwort. Pl. 1 to 1½ foot.

20 S. MELISSÆFÓLIA (Benth. lab. p. 538.) herbaceous; branches divaricate, pubescent from soft hairs; leaves petiolate, broad-ovate, obtuse, crenated, wrinkled, green on both surfaces, nearly glabrous or pubescent: upper floral leaves shorter than the calyxes; whorls about 10-flowered, rather remote, or the upper ones are approximate; bracteas linear, one half shorter than the calyxes; calyx ovate-campanulate, pubescent, with acute, but not spinose teeth; corolla pubescent outside, about twice as long as the calyx. ♃.? H. Native of Nipaul. Allied to *S. splèndens*, but more glabrous, and the flowers fewer, and about half the size. Leaves 1½ to 2 inches long, and about 1 inch broad, thin. Racemes branched a little. Corolla purplish: tube slender, incurved.

Balm-leaved Woundwort. Pl.

21 S. SPLE'NDENS (Wall. pl. rar. asiat. 1. p. 64.) herbaceous, tall; stem erect, pilose; leaves petiolate, ovate, serrately crenated, cordate at the base, wrinkled, villous, green on both surfaces: floral leaves similar to the rest, sessile, gradually becoming smaller as they ascend; whorls about 10-flowered, remote; bracteas linear, shorter than the calyxes; calyx pubescent, with bluntish mutic unequal teeth; corolla more than twice as long as the calyx: tube exserted, incurved. ♃.? H. Native of Gosaing-than, on the mountains, Wall; mountains of Mussooree, and throughout the Himalaya range, Royle. Allied to *S. alpina*, but less villous; flowers fewer in the whorls, and the bracteas shorter.

Shining Woundwort. Pl. tall.

Sect. III. CALO'STACHYS (from καλος, *kalos*, beautiful; and σταχυς, *stachys*, a spike; in reference to the beauty of the flowers.) Benth. lab. p. 539.—Perennial glabrous or villous herbs. Stems often furnished with obverse pili or prickles on the angles. Whorls about 6-flowered. Bracteas minute. Calycine teeth very acute or rather spinescent. Corolla scarlet or purple, with a much exserted tube. Cells of anthers diverging or divaricate.

22 S. COCCI'NEA (Jacq. hort. schœnbr. 3. p. 18. t. 284.) herbaceous, erect, clothed with soft villi; leaves petiolate, ovate-lanceolate, bluntish, crenated, cordate at the base; racemes elongated; whorls 6-flowered, all distant; bracteas almost wanting; corolla pubescent, about 3 times as long as the tube. ♃. G. Native of Mexico. Curt. bot. mag. t. 666. Andr. bot. rep. t. 810. Leaves 2 inches long: floral leaves sessile, with submucronate crenatures; upper ones longer than the calyxes, ending in spinose mucrones. Corolla beautiful scarlet, pubescent, an inch long.

Scarlet-flowered Hedge Nettle. Fl. June, Aug. Clt. 1798. Pl. 2 to 3 feet.

23 S. CILIA'TA (Dougl. mss. ex Benth. lab. p. 539.) herbaceous, erect, nearly glabrous; angles of stems obversely ciliated; leaves petiolate, ovate, shortly acuminated, crenated, cordate at the base, glabrous or rather hispid from a few hairs above; whorls 6-flowered, upper ones approximate; bracteas almost absent; corolla almost glabrous, 3 or 4 times longer than the calyx. ♃. H. Native of North-west America, along the banks of the Columbia, Douglas and Scouler. Leaves 2-3 inches long; petioles ciliated. Corolla smoothish, purple, nearly an inch long.

Ciliated-stemmed Hedge Nettle. Pl. 3 to 4 feet.

24 S. THUNBE'RGII (Benth. lab. p. 540.) herbaceous, erect?; angles of stem beset with obverse prickles; leaves petiolate, ovate, acuminated, crenated, cordate at the base, coriaceous, prickly on the nerves beneath, glabrous on both surfaces or hispid from long hairs; whorls 6-flowered, distant; bracteas almost wanting; corolla more than twice as long as the calyx, which is quite glabrous. ♃. G. Native of the Cape of Good Hope. Galeópsis hispida, Thunb. prod. fl. cap. p. 96. Habit of *S. boraginoides*. Stems procumbent or erect. Corolla glabrous, red, similar to those of *S. ciliata*.

Thunberg's Hedge Nettle. Pl. procumbent.?

25 S. BORAGINOI'DES (Schiede et Deppe, in Linnæa, 5. p. 100.) herbaceous, erect; angles of stem beset with obverse prickles; leaves petiolate, ovate, acute, crenated, cordate at the base, green on both surfaces, hairy and prickly on the nerves beneath; whorls 6-flowered, distant; bracteas almost wanting; calyx pilosely pubescent; corolla 4 times as long as the tube. ♃.? G. Native of Mexico, in shady places; on Mount Maculteper, and towards San Andres. Habit of *S. ciliata*. Leaves 1-2 inches long. Corollas and calyxes form and size of those of *S. coccinea*.

Borago-like Hedge Nettle. Pl. 2 to 3 feet.

26 S. CHAMISSÒNIS (Benth. in Linnæa, 6. p. 80.) herbaceous, erect; angles of stem obversely ciliated; leaves petiolate, ovate, obtuse, crenated, cordate at the base, clothed with velvety wool on both surfaces; whorls 6-flowered, distant; bracteas almost wanting; corolla villous outside, 3 times as long as the calyx. ♃.? H. Native of California, Chamisso. Allied to *S. ciliata*, but differs from it in the leaves, and very villous corollas, and in the calyxes being longer and hispidly pilose.

Chamisso's Hedge Nettle. Pl. 2 to 3 feet.?

27 S. RIEDE'RI (Cham. in Linnæa, 6. p. 570.) erect, simple; angles of stem obversely ciliated; leaves on short petioles, ovate-oblong: floral leaves ovate, subcordate, nearly sessile, all acute, serrately crenated, with scabrous margins; whorls 6-flowered: flowers sessile; calyx hispid, with the nerves prickly; corolla 3 times longer than the calyx. ♃.? H. Native of Kamtschatka, Rieder. Lower leaves 2 to 2½ inches long: middle cauline leaves 4-5 inches long. Corollas red. Habit and hispidity of *S. boraginoides*.

Rieder's Hedge Nettle. Pl. 2½ feet.

28 S. HIRSU'TA (H. B. et Kunth, nov. gen. amer. p. 341.) stems ascending, hispid; leaves petiolate, ovate-oblong, acute, cordate, hairy on both surfaces, crenated; whorls about 6-flow-

ered, distant; tube of corolla twice as long as the calyx. ♃.? G. Native of Mexico, in bushy places on the mountains between Actopan and Totonilco. Leaves nearly an inch long; petioles hispid. Calyx pilose, with subulately acuminated segments. Corolla scarlet, downy outside.

Hairy Hedge Nettle. Pl. ½ foot.

Sect. IV. Stachyotýpus (from *στυχυς, stachys*, a spike; and *τυπος, typos*, type; because this section is supposed to be the representative type of the genus; or in other words the true species of the genus.) Benth. lab. p. 541. Stachyotypus, Dumort, florul. belg. p. 45.—Campanistrum and Eriostachys species, Rchb. fl. germ. exc. p. 318.—Trixágo et Stachys, Hoffm. et Link, fl. port.—Annual or perennial, pilosely hispid or glabrous, rarely woolly herbs. Whorls usually about 6-flowered, rarely 2-4 or 10-15-flowered. Bracteas minute. Calycine segments usually subspinescent. Corolla purplish, red, or rosy-white, never cream-coloured; tube inclosed, or very shortly exserted.

§ 1. Genuína (this section is supposed to contain the genuine or true species of the genus.) Benth. lab. p. 541. *Stems tall, erect, having the angles usually ciliated with long spreading or obverse pili, rarely glabrous. Leaves ovate or oblong-lanceolate, rarely amply ovate. Whorls* 6-10-*flowered. Corollas rather large; tube sometimes exserted.*

29 S. Mexicána (Benth. lab. p. 541.) herbaceous, erect, tall; stems hairy from stiff pili; leaves ample, petiolate, ovate-oblong, crenated, cordate at the base, hispid on both surfaces: floral leaves sessile, exceeding the flowers; whorls 6-8-flowered, distant; calyx campanulate, hispid, with lanceolate acute rather spinose teeth; corolla nearly glabrous, twice as long as the calyx; tube exserted. ♃. H. Native of New Spain, Moçino et Sessé. Allied to *S. sylvática*, but the leaves are on shorter petioles, narrower and longer. Corolla larger, and the tube more ample; upper lip emarginate.

Mexican Hedge Nettle. Pl. tall.

30 S. sylvática (Lin. spec. p. 811.) herbaceous, erect, hispid; leaves on long petioles, ovate, acuminated, serrated, cordate at the base; floral leaves bractea-formed, scarcely longer than the calyxes; whorls about 6-8-flowered, distant; calyx campanulate, hispid, with lanceolate acute rather spinose teeth; corolla nearly glabrous, twice as long as the calyx, with an exserted tube. ♃. H. Native of Europe and Middle Asia, in shady places and woods; from Sweden to Spain and Italy; also of Tauria and Caucasus; in Britain frequent in hedges and other shady places. Smith, engl. bot. t. 416. Curt. lond. 3. t. 34. S. Canariénsis, Jacq. icon. rar. 1. p. 11. t. 108.—Sabb. hort. rom. 3. t. 38.—Riv. mon. irr. t. 26. f. 2. Roots creeping, but not extensively. Herb branched, hispid from long spreading hairs. Leaves large, coarsely and acutely toothed, green. Corolla purple, marbled about the orifice, 6 lines long, with a pilose ring near the base of the tube inside. The herb is pungent, with a fetid smell, approaching to that of black horehound. Being one of those plants which powerfully affect the nerves it might prove no contemptible stimulant if judiciously used, ex Smith. The herb will dye yellow.

Wild Hedge Nettle. Fl. July, Aug. Britain. Pl. 2 to 3 feet.

31 S. palústris (Lin. spec. p. 811.) herbaceous, erect; stems pubescent or beset with retrograde hairs; leaves nearly sessile, oblong, or ovate-lanceolate, serrately crenated, rounded at the base or cordate, wrinkled, hispid, or the lower ones are nearly glabrous; whorls 6 to 10-flowered, distinct, the upper ones subapproximate; calyx campanulate, hispid, with lanceolate acute rather spinose teeth; corolla twice as long as the calyx. ♃. H. Native throughout Europe, as well as of Asia and North America, in humid places; plentiful in Britain in marshes, on the banks of rivers, in watery places, by road-sides, and in corn-fields, especially if they are moist. Smith, engl. bot. t. 1675. Hook. fl. lond. vol. 2. icone. Curt. lond. 3. t. 35. S. ségetum, Hagen ex Rchb. fl. germ. exc. 319. S. affinis, Bunge, enum. pl. chin. bot.—Riv. mon. t. 26. f. 1.—Blackw. herb. t. 273.—Petiv. herb. brit. t. 33. f. 9. Angles of stem ciliated with spreading hairs, the rest pubescent. Leaves 2-3 and sometimes 4-6 inches long, pubescent or hispid on both surfaces; lower ones sometimes glabrous. Corollas pale purple; lower lip variegated; tube about equal in length to the calyx. It behoves many farmers to know this plant, says Mr. Curtis, as a very noxious plant in many corn-fields, increasing extensively by the roots, and also by seed. Linnæus says that swine are fond of the roots.

Var. β, *angustifólia* (Benth. lab. p. 542.) flowers smaller; calyxes rather mutie. ♃. H.

Var. γ, *hýbrida* (Benth. lab. p. 542.) leaves on long petioles; corolla subexserted. ♃. H. Native of Britain in moist places. S. ambígua, Smith, engl. bot. t. 2089. Rchb. icon. bot. eur. 3. p. 20. t. 222. Plant 1-2 feet high.

Marsh Hedge Nettle, or Clown's All-Heal. Fl. July, Aug. Britain. Pl. 2 to 4 feet.

32 S. Baicalénsis (Fisch. ex Benth. lab. p. 543.) erect; stem beset with retrograde stiff hairs; leaves nearly sessile, oblong-linear, acutish, serrated, rounded at the base, hispid: floral leaves scarcely longer than the calyxes; whorls 6-flowered; lower ones remote: upper ones approximate into a dense thick oblong spike; calyx campanulate, hispid, with lanceolate very acute rather spinose teeth; corolla twice as long as the calyx. ♃. H. Native of Dahuria, Fischer; Eastern Siberia, Pallas. S. angustifólia, Pall. herb. Stems nearly simple, with the sides glabrous, and the angles pilose. Leaves 2 inches long. Spikes densely hispid. Corollas like those of *S. palústris*.

Baical Hedge Nettle. Pl. 1 to 1½ foot.

33 S. áspera (Michx. fl. bor. amer. 2. p. 6.? Benth. lab. p. 543.) erect; stem retrorsely hispid, rarely naked; leaves on short petioles, ovate-oblong or ovate-lanceolate, acute, serrated, rounded at the base, glabrous, or furnished with a few stiff hairs above: floral leaves lanceolate, acute, longer than the calyxes; whorls 6-10-flowered, distant; calyx tubularly campanulate, glabrous, ciliated, with lanceolate acute subspinose divaricate teeth; corolla about twice as long as the calyx. ♃.? H. Native of North America, in pastures by river-sides; from Canada to Carolina. S. arvénsis, Walt. fl. car. p. 162, but not of Lin. S. hispida, Pursh, fl. amer. sept. 2. p. 407. Habit of *S. palústris*. Stems glabrous on the sides, but having the angles, nerves of leaves, and petioles beset with retrograde stiff hairs. Leaves 3-4 inches long and 1½ broad. Corollas violaceous, glabrous, with a pilose ring inside.

Var. β *glabráta* (Benth. lab. p. 543.) angles of stem almost naked, or altogether glabrous. ♃. H. Native of Carolina and of China in the province of Tokeen, Reeves. *S. áspera*, Nutt. gen. amer. 2. p. 30.?

Rough Hedge Nettle. Fl. July, Aug. Clt. 1821. Pl. 2 to 3 feet.

34 S. hyssopifólia (Michx. fl. bor. amer. 2. p. 4.? Benth. lab. p. 543.) plant ascending, quite glabrous, or the stems are beset with retrograde hairs on the angles; leaves nearly sessile, oblong-lanceolate, acutish, subserrated, narrowed a little at the base: floral leaves very acute, rather longer than the calyxes; whorls about 6-flowered, distinct, approximate into short racemes; calyx broadly campanulate, quite glabrous, with lanceolate very acute subspinose divaricate teeth; corolla glabrous, 2-3

times longer than the calyx. ♃. H. Native of North America, in humid meadows near Saint Louis, Drummond; Carolina, Walter. S. tenuifòlia, Willd. spec. p. 100.? S. palústris, Walt. fl. car. p. 162, but not of Lin. Stems procumbent at the base; branches ascending. Leaves 1-2 inches long, quite glabrous. Corolla violaceous; tube shortly exserted, with a pilose ring inside.

Hyssop-leaved Hedge Nettle. Pl. 1 to 1½ foot.

35 S. Chinénsis (Bunge, pl. chin. hor. in mem. soc. peterb. vol. 2. p. 241.) tall, erect, nearly glabrous; angles of stem obversely pilose; leaves nearly sessile, oblong-lanceolate, subserrated, hispid above and glabrous beneath; whorls few, 6-flowered; bracteas minute; calyx elongated, campanulate, pilose, with lanceolate very acute rather spinose teeth; corolla hardly twice as long as the calyx. ♃. H. Native of the North of China, Bunge. Allied to *S. palústris*, *S. áspera*, *S. hyssopifòlia*. Leaves 3-4 inches long. Corolla red, pilose outside, with a pilose ring inside.

China Hedge Nettle. Pl. 2 to 3 feet.?

§ 2. Rudera'lES (from *ruderalis*, of or belonging to rubbish; the species are generally found in waste places.) Benth. lab. p. 544. *Herbs usually perennial, erect, or ascending, rarely procumbent, hispid, villous or woolly, rarely glabrous. Whorls 6, rarely with so many as 10 flowers. Corolla rather large, with the lower lip half an inch long; having the tube always inclosed.*

36 S. albicau'lis (Lindl. in bot. reg. t. 1558.) erect, clothed with white wool at the base and viscid pubescence above; lower leaves petiolate: upper ones sessile, all lanceolate and coarsely toothed, roundly cuneated at the base or narrowed: floral leaves shorter than the calyxes; whorls 6-flowered, remote; calyx ovate-campanulate, clothed with viscid pubescence: teeth broad-lanceolate, acute, rather spinose; corolla glabrous, twice as long as the calyx. ♃. G. Native of the Andes of Chili, Macrae; in the Pampas about Buenos Ayres, Gillies. Leaves remote, 1-3 inches long. Corolla red, glabrous; tube a little exserted, furnished with a pilose ring inside.

White-stemmed Hedge Nettle. Fl. July, Aug. Clt. 1827. Pl. 2 to 3 feet.

37 S. oblongifòlia (Benth. in Wall. pl. rar. asiat. 1. p. 64. lab. p. 545.) erect or ascending, pubescent or villous; leaves on short petioles, oblong-lanceolate, acutish, serrated, subcordate at the base, villous: floral leaves longer than the calyxes; whorls about 6-flowered, distant; calyx tubularly campanulate, pubescent, with lanceolate very acute scarcely spinulose teeth; corolla one half longer than the calyx. ♃. G. Native of the mountains of Silhet. Leaves 1-2 inches long, densely villous or woolly beneath. Corolla violaceous, pubescent outside.

Oblong-leaved Hedge Nettle. Pl.?

38 S. ajugoi'des (Benth. in Linnæa. 6. p. 80. lab. 545.) erect, very hairy; leaves petiolate, oblong, obtuse, crenated, rounded at the base or cuneated, wrinkled: floral leaves conforming to the others; whorls few, 6-flowered, remote; calyx ovate-campanulate, hispid, with ovate acute rather spinose teeth; corolla glabrous, twice as long as the calyx. ♃. H. Native of California, Chamisso. Herb almost simple, and sometimes branched at the base. Leaves 1-2 inches long. Corollas like those of *S. Macræ'i*.

Ajuga-like Hedge Nettle. Pl. ¼ to ¾ foot.

39 S. sideritoi'des (Gill. mss. ex Benth. lab. p. 740.) perennial, ascending, clothed with silky pili; leaves oblong-lanceolate, serrated, narrowed a long way at the base, wrinkled, clothed with soft silky villi: floral leaves ovate-lanceolate: upper ones shorter than the calyxes; whorls 6-flowered, remote; calyx campanulate, hispid, with lanceolate-acute rather spinose teeth; corolla rather pilose, scarcely twice as long as the calyx. ♃. G. Native of Chili, on the Andes about Mendoza, Gillies. Habit of *S. arenària*, but the tube of the corolla is exannulate inside. Perhaps only a villous variety of *S. grandidentàta*.

Sideritis-like Hedge Nettle. Pl.?

40 S. grandidenta'ta (Lindl. in bot. reg. t. 1080.) perennial, erect, pilosely pubescent, hispid above; leaves petiolate, oblong-lanceolate, coarsely toothed, all roundly cuneated at the base or narrowed: upper floral leaves shorter than the calyxes; whorls 6-flowered, remote; calyx ovate-campanulate, hispid, with lanceolate-acute rather spinose teeth; corolla glabrous, twice as long as the calyx. ♃. G. Native of Chili, at Valparaiso, Macrae. Form of leaves and inflorescence that of *S. albicaúlis*. Corollas red or purple.

Large-toothed-leaved Hedge Nettle. Fl. July, Aug. Clt. 1827. Pl. 1 to 3 feet.

41 S. Macræ'i (Benth. lab. 6. p. 78. lab. p. 545.) erect or ascending, pilosely hispid; leaves petiolate, ovate or ovate-lanceolate, obtuse, crenated: lower ones cordate at the base: upper ones roundly cuneated at the base: upper floral leaves sessile, shorter than the calyxes; whorls 6-flowered, remote; calyx ovate-campanulate, hispid, with lanceolate-acute rather spinose teeth; corolla glabrous, twice as long as the calyx. ♃.? G. Native of Chili, at Valparaiso, and of California. Hook. et Arn. in Beech. voy. pt. bot. p. 155, but not of Benth. Very nearly allied to the preceding. Corolla violaceous.

Macrae's Hedge Nettle. Pl. ½ to 1 foot.?

42 S. Bridge'sii (Benth. lab. p. 546.) erect, clothed with soft white villi or wool; leaves petiolate, ovate, obtuse, crenated, subcordate at the base, wrinkled: floral leaves sessile: upper ones rather shorter than the calyxes; whorls 6-flowered, remote; calyx ovate-campanulate, clothed with very soft villi, with mutic teeth; corolla twice as long as the calyx. ♃.? G. Native of the South of Chili, Bridges. Allied to the preceding, but the leaves are smaller, thicker, and the whole plant is canescent from soft wool, not villous from stiff hairs.

Bridges's Hedge Nettle. Pl.?

43 S. Gillie'sii (Benth. lab. p. 740.) ascending, villous; leaves petiolate, obtuse, crenated, cordate at the base: lower ones rounded, nearly glabrous: superior ones ovate, pubescent; floral leaves ovate, quite entire, shorter than the calyxes, villous: racemes hispid from stiff villi; whorls 6-flowered, distant; calyx ovate-campanulate, hispid, with ovate-lanceolate acute rather spinose teeth; corolla glabrous, thrice as long as the calyx, with an exserted tube. ♃.? G. Native of the Andes of Chili, near Mendoza. Intermediate between *S. Macræ'i* and *S. circinnàta*; differing from the first in the short stiff stems, broad leaves, and larger corollas; and from the last in the stems and leaves being less hispid, leaves less crenated, and in the tube of the corolla being exserted.

Gillies's Hedge Nettle. Pl.?

44 S. circinna'ta (Lher. stirp. 1. p. 51. t. 26.) procumbent, hispid; floriferous branches erect; leaves petiolate, roundish, obtuse, crenated, broadly cordate at the base: floral leaves smaller: upper ones ovate, quite entire, rather shorter than the calyxes; whorls 6-flowered, distinct: lower ones remote; calyx campanulate, hispid, with ovate acute rather spinose teeth; corolla pubescent, scarcely twice as long as the calyx. ♃. H. Native of the South of Spain and North of Africa; Gibraltar; on the lead-hills of Tunis, Vahl.; Mount Atlas, in the fissures of rocks, Desf. S. velutina, Willd. enum. suppl. p. 41. S. latifòlia, Ait. hort. kew. 2. p. 303. Sterile branches procumbent, creeping a little. Corolla 7-8 lines long, pale or dark purple or white.

Circinnate-leaved Hedge Nettle. Fl. June, July. Clt. 1777. Pl. 1 to 2 feet.

45 S. nepetæfòlia (Desf. cat. hort. par. p. 58. Benth. lab. p. 546.) ascending, canescent; leaves petiolate, ovate, obtuse, crenated, cordate at the base, wrinkled; whorls distant, 6-flowered; calyx tubular, canescent, with lanceolate acute rather spinose teeth; corollas pubescent, half again as long as the calyxes. ♃.? H. Native of Spain, Pavon. Plant canescent from short tomentum. Leaves from ½ to 1 inch long, almost like those of *Népeta Mussìni*. Corolla purple; tube equalling the calyx. Habit different from other species of the genus.

Catmint-leaved Hedge Nettle. Fl. June, Aug. Clt. 1805. Pl. 1 to 2 feet.

46 S. Arà'bica (Horn. hort. hafn. p. 554.) erect, divaricately branched; branches glabrous or beset with spreading hairs; leaves petiolate, ovate-lanceolate, acutish, serrately crenated, rounded at the base or cuneated, glabrous or pubescent; floral leaves sessile, ovate, acute, cordate at the base; whorls 6-flowered, remote; calyx large, campanulate, pilose, with ovate acute rather spinose teeth; corolla pubescent, one half longer than the calyx. ⊙.? H. Native of Arabia. This species is distinguished from all others in the large calyx, which is 6-8 lines long. Corolla violaceous; tube shorter than the calyx.

Arabian Hedge Nettle. Fl. June, Aug. Clt. 1819. Pl. 1 foot.

47 S. bullà'ta (Benth. lab. p. 547.) erect, villous; leaves on short petioles, broad-ovate, coarsely crenated, bullately wrinkled, rather canescent beneath, hispidly villous on both surfaces; floral leaves shorter than the calyxes; whorls 6-flowered; calyx turbinately campanulate, hispid, with ovate acute rather pungent teeth; corolla about twice as long as the calyx. ♃.? H. Native of California, Beechey. *S. coccínea*, Hook. et Arn. in Beech. voy. pt. bot. p. 156. but not of Jacq. Leaves 1½ to 2 inches long; floral leaves sessile. Whorls approximate. Corolla pubescent; tube equalling the calyx, furnished with a ring of hairs inside.

Blistered-leaved Hedge Nettle. Pl.?

48 S. brachià'ta (Bojer, mss. ex Benth. lab. p. 547.) procumbent? clothed with fine tomentose pubescence; leaves sessile, oblong-lanceolate, bluntish, toothed, roundish at the base, wrinkled; whorls about 6-flowered, remote; calyx ovate-campanulate, pubescent, with ovate very acute rather spinose teeth; corollas small, downy outside, about twice as long as the calyx. ♃. S. Native of Madagascar, Lyall. Stems rather woody. Leaves 1 to 1½ inches long. Corolla almost like that of *S. Grahámii*, scarcely 3 lines long.

Armed Hedge Nettle. Pl. procumbent.

49 ? S. ca'ndida (Benth. lab. p. 547.) procumbent? clothed with white wool; leaves nearly sessile, oblong-lanceolate, coarsely toothed, or crenated, narrowed at the base; floral leaves rather shorter than the calyxes; whorls 6-flowered, remote; calyx ovate, campanulate, woolly, with lanceolate very acute rather spinose teeth; corolla woolly outside, one half longer than the calyx. ♃.? F. Native of the Levant, ex Horr. par.; Macedonia, ex Herb. Lamb. The whole plant clothed with dirty white wool. Leaves half, or hardly an inch long.

White Hedge Nettle. Pl. procumbent.

50 S. incrèta (Burch. cat. geogr. no. 3794.) procumbent, glabrous; leaves nearly sessile, oblong-lanceolate, cordate at the base; whorls about 6-flowered; calyxes glabrous, with rather spinose teeth; corollas twice as long as the calyx. ♃.? G. Native of the Cape of Good Hope. Habit of *S. Æthiópica*, but larger. Leaves about an inch long, with crenulated edges.

Trailing Hedge Nettle. Pl. trailing.

§ 8. Olica'nthæ (from ὀλιγος, *oligos*, few; and ανθος, *anthos*, a flower; in reference to the few-flowered whorls.) Benth. lab. p. 548. *Annual, rarely perennial, weak herbs, which are procumbent at the base. Whorls 2-4, rarely 6-flowered.*

51 S. Æthiópica (Lin. mant. p. 82.) villous, procumbent; leaves petiolate, rigid, ovate-deltoid, crenated, deeply and broadly cordate at the base; floral leaves narrowed at the base, rather shorter than the calyxes; whorls 2-4 flowered, racemose; calyx campanulate, hispid, with equal, acute, rather spinose teeth; corolla twice as long as the calyx. ♃. G. Native of the Cape of Good Hope. Jacq. obs. 4. p. 2. t. 77. Lher. stirp. nov. 2. t. 27. Lower leaves ½ an inch long; superior ones smaller: floral ones quite entire. Corolla purple.? This species varies much in hairiness and size of flowers.

Æthiopian Hedge Nettle. Fl. April, June. Clt. 1770. Pl. procumbent.

52 S. subse'ssilis (Burch. cat. geogr. no. 4326.) decumbent; stems nearly glabrous; leaves nearly sessile, ovate, almost quite entire, deeply cordate, pilosely hispid on the margins and nerves; floral leaves nearly glabrous, shorter than the calyxes; whorls 2-flowered, racemose; calyx campanulate, hispid, with equal lanceolate very acute subspinose teeth; corolla nearly glabrous, with the tube rather exserted. ♃.? G. Native of the Cape of Good Hope, and Algoa Bay. Leaves scarcely 2 lines long. Corolla twice as long as the calyx.

Almost-sessile-leaved Hedge Nettle. Pl. procumbent.

53 S. Lya'lli (Benth. lab. p. 548.) annual, diffuse, hispid; leaves petiolate, small, orbicular, rounded at the base, or cordate, wrinkled; floral leaves similar to the rest; whorls 2-flowered; calyx campanulate, with an oblique mouth, and lanceolate, acute teeth, the upper teeth the longest; corolla one half longer than the calyx. ⊙. S. Native of Madagascar. A small plant, with the habit of *Verónica agréstis*. Calyxes secund, subreflexed. Corollas rosy-white, form of those of *S. Córsica*, but much smaller.

Lyall's Hedge Nettle. Pl. diffuse.

54 S. rotundifòlia (Moç. et Sessé, mss. ex Benth. lab. p. 548.) annual, ascending; leaves petiolate, ovate-rounded, crenated, cordate at the base; floral ones similar to the rest; whorls axillary, 2-flowered; calyx campanulate, very pilose, with nearly equal lanceolate acute scarcely spinescent teeth; corolla 3 times as long as the calyx; tube shortly exserted; lower lip large. ⊙. S. Native of New Spain. Allied to *S. Córsica*. Stems nearly simple, villous. Flowers nearly sessile. Corollas almost like those of *S. Córsica*, but larger.

Round-leaved Hedge Nettle. Pl. ½ foot.

55 S. Córsica (Pers. ench. 2. p. 30.) procumbent, pilose; leaves petiolate, ovate, very blunt, broadly crenated, rounded at the base, or subcordate; floral leaves smaller: upper ones shorter than the calyxes; whorls 2-4-flowered, remote; calyx campanulate, hispid, with nearly equal lanceolate acute rather spinescent teeth; corolla more than twice as long as the calyx: tube a little exserted: lower lip large. ♃.? H. Native of Corsica and Sardinia, in corn-fields. Rchb. icon. bot. eur. 7. p. 24. t. 646. Clechòma grandiflòra, D. C. fl. fr. 3. p. 538. Herb diffuse. Corolla downy outside, 7-8 lines long, rosy-white or pink, large for the size of the plant.

Corsican Hedge Nettle. Fl. July, Aug. Clt. 1823. Pl. ½ to ½ foot.

56 S. serràta (Burch. cat. geogr. no. 5155.) annual, decumbent, pilose; leaves petiolate, broad-ovate, acutish, broadly cordate at the base; upper floral leaves sessile, shorter than the calyxes; whorls about 4-flowered; calyx tubularly campanulate, hispid, with nearly equal lanceolate acute rather spinose teeth; corolla twice as long as the calyx. ⊙. H. Native of

the Cape of Good Hope. Nearly allied to *S. arvénsis*; but the corollas are twice the size; the leaves broader and more acute, and the flowers fewer.

Serrulated-leaved Hedge Nettle. Pl. decumbent.

57 S. marrubiifòlia (Viv. fl. cors. app. 2. ex Benth. lab. p. 740.) annual, erectish, pilose; leaves petiolate, broad-ovate, obtuse, crenated, broadly cordate at the base; upper floral leaves sessile, shorter than the calyxes; whorls 6-flowered; calyx tubularly campanulate, pilose, with lanceolate acute teeth, the upper teeth the largest; corolla twice as long as the calyx: tube inclosed, equalling the calyx; lips nearly equal. ☉. H. Native of Barbary, Corsica, Naples. S. arvénsis purpùrea, Poir. dict. 7. p. 373. S. Poirètii, Tenore, syll. fl. nap. app. p. 538. Habit of *S. arvénsis*; but the calyxes are broadly campanulate, oblique, and the corollas are much larger. Leaves very like those of a species of *Marrùbium*.

Horehound-leaved Hedge Nettle. Pl. ½ foot.?

§ 4. Agre'stes (from *agrestis*, wild.) *Weak annual herbs. Whorls* 6, *rarely* 10-15-*flowered.*

58 S. eria'ntha (Benth. lab. p. 549.) annual, prostrate, rather creeping; leaves petiolate, ovate-oblong, obtuse, crenated, truncate at the base, or rounded, rather villous; upper floral leaves sessile, scarcely longer than the calyxes; whorls 6-flowered; calyx campanulate, clothed with soft rufous villi, with short acutish mutic teeth; corolla exceeding the calyx a little. ☉. H. Native of Mexico, Moçino et Sessé. Allied to *S. arvénsis*, and the leaves very like those of *S. Grahàmi*, but differs from both in habit and calyxes. Leaves 6-9 lines long, rather rufescent beneath. Corollas like those of *S. arvénsis*.

Woolly-flowered Hedge Nettle. Pl. prostrate.

59 S. arve'nsis (Lin. spec. p. 814.) annual, decumbent, pilose; leaves petiolate, ovate, obtuse, crenated, cordate at the base; floral leaves narrower: upper ones cuneated at the base, sessile, rather shorter than the calyxes; whorls 4-6-flowered, distant; calyx tubularly campanulate, hispid, with nearly equal lanceolate acute scarcely spinose teeth; corolla scarcely exceeding the calyx, with an inclosed tube and short lips. ☉. H. Native throughout Europe, North of Africa, and Middle Asia, in corn-fields; also of South America, but probably imported from Europe; plentiful in some parts of Britain, in corn-fields, in gravelly or calcareous soil. Smith, engl. bot. t. 1154. Hook. fl. lond. vol. 2. icone. Oed. fl. dan. t. 587. Rchb. icon. bot. eur. 10. p. 24. t. 967. Curt. fl. lond. 4. t. 41. Sabb. hort. rom. 3. t. 51. Glechòma marrubiástrum, Vill. dauph. 2. p. 371. Cardiaca arvénsis, Lam. fl. fr. 2. p. 383. Trixàgo arvénsis, Hoffm. et Link, fl. port. Trixàgo cordifòlia, Mœnch, meth. p. 398. Trixàgo coloràta, Presl, fl. sic. p. 37. Stàchys Brasiliénsis, Hortul.—Riv. mon. t. 27. f. 2. Glechòma arvénsis, Lin. spec. ed. 1st. p. 578. Plant erectish or decumbent. Leaves ½ to 1 inch long. Corolla pilose outside, pale purple: tube shorter than the calyx, with a ring of hairs inside near the base.

Corn-field Hedge Nettle. Fl. July, Aug. Britain. Pl. ¼ to ½ foot.

60 S. agra'ria (Schiede et Deppe, in Linnæa, 5. p. 100.) annual, erectish, pilose; leaves petiolate, oval, obtuse, crenated, cordate at the base; floral leaves narrower, all longer than the calyxes; whorls about 6-flowered, distant; calyx campanulate, pubescent, with nearly equal very acute rather spinose teeth; corolla hardly exceeding the calyx. ☉. H. Native of Mexico, near Jalapa; and Texas, at Rio Brazos. Flowers smaller than those of *S. arvénsis*. Corolla pale violet.

Field Hedge Nettle. Pl. ¼ foot.?

61 S. trunca'ta (Kunze, in pl. Poppig, mss. ex Benth. lab. p. 550.) annual, erect, pubescent; leaves petiolate, ovate, obtuse, crenated, rounded at the base; floral leaves acute, cuneated at the base, longer than the whorls; whorls 4-6-flowered, distant; calyx broad-campanulate, with equal broad-ovate very acute rather spinose teeth, which are much shorter than the tube; corolla scarcely exceeding the calyx, with an inclosed tube, and very short lips. ☉. H. Native of Chili, near Valparaiso. Habit of *S. arvénsis*, but more erect and less pilose. Corollas red, glabrous.

Truncate-flowered Hedge Nettle. Pl. ½ foot.?

62 S. Peruvia'na (Domb. in herb. Smith, ex Benth. lab. p. 551.) annual, decumbent; branches pilose; leaves petiolate, ovate-rounded, obtuse, crenated, cordate at the base, glabrous or pilose; floral leaves sessile, exceeding the calyxes; whorls about 6-flowered, distant; calyx broadly campanulate, hispid: teeth shorter than the tube, broad, acute, rather spinose; corolla scarcely exceeding the calyx, having the upper lip very short, and the lower lip 3 times as long as the upper. ☉. H. Native of Peru, in boggy places near Lima. Larger than *S. arvénsis*. Leaves broader, and more glabrous. Calyx larger. Corolla twice as long, with an inclosed tube.

Peruvian Hedge Nettle. Pl. decumbent.

63 S. Kee'lii (Benth. lab. p. 551.) annual? erect, villous; leaves petiolate, ovate, crenated, cordate at the base, pilose: superior ones oblong; floral leaves cuneated, narrow, reflexed, hardly longer than the calyxes; racemes elongated; whorls 6-flowered; fructiferous calyx campanulate, spreading; teeth acute, spinescent, rather shorter than the tube; corollas twice as long as the calyx; upper lip short; lower lip 3 times as long as the upper lip. ☉. H. Native of Mexico, near Tlalpuxahua, Keerl. Habit of *S. Grahàmii*, but more pilose, &c.

Keerl's Hedge Nettle. Pl. ½ to 1 foot.?

64 S. Graha'mii (Benth. lab. p. 551.) herbaceous, procumbent? pilosely pubescent; leaves petiolate, ovate-oblong, obtuse, crenated, subcordate at the base, rather hispid, or at length glabrous; whorls 10-15-flowered, remote; calyx globosely campanulate, nearly glabrous: teeth ovate, acute, rather spinose; corolla small, glabrous, about twice as long as the calyx. ☉. H. Native of Mexico, near Tlalpuxahua, G. J. Graham. Corollas 3 lines long, almost like those of *S. arvénsis*.

Graham's Hedge Nettle. Pl. procumbent.

65 S. Drummóndi (Benth. lab. p. 551.) annual, erect, pilosely hispid; leaves petiolate, oval, obtuse, broadly cordate at the base, or rounded; floral leaves lanceolate: upper ones rather shorter than the calyxes; whorls 6-flowered; calyx campanulate: teeth linear, or lanceolate-subulate, equalling the tube; corolla twice as long as the calyx: upper lip short; lower one 3 times as long as the upper. ☉. H. Native of Texas, at Rio Brazos, Drummond. Habit of *S. agrària*.

Drummond's Hedge Nettle. Pl. 1 to 2 feet.

66 S. Bogote'nsis (H. B. et Kunth, nov. gen. amer. 2. p. 309.) erect, pilose; leaves petiolate, ovate, rounded at apex, obsoletely cordate at the base, crenated, rather canescent beneath; whorls 4-6-flowered; calyx turbinately campanulate, 5-cleft, with ovate-oblong mucronate nearly equal teeth; corolla exceeding the calyx: upper lip entire, shorter than the lower one. ☉. H. Native near Santa Fe de Bogota. Leaves an inch long, and 9 lines broad. Corolla violaceous. This appears only to differ from *S. Drummóndi*, in the form of the calyx, and more villous leaves, which are canescent beneath.

Bogota Hedge Nettle. Pl. 1 foot.?

67 S. de'nsus (H. B. et Kunth, l. c.) erect, puberulous; leaves petiolate, ovate, obtuse, deeply cordate, crenated, nearly glabrous, with the veins and margins hairy; whorls about 10-flowered; calyx turbinately campanulate, with lanceolate aristately subulate nearly equal teeth; corolla with the tube a

little longer than the calyx: upper lip bifid; lower lip 3 times as long as the upper lip. ☉.? H. Native of Quito, between Cachapamba and Chillo. Leaves 10-11 lines long, and 7 lines broad, paler beneath. Corolla pale violet. Allied to *S. arvénsis*.

Weak Hedge Nettle. Pl.?

68 S. ELLI'PTICA (H. B. et Kunth, l. c. p. 308.) erect, hairy; leaves petiolate, elliptic, rounded at apex, cordate at the base, crenated; whorls 6-flowered; calyx turbinately campanulate, with ovate acuminately mucronate unequal teeth; corolla twice as long as the calyx: upper lip entire, rather concave. ☉.? H. Native of Quito, near Tumbamba and Chillo. Leaves ½ an inch long, and 4 lines broad. Whorls approximate. Corolla rose-coloured, downy outside, middle segment of lower lip marked by two purple spots at the base.

Elliptic-leaved Hedge Nettle. Pl. 1 foot.

Sect. V. OLI'SIA (meaning unknown to us.) Benth. lab. p. 553.—Olìsia species, Dumort, florul. belg.—Tetrahitum and Stàchys species, Hoffm. et Link, fl. port.—Herbs, annual or perennial, glabrous, pubescent, or pilose, but never woolly. Leaves ovate. Whorls about 6-flowered. Bracteas minute. Calyxes usually spinescent, sometimes bilabiate. Corollas cream-coloured.

69 S. HI'RTA (Lin. spec. p. 813.) erect or ascending, branched, pilosely hairy; leaves petiolate, ovate, crenated, truncately cordate at the base; floral leaves sessile, roundly cuneated at the base: upper ones ovate, acute, quite entire; whorls 6-flowered, distant, or the upper ones are approximate; calyx campanulate, pilose, with lanceolate-subulate very acute spinescent teeth; corolla pubescent outside, scarcely a half again as long as the calyx, with an inclosed tube, and an emarginately bifid upper lip. ☉. H. Native of the South-west of Europe, and the North of Africa, in dry stony places near the sea; as of Spain, Portugal, Italy, Tunis; as well as of the Canary Islands. All. ped. 1. p. 31. t. 2. f. 3. bad. Sideritis oeymástrum, Gouan, hort. monsp. p. 278. Galeópsis hirsùta, Lin. spec. ed. 1st. p. 580. Tetrahitum hirtum, Hoffm. et Link, fl. port. Stàchys divaricàta, Viv. fl. cors. append. 2. Stàchys inscripta, Rchb. icon. bot. exot. 1. p. 28. t. 40.—Lob. icon. 519.? Galeópsis Hispánica, Mill. ex Steud. nom. p. 351. Leaves ½ to 1½ inch long. Plant pale green. Corollas cream-coloured.

Hairy Hedge Nettle. Fl. June, Aug. Clt. 1725. Pl. ¼ to ½ foot.

70 S. A'NNUA (Lin. spec. p. 813.) annual, erect, nearly glabrous, or pubescent at top; leaves petiolate, ovate, bluntish, crenated, rounded at the base, or cuneated; floral leaves lanceolate, longer than the calyxes, acute, almost quite entire; whorls about 6-flowered, distinct: upper whorls approximate; calyx tubularly campanulate, villous, a little incurved, with lanceolate very acute rather spinose teeth; corollas pubescent, about twice as long as the calyx. ☉. H. Native of Europe, in corn-fields, and by way sides; as of France, Germany, Italy, Caucasus, &c. Jacq. fl. austr. 4. p. 31. t. 360. Betónica ánnua, Lin. spec. ed. 1st. p. 573. Mœnch, meth. p. 396. Stàchys nervòsa, Gat. fl. mont. p. 107. Stàchys Betónica, Crantz, stirp. austr. p. 265.—Riv. mon. irr. t. 69. Plant branched. Cauline leaves glabrous, 1½ inch long, and 8-10 lines broad; upper floral leaves smaller, pubescent. Corollas yellow, or cream-coloured.

Annual Hedge Nettle. Fl. July, Aug. Clt. 1713. Pl. ½ to 1 foot.

71 S. PUBE'SCENS (Tenor. fl. nap. prod. p. 34.) perennial, ascending, almost glabrous, but pubescent above; leaves petiolate, ovate, obtuse, crenated, cuneated at the base; floral leaves ovate, longer than the calyxes, acutish, nearly entire; whorls about 6-flowered, distant; calyx tubularly campanulate, villous, a little incurved, with lanceolate very acute rather spinose teeth; corolla pubescent, about twice as long as the calyx. ♃. H. Native of Europe, in the region of the Mediterranean, in dry fields; as of Spain, Lucania, Dalmatia. S. decúmbens, Willd. enum. suppl. p. 41.? S. Balbísii, Link, enum. 2. p. 110. S. frágilis, Vis. pl. rar. dalm. ex Rchb. fl. germ. p. 319.? Calycine teeth equalling the tube of the corolla. Corolla yellowish, or cream-coloured, sometimes spotted with red in the throat.

Pubescent Hedge Nettle. Fl. May, July. Clt. 1816. Pl. ½ to 1 foot.

72 S. MARI'TIMA (Lin. mant. p. 82.) perennial, tomentosely hairy, ascending; leaves on short petioles, oblong-lanceolate, obtuse, narrowed at the base, rather wrinkled; floral leaves sessile, ovate, obtuse: upper ones rather shorter than the calyxes; whorls about 6-flowered: lower ones distant: superior ones approximating into a spike; calyx tubularly campanulate, villous, with lanceolate acute mutic teeth; corolla pubescent, about a half again as long as the calyx. ♃. H. Native in the region of the Mediterranean, in sandy places by the sea side; as near Valentia, Montpelier, Nice, &c. Jacq. hort. vind. 1. p. 29. t. 70. Rchb. icon. bot. cur. 5. p. 51. t. 484. S. betonicæfòlia, Pers. ench. 2. p. 124.? but not of Desf.—Dill. elth. 50. t. 42. f. 50.—Bocc. mus. 2. p. 164. t. 127. Stems numerous. Leaves about an inch long, wrinkled and tomentose. Corolla pale yellow or cream-coloured, the lower lip spotted with purple at the base.

Sea-side Hedge Nettle. Fl. July. Clt. 1714. Pl. ½ to 1½ foot.

73 S. SPINULÒSA (Sibth. et Smith, fl. græc. prod. 1. p. 410.) annual?; angles of branches hispid; leaves petiolate, broad-ovate; lower leaves cordate at the base; floral leaves sessile, ovate-lanceolate; whorls 6-10-flowered, distinct; bracteas minute; calyx ample, campanulate, with broad acute rather spinose equal teeth, which are about equal in length to the corolla; upper lip of corolla very large. ☉.? H. Native of Dalmatia, Istria, Candia, Corfu, about Constantinople, &c. Galeópsis orientàlis, Mill. Plant erect or ascending. Angles of stems ciliated with obverse hairs. Leaves crenated, 1-2 inches long, green, pilose. Corollas pale yellow, like those of *S. menthæfòlia*, but a little longer.

Spinulose Hedge Nettle. Fl. July, Aug. Clt.? Pl. 1 to 1½ foot.

74? S. MENTHÆFÒLIA (Vis. pl. rar. dalm. in bot. zeit. 1829. erglb. p. 14. Benth. lab. p. 555.) plant ascending or erect, hairy; leaves on short petioles, oblong-ovate, serrated, rounded at the base, or subcordate; floral leaves sessile, acute, hardly exceeding the calyxes; whorls 6-10-flowered: superior ones approximate; calyx amply campanulate, bilabiate, with broad, very acute, submutic teeth; lower lip of corolla very large. ♃.? H. Native of Dalmatia. S. grandiflòra, Host, fl. austr. 2. p. 169. Leaves 2 to 3 inches long, hispid. Lower whorls distant. Corolla cream-coloured. This differs from the other species of this section in the bilabiate calyx.

Mint-leaved Hedge Nettle. Pl.?

Sect. VI. CHAMÆSIDERI'TIS (from χαμαι, *chamai*, on the ground; and Σιδηριτις, *Sideritis*; in reference to the smallness of the species.) Rchb. fl. germ. exc. p. 318. Benth. lab. p. 556. Perennial, glabrous, or pilose herbs, never woolly. Leaves oblong, lanceolate, or linear. Whorls 2-6-flowered. Bracteas minute, subspinescent. Corolla cream-coloured or purple.

75 S. SUBCRENA'TA (Vis. pl. rar. dalm. in bot. zeit. 1829.

1 erglb. p. 15.) ascending, pilosely pubescent; leaves nearly sessile, oblong-lanceolate, obtuse, scarcely crenated, narrowed, and quite entire at the base; floral leaves ovate-lanceolate, acute: upper ones shorter than the calyxes; whorls densely 6-10-flowered, distant; calyx tubularly campanulate, rather pilose, with ovate very acute rather spinose nearly equal teeth; corolla nearly glabrous, twice as long as the tube of the calyx. ♃. H. Native of Dalmatia, on hills. S. récta, β. Bertol. amœm. ital. p. 378. Allied to *S. récta*, but differs in the leaves being narrower, more entire. Corolla yellow, ?

Subcrenated-leaved Hedge Nettle. Pl. 1 to 2 feet.

76 S. succ'ta (Lin. mant. p. 82.) erect or ascending, pilosely hairy; leaves on short petioles, oblong-ovate or lanceolate, obtuse, crenated, rounded or narrowed at the base, wrinkled, hairy; floral leaves sessile, acute: upper ones shorter than the calyxes; whorls about 10-flowered, distant; calyx ovate-campanulate, hairy, with ovate very acute rather spinose equal teeth; corolla glabrous, twice as long as the calyx. ♃. H. Native of Europe, especially in the south, in dry places and by way sides; as of Spain, Germany, Italy, South of Russia, Tauria, Caucasus, Candia, &c. Jacq. fl. austr. 4. p. 31. t. 359. Sideritis hirsùta, Gouan, fl. monsp. p. 85. Betónica hirta, Gouan, hort. monsp. p. 276. Betónica decúmbens, Mœnch, meth. p. 396. Tetràhit herbariòrum, Ger. fl. gallopr. p. 272. S. Betónica, Crantz, stirp. austr. p. 264. S. bufònia, Thuill. fl. par. 1. p. 295. S. procúmbens, Lam. fl. fr. 2. p. 385. S. Sideritis, Vill. fl. dauph. 2. p. 375. S. sylvéstris, Forsk. fl. const. p. 28. S. ánnua, Smith, prod. fl. græc. 1. p. 410. but not of Lin. S. glutinòsa, Smith, prod. fl. græc. 1. p. 409. but not of Lin. S. decúmbens, Rchb. fl. germ. p. 318. but scarcely of Willd.—Riv. mon. irr. t. 70. Leaves 1 to 1½ inch long, very variable in breadth and hairiness. Corolla pale yellow or cream-coloured, with a purplish throat.

Upright Hedge Nettle. Fl. June, Aug. Clt. 1683. Pl. 1 to 1½ foot.

77 S. arena'ria (Vahl, symb. 2. p. 64.) decumbent, canescent from pubescence; leaves nearly sessile, oblong-linear or lanceolate, acute, subserrated, narrow a long way at the base, and quite entire; floral leaves smaller: upper ones shorter than the calyxes; whorls loosely 6-10-flowered, remote; calyx tubularly campanulate, pilose, with lanceolate very acute rather spinose teeth, the upper tooth rather the broadest; corolla pubescent outside, twice as long as the calyx. ♃. H. Native of the region of the Mediterranean; as of Tunis, Sicily, Naples, about Trebezond, Iberia, &c., in dry, rugged, exposed places. Sims, bot. mag. t. 1959. Desf. fl. atl. 2. p. 21. t. 126.? S. Ibérica, Bieb. fl. cauc. 2. p. 51. Rchb. icon. bot. exot. 1. p. 43. t. 58. S. prostràta, Lag. cat. hort. madr. S. diffùsa, Schw. S. scordifòlia, Willd. enum. 2. p. 616. S. purpùrea, Poir. dict. suppl. 2. p. 616. S. congésta, D'Urv. enum. pl. arch. in mem. soc. Lin. par. p. 324. S. rùbra, Donn, hort. cantab. Branches more or less canescent from long soft hairs, as well as the leaves. Leaves 1 to 1½ inch long: upper floral ones quite entire. Corolla purplish, pilose outside.

Sand Hedge Nettle. Fl. July. Clt. 1804. Pl. 1 foot.

78 S. angustifòlia (Bieb. fl. cauc. 2. p. 51.) glabrous; branches twiggy, diffuse; leaves linear, quite entire, serrated, or the lower ones are pinnatifid; racemes elongated; whorls remote, 2-flowered; calyx tubularly campanulate, glabrous, with nearly equal very acute rather spinose teeth; corolla pubescent outside, with a shortly exserted tube. ♃. H. Native of the South of Tauria, in woods, among stones at Femirdschi, and near Cherson. Sweet, fl. gard. 2. t. 180. S. tenuifòlia, Pall. ex Link, enum. 2. p. 109. Rchb. icon. bot. exot. 1. p. 20. t. 28. but not of Willd. S. récta, D'Urv. enum. pl. arch. ? but not of Lin. Corollas purplish.

Narrow-leaved Hedge Nettle. Fl. June, Aug. Clt. 1823. Pl. 1 to 3 feet.

Sect. VII. Amble'ia (meaning unknown to us.) Benth. lab. p. 558. Shrubs or under-shrubs, usually tomentose, rarely glabrous, but never pilose. Whorls 2-6-flowered, rarely so much as 10-flowered. Bracteas small, or few. Calyx tomentose or woolly, with soft mutic teeth.

79 S. hyssopoi'des (Burch. cat. georg. no. 2653.) suffruticose ?; branches elongated, loosely sub-tomentose; leaves linear or oblong, quite entire, or denticulated at apex, narrowed a long way at the base, glabrous on both surfaces, or scarcely tomentose; upper floral leaves shorter than the calyxes; whorls 2-flowered; calyx clothed with hoary tomentum, with broad lanceolate mutic teeth; corolla about twice as long as the calyx, green: floral ones gradually broader and shorter. Calyx clothed with very thin tomentum. Corolla silky outside.

Hyssop-like Hedge Nettle. Shrub.

80 S. cæru'lea (Burch. cat. geogr. no. 1775. ex Benth. lab. p. 558.) suffruticose ? quite glabrous; branches elongated, loosely tomentose; leaves linear or oblong, quite entire, or somewhat denticulated at apex, narrowed a long way at the base, glabrous, or scarcely tomentose; upper floral leaves shorter than the calyxes; whorls 2-flowered; calyx clothed with hoary tomentum: teeth broad-lanceolate, mutic; corolla about twice as long as the calyx. ♄. G. Native of South Africa. Leaves 2-4 inches long, greenish or tomentose. Flowers few, remote. Corolla silky outside.

Blue-flowered Hedge Nettle. Shrub.

81 S. spatula'ta (Burch. cat. geogr. no. 1788. ex Benth. lab. p. 559.) suffruticose, clothed with hoary tomentum; leaves linear-spatulate, quite entire; superior floral leaves scarcely exceeding the calyxes; whorls 2-flowered; bracteas small; calyx tubularly campanulate, with broad-lanceolate teeth, which are equal in length to the tube of the corolla. ♄. G. Native of South Africa. Very nearly allied to *S. lineàris*; but differs in the form of the leaves, subracemose flowers, small upper leaves, and inclosed tube of corolla, &c.

Spatulate-leaved Hedge Nettle. Shrub.

82 S. linea'ris (Burch. cat. geogr. no. 2717. ex Benth. lab. p. 559.) suffruticose, clothed with hoary tomentum; leaves linear, sessile, quite entire; floral leaves exceeding the flowers; whorls about 2-flowered; bracteas minute; calyx tubularly campanulate, with lanceolate acute mutic teeth, shorter than the tube of the corolla. ♄. G. Native of South Africa. Densely clothed with floccose tomentum. Leaves 1 inch long. Corolla about twice as long as the calyx, silky outside.

Linear-leaved Hedge Nettle. Shrub.

83 S. rosmarinifòlia (Benth. lab. p. 559.) suffruticose, clothed with hoary tomentum; leaves nearly sessile, oblong-linear, quite entire, rounded as the base, tomentose on both surfaces, and white beneath; whorls about 6-flowered, distant; bracteas subulate, shorter than the calyxes; calyx campanulate, clothed with hoary tomentum; teeth lanceolate, acute, mutic; corolla scarcely exceeding the calycine teeth, tomentose outside. ♄. G. Native of the Cape of Good Hope. S. hyssopifòlia, Vahl, herb. but not of Michx. Sideritis pállida, Thunb. prod. fl. cap. 95. Leaves similar to those of Lavender or Hyssop, about an inch long, acutish. Upper whorls sometimes approximate.

Rosemary-leaved Hedge Nettle. Shrub humble.

84 S. ruòsa (Ait. hort. kew. 2. p. 303.) suffruticose, clothed with hoary tomentum; leaves sessile, oblong-linear or lanceolate, narrowed a long way at the base, quite entire, wrinkled; whorls 6-10-flowered, distant; bracteas subulate: outer ones

about equal in length to the calyxes; calyx campanulate, with lanceolate subulate acute mutic teeth; corolla about twice as long as the calyx. ♄. G. Native of the Cape of Good Hope. Jacq. icon. rar. 3. p. 7. t. 499. Corollas pale yellow.?

Wrinkled-leaved Hedge Nettle. Fl. July, Aug. Clt. 1774. Shrub 1 to 2 feet.

85 S. DENTICULA'TA (Burch. cat. geogr. no. 1369. ex Benth. lab. p. 560.) suffruticose; branches clothed with hoary tomentum; leaves petiolate, obovate or oblong, obtuse, crenated, undulately curled, much wrinkled, clothed with sub-floccose tomentum beneath; whorls 2-flowered; bracteas small, subulate; calyx tubularly campanulate, loosely tomentose, with ovate-lanceolate acute mutic teeth; corolla scarcely twice as long as the calyx. ♄. G. Native of South Africa. Branches and leaves almost like those of *Marrùbium vulgàre*. Leaves ½ to ¾ of an inch long: floral leaves about twice as long as the calyx. Corolla silky outside.

Denticulated-leaved Hedge Nettle. Shrub.

86 S. CUNEA'TA (Banks, herb. mss. ex Benth. lab. p. 560.) suffruticose, clothed with tomentose wool; leaves petiolate, obovate-cuneated, roundish, obtuse, crenated, undulately curled, much wrinkled, clothed with sub-floccose tomentum on both surfaces; whorls 2-flowered; bracteas small, subulate; calyx campanulate, densely tomentose, with ovate-lanceolate acutish mutic teeth; corolla exceeding the calyx a little. ♄. G. Native of the Cape of Good Hope, Masson. Branches and leaves like those of *Marrùbium Alýssum*. Leaves hardly ½ an inch long: floral ones exceeding the calyxes. Whorls approximate at the tops of the branches. Corolla small, silky outside.

Wedge-leaved Hedge Nettle. Shrub.

87 S. PAUCIFLÒRA (Benth. lab. p. 560.) suffruticose, clothed with floccose wool; leaves nearly sessile, oblong-lanceolate, obtuse, quite entire, narrowed at the base, wrinkled; whorls 2-flowered, rarely 4-flowered, distant; calyx tubularly campanulate, with lanceolate acute mutic teeth; corolla exceeding the calyx a little. ♄. G. Native of Egypt, near Mount Sinai, N. Bové. S. orientàlis. Forsk. fl. ægypt. p. 68. but not of Lin. S. Palæstina, Vahl, symb. 2. p. 64. but not of Lin. S. affinis, Fres. mus. senkenb. p. 91. Stems shrubby at the base, branched. Lower leaves 1 to 1½ inch long; floral leaves usually shorter than the calyxes. Corollas small, silky outside. Tomentum white or yellowish.

Few-flowered Hedge Nettle. Fl.? Clt. 1834.? Shrub ½ to 1½ foot.

88 S. NI'VEA (Labill. pl. syr. dec. 8. p. 5. t. 3.) suffruticose, clothed with tomentose wool; leaves nearly sessile, oblong, obtuse, quite entire, narrowed at the base, thick; whorls 2-4-flowered, few, distant; calyx tubularly campanulate, white, with ovate obtuse mutic teeth; corolla a half again as long as the calyx, pubescent outside. ♄. G. Native of Syria, near Damascus. Tomentum white, floccose. Leaves 1½ inch long. Calycine teeth equalling the tube of the corolla.

Snowy Hedge Nettle. Shrub ½ to 1 foot.

89 S. BURCHE'LII (Benth. lab. p. 561.) suffruticose, clothed with floccose tomentum; leaves nearly sessile, oblong or oblong-lanceolate, serrately crenated, narrowed at the base, wrinkled; whorls 6-10-flowered, distinct; bracteas very minute; calyx tubularly campanulate, with lanceolate obtuse mutic spreading teeth: upper teeth the largest. ♄. G. Native of the Cape of Good Hope. Phlòmis micrántha, Burch. cat. geogr. no. 1672. trav. 310. Sideritis rugòsa, Thunb. prod. p. 95. Habit of *Marrùbium peregrinum*. Lower leaves 2-3 inches long; floral leaves whiter. Corolla small.

Burchell's Hedge Nettle. Shrub.

90 S. *Ægyptiaca* (Pers. ench. 2. p. 124.) hoary; flowers spicate; leaves ovate, wrinkled; bracteas broadly ovate, acuminated; calyx campanulate, smooth. ♄. G. Native of Egypt. This differs from *S. Palæstina* in the calyx and dense spike.

Egyptian Hedge Nettle. Shrub.

91 S. PALÆSTI'NA (Lin. spec. p. 1674.) suffruticose, canescent, tomentose; leaves sessile, oblong-lanceolate, obtuse, or aristately mucronate, quite entire, narrowed a little at the base, stem-clasping, wrinkled; whorls about 6-flowered, at length remote, or the upper ones are approximate; calyx tubularly campanulate, clothed with hoary tomentum: teeth obtuse, mutic; corolla scarcely twice as long as the calyx. ♄. G. Native of Palestine, on the mountains between Gaza and Jerusalem. S. lanàta, Mœnch, p. 397. but not of Jacq.—Barr. icon. t. 979.?—Boec. mus. 2. t. 109—112.? Leaves 1-2 inches long, whitest beneath. Corolla white or purple, clothed with silky pubescence outside.

Palestine Hedge Nettle. Fl. July, Aug. Clt. 1820. Shrub.

92 S. NU'TANS (Benth. lab. p. 561.) suffruticose, pubescent; leaves sessile, ovate, obtuse, crenated, narrowed at the base, wrinkled, villous above, and clothed with white wool beneath; whorls 2-6-flowered; flowers pedicellate, densely clothed with white wool, reflexed in the fructiferous state: teeth lanceolate, obtuse, mutic; corolla exceeding the calyx a little, pubescent outside. ♄. G. Native of the Cape of Good Hope, Dahl. This differs from *S. Lamárckii*, in the broader leaves, which are green above, and clothed with long white pili beneath, not clothed with white wool, &c.

Nutant-flowered Hedge Nettle. Shrub.

93 S. LAMA'RCKII (Benth. lab. p. 562.) suffruticose, clothed with woolly tomentum; leaves nearly sessile, oblong, obtuse, crenated, narrowly rounded at the base, thick, much wrinkled; whorls about 6-flowered, few, distant; calyx tubular, densely clothed with white wool: teeth ovate, obtuse, mutic; corolla exceeding the calyx a little, clothed with white tomentum outside. ♄. G. Native of the Cape of Good Hope. S. rugòsa, Lam. ill. t. 509. f. 3. but not of Ait. Sideritis decúmbens, Thunb. prod. p. 95. Habit of *Marrùbium*. Branches at length nearly glabrous. Leaves 6-12 lines long. Corollas yellow.?

Lamarck's Hedge Nettle. Shrub.

94 S. JURA'NA (Burch. cat. geogr. no. 1233. ex Benth. lab. p. 562.) suffruticose, clothed with rather floccose tomentum; leaves nearly sessile, oblong-lanceolate, subcrenated at top, wrinkled; whorls 6-10-flowered, distant; calyx woolly, with broad-lanceolate acute mutic teeth; corolla twice as long as the calyx. ♄. G. Native of South Africa. Leaves 1 to 1½ inch long, the tomentum rather velvety above, and canescent beneath. Corolla clothed with silky villi outside.

Coupled Hedge Nettle. Shrub 1 to 2 feet.

95 S. INFLA'TA (Benth. lab. p. 562.) suffruticose; branches clothed with white tomentum; leaves nearly sessile, oblong, obtuse, quite entire, a little wrinkled, clothed with white tomentum beneath; whorls about 6-flowered, distant; bracteas linear, short; flowers sessile; calyx inflately campanulate, with ovate bluntish mutic teeth; corolla one half longer than the calyx. ♄. G. Native of the North of Africa, and probably of Egypt; in Persia, between Kermancha and Amadan, Olivier. Leaves scarcely an inch long. Corolla silky outside. Tomentum floccose.

Inflated-calyxed Hedge Nettle. Shrub.

96 S. INTEGRIFÒLIA (Vahl, herb. ex Benth. lab. p. 562.) suffruticose; branches tomentosely woolly; leaves nearly sessile, oblong, bluntish, quite entire, or with a few crenatures at apex, narrowed at the base, green; whorls 6-10-flowered, distinct; bracteas linear, shorter than the calyxes; calyx ovate-tubular, sessile, densely clothed with wool, having linear obtuse mutic teeth; corolla one half longer than the calyx. ♄. G. Native of the Cape of Good Hope. Betónica Heraclèa, Lin. mant. p.

83. Phlòmis parvifòlia, Burch. cat. geogr. no. 1232. trav. p. 225. Sideritis, Thunb. prod. p. 95. Leaves ½ an inch long, beset with rather stellate wool while young, but the adult ones are nearly glabrous; floral leaves longer, and more densely tomentose. Corolla pubescent.

Entire-leaved Hedge Nettle. Shrub.

Sect. VIII. Zietè'nia (probably so named after some obscure botanist.) Benth. lab. p. 562. Zietènia and Stachys species of authors. Under-shrubs, woolly from white soft hairs, rarely glabrous. Bracteas small or few. Whorls 2-6-flowered. Calyxes woolly or glabrous, with subulate usually spinose teeth.

97 S. lavandulæfòlia (Vahl, symb. 1. p. 42.) suffruticose, pilose; cauline leaves petiolate, oblong-lanceolate, quite entire, narrowed at both ends; floral leaves sessile, ovate-lanceolate; whorls 2-6-flowered: teeth of calyx linear, mutic, longer than the tube, exceeding the corolla. ♄. H. Native of Caucasus, in dry stony places. Zietènia orientàlis, Gled. act. berol. 1766. p. 3. Sideritis calycántha, Bieb. fl. cauc. 3. p. 393. Rchb. icon. bot. eur. 1. p. 17. t. 15.—A humble, spreading, procumbent, canescent shrub. Sterile branches erect, leafy. Leaves bluntish. Corolla purple, shorter than the calycine teeth.

Lavender-leaved Hedge Nettle. Fl. July, Aug. Clt. 1820. Shrub procumbent.

98 S. mucrona'ta (Sieb. pl. cret. exs. ex Benth. lab. p. 563.) suffruticose, much branched, woolly from long loose hairs; leaves petiolate, oblong, crenated, wrinkled; whorls 2-4-flowered; calyx campanulate, with long, rather spinose teeth, which exceed the corolla. ♄. H. Native of Candia. Leaves 1 inch long: floral ones sessile. Whorls distinct. Limb of corolla very villous.

Mucronate Hedge Nettle. Shrub ½ foot.

99 S. spinòsa (Lin. syst. 3. p. 58.) suffruticose, hoary from silky adpressed hairs, much branched; branches spinescent at apex; leaves sessile, linear, quite entire; whorls 2-flowered; calyx campanulate, with lanceolate spinose teeth, which are equal in length to the corolla. ♄. H. Native of Candia. This differs from *S. glutinòsa*, in the leaves, branches, and calyxes being clothed with silky wool; in the branches being spinescent, and in the larger corollas.—Park. theatr. 476. t. 48. f. 6.—Mor. hist. 3. p. 382. sect. 11. t. 10. f. 9.

Spinose-branched Hedge Nettle. Fl. July. Clt. 1640. Shrub 1 foot.?

100 S. glutinòsa (Lin. spec. p. 813.) suffruticose, glabrous, much branched; leaves oblong-linear, acute, almost quite entire, narrowed at the base; whorls about 2-flowered; calyx campanulate, glabrous, with equal ovate very acute rather spinose teeth; corolla clothed with silky pubescence outside: tube about equal in length to the calycine teeth. ♄. H. Native of Corsica, on hills; and of Candia, &c.—Mor. hist. 3. p. 389. sect. 11. t. 4. f. 17.? Leaves of the spinescent branches an inch long, on short petioles, furnished with a few scattered hairs, the rest glabrous: superior ones sessile. Flowers on short pedicels. Corolla almost white.

Clammy Hedge Nettle. Fl. June, July. Clt. 1729. Shrub 1 foot.

101 S. fruticulòsa (Bieb. fl. cauc. 2. p. 51.) suffruticose, divaricately branched at the base; branches rather pilose; leaves sessile, oblong-lanceolate, or linear, subdenticulated, green on both surfaces, glabrous: floral ones conforming to the others; whorls 2-flowered; calycine teeth lanceolate, very acute, somewhat spinose, rather shorter than the tube; corolla about twice as long as the calyx. ♄. H. Native of Eastern Caucasus and Iberia, in stony places of mountains. Leaves ½ to 1 inch long, with remote short toothlets. Corolla pale purple.

Fruticulose Hedge Nettle. Fl. June, Aug. Clt. 1818. Shrub 1 foot.?

† *Species not sufficiently known.*

102 S. betonicæfòlia (Desf. cor. in ann. mus. 10. p. 304. t. 25.) villous; leaves cordate, crenated; whorls about 6-flowered; calyxes mutic. ☉. H. Native of Candia, Tournefort. Stem erect, branched. Leaves petiolate, wrinkled, obtuse, crenated, very like those of *Betònica officinàlis*. Whorls distinct, 2-flowered; floral leaves ovate, a little longer than the calyxes. Corolla large, white. Perhaps the same as *S. spinulòsa*.

Betony-leaved Hedge Nettle. Fl. June, July. Clt. 1818. Pl. 2 feet.

103 S. scordioi'des (Poir. dict. 7. p. 373.) suffruticose; leaves lanceolate-linear, almost entire: floral ones spiny-toothed; calycine teeth straight, subulate, spinose. ♄. H. Native of the North of Africa. Branches numerous, divaricate, stiff, villous. Floral leaves sessile, half stem-clasping, all glabrous. Whorls interrupted, terminal, 6-9-flowered. Corolla yellowish, a little longer than the calyx: upper lip flattish, emarginate; lobes of lower lip roundish, unequal, subcrenulated. Perhaps a species of *Sideritis*.

Scordium-like Hedge Nettle. Shrub humble.

104 S. Oly'mpica (Poir. suppl. 5. p. 226.) villous; stem simple, straight, stoloniferous; leaves elliptic, sharply serrated, ciliated with wool; cauline leaves distant, spreading at the top of straight petioles; spike dense, woolly. ♃.? H. Native of Mount Olympus, Toscan. Allied to *S. nivea*. Stem woolly. Leaves an inch long, obtuse at both ends, whitish-green above, and woolly beneath. Whorls dense. Teeth of calyx spinose. Corolla pale yellow, villous outside.

Olympic Hedge Nettle. Pl. 1 foot.

105 S. Tournefórtii (Poir. suppl. 5. p. 227.) leaves cordate-ovate, subcrenated, obtuse; petioles connate at the base; whorls many-flowered; corolla large, villous outside: tube length of calyx; stem tomentose. ♃.? H. Native of Candia, near Canea, Tournefort. S. Crética latifòlia, Tourn. inst. p. 186. itin. 1. p. 33. t. 1. This is a beautiful species, with large rose-coloured flowers. Leaves wrinkled, whitish-green, finely crenulated, 2-3 inches long, and an inch broad. Corolla with a whitish tube and a rose-coloured lip.

Tournefort's Hedge Nettle. Pl. 2 feet.

106 S. pilòsa (Nutt. journ. acad. nat. sc. phil. 7. p. 48.) hairy from pili; leaves nearly sessile, oblong-ovate, acute, serrated; calyx very pilose, with elongated teeth; whorls about 6-flowered. ♃.? H. Native of North America, in the valleys of the Rocky Mountains. Plant humble, robust. Leaves soft beneath. Flowers rather large, purplish.

Pilose Hedge Nettle. Pl. humble.

† † *Doubtful species.*

107 S. decu'mbens (Pers. ench. 2. p. 123.) whorls many-flowered, approximate; bracteas filiform; leaves cordate, toothed; stem decumbent, villous. ♃.? H. Native country unknown. Habit of *S. circinnàta*. Corolla yellowish. Stem branched.

Decumbent Hedge Nettle. Pl. decumbent.

108 S. venòsa (Pers. l. c.) lower leaves spatulate, obtuse, crenated, petiolate, veined with red; cauline leaves sub-rhomboid; stem very villous; calyx smooth. ♃.? H. Native country unknown.

Veiny-leaved Hedge Nettle. Pl.

109 S. betæfòlia (Pers. l. c. p. 124.) leaves petiolate, cor-

date, deeply crenated; spike compact, villous. ♃.? H. Native country unknown.

Beet-leaved Hedge Nettle. Pl.

110 S. barbi'gera (Viv. fl. cors. append. 2. p. 4.) hairy; stem ascending; leaves cordate-elliptic, crenulated; floral leaves ovate, acute, equalling the calyxes; bracteas ovate-linear; whorls 6-10-flowered; calyxes regular, spinulose; corolla woolly outside; middle segment of the beard obovate, acute: lateral segments linear, obtuse, and twice as long as the middle lobe. ♃.? H. Native of Corsica. This differs from *S. lavandulæfolia*, in habit, shape, and length of the floral leaves, corolla, &c.

Beard-bearing Hedge Nettle. Pl.

111 S. barbuntifo'lia (Viv. fl. cors. app. l. c.) hairy from spreading piti; stem brachiate; leaves cordate, roundish-ovate, crenated; floral leaves ovate and elliptic, spinulose at apex; whorls 6-flowered; corolla purple; lateral lobes of lower lip short, the middle lobe and upper lip emarginate. ♃.? H. Native of Corsica.

Horehound-leaved Hedge Nettle. Pl.

112 S. Valenti'na (Lag. nov. gen. et spec. p. 18.) leaves oblong-lanceolate, subcordate, hairy; whorls 6-7-flowered: upper ones sterile. ♃.? H. Native of Spain, on hills in the province of Valentia, near Enguera.

Valentia Hedge Nettle. Pl.

113 S. stenophy'lla (Spreng. syst. 2. p. 794.) suffruticose, rather hairy; branches twiggy; leaves linear, 3-nerved: lower ones sub-lanceolate, unidentate on both sides; whorls leafy; calyxes pungent. ♄. H. Native of the South of Spain. Sideritis linearifolia, Lam.?

Narrow-leaved Hedge Nettle. Fl. July, Aug. Clt. 1823. Shrub 1 foot.

114 S. glauck'scens (Mussin. ex Spreng. syst. 2. p. 726.) stem erect, villous; leaves cordate, acuminated, serrated, hairy on both surfaces: whorls leafless, spicate; segments of calyx divaricate, pungent. ♃.? H. Native of Caucasus.

Glaucescent Hedge Nettle. Pl.

115 S. biflo'ra (Hook. et Arn. in Beech. voy. pt. bot. p. 155.) Nothing is hardly known of this plant.

Two-flowered Hedge Nettle. Pl.

Cult. Very few of the species are worth cultivating for ornament, most of them having a weedy appearance. They will all grow in any common garden soil; the herbaceous perennial species are readily increased by dividing at the root in spring or autumn. The seeds of annual kinds only require to be sown in spring, in the open border. Some of the smaller species, as *S. Córsica*, do well in pots among other alpine plants. The hardy shrubby species, as *S. lavandulæfolia*, are well fitted for decorating rockwork; these are readily increased by cuttings, under a hand-glass, or by seeds. The greenhouse species require the treatment of other greenhouse plants.

LXXXII. SPHA'CELE (*from σφακος, sphakos*, sage; similarity.) Benth. in bot. reg. under no. 1289. lab. p. 567.—Phytóxys, Molina.—Sideritis species, H. B. et Kunth, nov. gen. amer. 2. p. 307.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, usually widened in the fructiferous state, irregularly somewhat 10-nerved, and reticulately veined, with an equal mouth, which is naked inside, deeply 5-toothed: teeth nearly equal, or scarcely somewhat dejected into two lips. Corolla with an ample, inclosed, or exserted tube, which is furnished with a pilose ring inside at the base: limb short, scarcely bilabiate; lobes broad-roundish, erectly spreading: upper ones sub-bifid: lateral ones entire: lower one larger, and emarginate. Stamens 4, ascending, nearly equal, or didynamous: lower ones the longest; filaments glabrous, naked; anthers sub-approximate, 2-celled: cells linear, distinct, diverging. Style somewhat equally bifid at top: lobes subulate, stigmatiferous at apex. Achenia dry, smooth.—Sub-shrubs or shrubs. Leaves bullately wrinkled, often canescent beneath; floral ones bractea-formed, rarely nearly similar to the cauline leaves. Whorls 2-6-flowered. Racemes simple or branched, terminal. This genus is allied to *Stáchys*, with the leaves of *Sálvia*.

1 S. salviæfo'lia (Benth. lab. p. 567.) shrubby; leaves oblong-lanceolate, rounded at the base, bullate above, and canescent beneath, as well as the branches; whorls many-flowered, secund, crowded into a terminal, rather branched, spike-formed raceme; corolla rather shorter than the calyx. ♄. G. Native of South America. Sideritis salviæfolia, H. B. et Kunth, nov. gen. 2. p. 307. Leaves 2-4 inches long. Whorls 6-10-flowered. Corolla whitish-blue, equalling the calyx. Calyx hispid, with lanceolate, subulate teeth. Bracteas very minute.

Sage-leaved Sphacele. Shrub.

2 S. bulla'ta (Benth. lab. p. 568.) shrubby; branches and under sides of leaves clothed with hoary tomentum, glabrous above, and rugosely blistered, oblong, obtuse, cordate, crenulated; flowers about 5-6 in a whorl, crowded into a dense spike; bracteas ovate, bidentate at apex; calycine teeth acuminately subulate; tube of corolla exceeding the calyx a little. ♄. S. Native of New Granada, on the Andes between Pasto and Peindela. Sideritis bullàta, H. B. et Kunth, nov. gen. amer. 2. p. 306. Shrub much branched, strong-scented. Leaves 2 inches long. Corollas white.

Blistered-leaved Sphacele. Shrub.

3 S. panicula'ta (Benth. lab. p. 568.) suffruticose; branches clothed with hairy tomentum; leaves oblong, sagittately cordate, acute, crenately toothed, rugosely blistered above, and glabrous, but clothed with fine hoary pubescence beneath; spikes panicled; whorls 6-flowered, approximate; bracteas ovate, and are, as well as the calycine teeth, acute. ♄. S. Native of Quito, on the mountains near Tarqui. Sideritis paniculàta, H. B. et Kunth, nov. gen. 2. p. 307. Shrub strong-scented. Leaves 3 inches long, and 16 lines broad. Calyx hispid. Corollas white, similar to those of *S. bullàta*.

Panicled Sphacele. Shrub 3 to 4 feet.

4 S. calyci'na (Benth. lab. p. 568.) suffruticose?; branches clothed with soft villi; leaves petiolate, ovate-oblong, rounded at the base, a little wrinkled, villous; racemes nearly simple, secund; whorls 2-flowered, remote; calyx ample, very villous; corolla ample, exceeding the calyx a little. ♄. F. Native of California, Douglas. Leaves 2-3 inches long, irregularly toothed. Calycine teeth broad-ovate, acute. Corolla white. Upper floral leaves sessile, bractea-formed, lanceolate, quite entire.

Large-calyxed Sphacele. Shrub.?

5 S. tomentòsa (Benth. lab. p. 569.) suffruticose, prostrate; branches ascending, tomentosely villous; leaves small, oblong, roundly subdilated at the base, wrinkled, tomentose on both surfaces; racemes loose, secund; whorls 2-flowered; corolla scarcely exceeding the calyx. ♄. G. Native of Peru, at Chuculin, Dombey. Leaves ⅓ inch long, irregularly and deeply crenated. Upper floral leaves sessile. Corolla inflated a little, pale.

Tomentose Sphacele. Shrub prostrate.

6 S. campanula'ta (Benth. in bot. reg. under no. 1289. lab. p. 569.) shrubby; branches divaricate; leaves small, oblong-lanceolate, narrowed at the base, bullately wrinkled above, and green, but clothed with hoary tomentum beneath; racemes loose, secund; whorls 2-flowered; corollas ample, about twice as long as the calyx. ♄. G. Native of Chili, near Valparaiso and Conception. Rosmarinus Chilénsis, Molina, hist. nat. chil. p. 13.? Dracocéphalum chamædryoides, Balb. misc. p. 29.

Algue Laguen, Feuill. chil. 3. t. 1. Phytóxys acidíssima, Molina ex Spreng. syst. 2. p. 716. Branchlets tomentosely pubescent. Leaves on short petioles, ½ to 1 inch long. Corollas pale blue.

Campanulate-calyxed Sphacele. Fl. July. Clt. 1795. Shrub 2 to 3 feet.

7 S. subrasta'ta (Benth. l. c.) shrubby; branches tomentose; leaves oblong-lanceolate, truncately subhastate at the base, green, and bullately wrinkled above, but clothed with white tomentum beneath; racemes loose, nearly simple; whorls many-flowered; corolla about twice as long as the calyx. ♄. G. Native of Chili, near Valparaiso. Leaves scarcely an inch long, obtuse, crenulated. Whorls 4-6-flowered. Calycine teeth linear-subulate. Corolla blue. Stamens a little exserted.

Subhastate-leaved Sphacele. Shrub.

8 S. Lindle'yi (Benth. l. c. lab. p. 570.) shrubby; branches clothed with floccose wool; leaves ovate, cordate at the base, bullately wrinkled, clothed with white wool beneath; racemes simple, dense; whorls many-flowered; corolla twice as long as the calyx. ♄. G. Native of Chili, near Valparaiso. Hook. bot. mag. t. 2993. Stáchys Sálviæ, Lindl. in bot. reg. t. 1226. Leaves 1½ to 3 inches long. Corollas purplish-violet, more than an inch long, pubescent outside.

Lindley's Sphacele. Fl. Aug. Clt. 1825. Shrub 3 to 4 feet.

9 S. lamiifòlia (Benth. lab. p. 570.) shrubby; branches clothed with rufous tomentum; leaves on short petioles, ovate, cordate at the base, villous, wrinkled, of nearly the same colour on both surfaces; racemes loose, a little branched; whorls many-flowered; corolla much exserted. ♄. G. Native of Peru, Dombey. Leaves obtuse, crenated, glandular beneath: floral ones sessile. Whorls 4-6-flowered. Calyx sub-bilabiate, with setaceously acuminated teeth. Corolla scarlet, almost 1½ inch long.

Dead Nettle-leaved Sphacele. Shrub.

10 S. speciòsa (St. Hil. mss. ex Benth. lab. p. 570.) shrubby; branches clothed with rufous tomentum; leaves petiolate, ovate, or oblong-lanceolate, truncately subcordate at the base, bullately much wrinkled above, and rather woolly beneath, but at length nearly glabrous; racemes loose, paniculately branched; whorls 2-flowered; corolla much exserted. ♄. G. Native of Brazil, in shady rocky places on Serra do Papagaio, in the province of Minas Geraes. Leaves doubly crenulated: floral leaves small, bractea-formed, acuminated, nearly entire. Corolla reddish-violet, more than an inch long.

Showy Sphacele. Shrub 3 to 5 feet.

Cult. The species are free growers, and flowerers. Any light rich earth will answer them; and cuttings readily strike root, with a hand-glass placed over them.

LXXXIII. LEPECHI'NIA (named after John Lepechin, a Russian botanist.) Willd. hort. berol. 1. p. 21. t. 21. Benth. lab. p. 415.—Horminum species, Ortega.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx inflately campanulate, reticulately veined, truncate at apex, sub-bilabiate; upper lip bidentate; lower lip tridentate: teeth all awned; throat naked inside. Corolla equal in length to the calyx; tube naked inside; limb bilabiate; upper lip erect, flattish, emarginate; lower lip trifid, with flat, entire, rather spreading lobes. Stamens 4, didynamous, ascending: lower 2 the longest; anthers approximate: cells rather parallel. Style glabrous, almost equally bifid at apex. Achenia dry, smooth, black.—Herbs. Whorls many-flowered, remote, or spicate.

1 L. spica'ta (Willd. hort. berol. 1. p. 21. t. 21.) stem erect; whorls crowded into a terminal spike; fructiferous calyx closed. ♃. F. Native of Mexico, near Arlo and Santa Rosa de la Sierra; and near Xalapa. Bot. reg. t. 1992. Horminum cauléscens, Orteg. dec. p. 68. Ulrícia pyramidáta, Jacq. ex Steud. nom. p. 413. Stem rather hairy. Leaves nearly sessile, 2-6-inches long, ovate, obtuse, crenulated, cuneated at the base, wrinkled, pubescent, green on both surfaces; floral leaves under the spike similar to the others, but smaller; those in the spike bractea-formed, equalling the calyxes. Spikes oblong or sub-globose 1 to 1½ inch long. Calyx pubescent. Corolla small, yellow.

Spike-flowered Lepechínia. Fl. July, Aug. Clt. 1800. Pl. 1 to 1½ foot.

2 L. procu'mbens (Benth. lab. p. 415.) stems procumbent; whorls secund, remote; fructiferous calyx spreading. ♃. F. Native of Mexico, Karwinski. Branches nearly simple, villous. Leaves petiolate; lower ones ovate: superior ones oblong; all obtuse, crenated, sub-cordate at the base; lower floral leaves almost similar to the others, sessile: the upper ones small and bractea-formed. Whorls 6-10-flowered. Corolla like *L. spicata*, but a little longer.

Procumbent Lepechínia. Pl. procumbent.

Cult. The species of *Lepechínia* should be grown in pots in a rich open earth, or one composed of equal parts of peat sand and loam. They require the protection of a frame or greenhouse in winter, and are readily increased by division and seeds, and even by cuttings.

LXXXIV. CRANIO'TOME (from κρανεον, *kranéon*, a helmet; and τομη, *tome*, a section; probably in reference to the short galea or helmet.) Reichb. icon. bot. exot. 1. p. 39. Benth. lab. p. 704.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx ovate, somewhat globose after florescence, equal, 5-toothed; throat contracted, villous inside. Corolla with an exserted tube, and a bilabiate limb: the upper lip very short and concave, entire; the lower lip longer, spreading, and trifid; the lateral segments short. Stamens 4, ascending, didynamous, shorter than the corolla: lower ones longest. Anthers 2-celled; cells at length divariente. Style about equally bifid at top. Stigmas minute. Achenia dry, smooth.

1 C. versi'color (Reichb. l. c. t. 54.) ♃. H. Native of Nipaul, Kamaon, and Silhet, &c. Népeta versícolor, Trev. in nov. act. acad. nat. cur. 13. p. 183. Anisómeles Nepalénsis, Spreng. syst. 2. p. 706. Ajuga furcàta, Link, enum. 2. p. 99. Herb erect, branched. Branches pilose. Leaves petiolate, ovate, acuminated, crenated, cordate at the base, hispid from pili on both surfaces. Uppermost floral leaves bractea-formed. Cymes loose, many-flowered, pedunculate, racemose. Racemes slender, panicled. Flowers minute, elegantly variegated with white, red, and purple. Calyx pubescent. Fl. July, Aug. Clt. 1824. Pl. 4 to 6 feet.?

Party-coloured-flowered Craniotome.

Cult. For culture and propagation see *Lepechínia*, above.

LXXXV. SIDERI'TIS (of Pliny, and Σιδηριτις of Dioscorides; from σιδηρος, *sideros*, iron; so named on account of its fancied property of healing flesh wounds.) Tourn. inst. t. 90. Lin. gen. no. 712. Schreb. gen. no. 966. Juss. gen. p. 113. Benth. lab. p. 570.—Hesiódia, Burgsdórffia, and Marrubiástrum, Mœnch.—Empedóclea, Rafin.—Naviculària, Fabr.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx tubular, 5-10-nerved: teeth erect, rather spinose, sometimes equal, and sometimes the upper one is very broad, or the 3 upper ones are almost joined into an upper lip. Corolla with an inclosed tube,

which is naked or annulate inside, and a bilabiate limb; upper lip erect, flattish, entire, or emarginately bifid; lower lip spreading, trifid, the middle lobe the broadest, and usually emarginate. Stamens 4, didynamous, inclosed; the upper 2 very short, bearing 2-celled anthers: the cells divaricate; the 2 lower ones longer, bearing dimidiate or difformed empty anthers, rarely conforming to the superior anthers. Style inclosed, bifid at top; upper lobe terete, truncate, stigmatiferous at top: lower lobe dilated, clasping the superior one at the base, stigmatiferous on the top and edges. Achenia dry, obtuse at apex, not truncate.—Herbs, shrubs, and under-shrubs. Whorls 6, or many-flowered, axillary, racemose or spicate. Floral leaves sometimes almost similar to the cauline leaves: upper ones minute, sometimes bractea-formed, dilated, and clasping the flowers, with quite entire or spiny-toothed margins. Corollas small, usually yellowish.

Sect. I. Marrubia'strum (from *Marrubium*, horehound; and *astrum*, an affixed signification, like: plants with the habit of *Marrúbium*.) Mœnch, meth. 391. Benth. lab. p. 573. Shrubs clothed with soft wool, generally white. Floral leaves green, quite entire or crenated, nearly similar to the lower cauline ones, but much smaller; uppermost ones minute.

1 S. Massonia'na (Benth. lab. p. 573.) clothed with white dense adpressed wool; leaves oblong, subcordate at the base, thick, clothed with white wool on both surfaces or only beneath; racemes paniced; whorls few-flowered. ♄. G. Native of Madeira, Masson. Allied to *S. Crética*, but the leaves are narrower and scarcely crenated, and the upper surfaces of the leaves less woolly. Whorls 4-10-flowered, interruptedly racemose. Corollas yellow. ?

Masson's Ironwort. Shrub.

2 S. ca'nescens (Ait. hort. kew. 2. p. 289.) clothed with adpressed dense white wool; leaves ovate, crenated, a little truncate at the base, cordate, thick, clothed with adpressed wool on both surfaces, white beneath; racemes simple; whorls few-flowered. ♄. G. Native of Teneriffe. S. Crética, Lin. spec. p. 801.—Comm. hort. 2. p. 197. t. 99. Habit of *S. Canariénsis*, but the wool is white. Leaves 1-2 inches long. Whorls usually 10-flowered; lower ones distant. Corolla yellow, scarcely exceeding the calyx, pale yellow, or dirty white.

Whitened Ironwort. Fl. April, July. Clt. 1714. Shrub 2 to 3 feet. ?

3 S. macrosta'chyos (Poir. suppl. 2. p. 381.) clothed with dense white adpressed wool; leaves ovate, subcordate at the base, green above, and very white beneath; whorls many-flowered, imbricated into a thick very dense spike. ♄. G. Native of the Canary Islands, Poiret, Masson. Corollas exceeding the calyx a little. Upper surfaces of leaves nearly glabrous.

Long-spiked Ironwort. Shrub.

4 S. Canarie'nsis (Lin. spec. p. 573.) clothed with villous wool; leaves ovate, crenated, cordate at the base, thick, wrinkled, veiny beneath, and clothed with velvety wool on both surfaces; racemes simple; whorls many-flowered, distinct. ♄. G. Native of the Canary Islands. Jacq. hort. vind. 3. p. 18. t. 30. Marrubiástrum tomentósum, Mœnch, meth. p. 391.—Pluk. phyt. t. 322. f. 4. Plant clothed with rather floccose yellowish white dense wool. Leaves 2-4 inches long. Whorls dense, 20-30-flowered. Corolla yellowish, scarcely exceeding the calyx. Style often 4-5 cleft, and the ovarium 8-10 parted, in the gardens.

Canary Island Ironwort. Fl. May, Aug. Clt. 1697. Shrub 3-6 feet.

Sect. II. Empedóclea (the name of an ancient philosopher.) Benth. lab. p. 574.—Empedóclea, Rafin. Caratt. ex Guss. Small shrubs or perennial herbs, woolly at the base. Floral leaves quite entire, clasping the sessile flowers.

5 S. Syri'aca (Lin. spec. p. 801.) suffruticose, clothed with white wool; leaves thick, oblong-lanceolate, narrowed at the base: lower ones crenulated: floral leaves cordate at the base, quite entire, equalling the calyxes. ♄. F. Native of Candia and Palestine. Rchb. icon. bot. exot. 1. p. 42. t. 57. Sibth. et Smith, fl. græc. 6. p. 41. t. 550.—Sabb. hort. rom. 3. t. 40. The whole plant is clothed with white wool. Whorls 6-10-flowered. Corolla twice as long as the calyx, yellow, clothed with silky villi outside.

Syrian Ironwort. Fl. June, Sept. Clt. 1597. Shrub 1 to 1½ foot.

6 S. Tau'rica (Bieb. fl. cauc. 2. p. 43.) suffruticose, clothed with white wool; leaves thick, oblong-lanceolate, or spatulate, narrowed at the base: lower ones crenulated, clothed with dense white wool on both surfaces: floral leaves very broadly cordate, acuminated, quite entire, reticulately veined, clothed with loose wool, greenish; calycine teeth lanceolate, mutic. ♄. H. Native of Tauria, on calcareous mountains. Bieb. cent. pl. rar. ross. 1. t. 39. Rchb. icon. bot. eur. 4. p. 61. t. 384. S. Syriaca, Pall. ind. taur. but not of Lin. S. incàna, Habliz, taur. p. 148, but not of Lin. Nearly allied to *S. Syriaca*. Corollas yellow.

Taurian Ironwort. Fl. June, Sept. Clt. 1822. Shrub 1 to 1½ foot.

7 S. Sicula (Ucria, ex Guss. prod. fl. sic. 2. p. 85.) suffruticose, clothed with white wool; leaves thick, oblong-spatulate, narrowed at the base: lower leaves crenulated, woolly on both surfaces: floral ones very broadly cordate, acuminated, quite entire, reticulately veined, clothed with loose wool, green, about twice as long as the calyxes; calycine teeth lanceolate-subulate, very acute, rather spinescent. ♄. F. Native of the South of Europe; as of Spain, Italy, Sicily. S. Brùtia, Tenore, fl. nap. 2. p. 16. Empedóclea montàna, Rafin. Caratt. p. 78. S. decúmbens, Mœnch, meth. p. 390. ? Naviculària Heistèri, Fabric. Very nearly allied to *S. Syriaca*. Corollas yellow.

Sicilian Ironwort. Shrub 1½ to 2 feet.

8 S. Libanótica (Labill. icon. pl. syr. rar. 4. p. 13. t. 8.) suffruticose; branches simple, glabrous; leaves obovate-oblong, serrated, tomentose; whorls distant; bracteas ovate, acuminated, reticulately veined; calycine segments mucronate. ♄. F. Native of Mount Lebanon. Floral leaves sessile. Whorls 4-8-flowered. Bracteas length of calyxes. Calyx pilose. Corolla pale yellow, pilose, the tube length of calyx.

Lebanon Ironwort. Shrub 1 to 1½ foot.

9 S. pu'llulans (Vent. hort. cels. t. 98.) suffruticose; stem rather woolly at the base, green and pubescent above, divaricately branched; leaves ovate-lanceolate, half stem-clasping, stiff, reticulately veined, green on both surfaces, pubescent or canescent from loose wool: floral leaves broadly cordate, acuminated, twice as long as the flowers; calyx green, with subulate spinose teeth. ♄. F. Native of Syria, on mountains near Jerusalem and Nazareth, Boué. Leaves 2-3 inches long; floral ones 1 to 1½ inch long. Whorls 6-10-flowered. Corolla pubescent outside. Perhaps only a variety of *S. Libanótica*.

Sprouting Ironwort. Shrub.

10 S. du'ra (Benth. lab. p. 576.) suffruticose; stem clothed with white wool; leaves sessile, half stem-clasping, lanceolate, acute, quite entire, stiff, rather woolly from hoary villi on both surfaces: floral leaves broad-cordate, equalling the calyxes, quite entire, acuminated; calyx clothed with soft villi, with soft mutic teeth. ♄. F. Native country unknown. Habit of *S. Syriaca*, but the form of the leaves is different, the whole plant is less woolly, and the whorls more numerous and more remote. Whorls about 6-flowered. Floral leaves very concave.

Hard Ironwort. Shrub.

11 S. PERFOLIA'TA (Lin. spec. p. 802.) suffruticose, hardly woolly at the base; stem pilose, green; leaves half stem-clasping, ovate-oblong or lanceolate, greenish on both surfaces, and furnished with soft villi, rather veiny: floral leaves very broadly cordate, acuminated, reticulately veined, green on both surfaces, twice as long as the leaves; calyx green, pilose, with lanceolate-subulate very acute scarcely spinose teeth. ♄. F. Native of the South of Europe; as of Spain, Sicily, and the Levant. Leaves 1½ to 2 inches long, quite entire or few-toothed, often connate at the base; floral leaves very much dilated, boat-shaped at the base. Corolla yellow, hardly exceeding the calycine teeth.

Perfoliate-leaved Ironwort. Fl. Aug. Nov. Clt. 1731. Shrub 1 to 1½ foot.

12 S. DI'STANS (Willd. spec. 3. p. 66.) suffruticose, hoary; leaves lanceolate, quite entire, acute; whorls distant; floral leaves cordate, acuminated, mucronate, reticulated, nerved. ♄. F. Native of the Levant. Very nearly allied to *S. Taûrica*, from which it differs in the acute, less tomentose, quite entire, leaves, very remote whorls, and glabrous, mucronate bracteas, &c. Tube of corolla longer than the calyx; middle lobe of lower lip obtuse, not emarginate as in *S. Taûrica*.

Distant-whorled Ironwort. Shrub ½ to 1 foot.

13 S. RUGO'SA (Poir. suppl. 2. p. 383.) suffruticose; leaves ovate-lanceolate, obtuse, wrinkled, a little toothed, clothed with hoary tomentum; whorls distant; floral leaves entire, and are, as well as the calyxes acuminated and tomentosely pilose at apex; branches strict. ♄. F. Native of Syria, Labillardière. *S. rytidea*, Spreng. syst. 3. p. 644. Stems slender. Leaves distant, about an inch long. Calyxes longer than the floral leaves; teeth spinose. Corollas yellow.?

Wrinkled Ironwort. Shrub ½ to 1 foot.

14 S. ÆGYPTI'ACA (Pers. ench. 2. p. 117.) leaves ovate, serrated, hoary, the veins beneath rather prominent; stem terete, clothed with white tomentum; whorls clasped by the floral leaves. ♄.? F. Native of Egypt. Stem tall.

Egyptian Ironwort. Shrub tall.

SECT. III. EUSIDERI'TIS (from *ευ*, *eu*, well, and *Sideritis*; so named from this section being supposed to contain the true or legitimate species of the genus.) Benth. lab. p. 577. Small shrubs, villous or rather woolly from soft hairs or pili; rarely nearly glabrous. Floral leaves bractea-formed, sessile, very broadly cordate, clasping the flowers, reticulately veined, with spiny-toothed margins. Teeth of calyx equal, spiny. Corolla exceeding the calycine teeth a little. The species of this section are closely allied to each other.

15 S. GRANDIFLO'RA (Salzm. pl. tang. exs. ex Benth. lab. p. 577.) suffruticose; stem loosely woolly; leaves oblong, obtuse, crenated, narrowed a long way at the base, clothed with soft villi; floral leaves very broad, exceeding the flowers, clothed with soft villi, bluntly acuminated at top, somewhat spinosely denticulated on the margins at the base. ♄. F. Native on hills about Tangiers. Leaves green on both surfaces. Corollas pale yellow, size of those of *Stachys récta*; tube annulate inside.

Great-flowered Ironwort. Shrub 1 to 1½ foot.

16 S. OVA'TA (Cav. icon. 1. p. 36. t. 48.) suffruticose,? green, glabrous or subvillous; leaves oblong-ovate, obtuse, subserrated: floral leaves very broad, exceeding the flowers, glabrous or with villous margins, few-veined, with spiny-toothed margins; whorls approximate, spicate. ♄. F. Native of Spain. Leaves 1 to 1½ inch long. Whorls 6-flowered. Corolla cream-coloured; middle segment of the lower lip crenated.

Ovate-leaved Ironwort. Shrub.

17 S. SPINO'SA (Lam. dict. 2. p. 169.) suffruticose, clothed with soft villi, greenish; leaves oblong-lanceolate, mucronate, with serrated subspinose margins: floral leaves broad, acuminated, exceeding the flowers, with spiny-toothed edges, all clothed with silky villi; whorls approximate, spicate. ♄. P. Native of Spain and Barbary. *S. serràta*, Lag. nov. gen. et spec. p. 18. Stems branched at the base. Corollas pale yellow.

Spinose Ironwort. Fl. June, Sept. Clt.? Shrub 1 to 1½ foot.

18 S. ILICIFO'LIA (Willd. enum. p. 606.) suffruticose, nearly glabrous; leaves oblong-lanceolate, with spinosely serrated edges, a little cut: floral leaves broad, acuminated, exceeding the flowers, with spiny-toothed margins, all nearly glabrous; whorls all remote. ♄. F. Native of the Levant and Spain. Leaves 1-2 inches long. Corollas small. Whorls many-flowered, dense. Lower leaves petiolate; upper ones sessile.

Holly-leaved Ironwort. Fl. June, Sept. Clt.? Shrub 1 to 1½ foot.

19 S. SCORDIOI'DES (Lin. spec. p. 803.) suffruticose; branches decumbent, ascending or erectish, usually loosely villous, rarely glabrous; leaves ovate, oblong or oblong-linear, narrowed at the base, deeply toothed, mutic or rarely almost entire, pilosely woolly or glabrous: floral leaves very broad, equalling the calyxes or hardly longer, with spiny-toothed margins; whorls rather villous, rarely glabrous, interruptedly or densely spicate. ♄. H. Native of Europe, in the region of the Mediterranean; as of Spain, South of France, Piedmont, South of Switzerland. —Barr. icon. 343.—Lob. icon. 528. Very variable in stature and form of leaves. Corollas pale yellow.

Var. α, grandiflòra (Benth. lab. p. 578.) branches erectish, stiff; leaves oblong, green, villous, deeply toothed; whorls large, subinterruptedly spicate. ♄. H. Native among rocks in the Eastern Pyrenees, near Bagnols, and of Spain. *S. subspinòsa*, Cav. icon. rar. 3. p. 5. t. 209. *S. spinòsa*, Bench. cat. pl. pyr. p. 121. but not of Lin.

Var. β, communis (Benth. lab. p. 578.) branches erectish or ascending; leaves obovate-oblong, deeply toothed, villous, canescent while young; whorls very spinose, interruptedly spicate. ♄. H. Native of the South of France and Spain in dry, arid places.

Var. γ, elongàta (Benth. lab. p. 578.) branches elongated, ascending or erect; leaves oblong or oblong-lanceolate, deeply toothed, nearly glabrous, green; whorls interruptedly rarely densely spicate. ♄. F. Common in gardens; and probably a native of Spain. *S. hyssopifòlia*, of many authors. *S. fœtida*, Poir. dict. suppl. 2. p. 382. *S. hirta*, Roth, catal. 1. p. 67. *S. hirsùta*, Brot. fl. lus. 1. p. 161. *S. fruticulòsa*, Pourr. act. tol. 3. p. 328.

Var. δ, alpìna (Benth. lab. p. 578.) branches short, decumbent; leaves oblong-ovate, few-toothed, clothed with hoary villi or at length glabrous; whorls densely or subinterruptedly spicate. ♄. H. Native of the higher Pyrenees and Piedmont. *S. alpina*, Vill. fl. dauph. 2. p. 373. *S. Pyrenàica*, Poir. suppl. 2. p. 383. *S. crenàta*, Lapeyr. hist. abr. pl. pyr. p. 331.

Var. ε, glabràta (Benth. lab. p. 578.) branches ascending; leaves oblong-ovate, few-toothed or quite entire, nearly glabrous; whorls densely or subinterruptedly spicate. ♄. H. Native along with var. δ. *S. hyssopifòlia*, of many authors.

Var. ζ, angustifòlia, (Benth. lab. p. 578.) leaves oblong-linear, nearly glabrous. ♄. H. Native of the Eastern Pyrenees. *S. hyssopifòlia*, Lin. spec. 803. Schkuhr, handb. 2. t. 158.—Barrel. icon. t. 171.

Var. η, incàna, (Benth. cat. pyr. 121. lab. p. 578.) leaves oblong-linear, clothed with hoary villi. ♄. H. Native of the Eastern Pyrenees. *S. Pyrenàica*, Endress. pl. exs. un. fcin. Wurtemb.

Scordium-like Ironwort. Fl. Aug. Nov. Clt. 1597. Shrub ½ to 1 foot.

20 S. leuca'ntha (Cav. icon. 4. p. 2. t. 304.) suffruticose; branches erect, strict, tomentose; leaves linear, a little toothed, nearly glabrous, fascicled in the axils; spikes interrupted, slender, nearly glabrous: floral leaves very broad, equalling the calyxes, with spiny-toothed margins. ½. F. Native of Spain, in calcareous places, on the mountains. Corollas white or pale yellow.

White-flowered Ironwort. Fl. July, Aug. Clt. 1823. Shrub 1 foot.

21 S. pu'ngens (Benth. lab. p. 579.) suffruticose; branches erect, strict, pubescent; leaves linear, very acute, pungent, quite entire, glabrous; spikes dense, tetragonal: floral leaves very broad, about twice as long as the calyxes, with deep spiny-toothed margins. ½. F. Native of Spain. Spikes almost as in *S. serràta*, and the habit is that of *S. fœ'tens;* but the floral leaves are different. Leaves an inch long; lower ones hardly pungent.

Pungent Ironwort. Shrub.

22 S. arbore'scens (Salzm. pl. exs. ex Benth. lab. p. 579.) suffruticose; branches erect, somewhat bifariously woolly: leaves oblong-lanceolate, deeply toothed, glabrous: floral leaves very broad, equalling the calyxes, reticulately veined, rather woolly, with subspinosely toothed margins; whorls many-flowered, hairy, distinct, approximate, subspicate. ½. F. Native of Gibraltar, Broussonet and Salzmann. Leaves nearly sessile, scarcely an inch long. Whorls 6-10-flowered, globose. Bracteas orbicular. Corollas pale yellow.

Arborescent Ironwort. Shrub 4 to 5 feet.

23 S. Cavanille'sii (Lag. nov. gen. et spec. p. 18.) rather hoary; leaves lanceolate, dentately serrated; spike elongated; whorls distinct; bracteas cordately orbicular, spiny-toothed. ½. F. Native of Spain, in mountainous places about Madrid and Old Castile. S. scordioides, Cav. icon. 4. p. 2. t. 303, but not of Lin. ex Lag. Stems and under surfaces of leaves tomentose, more or less hoary. Corollas yellow.

Cavanilles's Ironwort. Shrub ½ to 1 foot.

24 S. hirsu'ta (Lin. spec. p. 803.) suffruticose; branches decumbent, very hairy; leaves oblong-ovate or cuneated, deeply toothed, narrowed at the base, hairy: floral leaves very broad, equalling the calyxes, with subspinosely toothed margins; whorls globose, very hairy, all remote. ½. F. Native of Spain, France, Provence, Piedmont. Cav. icon. 4. p. 1. t. 302. S. scordioides, var. lanàta et latifòlia, Benth. cat. pyr. p. 121. S. tomentòsa, Pourr. act. acad. tol. 3. p. 328. S. Hispánica, Mill. dict. no. 7.—Sabb. hort. 3. t. 58. Whorls usually more than 10-flowered, an inch distant. Floral leaves scarcely spinose. Corollas pale yellow.

Hairy Ironwort. Fl. June, July. Clt. 1731. Shrub decumbent.

25 S. chamædryfòlia (Cav. icon. 4. p. 1. t. 301.) suffruticose; branches ascending, rather villous; leaves oblong or cuneated, deeply toothed, narrowed at the base, rather villous: floral leaves very broad, equalling the calyxes, with subspinosely toothed margins; whorls almost glabrous or villous, all remote. ½. F. Native of Spain. Hardly differing from *S. hirsùta*, unless in being more glabrous. Whorls usually smaller, and the floral leaves larger. Corollas yellow.

Germander-leaved Ironwort. Fl. June, Aug. Clt. 1816. Shrub 1 foot.

26 S. angustifòlia (Lam. dict. 2. p. 168.) suffruticose; branches ascending or erectish, strict, tomentosely pubescent; leaves oblong-linear, quite entire, rarely few-toothed, narrowed at the base: floral leaves very broad, equalling the calyxes, with spiny-toothed margins; whorls rather villous, all distant. ½. F. Native of Spain, in the region of the Mediterranean, and North of Africa, in sandy places near Mascar. S. incàna, Cav. icon. rar. 2. p. 69. t. 186. S. angustifòlia, Lam. dict. 2. p. 168. Lag. nov. gen. et spec. p. 18. S. lincarifòlia, Lag. nov. gen. et spec. p. 18.? Allied to *S. scordioides*, var. *angustifòlia* and *S. incàna*. Leaves always sessile. Corollas yellow.

Narrow-leaved Ironwort. Fl. July, Aug. Clt. 1820. Shb. 1 ft.

27 S. tragorifo'lium (Lag. nov. gen. et spec. p. 18.) suffruticose; branches ascending or erectish, tomentosely woolly; leaves oblong-linear, obtuse, quite entire, narrowed at the base, rather woolly; floral leaves very broad, equalling the calyxes, spiny-toothed; whorls rather villous, interruptedly spicate. ½. F. Native of Spain, in the kingdoms of Murcia and Valentia. S. suffruticòsa, Mill. dict. no. 4.? Calyxes glabrous or villous, not woolly. Corollas yellow.

Goat-marjoram Ironwort. Shrub 1 foot.?

28 S. inca'na (Lin. spec. p. 802.) suffruticose; branches clothed with white wool or tomentum; leaves oblong-linear, obtuse, quite entire, clothed with white wool on both surfaces, especially while young: floral leaves very broad, somewhat palmatifid, shorter than the calyxes, rather spinose; whorls distant; calyxes clothed with white wool. ½. F. Native of Spain. S. virgàta, Desf. fl. atl. 2. p. 15. t. 126.—Boec. mus. 2. p. 77. t. 67. f. 2.? Habit of *Lavándula spica*. Leaves ½ to 1½ inch long. Whorls about 6-flowered. Corollas yellow.

Hoary Ironwort. Fl. July, Aug. Clt. 1752. Shrub 1 to 2 feet.

29 S. sera'ea (Pers. ench. 2. p. 118. Benth. lab. p. 741.) suffruticose, clothed with white wool; leaves oblong-linear or spatulate, obtuse, quite entire, densely clothed with white wool on both surfaces: floral leaves subpalmatifid, shorter than the calyxes, subspinose; whorls distant; calyx clothed with white wool. ½. F. Native of Spain. Nearly allied to *S. incana*, but the wool is much more dense, and the floral leaves shorter, and scarcely toothed.

Silky Ironwort. Shrub.

30 S. glau'ca (Cav. icon. 2. p. 68. t. 185.) suffruticose, glabrous, glaucescent; leaves oblong-linear, obtuse, quite entire: floral leaves broad, obtuse, quite entire or a little toothed, rather shorter than the calyxes; whorls distant; calyxes glabrous, with obtuse teeth. ½. F. Native of Spain, on the mountains. Habit of *S. incàna*, but differs from it in being glabrous and glaucescent, &c. Corollas pale rose-coloured.

Glaucous Ironwort. Shrub.

31 S. fœ'tens (Lag. nov. gen. et spec. p. 18.) suffruticose; leaves linear, glabrous, acute; spikes dense; fructiferous calyx with a bearded throat. ½. F. Native of Spain. Stem and branches twiggy, rush-formed, glabrous. Peduncles villous. Spikes cylindrical, 1½ to 5 inches long; whorls 12-24-flowered. Corolla white, length of calyx.

Stinking Ironwort. Shrub 2 to 3 feet.

32 S. lasia'ntha (Pers. ench. 2. p. 117.) leaves ovate, with spinulose teeth; whorls very villous. ½. H. Native of Spain. S. Hispanica fœtidissima, flore purpurascente, et coma canescente, Tourn. inst. p. 192.

Woolly-flowered Ironwort. Shrub.

33 S. crispa'ta (Willd. enum. p. 606. in a note.) hairy; leaves oblong-cuneated, toothed, undulated, tomentose beneath; bracteas orbicular, spiny-toothed; whorls distant. ½.? F. Native of Gibraltar. Leaves small, undulated.

Curled-leaved Ironwort. Fl. June, Sept. Clt. 1816. Shrub 1½ foot.

Sect. IV. Hesiònia (probably from Hesiodus, the name of an ancient poet.) Benth. lab. p. 582. Hesiòdia, Burgsdórffia and Marrubiástrum species, Mœnch, meth. Greenish annual herbs, rather woolly from soft pili. Floral leaves almost similar to the cauline ones, but smaller, a little toothed; teeth mutic. Teeth of calyx sometimes all nearly equal, the 3 upper ones somewhat connected at the base, obscurely bilabiate; sometimes the upper tooth is very large, with the lower ones all narrow, and about equal. Corolla usually shorter than the calycine teeth.

34. S. LANA'TA (Lin. spec. p. 804.) annual, clothed with soft wool-like hairs; leaves ovate, rounded at the base: floral leaves ovate, crenulated; calyx woolly, greenish, sub-bilabiate, with lanceolate-subulate acuminately subspinose teeth, the upper tooth twice the size of the lower ones. ⊙. H. Native of the region of the Mediterranean, as of Candia, Leri, Syria, &c. S. élegans, Murr. nov. comm. gott. 1778. t. 4. S. nigricans, Pers. ench. 2. p. 117. Lam. dict. 2. p. 167. Marrubiástrum élegans, Mœnch, meth. p. 391. Habit of *Stáchys ánnua*. Plant densely pilose. Leaves 1 to 1½ inch long. Corolla yellowish at the base; lips black at apex.

Woolly Ironwort. Fl. July. Clt. 1787. Pl. ½ to 1 foot.

35 S. PURPU'REA (H. F. Talbot, fl. corf. ined. ex Benth. lab. p. 712.) annual, very villous, green; leaves oblong-ovate: lower floral leaves toothed: upper ones ovate-lanceolate, acute, almost quite entire; calyx pilose, with aristately mucronate teeth, the upper tooth very large, ovate, the lower ones lanceolate-subulate; galea of corolla oblong, purplish. ⊙. H. Native of the islands, Corfu and Zante, Talbot. Sideritis Cretica, maxima, Ocimi Valentini facie, Tourn. This differs from *S. Romàna* in being more densely beset with long hairs, and particularly in the purple, not yellow, corollas; and the galea is longer and much narrower.

Purple-flowered Ironwort. Pl. ½ foot.

36 S. ROMA'NA (Lin. spec. p. 802.) annual, clothed with soft rather woolly pili, green; leaves oblong-ovate: floral leaves ovate-lanceolate, toothed; calyx nearly glabrous, with aristately mucronate teeth, the upper tooth large and ovate, and the lower teeth lanceolate-subulate. ⊙. H. Native of the region of the Mediterranean, in cultivated and waste places; as of Spain, France, Italy, Sicily, Grecian Islands, Syria, &c. Cav. icon. 2. p. 69. t. 187. Sibth. et Smith, fl. græc. 6. p. 43. t. 552. S. spatulàta, Lam. fl. fr. 2. p. 377. Burgsdórffia rígida, Mœnch, meth. p. 392. Burgsdórffia, Hoffm. et Link, fl. port. Stems branched at the base, ascending, clothed with long soft villi like the rest of the plant. Whorls 6-flowered, distant. Corolla yellowish.

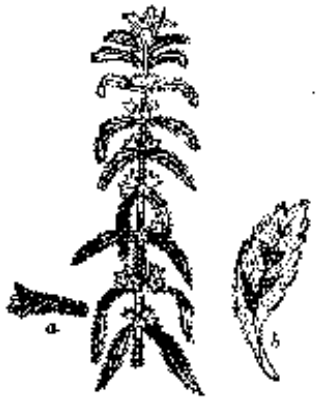
Roman Ironwort. Fl. June, Aug. Clt. 1740. Pl. ½ foot.

37 S. APPROXIMA'TA (Gasp. in Guss. prod. fl. sic. suppl. p. 191.) bractless, very villous; leaves oblong, crenately toothed, tapering into the petioles: floral leaves equalling the calyxes; whorls all approximate into elongated spikes; teeth of calyx spinose, pungent: upper tooth ovate. ⊙ H. Native of Sicily, near Seceiara, in maritime pastures, Gasparini. Habit of *S. Romàna*.

Approximate-flowered Ironwort. Pl. ½ foot. ?

38 S. MONTA'NA (Lin. spec. p. 802.) annual, ascending; stem hairy; leaves oblong-lanceolate, narrowed at the base; floral leaves awned, a little toothed; calyx green, nearly glabrous, sub-bilabiate; teeth all ovate, aristately mucronate, at length spreading. ⊙. H. Native of the South of Europe and Middle Asia, in cultivated fields; as of the South of France, Italy, Sicily, Dalmatia, Syria, Tauria, Caucasus, Altaia, &c. Jacq. fl. austr. 5. p. 16. t. 434. Hesiòdia bicolor, Mœnch, meth. 392. Hesiòdia montàna, Dumort, fl. belg. p. 44.—Colum. ecphr. 1. p. 198. t. 196. Habit of *S. Romàna*, but taller, the whorls more numerous, the calycine teeth all nearly equal; the 3 superior teeth less deeply cut than the lower ones. Corollas yellow, with a ferruginous margin; upper lip entire, rather concave (fig. 83.)

FIG. 83.



Mountain Ironwort. Fl. July, Aug. Clt. 1752. Pl. ½ to 1 foot.

39 S. REMÒTA (D'Urv. enum. pl. arch. in mem. soc. Lin. par. p. 322.) annual; branches elongated, divaricate, rather villous or woolly; leaves oblong-lanceolate, narrowed at the base: floral leaves obtuse, mutic, a little toothed; calyx clothed with loose wool, sub-bilabiate: teeth all ovate-lanceolate, aristately mucronate, at length spreading. ⊙. H. Native of the Grecian Islands and Syria. S. lanàta, Hochst. et Steud. pl. exs. but not of Lin. S. montàna, Sibth. et Smith, fl. græc. 6. p. 42. t. 551, but not of Lin. Very nearly allied to *S. montàna*, but the habit is stronger, and the calyxes are clothed with white loose wool, not with long pili as in it.

Remote Ironwort. Pl. ½ to 1 foot.

† *Species not sufficiently known.*

40 S. TOMENTÒSA (Ucria, pl. ad Lin. Opus. add. no. 15. ex Guss. prod. fl. sic. suppl. 192.) leaves ovate-lanceolate, toothed, hoary; flowers verticillately spicate; spikes leafy. ⊙.? H. Native of Sicily.

Tomentose Ironwort. Pl. ?

41 S. RÒSEA (Desf. cor. Tourn. in ann. mus. 10. p. 302. t. 24.) villous; leaves ovate-oblong, obtuse, sessile, crenated; flowers twin, axillary; calyxes mutic. ⊙.? H. Native of Egypt. Plant canescent from adpressed tomentum, with the habit and leaves of *Teúcrium Scórdium*. Leaves 6-10 lines long, and 4-5 broad. Flowers nearly sessile. Corolla pale red; tube equalling the calyx; upper lip arched, entire.

Rose-coloured-flowered Ironwort. Pl. ¾ to 1 foot.

† † *Doubtful species.*

42 S. CILIA'TA (Thunb. fl. jap. 245.) leaves ovate, serrated; bracteas ciliated. 4.? H. Native of Japan, Thunb. Plant villous. Leaves petiolate, dotted above, hardly an inch long. Spikes terminal, lanceolate, erect. Bracteas nearly orbicular, acuminated, nerved, ciliated, imbricated.

Ciliated Ironwort. Pl. 1 to 1½ foot.

43 S. PARVIFÒLIA (Lam. ill. t. 505. f. 2.) This can hardly be enumerated as a species.

44 S. PROSTRA'TA (Zucc. ex Steud. nom. p. 776.)

45 S. TRICHIFÒLIA (Juss. ex Steud. nom. p. 776.)

Cult. All the shrubby species are well fitted for decorating rockwork; they prefer a dry chalky or gravelly soil, and are readily increased by cuttings, seeds, or by division. Those species belonging to the first section being natives of the Canary Islands are properly greenhouse plants. The seeds of annual kinds only require to be sown in the open ground in Spring in dry light soil.

LXXXVI. MARRU'BIUM (of Pliny, from the Hebrew *marrob*, a bitter juice, the species being extremely bitter.) Tourn. inst. t. 91. Lin. gen. no. 791. Schreb. gen. no. 976. Juss. gen. p. 114. Benth. lab. p. 585. Lagópsis, Bunge.

LIN. SYST. *Didynàmia, Gymnospérmia.* Calyx tubular, 5-10-nerved, equal; teeth 5-10, acute, rather spinose, nearly equal, erect or often spreading at maturity. Corolla with an inclosed tube, which is naked inside or somewhat annulated, and a bilabiate limb; upper lip erect, flattish or concave, entire or shortly bifid; lower lip spreading, trifid, the middle lobe the broadest, and usually emarginate. Stamens 4, didynamous, the lower ones the longest, inclosed within the tube of the corolla; anthers 2-celled: cells divaricate, sub-confluent, all nearly similar. Style bifid at

top; lobes short, obtuse, stigmatiferous at apex. Achenia dry, obtuse, not truncate at apex.—Perennial, usually tomentose or woolly herbs. Leaves wrinkled, rarely cordate at the base, usually cut; floral leaves similar, exceeding the flowers. Whorls axillary, usually many rarely few-flowered. Bracteas subulate, exceeding the calyxes, rarely very short, and almost wanting.

Sect. I. Lagópsis (from λαγος, *lagos*, a hare; and οψις, *opsis*, resemblance; application not evident.) Benth. lab. p. 586. Lagópsis, Bunge, mon. gen. molucc. Teeth of calyx 5. Tube of corolla exannulate; upper lip quite entire. Leaves roundish, palmatifid.

1 M. incísum (Benth. lab. p. 586.) leaves roundish, subpalmately-lobed, cut, greenish on both surfaces; bracteas setaceous; calyx glabrous or scarcely tomentose, with 5 setaceous teeth; upper lip of corolla oblong, entire. ♃. H. Native of Siberia, Dauria, and China, near Pekin. Leonúrus supínus, Willd. spec. 3. p. 116. Plant ascending, pubescent. Whorls 6-10-flowered. Corollas whitish, villous outside.

Cut-leaved Horehound. Pl. ½ to ½ foot.

2 M. erióstachyum (Benth. lab. p. 586.) leaves roundish, palmately lobed, cut, green on both surfaces; bracteas stiff, subulate; calyx densely woolly, with 5 subulate spinescent teeth; upper lip of corolla short, entire. ♃. H. Native of Siberia. Leonúrus erióstachys, Turcz. mss. Lagópsis víridis, Bunge, mon. gen. molucc. ined. Plant ascending, pubescent, but the tops of the stems are woolly. Leaves 5-7-parted; lobes cut. Whorls about 10-flowered. Corollas like those of *M. lanàta*.

Woolly-spiked Horehound. Pl. ½ foot.

3 M. lanátum (Benth. lab. p. 587.) leaves roundish, deeply lobed, clothed with white wool on both surfaces; bracteas setaceous; calyx densely woolly, with 5 subulate subspinescent teeth; upper lip of corolla short, entire. ♃. H. Native of Altaia, in exposed stony places at the river Tschuja. Moluccélla marrubiástrum, Steph. in mem. soc. mosc. 2. p. 8. Ledeb. fl. ross. alt. ill. t. 150. Lagópsis incàna, Bunge, mon. gen. molucc. ined. Stems numerous, decumbent, rising from a thick base, ascending at top. Whorls approximate into oblong, woolly spikes. Corolla blackish brown, villous outside.

Woolly horehound. Pl. decumbent.

Sect. II. Marrúbium (see genus for derivation.) Benth. lab. p. 587. Teeth of calyx 5-10. Tube of corolla subannulate inside; upper lip emarginate or bifid. Leaves roundish or ovate, crenated, rarely cut.

4 M. Alyssum (Lin. spec. p. 815.) leaves roundish, cuneated at the base, deeply crenated or lobed, clothed with soft white villi on both surfaces; bracteas almost wanting; calyx woolly, with 5 stiff spreading teeth; upper lip of corolla short, emarginately bifid. ♃. H. Native of the region of the Mediterranean; as of Spain, Sardinia, Apulia, Egypt, &c. M. plicátum, Forsk. fl. ægypt. arab. p. 213.—Mor. hist. 3. p. 377. sect. 11. t. 10. f. 12. Stems thick, ascending, woolly. Whorls distant, 10-15-flowered. Corollas minute, dark purple.

Alyssum or Plaited-leaved Horehound. Fl. July, Aug. Clt. 1597. Pl. ½ to 1 foot.

5 M. Persícum (Meyer, verz. pflanz. p. 95.) leaves orbicular, crenated, clothed with white wool on both surfaces; bracteas almost wanting; calyx woolly, with 5 stiff spreading teeth; upper lip of corolla oblong. ♃. H. Native of Persia, in dry stony places on the Talusch mountains near Swant. Habit, leaves, and inflorescence nearly of *M. vulgàre*, but is clothed with white wool in all parts. Flowers more numerous in the whorls than in *M. Alyssum*. Corolla a little larger.

Persian Horehound. Pl. ½ to 1 foot.

6 M. cærulescens (Desf. cat. hort. par. ed. 3. p. 395.) stems tall, clothed with white wool; leaves ovate, crenated at apex, scarcely wrinkled, green above, canescent beneath; outer bracteas shorter than the calyxes; calyx clothed with white wool, with 5 subulate straight spreading teeth; galea of corolla oblong, bifid at apex. ♃. H. Native of Persia. Leaves form of those of *M. Astracánicum*, clothed with white tomentum or wool beneath while young, but almost glabrous in the adult state. Corollas blue.

Bluish-flowered Horehound. Pl. 2 to 3 feet.

7 M. catariæfólium (Desr. in Lam. dict. 3. p. 717.) stems clothed with hoary tomentum; leaves ovate, crenated, a little wrinkled, pubescent, canescent beneath; outer bracteas shorter than the calyxes; calyx clothed with hoary tomentum, with 5 short stiff spreading recurved teeth; galea oblong, bifid at apex. ♃. H. Native of Cappadocia. Nearly allied to *M. Astracánicum*, but more erect, more branched, and clothed with hoary tomentum, never woolly nor villous. Whorls more numerous and smaller, as well as the flowers. Corollas white.

Cat-mint-leaved Horehound. Fl. July, Aug. Clt. 1819. Pl. 1 to 2 feet.

8 M. Astracánicum (Jacq. icon. rar. 1. p. 11. t. 109.) stems loosely villous, rather woolly; leaves ovate, crenated at top, bullately wrinkled, green and villous on both surfaces, or scarcely canescent beneath; outer bracteas shorter than the calyxes; calyx pubescent, with 5 short acute straight or subrecurved teeth; galea of corolla oblong, bifid at apex. ♃. H. Native of the Levant; Persia, on the higher Talusch mountains; and Cashmere, but not about Astracan. Rchb. icon. bot. eur. 3. p. 61. t. 270. Intermediate between *M. candidissimum* and *M. leonuroides*. Lower parts of stems and lower leaves clothed with long soft hairs. Whorls dense, many-flowered. Corolla blue or white.

Astracan Horehound. Fl. July, Aug. Clt. 1816. Pl. 1½ to 2 feet.

9 M. leonuroídes (Desr. in Lam. dict. 3. p. 715.) stems rather woolly; leaves ovate or roundish, coarsely and deeply crenated, clothed with soft pubescence, canescent beneath or on both surfaces; outer bracteas scarcely shorter than the calyxes; calyx clothed with white wool, with 5 subulate recurvedly spreading teeth; galea of corolla oblong, bifid at apex. ♃. H. Native of Caucasus and near Astracan. Rchb. icon. bot. eur. 3. p. 84. t. 299. M. Astracánicum, Bieb. fl. taur. 2. p. 52.? and of many other authors. M. affine, Horn. hort. hafn. p. 556. Lower leaves roundish; superior ones ovate. Whorls size of those of *M. vulgàre*. Corollas blueish purple.

Leonurus-like Horehound. Fl. July, Sept. Clt. 1819. Pl. 1 to 2 feet.

10 M. plumósum (Meyer, verz. pflanz. p. 96.) leaves roundish, deeply lobed, clothed with short villi on both surfaces, rather canescent; calyx clothed with soft villi, with 5 teeth, which are, as well as the bracteas subulate and plumose; galea of corolla bifid at apex. ♃. H. Native of Caucasus. Whorls distant, many-flowered, nearly an inch in diameter. Corolla scarcely longer than the calycine teeth.

Feathery-bractead Horehound. Pl. ascending.

11 M. velutínum (Sibth. et Smith, fl. græc. 6. p. 49. t. 561.) branches elongated, tomentose, woolly at the base; leaves orbicular, crenated, subcuneated at the base, clothed with velvety villi on both surfaces; whorls ample, many-flowered; calyx clothed with tomentose pubescence, with 5 teeth, which are subulate, stiff, straight, or at length spreading, as well as the bracteas; galea of corolla oblong, bifid. ♃. H. Native of Mount Parnassus. Allied to *M. candidissimum*, but differs in the colour of the whole plant, and in the form of the leaves. Corollas white.?

Velvety Horehound. Pl. 1½ foot.

12 M. candidi'ssimum (Lin. spec. p. 816.) branches elongated, a little branched, clothed with white wool; leaves ovate, crenated, clothed with soft white villi or white wool; whorls large, many-flowered; calyx clothed with white villi or wool, usually with 5 subulate stiff spreading teeth; galea of corolla oblong, bifid at apex. ♃. H. Native of the South of Europe; as of Spain, South of France, Italy, Dalmatia, Carinthia, Persia, &c. M. peregrinum, Rchb. icon. bot. eur. 4. p. 10. t. 312, but not of Lin. M. catariæfòlium, Rchb. icon. bot. eur. 4. p. 10. t. 313, but not of Desr. M. setàceum, Desr. in Lam. dict. 3. p. 717.? M. incànum, Desr. in Lam. dict. 3. p. 716. M. uncinàtum, Horn. hort. hafn. p. 968.? M. flexuòsum, Mœnch, meth. p. 399.? M. oloratissimum, Pourr. ex Steud. nom. bot. p. 510.—Dill. elth. 218. t. 174. f. 214. Stems procumbent at the base and ascending at apex. Whorls remote, 20-50-flowered. Corollas whitish.

Very white Horehound. Fl. July, Sept. Clt. 1732. Pl. 1 to 2 feet.

13 M. supi'num (Lin. spec. p. 816.) branches clothed with white wool; leaves ovate-roundish, clothed with soft villi, greenish, or clothed with white wool beneath, crenated, bullately wrinkled; whorls many-flowered; calyx villous, with 5-10-subulate stiff, erect, or at length spreading teeth; galea of corolla oblong, bifid at apex. ♃. H. Native of the South of Europe.?—Bocc. mus. 2. p. 78. t. 69.—Barrel. icon. 685.? Intermediate between *M. candidissimum* and *M. vulgàre*, having the flowers of the first and the leaves of the latter. Perhaps a garden hybrid.

Trailing Horehound. Fl. Aug. Sept. Clt. 1714. Pl. trailing.

14 M. peregri'num (Lin. spec. p. 815.) dwarf, divaricately branched; leaves oblong, clothed with hoary tomentum; whorls few-flowered; calyx tomentose, with 5 lanceolate-subulate erect or scarcely spreading teeth; galea of corolla oblong, bifid. ♃. H. Native of Europe and Middle Asia; as of Germany, Austria, Transylvania, Grecian Islands, Syria, Tauria, &c. Jacq. austr. t. 160. M. Créticum, Mill. dict. no. 3. Rchb. icon. bot. eur. 3. p. 74. t. 288. M. paucifòrum, Wallr. sched. crit. p. 295. M. angustifòlium, Mœnch, ex Steud. nom. p. 510.—Dill. elth. 219. t. 174. f. 215.—Mor. hist. t. 9. f. 8. Plant clothed with short, hoary tomentum. Whorls 4-6 rarely 10-flowered. Corollas whitish.

Foreign Horehound. Fl. July, Sept. Clt. 1640. Pl. 1 to 1½ foot.

15 M. Pannónicum (Clus. ex Rchb. fl. germ. exc. p. 325.) branches divaricately branched; leaves ovate or oblong, clothed with hoary tomentum or soft villi; floral leaves all twice as long as the flowers; whorls many-flowered, all distant; calyx clothed with hoary tomentum, with 6-10 subulate teeth which at length spread; galea of corolla oblong, bifid at apex. ♃. H. Native of Germany, near Halle, Hungary, Moravia, Austria, and Transylvania. M. paniculàtum, Desr. in Lam. dict. 3. p. 716.? Rchb. icon. bot. eur. 3. p. 86. t. 300. M. peregrinum, Spreng. fl. hal. t. 6. but not of Lin. M. remòtum, Kit. in Schultes, austr. fl. 2. p. 161. M. rùbrum, Roth, nov. spec. p. 259. Whorls distant, 12-15-flowered. Corolla of *M. peregrinum*. Allied to *M. peregrinum* and *M. vulgàre*.

Pannonian Horehound. Pl. 1 to 1½ foot.

16 M. radia'tum (Delile, mss. ex Benth. lab. p. 591.) branches divaricate, a little branched, clothed with hoary tomentum; leaves ovate or oblong, clothed with hoary tomentum or soft villi: upper floral leaves scarcely exceeding the calyxes; whorls many-flowered, rather loose: upper ones approximate; calyx small, tomentose, with 6-10 elongated subulate straight stellately spreading subspinescent teeth. ♃. H. Native of the region of the Mediterranean. Allied to *M. Pannónicum*, but the leaves and calyxes are smaller, &c.

Radiate-calyxed Horehound. Pl. 1 to 1½ foot.?

17 M. cunea'tum (Russ. nat. hist. alepp. 2. p. 255.) stem clothed with white tomentum at the base and pubescence at top; leaves ovate-cuneated, much wrinkled, green above and canescent beneath: floral leaves small, scarcely exceeding the calyxes; calyx small, tomentose, with 10 short somewhat recurved spreading mutic teeth. ♃. H. Native of Syria, near Aleppo, and between Bagdad and Kermancha. Stems more slender than in other species. Whorls numerous, lower ones remote, upper ones approximate. Corollas small, white.

Cuneate-leaved Horehound. Pl. 1 foot.

18 M. vulga're (Lin. spec. p. 816.) branches clothed with white wool; leaves ovate or roundish, clothed with soft villi, greenish or clothed with white wool beneath, crenated; whorls many-flowered; calyx clothed with woolly villi: teeth 10, recurvedly spreading; galea of corolla oblong, bifid at apex. ♃. H. Native throughout Europe and Middle Asia, among rubbish and by way-sides; plentiful in some parts of Britain, but probably not indigenous. Woodv. med. bot. 265. t. 97. Smith, engl. bot. t. 410.—Subb. hort. rom. 3. t. 59. Fl. dan. 1030. M. lanàtum, H. B. et Kunth, nov. gen. amer. 2. p. 310. M. Germánicum, Schranck ex Steud. nom. p. 510. Stems ascending, rarely decumbent. Whorls distant, 20-50-flowered. Corollas small, white. This, the common horehound, has a strong penetrating smell, not altogether unpleasant. It was a favourite medicine in obstructions of the viscera. In large doses it proves aperient. Bees much frequent the flowers.

Var. β, lanàtum (Benth. lab. p. 591.) leaves densely clothed with white wool. ♃. H. Native of Naples. M. Apulum, Tenore, fl. nap. t. 154. syll. p. 292.

Common Horehound. Fl. June, Sept. Britain. Pt. 1½ to 2 feet.

† *Species not sufficiently known.*

19 M. circinna'tum (Desr. in Lam. dict. 3. p. 717.) leaves circinnate, crenated, much wrinkled; calycine teeth subulate, erect, villous. ♃. H. Native of the Levant. Stems tomentose. Leaves clothed with shining soft tomentum. Flowers white. Calyx tubular, tomentose. Tube of corolla exceeding the tube of the calyx; upper lip deeply bifid.

Circinnate-leaved Horehound. Pl. ?

20 M. parvifòrum (Fisch. et Meyer, ind. sem. hort. petrop. 1835. p. 33.) leaves pubescent, wrinkled, ovate-oblong, crenated, clothed with white tomentum beneath, as well as the base of the erect branched stems; bracteas setaceous, equalling the calyxes; calycine teeth 10, setaceous, mucronate, straight, spreading much, rather shorter than the tube; corolla scarcely exceeding the calyx. ♃. H. Native of Caucasus, on the Talusch mountains. M. peregrinum, Meyer, verz. pflanz. no. 820. This differs from *M. peregrinum* of Lin. in not being silky, and in the calycine teeth being 10. Corolla white; galea bifid.

Small-flowered Horehound. Pl. 1 to 1½ foot.

21 M. propi'nquum (Fisch. et Meyer, l. c.) clothed with petiocanescent villi; stem branched, erectish; leaves wrinkled, middle ones obovate: upper ones cuneated; bracteas setaceous, rather late, coarsely crenated: lower leaves almost orbicular; shorter than the calyxes; calycine teeth villous, setaceous, mucronate, spreading much, straight, not half so long as the tube; tube of corolla exserted; galea short. ♃. H. Native of Caucasus, on the Talusch mountains. Allied to *M. leonuroides*. Flowers violaceous.

Allied Horehound. Pl. 1 to 2 feet.?

Cult. All the species of *Marrùbium* grow freely in any common garden soil, and are readily increased by division and by seed.

LXXXVII. BALLOTA (*βαλλωτη, ballote*, the Greek name

of *Ballòta nigra*, or Black Horehound, which is derived from βαλλω, *ballo*, to emit; rejected by cattle on account of the offensive smell.) Benth. lab. p. 592. Ballòta and Marrùbium, species of Lin. and other authors. Beringèria, Necker. Pseudodictámnus, Tourn. and Mœnch.

Lin. syst. *Didynàmia*, *Gymnospérmia*. Calyx somewhat funnel shaped; tube 10-nerved; teeth 5-10, dilated at the base or combined into an orbicular spreading limb. Corolla having the tube a little inclosed, with a transverse pilose ring inside, and a bilabiate limb; upper lip erect, oblong or subconcave, emarginate at apex; lower lip spreading, trifid, middle lobe emarginate. Stamens 4, ascending, didynamous; lower ones the longest; anthers exserted from the tube of the corolla, approximating by pairs, 2-celled: cells at length divaricate, and nearly distinct. Style bifid at apex, with subulate lobes, which are stigmatiferous at apex. Achenia dry, obtuse at apex, not truncate.—Perennial, hairy, woolly, or tomentose herbs. Leaves wrinkled, usually cordate at the base, entire or crenated, never cut; floral ones almost similar. Whorls axillary, many rarely few-flowered. Bracteas numerous, oblong, subulate, spine-formed, but sometimes very short.

Sect. I. Beringe'ria (probably named after some botanist of the name of Beringer, of whom we know nothing.) Benth. lab. p. 594. Bracteas oblong or subulate, soft. Limb of calyx 6-20-toothed or crenated.

1 B. Africa'na (Benth. lab. p. 594.) hairy; leaves orbicular, irregularly crenated, green on both surfaces; limb of calyx spreading, orbicular, dilated, with about 10 short setaceous teeth; galea of corolla ovate; stamens scarcely exserted from the tube. ♃. G. Native of the Cape of Good Hope. Marrùbium Africànum, Lin. spec. p. 816. Pseudodictámnus emarginàtus, Mœnch, ex Steud. Marrùbium crispum, Lin. spec. 1674. Marrùbium Thouìni, Schultes, ex syll. pl. suc. ratisb. 2. p. 23.—Comm. hort. 2. p. 179. t. 90. Whorls globose, many-flowered, distant. Corollas nearly glabrous, white or purple.?

African Stinking Horehound. Fl. July, Sept. Clt. 1710. Pl. 1 foot.

2 B. pseudodicta'mnus (Benth. lab. p. 594.) clothed with white wool; leaves orbicular, quite entire or obscurely crenated, thick, woolly; limb of calyx spreading, dilated, woolly, with 5-10 crenatures. ♄. F. Native of Candia. Marrùbium pseudodictámnus, Lin. spec. 817. Sibth. et Smith, fl. græc. 6. p. 50. t. 562. Lam. ill. t. 508. f. 2. Beringèria pseudodictámnus, Necker, Link, handb. 478.—Sabb. hort. rom. 3. t. 47.—Park. theatr. 28. f. 2. Whorls dense, many-flowered, distant. Corollas white, spotted with red.

Bastard Dittany of Crete. Fl. July, Aug. Clt. 1596. Shrub 1 to 2 feet.

3 B. undula'ta (Benth. lab. p. 595.) hairy; leaves orbicular, crenated, villous on both surfaces, rugosely curled; limb of calyx spreading, orbicular, rather shorter than the tube, thick, villous, with an undulately curled 10-20 crenated margin: crenatures mutic. ♃. H. Native of Arabia, in the desert of Sinai, N. Bové. Marrùbium umbellàtum, Fres. pl. ægypt. in mus. senk. p. 92. Some of the hairs glanduliferous. Whorls many-flowered, less dense than those of *B. pseudodictámnus*.

Undulated-calyxed Stinking Horehound. Pl. ?

4 B. acetabulòsa (Benth. lab. p. 595.) hairy or somewhat woolly; leaves orbicular, crenated, villous above, and clothed with white wool beneath; limb of calyx spreading, with a 20-crenated margin: crenatures mutic. ♃. or ♄. F. Native of the Grecian islands and Syria. Marrùbium acetabulòsum, Lin. spec. p. 817. Marrùbium pseudodictámnus, Steud. et Hochst. pl. exs. un. itin. but not of Lin. Beringèria acetabulòsa, Necker, Link, handb. p. 478. Marrùbium suffruticòsum, Mill. dict. no. 9.—Park. theatr. 28. f. 3.?—Barrel. icon. t. 129. Calyx woolly or villous at the base. Corolla small, pale purple; galea scarcely emarginate.

Saucer-leaved Stinking Horehound. Fl. June, Aug. Clt. 1676. Pl. 2 feet.

5 B. molli'ssima (Benth. lab. p. 595.) stems clothed with white wool; leaves broad-ovate, obtuse, canescent or white on both surfaces, floccosely woolly beneath; limb of calyx spreading, about equal in length to the tube, villously tomentose, with a shortly 10-toothed margin: teeth broad, acute, scarcely mucronate. ♄. F. Native of Spain.? Marrùbium Hispánicum, Lin. herb, but scarcely of his spec. pl. 816. but not of other authors. Marrùbium cinèreum. M. scrophulariæfòlium Hortul. —Herm. par. 201.?—Bocc. mus. 2. p. 167. t. 122.? Leaves more broad than long, regularly crenated, very soft. Whorls dense, many-flowered. Bracteas spatulate. Corolla whitish. Perhaps only a variety of *B. hirsùta*.

Very soft Stinking Horehound. Fl. July, Aug. Clt. 1714. Pl. 1 foot.

6 B. hirsu'ta (Benth. lab. p. 595.) hairy or somewhat woolly; leaves orbicular, crenated, hairy above, green on both surfaces, or clothed with white wool beneath; limb of calyx spreading, about equal to the tube, hairy, with a shortly 10-toothed margin: teeth broad acute or mucronate. ♃. F. Native of the North of Africa, near Mogodor. Marrùbium hirsùtum, Willd. spec. 3. p. 113.? Marrùbium crispum, Desr. in Lam. dict. 3. p. 719.? and of many other authors, but not of Lin. Habit and leaves of *B. acetabulòsa*, but differs in the limb of the calyx being 10 not 20-toothed, smaller, and in the plant being more hairy. Corollas pale purple.?

Var. β, hispida (Benth. lab. p. 596.) greener and more hairy. ♃. H. Native of Spain.

Hairy Stinking Horehound. Fl. June, Aug. Clt.? Pl. 1½ foot?

7 B. microphy'lla (Benth. lab. p. 596.) tomentose; leaves subcordately ovate, finely crenulated; calyx funnel-shaped: limb spreading, with 10 acute unequal teeth; bracteas spatulate, acute. ♃.? F. Native of the Levant. Marrùbium microphýllum, Desr. in Lam. dict. 3. p. 720. Leaves nearly sessile, soft, thick, 7-9 lines long, and 4 lines broad. Whorls numerous, many-flowered.

Small-leaved Stinking Horehound. Pl.

8 B. rugòsa (Benth. lab. p. 596.) stem pubescent, rather woolly; leaves ovate, obtuse, crenated, wrinkled, clothed with hoary tomentum on both surfaces; whorls few-flowered; limb of calyx short, spreading a little, with 10 short mucronulate teeth. ♃. F. Native of the Levant. Marrùbium rugòsum, Desf. l. Desf. cat. hort. par. ed. 3. p. 396. Marrùbium humile, Desf. l. c.? Leaves scarcely ½ an inch long, usually clothed with white wool beneath. Whorls 4-6 rarely 10-flowered. Corolla of *B. acetabulòsa*, but more glabrous.

Wrinkled-leaved Stinking Horehound. Pl. humble.

9 B. orli'gica (Benth. lab. p. 596.) stems clothed with hoary pubescence; leaves ovate, crenated, wrinkled, canescent above, and clothed with white wool beneath; whorls few-flowered; limb of calyx short, unequally dilated, with 10 mucronate teeth. ♃. F. Native of Syria, on mountains about Aleppo and Antioch, P. Russell. Marrùbium rugòsum, var. Russell, herb. All parts as in *B. saxátilis*, but twice the size.

Oblique-calyxed Stinking Horehound. Shrub. ?

10 B. saxa'tilis (Sieb. pl. exs. ex Benth. lab. p. 596.) hairy; leaves ovate or orbicular, crenated, thick, wrinkled, green on both surfaces or white beneath, hairy on both surfaces; whorls few-flowered; limb of calyx short, spreading a little, with 10 mucronate teeth. ♄. F. Native of Syria, near Aleppo and of Palestine. Marrùbium rugòsum, Russel, nat. hist. alep. 2. p.

255. Moluccélla microphýlla, Delile, fragm. fl. arab. petr. 10. f. 2. Stems woody at the base. Branches divaricate or procumbent. Corollas smaller than in *B. rugòsa*.

Rock Stinking Horehound. Shrub procumbent.

11 B. Russellia'na (Benth. lab. p. 597.) stems scarcely pubescent; leaves ovate, obtuse, quite entire, wrinkled, green above, and white beneath; whorls few-flowered; limb of calyx short, spreading a little, with 6-10 acute or shortly mucronate teeth. ♄.? F. Native of Syria, Near Aleppo, Russell. Allied to *B. saxátilis*, but the leaves are all quite entire, and the branches less hairy. Leaves hardly half an inch long, cordate at the base, pubescent above.

Russell's Stinking Horehound. Shrub.

12 B. Hispa'nicum (Benth. lab. p. 597.) hairy; leaves ovate-cordate: upper ones usually acute, or all are obtuse, rarely rounded, hairy on both surfaces, green or canescent beneath; limb of calyx short, spreading a little, with 10 setaceously mucronate teeth. ♃.? U. Native of Spain, Sicily, and South of Italy. Marrùbium Hispánicum, Lin. spec. 816. Marrùbium rupéstre, Biv. manip. 2. t. 1. Marrùbium scrophulariæfòlium, Lag. Pseudodictámnus acútus, Mœnch, meth. p. 399. Marrùbium saxátile, Rafn.—Bocc. mus. 2. p. 167. t. 122.—Barrel. icon. t. 797.—Herm. par. t. 201. Leaves usually 2 inches long, exactly cordate, crenated. Whorls 20-50-flowered, dense. Bracteas and calyxes very hairy. Corollas like those of *B. acetabulòsa*.

Spanish Stinking Horehound. Fl. July, Aug. Clt. 1714. Pl. 2 feet.

Sect. II. Ballòta (see genus for derivation.) Benth. lab. p. 597. Bracteas linear-subulate, soft. Limb of calyx 5-toothed.

13 B. nigra (Lin. spec. 814.) hairy or glabrous; leaves ovate, truncate at the base, green on both surfaces, more or less hairy; limb of calyx erectish: teeth dilated at the base and subulately mucronate at the apex. ♃. H. Native throughout the whole of Europe, in waste places, in hedges, and by waysides; also of Tauria and Caucasus; plentiful in Britain. Rchb. icon. bot. eur. 8. p. 30. t. 1773. Smith, engl. bot. t. 46. B. álba, Lin. spec. 814. B. fœ'tida, Lam. fl. fr. 2. p. 281. Rchb. icon. bot. eur. 8. p. 30. t. 775. B. vulgàris, Link. B. boreàlis, Schweigg. Rchb. icon. bot. eur. 8. p. 30. t. 776. B. ruderàlis, Spreng. fl. hal. p. 101. B. sèpium, Paulet, in Pers. ench. 2. p. 125. B. rùbra, Schrad. Marrùbium nigrum, Ger. emac. 701. f. 1. Crantz, stirp. austr. p. 272. Marrubiástrum, Riv. mon. irr. t. 65.—Sabb. hort. rom. 3. t. 35.—Blackw. 136.—Mor. hist. 3. p. 377. sect. 11. t. 9. f. 14. Stems, leaves, and calyxes green, sometimes nearly glabrous, but usually pubescent, rarely hairy. Whorls many-flowered, rather loose, the lower cymes on short peduncles. Limb of calyx very variable in form. In the species the stems are brown, and corollas purple; but in that variety called *B. álba* the whole plant is pale green, and the corollas white. The plant is recommended in hysterical cases. In Gotland it is an universal remedy in disorders incident to cattle.

Black or Common Stinking Horehound. Fl. July, Sept. Britain. Pl. 2 to 3 feet.

14 B. urticæfòlia (Ostm. ex Rchb. icon. bot. eur. 8. p. 30. t. 774.) slender; leaves ovate, sharply and deeply serrated; teeth of calyx erect, linear-setaceous, equalling the tube. ♃. H. Native of Bohemia and Saxony, in waste places and on walls. Plant slender, green, less pubescent than *B. nigra*. Leaves exactly of *Urtica úrens*, the first ones cordate, ex Rchb. fl. germ. exc. p. 325. Perhaps only a variety of *B. nigra*.

Nettle-leaved Stinking Horehound. Pl. 3 to 4 feet.

Sect. III. Acanthofra'sium (from *ακανθος, acanthos*, a spine; and *πρασιον, prasion*, one of the Greek names of Horehound; so called in allusion to the subulate spine-formed bracteas.) Benth. lab. p. 598. Bracteas subulate, stiff, spine-formed. Limb of calyx 5-10-toothed.

15 B. Pe'rsica (Benth. lab. p. 598.) leaves cuneiform, toothed; bracteas spine-formed; limb of calyx membranous, dilated, shortly 5-10-toothed. ♄. G. Native of Persia. Moluccélla Pérsica, Burm. fl. ind. p. 128. t. 38. f. 2. Branches simple, glabrous, whitish, with a single spine at each joint. Serratures of leaves spiny. Calyx regular, 5 cleft; segments obovate, scarious, with 3 mucrones. Corolla flattish, glabrous.

Persian Stinking Horehound. Shrub.

16 B. limba'ta (Benth. lab. p. 748.) canescent; leaves oblong, quite entire, cuneated at the base; bracteas spine-formed; limb of calyx unequally and membranaceously dilated, somewhat 5-toothed. ♄. G. Native of the North East of India, on the mountains, in gravelly places near Pindaden Khan. Shrub much branched, younger branches villous. Leaves ½ to 1 inch long. Whorls distant, 6-flowered. Calyx very villous; limb with 5 angles, and as many teeth between the angles.

Limbate-calyxed Stinking Horehound. Shrub 2 feet.

17 B. spinòsa (Link, handb. p. 475.) leaves ovate, quite entire or deeply toothed, green on both surfaces; whorls few-flowered; bracteas spine-formed, straight; calyxes hairy; limb erectish, with 5-10 teeth, which are dilated at the base, subulate, and subspinose; galea of corolla very hairy. ♄. F. Native of Piedmont and Provence. Moluccélla frutéscens, Lin. spec. p. 821. Beringèria frutéscens, Rchb. fl. germ. exc. p. 325. Shrub branched; branches villous. Leaves scarcely an inch long. Whorls about 6-flowered, distant.

Spinose Stinking Horehound. Shrub 1 foot.

18 B. integrifòlia (Benth. lab. p. 599.) shrubby, pubescent; leaves ovate, quite entire, rarely with a few crenatures, green on both surfaces; bracteas spine-formed, spreadingly reflexed; limb of calyx dilated, spreading a little, 5-toothed; galea of corolla nearly glabrous. ♄. F. Native of the island of Cyprus. Moluccélla frutéscens, Sibth. et Smith, fl. græc. 6. p. 568. Habit of *B. spinòsa*, but the branches are longer, and the leaves usually entire, the spines stronger and usually recurved. Corolla white, lined with purple.

Entire-leaved Stinking Horehound. Shrub 1 to 2 feet.

19 B. Forska'hlei (Benth. lab. p. 599.) leaves ovate, serrated; calyx campanulate, pubescent, with 5 subulate unequal unarmed teeth; whorls remote, 10-12-flowered, involucra quadrifid, with setaceous segments. ♄. F. Native of Arabia Felix. Phlòmis álba, Forsk. fl. aegypt. p. 107. Corolla white; upper lip hairy. Habit of *B. spinòsa*.

Forskahl's Stinking Horehound. Shrub.

† *Doubtful species.*

20 B. orienta'lis (Presl. del. prag. p. 80.) stem branched; villous; leaves cordate-roundish, toothed, wrinkled, clothed with hoary tomentum beneath; bracteas linear; calyx stiff, with 10 spinose teeth; galea of corolla arched, crenulated. ♃. H. Native of Asia Minor. Marrùbium orientàle, Spreng. syst.

Eastern Stinking Horehound. Pl.

21 B. pilòsa (Lour. coch. p. 364.) leaves ovate, crenated, tomentose; whorls pilose; calyx 10-toothed. ♃. H. Native of Cochinchina. Stem pilose, branched. Corolla white. Teeth of calyx reflexed. Upper lip of corolla entire, arched. Perhaps a species of *Leúcas*.

Pilose Stinking Horehound. Pl.?

22 B. discolor (Desf. ex Steud. nom. p. 90.) and 23. B. parvifòlia (Desf. l. c.) Nothing is known of these two plants but the names.

Cult. See *Marrùbium* for the culture of the perennial herbaceous kinds; and *Lasiócorys* for that of the shrubby species.

LXXXVIII. LASIO'CORYS (from λασιος, *lasios*, wool; and κορυς, *korys*, a helmet; in reference to the outside of the galea of the corolla being very hairy.) Benth. lab. p. 600.—Leùcas species, R. Br.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx subcampanulate, equal, 10-nerved; teeth 5, ovate, rarely furnished with minute teeth in the sinuses. Corolla with an inclosed tube, which is annulate inside, and a bilabiate limb; upper lip entire, concave, erect, very hairy outside; lower lip spreading, scarcely longer, trifid; the middle segment hardly broader than the lateral ones, emarginate. Stamens 4, didynamous: lower 2 the longest, ascending; filaments naked at the base; anthers approximating by pairs under the upper lip, 2-celled: cells divaricate. Lobes of style subulate: lower one the shortest, and sometimes very short, stigmatiferous towards the apex. Achenia dry, triquetrous, obtuse at top.—Branched shrubs. Leaves entire or toothed.

1 L. Cape'nsis (Benth. lab. p. 600.) leaves almost quite entire; whorls 2-4-flowered; calycine teeth one half shorter than the tube. ♄. G. Native of the Cape of Good Hope. Young branches clothed with white tomentum: adult ones canescent, or nearly glabrous. Leaves fasciculate, nearly sessile, oblong or cuneiform, obtuse, canescent from tomentum, as well as the calyxes, &c. Corolla whitish. Upper lobe of style usually very short.

Cape Lasiocorys. Shrub.

2 L. Abyssi'nica (Benth. lab. p. 600.) leaves toothed at apex; whorls 6-10-flowered; calycine teeth subulately acuminated, about equal in length to the tube. ♄. G. Native of Abyssinia. Leùcas quinquedentàta, R. Br. append. to Salt. abyss. Habit of *L. integrifòlia*. Branches pubescent. Leaves longer and greener. Calyx scarcely tomentose. Upper lobe of style one half shorter than the lower one.

Abyssinian Lasiocorys. Shrub.

Cult. A light rich soil will suit the species of this genus; and cuttings will strike root readily in the same kind of earth, with a hand-glass placed over them; but if seeds ripen, this will be unnecessary.

LXXXIX. ROYLEA (named in honour of John Forbes Royle, M.D. surgeon in the East India Company's Service; late superintendent of the botanic garden at Saharumpur; now Professor of Materia Medica in King's College, London; author of "Illustrations of Indian Botany, &c.") Wall. pl. rar. asiat. 1. p. 57. t. 74. Benth. lab p. 601.—Ballòta species, D. Don, prod. fl. nep. p. 111.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular at the base, 10-nerved; limb 5-cleft; segments erect, oblong, membranaceous, reticulately veined, equal. Corolla shorter than the calyx; tube inclosed, annulate inside; limb bilabiate; upper lip erect, entire, arched: lower lip spreading, trifid, having the middle lobe entire. Stamens 4, didynamous, ascending under the upper lip: lower 2 the longest; anthers approximate by pairs, 2-celled: cells divaricate, at length sub-confluent. Style almost equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia dry, obtuse at apex.—Allied to *Ballòta* and *Otostègia*, from which it differs only in the calyx.

1 R. e'legans (Wall. l. c.) ♄. G. Native of Sirmore and Deyra Dhoon, Wall.; Hurdwar and Sirinaghur, Hardwick; Himalaya, Royle. Phlòmis calycina, Roxb. fl. ind. 3. p. 11. Ballòta cinèrea, D. Don, prod. fl. nep. p. 111.—A much branched, erect shrub. Branches cinereous from tomentum. Leaves numerous, petiolate, ovate, acute, subcordate, coarsely and bluntly serrated, 1 to 1½ inches long, pilose on both surfaces, green above and hoary beneath; floral leaves conforming to the others, but gradually smaller. Whorls 6-10-flowered; cymes on short peduncles. Calyxes tomentosely pubescent. Corollas from white to pale red, or rose-coloured.

Elegant Royléa. Fl. July, Aug. Clt. 1824. Shrub 2 to 3 feet.

Cult. For culture and propagation see *Lasiócorys*, above.

XC. OTOSTE'GIA (from ους ωτος, *ous otos*, an ear; and στεγος, *stegos*, a covering; in reference to the lips of the calyx being prolonged.) Benth. lab. p. 601.—Phlòmis species, Vahl. —Molucélla species, R. Br.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular at the base, 10-nerved; limb sub-bilabiately and membranaceously prolonged: upper lip short, entire, or triangular: lower lip large, ovate, obtuse. Corolla with an inclosed tube, which is annulate inside, and a bilabiate limb; upper lip oblong, concave, entire, erect, very hairy outside: lower lip spreading, trifid: middle lobe broader, emarginate. Stamens 4, ascending, didynamous, the lower ones the longest; filaments naked at the base; anthers approximate by pairs under the superior lip, 2-celled: cells divaricate. Style somewhat equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia dry, obtuse at apex.—Shrubs. Whorls loosely many-flowered. Corollas white.? This genus differs from *Röylea*, *Ballòta*, and *Leùcas*, in the calyx; and from the latter genus in the divisions of the style.

1 O. integrifo'lia (Benth. lab. p. 602.) leaves oblong, quite entire, clothed with rather silky tomentum on both surfaces; upper lip of calyx ovate, entire. ♄. G. Native of Abyssinia, Salt. Molucélla integrifòlia, R. Br. Append. to Salt's Abyssinia. Shrub clothed with silky tomentum or pubescence. Leaves narrowed at the base and blunt at apex, canescent on both surfaces as in *Atriplex Hálimus*; young leaves fascicled, with 3 short straight spines in each axil. Whorls numerous, disposed in a terminal raceme.

Entire-leaved Otostegia. Shrub.

2 O. scariòsa (Benth. lab. p. 602.) leaves ovate, toothed, wrinkled, green on both surfaces; upper lip of calyx ovate, entire. ♄. G. Native of Arabia Felix, Forsk; Abyssinia, Salt. Molucélla scariòsa, R. Br. append. to Salt's Abyss. Clinopòdium fruticòsum, Forsk. fl. ægypt. p. 107. Phlòmis moluccoides, Vahl. symb. 1. p. 42. t. 14. Habit of *Röylea*. Branches pubescent. Leaves an inch long, roundly truncated at the base, green above and pubescent beneath. Whorls few; cymes on short peduncles. Bracteas canescent, pubescent. Calyx villous.

Scarious Otostegia. Shrub.

3 O. repa'nda (Benth. lab. p. 602.) leaves ovate, toothed, wrinkled, clothed with hoary tomentum beneath; upper lip of calyx short, triangular. ♄. G. Native of Abyssinia, Salt. Molucélla repánda, R. Br. Append. to Salt's Abyss. Allied to *O. scariòsa*, but differs in the branches and leaves being villous, and in the calyxes being more villous, and in the form of the upper lip of the corolla.

Repand-leaved Otostegia. Shrub.

Cult. For culture and propagation, see *Lasiócorys*, above.

XCI. LEU'CAS (from λευκος, *leucos*, white; in allusion to the downy whiteness of the flowers.) R. Br. prod. p. 504. Benth. lab. p. 602.—Phlòmis species, Lin.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular or tubularly campanulate, striated, straight or incurved at apex;

mouth equal or drawn out obliquely above or beneath, 8-10-toothed. Corolla with an inclosed tube, which is annulate, or naked inside, and a bilabiate limb; upper lip concave, erect, entire, rarely emarginate, very hairy outside; lower lip longer, spreading, trifid, the middle segment the largest. Stamens 4, didynamous, ascending, the lower ones the longest; filaments naked at the base; anthers approximate by pairs under the upper lip, sub-bilocular: cells divaricate, confluent. Upper lobe of style very short, lower one subulate and stigmaciferous towards the apex. Achenia dry, triquetrous, obtuse at apex.—Herbs or under shrubs. Leaves quite entire or usually toothed; floral ones nearly similar. Whorls sometimes few-flowered and sometimes densely many-flowered. Corollas usually white, rarely purplish.—Scarcely differing from *Ballòta*, except in the unequally lobed stigma, but the calyx, corolla, and the general habit mark it out as a good genus.

Sect. I. Hemi'stoma (from ἡμι, *hemi*, half, and στομα, *stoma*, a mouth; the lower side of the calyx is alone drawn out.) Benth. lab. p. 605. Hemistoma, Ehrenb. Calyx tubular, with an oblique mouth; lower side drawn out, cleft above. Whorls globose, many-flowered. Bracteas numerous, equalling the calyxes.

1 L. Indica (R. Br. prod. p. 504.) herbaceous; stems and under sides of leaves clothed with silky tomentum; whorls many-flowered, globose; calyx rather villous, membranaceous, having the 3 lower teeth short and setaceous, the upper ones having disappeared. ☉. S. Native of Madagascar. Phlòmis Indica, Lin. spec. 820. Leaves broad-ovate, acutish, coarsely and serrately crenated. Corollas exceeding the calyx a little, densely clothed with white hairs or villi.

Indian Leucas. Fl. July, Aug. Clt. 1789. Pl. 1 foot.

2 L. urticæfòlia (R. Br. prod. p. 504.) herbaceous, clothed with fine canescent tomentum; whorls many-flowered, globose; calyx rather villous, membranaceous, with 8-10 very short setaceous teeth. ☉. S. Native of the East Indies, Abyssinia, and Arabia. Phlòmis urticæfòlia, Vahl, symb. 3. p. 76. Leucas affinis, R. Br. in append. to Salt, abyss. Hemistoma ovàta, Ehrenb. mss. Habit and inflorescence of *L. Indica*. Stems decumbent or ascending at the base. Leaves broad, ovate, coarsely and serrately crenated. Corollas white.

Nettle-leaved Leucas. Fl. July, Sept. Clt. 1810. Pl. ½ to 1 foot.

Sect. II. Loxo'stoma (from λοξος, *loxos*, oblique; and στομα, *stoma*, a mouth; mouth of calyx oblique.) Benth. lab. p. 606. Calyx tubular, with an oblique mouth, the lower side more drawn out than the upper, and hardly cleft above. Whorls few-flowered. Bracteas minute.

3 L. glabra'ta (R. Br. prod. p. 504.) herbaceous, glabrous; whorls 2-4-flowered, secund; calyx glabrous, with 10 subulate teeth. ☉. S. Native of Delagoa Bay, and Arabia Felix. Phlòmis glabràta, Vahl, symb. 1. p. 42. Plant often purplish. Stems elongated, decumbent. Leaves ovate or oblong, few-toothed. Corolla purplish.

Glabrous Leucas. Pl. decumbent.

Sect. III. Physoca'lyx (from φυσα, *physa*, a bladder; and καλυξ, *calyx*, a calyx; calyx inflated.) Benth. lab. p. 744. Calyx inflated, with a contracted equal mouth. Whorls 6-10-flowered. Bracteas minute.

4 L. infla'ta (Benth. lab. p. 744.) shrubby; leaves sessile, orbicular, subcordate at the base, hairy on both surfaces, and green; whorls subspicate; calyx with 10 short erect teeth: throat nearly naked inside. ♄. G. Native of Arabia, in the desert of Suez, N. Bove.

Inflated-calyxed Leucas. Shrub.

Sect. IV. Ortholeu'cas (from ορθος, *orthos*, straight; and *Leucas*; in reference to the equal mouth of the calyx.) Benth. lab. p. 606. Ortholeucas, Benth. in Wall. pl. rar. asiat. 1. p. 61. Whorls rather loose, usually few-flowered. Bracteas minute or few, setaceous, rarely almost equalling the calyxes. Calyx tubular or sub-campanulate, striated, with an equal or scarcely oblique mouth, a nearly naked throat, and 10 erect, subulate, or very short setaceous teeth.

5 L. Chine'nsis (R. Br. prod. p. 504.) suffruticose? branches clothed with silky tomentum; leaves broad-ovate, coarsely toothed, wrinkled, villous, white beneath; whorls few-flowered; calyx funnel-shaped, tomentose, with an equal acutely 10-toothed limb. ♄. G. Native of China and the Indian peninsula. Phlòmis Chinénsis, Retz, obs. 2. p. 19. Habit of *L. montàna* and *L. lanàta*. Whorls 6-10-flowered. Corollas white.

China Leucas. Fl. June, Oct. Clt. 1820. Shrub procumbent.

6 L. monta'na (Spreng. syst. 2. p. 742.) perennial or suffruticose; branches clothed with silky tomentum; leaves ovate, serrately crenated, wrinkled, green above and pubescently hairy, but clothed with white wool beneath; whorls many-flowered; calyx clothed with silky villi, with an equal mouth, and very short setaceous erect teeth. ♄.? S. Native of India, near Madras. Phlòmis montàna, Roth, nov. spec. p. 263. Branches ascending, rising from a woody base. Leaves roundly truncate, or broadly cordate at the base. Whorls 15-20-flowered. Corollas white; tube annulate inside.

Mountain Leucas. Shrub ascending.

7 L. ova'ta (Benth. in Wall. pl. rar. asiat. 1. p. 61. lab. p. 607.) perennial or suffruticose; branches clothed with silky tomentum; leaves ovate, obscurely crenated, wrinkled, green and pubescently hairy above, but clothed with white wool beneath; whorls many-flowered; calyx pubescent, with an equal mouth, and very short setaceous straight teeth. ♄.? S. Native of Ava, on the banks of the Irawaddi. Allied to *L. montàna*; but the leaves are larger and blunter, scarcely broadly crenated, or almost quite entire.

Ovate-leaved Leucas. Shrub 2 feet.

8 L. lana'ta (Benth. l. c.) perennial or suffruticose; branches clothed with white wool; leaves ovate, sub-crenated, thick, wrinkled, clothed with very soft white wool on both surfaces; whorls many-flowered; calyx clothed with white wool, with an equal truncate mouth, and very short setaceous erect teeth. ♄.? G. Native of the East Indies, in the valleys of the provinces of Kamaon, Sirmore, and Deyra Dhoon, Wall. and Royle. Marrùbium mollissimum, D. Don, prod. fl. nep. p. 112. Allied to *L. montàna*; but the plant is clothed with white wool; the leaves narrower, and less deeply crenated. Corollas white.

Woolly Leucas. Pl. 1 to 1½ foot.

9 L. molli'ssima (Wall. pl. rar. asiat. 1. p. 62.) perennial or suffruticose; branches tetragonal, clothed with adpressed tomentose villi; leaves ovate, crenated, wrinkled, clothed with soft villi, pale or canescent beneath; whorls many-flowered; calyx pubescent, with an equal mouth, and very short setaceous erect teeth. ♄.? S. Native of the East Indies, in the valleys of Nipaul, and on the Pundua mountains; also of China, Sir G. Staunton. Habit of *L. montàna*, but usually taller, and more branched. Leaves ½ to 1 inch, roundly truncate or broadly cordate at the base. Whorls 10-30-flowered. Corollas white? or usually purplish; tube annulate inside.

Very-soft Leucas. Shrub 1 to 2 feet. ?

10 L. HAMILTONIA'NA (Benth. l. c.) perennial; branches clothed with adpressed tomentose villi; leaves ovate, serrately crenated, wrinkled, clothed with soft villi, canescent or rufescent beneath; whorls few-flowered; calyx pubescent, a little incurved, with an oblique mouth, and very short setaceous erect teeth. ♃. S. Native of the East Indies, at Monghyr, Hamilton. Differs from *L. mollissima*, in the larger more acute leaves, and few-flowered whorls, and in the calyx.

Hamilton's Leucas. Pl. 1 to 1½ foot.

11 L. TE'RES (Benth. l. c.) perennial or suffruticose; branches tomentose, terete; leaves ovate, subcrenated, green and pubescent above, and canescent beneath, hardly wrinkled; whorls 6-10-flowered; calyx pubescent, with an equal mouth and very short setaceous erect teeth. ♄. ? S. Native of the Birman Empire, on the banks of the Irawaddi. Allied to *L. mollissima*; but differs in the branches being terete; in the leaves being smaller, and flowers fewer; in the whorls being smaller, &c.

Terete-stemmed Leucas. Pl.

12 L. STRIGÒSA (Benth. l. c.) herbaceous; branches tetragonal, clothed with adpressed pubescence; leaves oblong-lanceolate, scarcely serrated, green and strigosely hairy above, but clothed with rufous canescent adpressed tomentum beneath; whorls few-flowered; calyx pubescent, with an equal mouth, and very short teeth. ☉. S. Native of the East Indies, near Prome, Wall. Branches ascending. Leaves nearly sessile. Whorls remote, 2-6-flowered, rarely about 10-flowered. Flowers of *L. pilòsa*.

Strigose Leucas. Pl. ascending.

13 L. ANGULA'RIS (Benth. l. c.) herbaceous, procumbent; branches acutely tetragonal; angles ciliated, subalate; leaves on short petioles, ovate, crenated, wrinkled, strigosely hispid on both surfaces; whorls few-flowered; calyx tubularly campanulate, villous, with an equal mouth and setaceous teeth. ☉. ? S. Native of Ceylon, Macrae. Allied to *L. strigòsa* and *L. pilòsa*, but differs in the form of the leaves, and especially in the calyxes.

Angular-stemmed Leucas. Pl. procumbent.

14 L. PILÒSA (Benth. l. c.) perennial, erect; branches pilosely pubescent; leaves ovate, serrately crenated, green on both surfaces, pilose or canescently pubescent beneath; whorls many-flowered; calyx pubescent, with an equal mouth, and very short setaceously erect teeth. ♃. S. Native of Bengal, and the banks of the Irawaddi. Phlòmis pilòsa, Roxb. fl. ind. 3. p. 12.? Corollas white or pale purple. Whorls 2-20-flowered.

Var. β, pubéscens (Benth. l. c.) leaves canescent from pubescence beneath. ♃. S. Native of Deyra Dhoun, Royle; Rajemahl, Wall.

Pilose Leucas. Pl. 1½ foot.

15 L. DECEMDENTA'TA (Smith, in Rees' cycl. Benth. lab. p. 600.) annual? pubescent; leaves ovate, crenated, clothed with fine tomentum, green on both surfaces, or sub-canescent beneath; whorls many-flowered: lower ones or all are shorter than the petioles; calyx pubescent, striated, with an equal mouth, and short setaceous teeth. ☉.? S. Native of the Islands of the Pacific; as of Timor, Otaheite, Corollines, Malden, &c. Stàchys decemdentàta, Forst. prod. no. 526. Phlòmis decemdentàta, Willd. spec. 3. p. 124. Leucas stachyoides, Spreng. syst. 2. p. 749. Floral leaves ½ an inch long, twice as long as the flowers. Allied to *L. mollissima*.

Ten-toothed Leucas. Pl. 1 to 1½ foot. ?

16 L. PLA'CIDA (R. Br. prod. 505.) annual, nearly glabrous; leaves ovate, crenated, membranaceous, green on both surfaces, and nearly glabrous; whorls many-flowered, shorter than the petioles; calyx nearly glabrous, with an equal mouth, and setaceous teeth. ☉. S. Native of tropical New Holland, Moluccas, banks of the Irawaddi. Phlòmis Moluccàna, Roxb. fl. ind. 3. p. 11. Leucas melissæfòlia, Benth. in Wall. pl. rar. asiat. 1. p. 62. L. parvifòra, Benth. in Wall. l. c. Hardly distinct from *L. decemdentàta*, except in the smoothness, and thinner blunter leaves. Corollas white.

Placid Leucas. Fl. July, Sept. Cit. 1833. Pl. 1 to 2 feet.

17 L. REPETIFÒLIA (Benth. l. c.) herbaceous? clothed with fine pubescence; leaves numerous, petiolate, ovate-roundish, crenated, green on both surfaces, or scarcely canescent; whorls few-flowered; calyx tubularly campanulate, nearly glabrous, with an equal mouth, and short acute teeth. ☉.? S. Native of the Indian peninsula. Leaves an inch long, obtuse, truncate or subcordate at the base, pubescent on both surfaces.

Catmint-leaved Leucas. Pl.?

18 L. LONGIFÒLIA (Benth. lab. p. 744.) stem herbaceous, erect, villous; leaves linear, almost quite entire, nearly glabrous; whorls 6-10-flowered; calyx turbinately tubular, with an equal mouth, and very short setaceous teeth. ☉.? S. Native of the North-east of India, at Pounah, Jacquemont. Allied to *L. hyssopifòlia*.

Long-leaved Leucas. Pl. erect.

19 L. ANGUSTIFÒLIA (Wall. pl. asiat. rar. 1. p. 62. Benth. lab. p. 610.) herbaceous, diffuse; leaves oblong-lanceolate or linear, narrowed at the base, nearly glabrous; whorls 6-20-flowered; calyx tubular, with an equal mouth, and very short setaceous erect teeth. ☉.? S. Native of Nipaul. Habit of *L. procúmbens*; but differs in the much longer leaves, which are narrowed at both ends; and in the flowers being more numerous; in the whorls, &c.

Narrow-leaved Leucas. Pl. diffuse.

20 L. PROCU'MBENS (Desf. mem. mus. par. 11. p. 7. t. 3. f. 2.) herbaceous, diffuse; leaves ovate-lanceolate, subserrated, nearly glabrous; whorls 2-6-flowered; calyx tubular, with an equal mouth, and lanceolate-subulate erect teeth. ♃. S. Native of the East Indies, Bengal, Ceylon, Peninsula, Bundelgund, &c. Phlòmis biflòra, Roxb. fl. ind. 2. p. 12. and of many other authors, but not of Vahl. Népeta Indica, Burm. fl. ind. p. 126. The whole plant nearly glabrous. Stems rising from a thick perennial base. Corollas as in *L. biflòra*.

Procumbent Leucas. Pl. procumbent.

21 L. BIFLÒRA (R. Br. prod. p. 504.) herbaceous, diffuse; leaves ovate, coarsely toothed, pubescent on both surfaces; whorls 2-flowered; calyx tubular, with an equal mouth, and subulate teeth. ☉.? S. Native of the peninsula of India and Ceylon. Phlòmis biflòra, Vahl, symb. 3. p. 77.—Burm. thes. zeyl. p. 140. t. 69. f. 1. Leaves pale beneath, ½ an inch long. Corolla white; tube obscurely annulate inside.

Two-flowered Leucas. Fl. July, Sept. Cit. 1819. Pl. diffuse.

22 L. PUBE'SCENS (Benth. lab. p. 610.) herbaceous; branches clothed with fine pubescence; leaves ovate, crenated, truncate at the base, thin, green on both surfaces, or pale and pubescent beneath; whorls densely many-flowered; bracteas subulate, shorter than the calyxes; calyx tubular, with an equal mouth, and straight subulate teeth. ☉.? S. Native of the peninsula of India. L. marrubioides, β, glàbrior, Benth. in Wall. pl. asiat. rar. 1. p. 61. This differs from *L. marrubioides*, in the leaves and calyxes being finely pubescent, not clothed with white wool, &c.

Pubescent Leucas. Pl.

23 L. MARRUBIOI'DES (Desf. mem. mus. par. 11. p. 6. t. 3. f. 1.) herbaceous; branches clothed with woolly pubescence; leaves broad-ovate, crenated, subcordate at the base, wrinkled, hispid above, but clothed with white wool beneath; whorls densely many-flowered; bracteas subulate, about equal in length to the calyxes; calyx tubular, with an equal mouth, and straight

subulate teeth. ⊙.? S. Native of the Indian peninsula and Ceylon. Stems procumbent at the base. Whorls above 30-flowered. Corollas white.

Horehound-like Leucas. Pl. procumbent.

24 *L.* Java'sica (Benth. lab. p. 611.) stem branched, scandent; branches obversely pilose on the angles; leaves ovate, bluntly serrated, scutish at the base, and quite entire, pubescent on both surfaces; whorls 6-10-flowered; calyx oblong, pubescent, 10-toothed: teeth subulate, the alternate ones shorter. ⊙.? S. Native of Java, among bushes on the banks of rivers. Phlòmis Chinénsis, Blum. bijdr. p. 829. but not of Retz.

Var. β; leaves smaller, clothed with soft pubescence on both surfaces. ⊙.? S. Native of Java, on declivities between Mount Burangrang and Tankuwan Paku.

Java Leucas. Pl. climbing.

Sect. V. A'strodon (from ἀστηρ, *aster*, a star; and ὀδους ὀδοντος, *odous odontos*, a tooth; in allusion to the teeth of the calyx spreading in a stellate manner.) Benth. lab. p. 611. A'strodon, Benth. in Wall. pl. asiat. rar. 1. p. 61. Calyx tubular, with an equal mouth, and a usually very villous throat, and 10 teeth, which usually spread in a stellate manner at the time of maturity. Whorls usually globose, many-flowered, solitary or few, the upper ones sometimes capitate. Bracteas scarcely shorter than the calyxes.

25 *L.* suffruticòsa (Benth. lab. p. 611.) branches clothed with rufous villi, leafy at the base; leaves sessile, oblong-lanceolate, linear, quite entire, green and hispid above, and clothed with white tomentum beneath; bracteas subulate; calyx clothed with rufous villi, with a truncate villous mouth, and very short rather spreading teeth. ♄. S. Native of the Indian peninsula, on the Nielgherry mountains. Stems numerous, rising from a woody base. Leaves 8-10 lines long. Whorls about 10-flowered. Corollas as in *L. ternifòlia*; tube exannulate inside.

Suffruticose Leucas. Shrub ½ to 1 foot.

26 *L.* rosmarinifòlia (Benth. l. c.) suffruticose; branches clothed with adpressed villi; leaves sessile, linear, quite entire, scabrous from hairs above, but clothed with white tomentum beneath; bracteas lanceolate-linear; calyx villous, with a truncate villous mouth, and very short rather spreading teeth. ♄. S. Native of the Indian peninsula, Wight. Allied to the preceding, but the hairs are hardly rufescent. Leaves an inch long, much narrower. Bracteas broader, very acute, equalling the calyxes.

Rosmary-leaved Leucas. Shrub dwarf.

27 *L.* helianthemifòlia (Desf. mem. mus. par. 11. p. 2. t. 1.) stems shrubby at the base; branches clothed with silky subrufescent wool; leaves opposite, sessile, oblong-elliptic or lanceolate, quite entire, silky on both surfaces, but greener above, and very white beneath; bracteas linear, shorter than the calyxes; calyx clothed with silky villi, with a truncate villous mouth, and very short rather spreading teeth. ♄. S. Native of the Indian peninsula, on the Nielgherry mountains, Leschenault and Wight. Differs from *L. ternifòlia*, in the leaves being opposite, shorter, less white; and in the branches being usually rufescent.

Sun-rose-leaved Leucas. Shrub dwarf.

28 *L.* ternifòlia (Desf. mem. mus. par. 11. p. 4. t. 1. f. 2.) stem shrubby at the base; branches densely tomentose; leaves 3 in a whorl, sessile, oblong-lanceolate, quite entire, silky on both surfaces, very white beneath; bracteas linear; calyx clothed with silky wool, with a truncate villous mouth, and very short, rather spreading teeth. ♄. S. Native of the Indian peninsula, on the Nielgherry mountains. Branches clothed with dense white or rufescent wool. Leaves 1 to 1½ inch long. Whorls 10-20-flowered. Galea of corolla densely clothed with white hairs; tube exannulate inside.

Tern-leaved Leucas. Shrub dwarf.

29 *L.* lanceæfòlia (Desf. mem. mus. 11. p. 5. t. 2. f. 2.) stem erect, clothed with rufous tomentum; leaves oblong-lanceolate, almost quite entire, green and pubescent above, but canescent and clothed with tomentose pubescence beneath; bracteas equalling the calyxes; calyx clothed with rufous villi, with a truncate pubescent mouth, very short teeth, which are, as well as the bracteas, stiffly mucronulate. ♃. S. Native of the Indian peninsula, on the Nielgherry mountains. Leaves 3-4 inches long. Galea of corolla densely clothed with white villi; tube finely pubescent inside, but exannulate.

Lance-leaved Leucas. Pl. 7 to 8 feet.

30 *L.* stelligèra (Wall. pl. rar. asiat. 1. p. 61. Benth. lab. p. 613.) herbaceous, erect, pubescent and sub-canescent; leaves oblong-lanceolate, bluntly serrated, glabrous or finely pubescent; calyx tomentose, with a truncate mouth, which is villous inside; teeth 10, and are, as well as the bracteas, subulate, soft, spreading, revolute at top. ⊙.? S. Native of the East Indies, at Aurungabad, Wall. Habit of *L. linifòlia*. Leaves 2-3 inches long. Whorls usually solitary, or 2-3 approximate at the tops of the branches. Corolla white; tube annulate inside.

Star-bearing Leucas. Pl. 1½ foot.

31 *L.* lamiifòlia (Desf. mem. mus. 11. p. 4. t. 2. f. 1.) herbaceous, clothed with rufous villi; leaves cordate-ovate, clothed with rufous villi above, and hoary tomentum beneath; bracteas lanceolate-linear, equalling the calyxes; calyx silky, with a truncate equal mouth, which is villous inside, and subulate teeth, which at length spread in a stellate manner. ⊙.? S. Native of the Indian peninsula, on the Nielgherry mountains. Leaves crenated, 2 to 2½ inches long. Whorls few, towards the tops of the branches, densely many-flowered. Flowers like those of *L. lanceæfòlia*.

Dead Nettle-leaved Leucas. Pl. 2 feet.

32 *L.* hirta (Spreng. syst. 2. p. 743.? Benth. lab. p. 613.) suffruticose?; branches clothed with rufescent villi; leaves ovate or oblong, sub-crenated, green and hairy on both surfaces; bracteas equalling the calyxes; calyx villous, with a truncate very villous mouth, and 10 short subulate stellately spreading mutic teeth. ♄.? S. Native of the peninsula of India, Heyne. Phlòmis hirta, Heyne, and perhaps of Roth, nov. spec. pl. p. 264.? Leucas helianthemifòlia, Benth. in Wall. pl. asiat. rar. 1. p. 61. but not of Desf. Plant divaricately branched. Leaves scarcely an inch long. Whorls usually solitary, on the tops of the branches. Galea of corolla densely clothed with white hairs.

Hairy Leucas. Shrub ½ foot.

33 *L.* vesti'ta (Benth. in Wall. pl. rar. asiat. 1. p. 61. lab. p. 613.) herbaceous, erect; stem clothed with rufescent hairs; leaves ovate-oblong, crenated, hairy, green, or scarcely canescent beneath; bracteas linear, ciliately hairy; calyx hairy, with a truncate nearly equal mouth, which is very hairy inside, and hardly equal subulate teeth, which spread in a stellate manner. ⊙.? S. Native of the peninsula of India, on the Madura mountains; and of Silhet. Stem more robust than in *L. ciliata*. Tube of corolla annulate inside.

Clothed Leucas. Pl. 2 to 3 feet.?

34 *L.* cilia'ta (Benth. l. c.) herbaceous, erect, clothed with adpressed pubescence; leaves ovate-lanceolate or oblong, serrately crenated, green on both surfaces; bracteas linear, ciliately hairy; calyx tubular, with a truncate equal mouth, which is rather pilose inside or naked, with elongated subulate hairy stellately spreading teeth. ⊙.? S. Native of Nipaul. Leaves

2-3 inches long. Whorls few, distant, towards the tops of the branches. Corollas as in *L. Zeylánica*; tube annulate inside.

Ciliated Leucas. Pl. 1 to 2 feet.

Sect. VI. Plagióstoma (from πλαγιος, *plagios*, transverse; and στομα, *stoma*, a mouth; in reference to the oblique mouth of the calyx.) Benth. lab. p. 614. Plagióstoma, Benth. in Wall. pl. rar. asiat. 1. p. 60. Calyx turbinate or tubular, with an oblique mouth, which is drawn out above. Whorls usually globose, many-flowered, solitary or few: upper ones sometimes capitate. Bracteas equal to, or a little shorter than the calyxes.

35 L. strícta (Benth. l. c.) herbaceous, erect, strict, pubescently hairy; leaves oblong-lanceolate or linear, almost quite entire; whorls many-flowered, solitary, terminal; bracteas subulate, hairy; calyx hairy, sub-striated, with an oblique mouth, and subulate striated teeth, which spread at length in a stellate manner. ☉.? S. Native of the Indian peninsula. Leaves remote, 1 to 1½ inch long. Whorls 1-2 together, forming a head, 15-30-flowered. Corollas as in *L. Zeylánica*.

Strict Leucas. Pl.?

36 L. Zeylá'nica (R. Br. prod. p. 504.) herbaceous, erect, pubescently hairy; leaves oblong-lanceolate or linear, quite entire, or few-crenate; whorls dense, many-flowered, dimidiate or nearly equal; bracteas linear, hairy; calyx glabrous at the base, almost veinless, striated at top, a little incurved, with an oblique mouth, and short teeth, the upper teeth the largest. ☉. S. Native of Ceylon; also of Pegu, near Rangoon. Phlòmis Zeylánica, Lin. spec. p. 820. but not of Roxb. Leonûrus marrubiástrum, Burm. fl. ind. 127. but not of Lin.—Rumph. amb. 6. p. 39. t. 16. f. 1. Leaves distant, green. Whorls 10-20-flowered, 1 or 2 together at the tops of the branches. Corollas white.

Ceylon Leucas. Fl. June, Oct. Clt. 1777. Pl. 1 foot.

37 L. dimidiá'ta (Benth. lab. p. 615.) herbaceous, diffuse, pubescently hairy; leaves oblong or linear, quite entire; whorls few-flowered, dimidiate, remote; bracteas linear, hairy; calyx glabrous at the base, almost veinless, striated at top, hairy, a little incurved, with an oblique mouth, and short hardly unequal teeth. ☉. S. Native of the Indian peninsula. L. dimidiàta, Benth. in Wall. pl. rar. asiat. but not of Roth. Leaves nearly sessile, remote, ⅓ an inch long. Whorls remote, secund, 4-12-flowered. Very nearly allied to *L. áspera*.

Diffuse Leucas. Pl. 1 to 1½ foot, diffuse.

38 L. hyssopifólia (Benth. l. c.) herbaceous, perennial, many-stemmed, ascending, hairy; leaves oblong-linear, quite entire; whorls dense, nearly equal; bracteas linear, scarcely pilose; calyx glabrous, almost veinless, or scarcely striated at apex, rather hairy, with an oblique truncate mouth, and minute setaceous hairy teeth. ♃. S. Native of Nipaul and Kamaon, Wall.; Deyra Dhoon, Royle. Stems numerous, rising from a thick woody base, ascending. Leaves 1 to 1½ inch long. Whorls 10-20-flowered, distant. Calyx shortly 10-toothed. Corollas white.

Hyssop-leaved Leucas. Pl. ½ to 1 foot.

39 L. á'spera (Spreng. syst. 2. p. 743.) herbaceous, pubescently hairy; leaves oblong or linear, sub-crenated, green; whorls dense, equal; bracteas oblong-linear, or subulate, hairy; calyx glabrous at the base, almost veinless, striated at top, and a little incurved, with an oblique mouth, and short, scarcely unequal teeth. ☉. S. Native of the Himalaya, along the river Jumna, even to Allahabad, Royle; Indian peninsula, Wight; Mauritius, Bourbon, Java, and the Philippines, &c. Phlòmis áspera, Willd. enum. 2. p. 631. Phlòmis Plukenètii, Roth, nov. pl. spec. 261.? Leûcas Plukenètii, Spreng. syst. 2. p. 743.? Phlòmis esculénta, Roxb. fl. ind. 3. p. 10. Phlòmis cephalótis, var. Blum. bijdr. p. 830.? Tumba, Rheed. mal. 10. p. 181. t. 91.? Stems hispid, or tomentosely pubescent, rarely glabrous. Leaves entire or few-toothed. Whorls usually 10-20-flowered. Corollas white; tube annulate inside.

Var. β, Wightiana (Benth. lab. p. 616.) whorls small, numerous, approximate. ☉. S. L. Wightiàna, Benth. in Wall. pl. rar. asiat. 1. p. 60.

Rough Leucas. Fl. July, Aug. Clt. 1818. Pl. 1 to 3 feet.

40 L. nu'tans (Spreng. syst. 2. p. 743.) herbaceous, pubescent; leaves ovate-oblong, crenated a little, green; whorls many-flowered, distant; bracteas oblong or lanceolate; calyx pubescent, striated, much elongated in the fructiferous state, incurved, nutant, with an oblique mouth, and short, linear, scarcely unequal teeth. ☉.? S. Native of the Indian peninsula; and near Segain, and on the banks of the Irawaddi. Leaves broader than in *L. áspera*, with the crenatures fewer and more obscure. Corollas small.

Nodding-calyxed Leucas. Pl.?

41 L. dimidia'ta (Spreng. syst. 2. p. 743. Benth. lab. p. 616. but not of Benth. in Wall. pl. rar. asiat.) herbaceous, pubescently hairy; leaves ovate-oblong, subcrenated, green; whorls many-flowered, usually solitary, terminal; bracteas linear-subulate, hairy; calyx glabrous at the base, almost veinless, striated at top, incurvedly reflexed, with an oblique mouth, and short scarcely unequal teeth. ☉.? S. Native of the Burman Empire, on the banks of the Irawaddi. Nearly allied to *L. nútans*, but differs in the shorter calyxes, minute bracteas, solitary whorls; and with the habit and leaves of *L. Zeylánica*.

Dimidiate Leucas. Pl.?

42 L. cephalótes (Spreng. syst. 2. p. 743.) herbaceous, pubescently hairy; leaves ovate or oblong, subserrated, green; whorls usually solitary, large, globose, densely many-flowered; bracteas ovate-lanceolate, acute, imbricated; calyx striated at top, rather villous, with an oblique mouth, and short, scarcely unequal teeth. ☉. S. Native of the East Indies, common; Nipaul, Bengal, and the Peninsula. L. capitàta, Desf. mem. mus. 11. p. 8. t. 4. Phlòmis cephalótes, Roth, nov. pl. spec. 262. Leaves 2-4 inches long. Whorls terminal. Corollas white; lower lip large, obcordate.

Headed Leucas. Fl. July, Sept. Clt. 1818. Pl. 1 foot.

43 L. Martinice'nsis (R. Br. prod. p. 617.) herbaceous, pubescent, scarcely canescent; whorls distant, large, globose, many-flowered; bracteas lanceolate-subulate; calyx membranous, incurved, with an oblique mouth, which is drawn out above, and with about 10 subulate teeth, the upper tooth very long. ☉. S. Native of the tropics in both hemispheres; as of the East Indies, Madagascar, west coast of Africa, West Indies, Brazil, &c. Clinopódium Martinicénsis, Jacq. amer. p. 173. t. 177. f. 75. Phlòmis Martinicénsis, Swartz, prod. fl. ind. occ. p. 88. Phlòmis Caribæ'a, Jacq. icon. rar. 1. p. 11. t. 110. Leonûrus parvifòrus, Mœnch, meth. p. 401. Phlòmis móllis, Schum. pl. guin. 263. Leaves ovate, crenated, rounded at the base, but more often cuneated: upper ones lanceolate. Bracteas subspinescent. Corollas small, white; tube exannulate inside.

Martinico Leucas. Fl. July, Sept. Clt. 1781. Pl. 1 to 2 feet.

44 L. linifo'lia (Spreng. syst. 2. p. 743.) herbaceous, erect, clothed with fine canescent pubescence or tomentum; leaves oblong-linear, quite entire, or remotely serrated; whorls dense, nearly equal, many-flowered; bracteas linear, canescent; calyx canescent or glabrous, almost veinless, elongated above, with a very oblique mouth, the lower teeth very short, and the upper tooth very large. ☉. S. Native of the East Indies, Bengal, and the Peninsula, very common; Madagascar, Mauritius,

Bourbon, Moluccas, Philippines, &c. Phlòmis linifòlia, Roth, nov. spec. pl. p. 260. Phlomis Zeylánica, Roxb. fl. ind. 3. p. 9. Lin. syst. 150. Jacq. icon. rar. 1. p. 11. t. 111. but not of Lin. spec. L. lavandulæfòlia, Smith, in Rees' cycl. vol. 2. Leonùrus Indicus, Burm. fl. ind. p. 127. Herba admiratiònis, Rumph. amb. 6. p. 39. t. 16. f. 1. Leaves 2-3 inches long. Whorls distinct, 2-4 towards the tops of the branches. Corollas like those of *L. Zeylánica*, white.

Flax-leaved Leucas. Fl. July, Sept. Clt. 1816. Pl. 1 to 1½ foot.

Cult. Most of the species of *Leùcas*, being annual, the seed should be reared on a hot-bed early in spring; and when the plants are about 1 inch in height, they should be planted into separate small pots, and afterwards shifted from size to size of pots, as they increase in size; and in the summer they may be placed in the greenhouse, where they will flower and seed freely, if plenty of air be given through the day. The suffruticose species should be treated like other stove plants, and they will be readily increased by cuttings or seeds.

XCII. LEONO'TIS (from λεων, *leon*, a lion; and ους ωτος, *ous otos*, an ear; lion's ear; fanciful likeness in the corollas.) R. Br. prod. p. 504. Benth. lab. p. 618.—Phlòmis species of Lin. and other authors.

Lin. syst. *Didynamia, Gymnospérmia.* Calyx ovate-tubular, 10-nerved, incurved at apex, with an oblique sub-10-toothed mouth; the upper tooth the largest. Corolla having the tube usually exserted, naked, or incompletely annulate inside, and a bilabiate limb; upper lip concave, erect, elongated, entire: lower lip short, spreading, trifid, the middle segment hardly larger than the lateral ones. Stamens 4, ascending, didynamous, the lower 2 the longest; filaments naked at the base; anthers approximating by pairs under the lower lip, 2-celled: cells divaricate, acute. Upper lobe of style very short. Achenia dry, obtuse at apex.—Herbs or sub-shrubs. Whorls many-flowered, usually very dense. Bracteas numerous, linear-subulate. Corollas showy, scarlet or yellowish.

1 L. nepetæfòlia (R. Br. prod. p. 504.) herbaceous; leaves ovate, crenated; teeth of calyx all spiny: upper one large; corollas scarlet, scarcely twice as long as the calyx. ☉. S. Native of Asia and Africa, within the tropics; West Indies, and Brazil, in moist places. Ker. bot. reg. 4. t. 281. Phlòmis nepetæfòlia, Lin. spec. 820. Leonùrus globòsus, Mœnch, meth. 400. Leonùrus nepetæfòlius, Mill. dict. no. 2.—Herm. lugdb. 115. t. 117.? Stem pubescent or tomentose. Leaves 2-4 inches long, obtuse, rarely acutish, truncate or subcordate at the base, green on both surfaces, clothed with hoary tomentum beneath or glabrous. Whorls few, distant. Corolla villous, scarlet.

Cat-mint-leaved Lion's-Ear. Fl. Sept. Oct. Clt. 1778. Pl. 2 to 7 feet.

2 L. pa'llida (Benth. lab. p. 619.) herbaceous; leaves ovate, acute, bluntly serrated; calycine teeth all spinose: upper one large, ovate; corollas yellowish, scarcely exceeding the calyxes. ☉. S. Native of Guinea. Phlòmis pállida, Schum. pl. guin. p. 262. Phlòmis Africàna, Beauv. fl. d'ow. 2. p. 82. t. 111. Very nearly allied to *L. nepetæfòlia*; but differs in the leaves being more acute, on shorter petioles, and especially in the corollas being smaller, and yellowish.

Pale-flowered Lion's-Ear. Pl. 2 to 4 feet.

3 L. ova'ta (Spreng. syst. 2. p. 744.) herbaceous; leaves ovate, deeply crenated; calycine teeth all spinose; upper tooth large, ovate; corolla about 3 times as long as the calyx. ☉.? S. Native of South Africa, without the tropic, Burchell. Phlòmis Leonòtis, Lin. mant. p. 83. Mill. fig. t. 162. f. 1. Stems tomentosely pubescent. Leaves scarcely an inch long, broadly truncate or subcordate at the base, pubescent above, and tomentosely pubescent beneath. Whorls size of those of *L. nepetæfòlia*. Corollas orange-coloured, size of those of *L. Leonùrus*.

Ovate-leaved Lion's-Ear. Fl. June, July. Clt. 1713. Pl. 2 to 7 feet.

4 L. interme'dia (Lindl. bot. reg. 10. t. 1850.) herbaceous or suffruticose; leaves ovate-lanceolate, deeply toothed; whorls very dense, globose; calyx villous, with mutic teeth; corolla about 3 times as long as the calyx. ♄.? or ♃.? Native of Algoa Bay. Habit of *L. ovàta*; but the leaves are 2 or 3 times as long, bluntly acuminated, and the tomentum on the lower surfaces of the leaves, as well as on the petioles and branches, is more dense. Corollas orange-coloured, a little shorter than those of *L. Leonùrus*.

Intermediate Lion's-Ear. Fl. Sept. Oct. Clt. 1822. Shrub? 3 to 4 feet.

5 L. parvifo'lia (Benth. lab. p. 619.) shrubby; leaves ovate, wrinkled, and arc, as well as the branches, canescent; upper tooth of calyx ovate, spinescent: lower ones all very short and mutic; corolla about 3 times as long as the calyx. ♄. G. Native of the Cape of Good Hope, Masson. This species differs from *L. ovàta*, in the leaves being smaller, more wrinkled, canescent, and in the form of the mouth of the calyx. Stems woody and humble. Corollas of *L. Leonùrus*.

Small-leaved Lion's-Ear. Shrub humble.

6 Leonu'rus (R. Br. prod. p. 504.) shrubby; leaves oblong-lanceolate, bluntly serrated; whorls rather loose; calyx clothed with fine pubescent tomentum, with mutic teeth; corolla more than 3 times as long as the calyx. ♄. G. Native of the Cape of Good Hope. Phlòmis Leonùrus, Lin. spec. p. 820. Curt. bot. mag. t. 478. Leonùrus grandiflòrus, Mœnch, meth. 400.—Leonùrus Africànus, Mill. dict. no. 1.—Knor. del. 2. t. 50.—Sabb. hort. rom. 3. t. 44.—Breyn. cent. 171. t. 86.—Seba, mus. 1. p. 22. t. 14. f. 1. Branches tomentose. Leaves 2 inches long, obtuse, tomentose beneath and pubescent above. Whorls distant or approximate. Corollas 2 inches long, scarlet, villous.

Lion's-tail Lion's-Ear. Fl. Oct. Dec. Clt. 1712. Shrub 5 to 6 feet.

Cult. The species are all very showy when in blossom. Any light rich earth will suit them; and young cuttings of the shrubby kinds strike root readily in sand, with a hand-glass over them. The annual kinds should be treated in the manner recommended for the species of *Leùcas*, see above.

XCIII. PHLO'MIS (φλομος, of Dioscorides; from φλοξ, *phlox*, φλογος, *phlogos*, a flame; the down of some species was used formerly as wicks.) R. Br. prod. p. 504. Benth. lab. p. 620.—Phlòmis species of Lin. and other authors. Phlomidòpsis, Link, handb. p. 379.—Phlomoìdes, Mœnch, meth. p. 403.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular, 5 or 10-striped, usually plicate, with an equal, truncate, or tridentate mouth. Corolla with an inclosed or scarcely exserted tube, usually annulate inside, and a bilabiate limb; upper lip galeate, keeled, compressed, broad, entire or emarginate, incumbent or erectish: lower lip spreading, trifid. Stamens 4, ascending, didynamous; the lower 2 the longest; upper filaments adnate, usually drawn out into an appendage at the base: lower ones naked; anthers approximate by pairs under the galea, somewhat 2-celled: cells divaricate, obtuse, confluent. Superior lobe of style very short, the lower lobe subulate, stigmatiferous at apex. Achenia dry, triquetrous, obtuse at apex, rarely trun-

cate, glabrous or pubescent at apex.—Herbs, under-shrubs, and shrubs; in the first section clothed with floccose wool, and in the second section green. Leaves wrinkled. Whorls many-flowered, axillary, propped by bracteas, rarely naked. Corollas in the first section yellow or purple; but in the second section purple or white.

Sect. I. Euphlo'mis (from *eu*, *eu*, well; and *phlomis*; so called because this section is supposed to contain the true species of the genus.) Benth. lab. p. 622. Galea of corolla large, incumbent, tomentose, rarely villous, shortly somewhat bearded inside and along the margins; lateral segments of the lower lip small, furnished each with a lanceolate, or ovate, truncate, small appendage; the middle lobe large, very broad, rounded, emarginate, or somewhat 2-lobed.

§ 1. Lychni'tis (from λυχνος, *lychnos*, a lamp; down used for making wicks.) Benth. lab. p. 623. *Plant suffruticose. Floral leaves broadly dilated at the base, clasping the flowers.*

1 P. lychni'tis (Lin. spec. p. 819.) suffruticose, clothed with hoary tomentum; leaves sessile, oblong-linear, narrowed at both ends, stem-clasping, wrinkled; floral leaves very broad at the base; bracteas subulate, and are, as well as the calyxes, clothed with silky pili, with short subulate teeth. ♄. H. Native of Europe, in the region of the Mediterranean, in dry places; as of Spain, South of France, North of Italy.? Sims. bot. mag. 998. Mill. fig. 203.—Lob. icon. 558.—Barrel. icon. 1321. Stems numerous, simple, rising from a woody base. Cauline leaves 2-3 inches long, and scarcely 4 lines broad, green or canescent above, very veiny, and clothed with white tomentum beneath. Corolla yellow, twice as long as the calyx. The dry leaves of this sort are used for wicks; hence its specific name, and its Spanish one of *Candelera*.

Link Phlomis. Fl. June, Aug. Clt. 1658. Shrub 2 feet.

§ 2. Gymnophlòmis (from γυμνος, *gymnos*, naked; and φλομος, *phlomos*, the Greek name of Mullein; so called from the whorls being almost destitute of bracteas.) Benth. lab. p. 623. *Perennial herbs or undershrubs. Floral leaves narrowed at the base. Whorls few-flowered. Bracteas few, loose or wanting. Calycine teeth soft, mutic.*

2 P. Bauguei'ri (Desf. mem. mus. 11. p. 9. t. 5.) perennial or suffruticose, very white from floccose tomentum; leaves ovate-oblong, roundly cuneated at the base, densely woolly; whorls about 6-flowered; bracteas linear, loose; calyx very pilose, with lanceolate soft plumose teeth, which exceed the corolla. ♃. F. Native of Persia, near Kermanchan. Stems almost simple. Leaves 2-3 inches long, acutish, a little crenated, and a little wrinkled. Whorls approximate. Corollas deep red, a little smaller than those of *P. lychnitis*. Superior filaments thickened at the base, scarcely appendiculate.

Bruguier's Phlomis. Pl. 1 to 1½ foot.

3 P. crini'ta (Cav. icon. rar. 3. p. 25. t. 247.) perennial or suffruticose, clothed with very white floccose wool; leaves ovate-oblong, roundedly truncate at the base, the radical leaves subcordate, very thick, densely woolly on both surfaces; floral leaves narrowly rounded at the base; whorls 6-10-flowered; bracteas linear, loose; calyx very pilose, with linear plumose mutic teeth, which are shorter than the corolla. ♃. F. Native of Spain. Stems rising from a woody base. Radical leaves 2-3 inches long, almost quite entire. Whorls disposed in a panicle. Corolla like those of *P. lychnitis*, yellow or pale orange.

Long-haired Phlomis. Fl. June, Aug. Clt. 1820. Pl. 1 to 1½ foot.

4 P. purpu'rea (Desf. fl. atl. 2. p. 25. t. 127.) perennial or suffruticose, woolly; leaves ovate-oblong, rounded at the base, clothed with sub-floccose tomentum on both surfaces; whorls 4-6-flowered; bracteas linear, loose; calyx pilose, with linear soft acute mutic teeth. ♃. F. Native of Algiers, near Mayance. Lower leaves petiolate: upper ones sessile, scarcely crenated. Corollas size of those of *P. herba-venti*, purple, villously tomentose outside; upper lip bipartite.?

Two-lobed-lipped Phlomis. Pl. 2 to 3 feet.

5 P. orienta'lis (Mill. dict. no. 9.) perennial or suffruticose, clothed with floccose wool; leaves ovate: lower ones cordate at the base, much wrinkled, villous or woolly on both surfaces; floral leaves narrowed at the base; whorls 6-10-flowered; calyx elongated, pilose, with linear, soft, acute, plumose teeth. ♃. F. Native of Syria, near Aleppo, and about Smyrna. Habit of *P. Nissòlii*, but the calyx is very different. Corollas pale brown or yellow.

Eastern Phlomis. Fl. July, Aug. Clt.? Pl. 1 to 2 feet.

6 P. Olivie'ri (Benth. lab. p. 624.) shrubby, woolly; leaves petiolate, ovate, narrowed at the base: lower ones cordate, wrinkled, densely clothed with wool in the young state; whorls few-flowered; bracteas short, linear; calyx hispidly woolly, with lanceolate-linear obtuse teeth. ♄. F. Native of Persia, between Bagdad and Kermanchan, and between Kermanchan and Armadan. Bracteas as in *P. Armeniaca*, but more hispid; but the calyxes are less pilose, and the stems more simple than in *P. orientàlis*.

Olivier's Phlomis. Shrub.

7 P. Armeni'aca (Willd. spec. 3. p. 119.) perennial, clothed with floccose wool; radical leaves on long petioles, cordate-oblong, obtuse, crenated; cauline leaves lanceolate, attenuated at the base; whorls 6-flowered; bracteas loose, subulate, mucronulate; calyx clothed with tomentose wool, contracted at the apex in the fructiferous state, with subulate mucronate straight teeth. ♃. F. Native of Armenia; and of Caucasus, in dry stony places among the Talusch mountains, near Perimbal and Swant. D. Don, in Sweet, fl. gard. n. s. 4. t. 364. P. orientàlis, angusto et lineare folio, flore luteo, Tourn. cor. p. 10. Stems simple. Leaves obscurely crenated. Whorls distinct, usually 6-flowered. Corollas yellow, similar to those of *P. lychnitis*, twice the length of the calyx, clothed with stellate pubescence outside.

Armenian Phlomis. Fl. June, July. Clt. 1834. Pl. ½ to 1 foot.

8 P. Nissòlii (Lin. spec. p. 819.) perennial or suffruticose, densely clothed with sub-floccose wool; leaves petiolate, ovate-oblong, deeply cordate at the base, much wrinkled; whorls few-flowered; bracteas very short; calyx densely woolly, with ovate acuminated soft mutic teeth. ♃. F. Native of Syria, near Smyrna and Aleppo. Mill. fig. 204. Stems rising from a woody base. Lower leaves petiolate, 4-5 inches long, crenulated. Whorls distant. Corolla yellow, similar to that of *P. lychnitis*; but the upper lip is a little acuminated, and the middle lobe of the lower lip more deeply emarginate.

Nissole's Phlomis. Fl. June, July. Clt. 1757. Pl. 1 to 1½ foot.

§ 3. Dendrophlòmis (from δενδρον, *dendron*, a tree; and φλομος, *phlomos*, the Greek name of Mullein; in allusion to the species being woody). Benth. lab. p. 625. *Shrubs, rarely sub-shrubs. Whorls dense. Bracteas adpressed, numerous, about equal in length to the calyxes. Calyxes usually truncate, mucronate.*

9 P. purpu'rea (Lin. spec. p. 818.) shrubby; branches

clothed with floccose tomentum; leaves oblong, obtuse, crenated, truncate or subcordate at the base, greenish above, and clothed with white tomentum beneath; bracteas oblong-lanceolate, and are, as well as the calyxes, clothed with white tomentum; calycine segments lanceolate, softly acuminated. ♄. H. Native of Spain, near Malaga. Smith, spicil. 6. t. 7. P. ferruginea, Mill. dict. no. 12. P. salviæfòlia, Jacq. hort. schœnbr. 3. p. 58. t. 359. Floral leaves ovate-lanceolate, much longer than the whorls. Corollas reddish-purple; upper lip tomentosely villous outside. Appendages of upper filaments subulate.

Purple-flowered Phlomis. Fl. June, Aug. Clt. 1661. Shrub 2 to 3 feet.

10 P. Ita'lica (Smith, spicil. 1. t. 6.) shrubby, clothed with floccose tomentum; leaves oblong-lanceolate, obtuse, truncate at the base, wrinkled; whorls dense; bracteas linear, obtuse, adpressed, about equalling the calyxes, clothed with floccose tomentum; calyx truncate, with very short obtuse mutic teeth. ♄. H. Native of Spain, Italy, and Balearic Islands. P. rotundifòlia, Mill. dict. no. 18. fig. 202. Wool subferruginous or white. Leaves all petiolate, 2-3 inches long, velvety on the upper surface, a little crenated. Corollas purple. Upper filaments thickened a little under the insertion. This differs from *P. purpùrea* in the calyxes and bracteas.

Italian Phlomis. Fl. June, Aug. Clt. 1661. Shrub 1 to 2 feet.

11 P. ellípticа (Benth. lab. p. 626.) shrubby, clothed with subfloccose tomentum; leaves ovate-elliptic, truncate at the base, much wrinkled, clothed with floccose tomentum beneath, or on both surfaces: whorls dense, many-flowered; bracteas lanceolate, linear, bluntish, stiff, clothed with floccose wool; calyx truncate, with linear stiff pungent teeth. ♄. F. Native of Persia. Branches at length glabrous towards the tops. Leaves an inch long, at length naked above, but clothed with floccose tomentum on both surfaces while young. Whorls about 10-flowered. Corolla purplish.

Elliptic-leaved Phlomis. Shrub.

12 P. lana'ta (Willd. enum. suppl. p. 41.) shrubby; branches divaricate, clothed with subfloccose wool; leaves small, ovate-roundish, very blunt, roundly cuneated at the base, much wrinkled, green above, and clothed with white wool beneath; bracteas ovate-lanceolate, obtuse, shorter than the calyxes, and are, as well as them, clothed with white wool; calycine teeth very short, obtuse, or stiffly mucronulate. ♄. H. Native of Calabria and Candia. P. parvifòlia, Presl. del. prag. p. 86. P. microphýlla, Sieb. in bot. zeit. 1823. 2. p. 598. Shrub divaricately much branched. Branches clothed with rusty wool. Whorls solitary on the branches, or twin and remote, 6-8-flowered. Corolla yellow; upper lip clothed with velvety tomentum.

Woolly Phlomis. Fl. June, July. Clt. 1696. Shrub 1 to 2 feet.

13 P. angustifòlia (Mill. dict. no. 2.) shrubby; branches clothed with floccose tomentum; leaves ovate or oblong, obtuse, truncate at the base, much wrinkled, canescent above, and clothed with white tomentum beneath; bracteas lanceolate, clothed with soft white tomentum, mutic; calyx clothed with white tomentum; calycine teeth truncate, mucronate, very short and stiff. ♄. F. Native among rocks in the desert of Sinai, Bove; and in the Grecian Archipelago. P. flavéscens, Mill. dict. no. 10. This species differs from *P. purpùrea*, in the stem being taller; in the calyxes being truncate, &c. Corolla cream-coloured, size of those of *P. purpùrea*.

Narrow-leaved Phlomis. Fl. June, Aug. Clt. 1596. Shrub.

14 P. fruticòsa (Lin. spec. p. 818.) shrubby; branches clothed with floccose tomentum; leaves ovate or oblong, roundly cuneated at the base, wrinkled, green above, and clothed with white tomentum beneath; whorls densely many-flowered; bracteas broad-ovate or ovate-lanceolate, acute, greenish, ciliated, villous; calyx villous, with truncate teeth, which end each in a subrecurved, or spreading, subulate, stiff acumen. ♄. H. Native of the region of the Mediterranean, in dry exposed places of mountains; as of Sicily, Abruzzo, Greece, Levant, &c. Sims, bot. mag. 1843. Sibth. et Smith, fl. græc. 6. p. 51. t. 568. P. ferruginea, Hortul. but not of Tenore nor Mill. P. latifòlia, Mill. dict. no 3.—Sabb. hort. rom. 3. t. 15. Shrub branched. Tomentum of branches usually yellowish. Leaves 2-3 inches long, quite entire, or more or less crenated, villous above. Whorls solitary or twin at the tops of the branches, 20-30-flowered. Corollas yellow or dusky yellow, showy. Appendages of upper filaments recurved.

Shrubby Phlomis, or Jerusalem Sage. Fl. June, July. Clt. 1596. Shrub 2 to 4 feet.

15 P. ferrugi'nea (Tenore, fl. nap. 2. p. 36. t. 57.) shrubby; branches clothed with loose floccose tomentum; leaves oblong-lanceolate, obtuse, crenulated, cordate at the base, much wrinkled, villous and green above, but clothed with loose floccose tomentum beneath; bracteas lanceolate, hispid; calyx villous, with a long-haired throat, and short stiff subulate teeth. ♄. H. Native of Lucania and Japygia, Tenore. Branches clothed with rusty purple loose wool. Leaves 2-3 inches long, green above, and canescent beneath. Whorls 18-20-flowered. Corollas yellow, densely tomentose outside. Appendages of upper filaments short, acute.

Var. β, Crética (Benth. lab. p. 627.) leaves lanately villous, canescent; bracteas linear-subulate. ♄. H. Native of Candia. P. Crética, Presl. del. prag. P. fruticòsa, Sieb. pl. cret. exs.

Rusty Phlomis. Fl. June, July. Clt. 1823. Shrub 2 to 3 feet.

16 P. visco'sa (Poir. dict. 5. p. 271.) shrubby; branches scarcely tomentose; leaves petiolate, ovate, obtuse, crenated, truncate or subcordate at the base, green above, and scarcely tomentose beneath; whorls many-flowered; bracteas lanceolate-linear, ciliated; calyx hispid, with truncate, subulately acuminated, stiff, rather spreading teeth, 2 of the teeth longer than the rest. ♄. H. Native of the Levant. P. virens, D. C. cat. hort. monsp. p. 182. Nearly allied to *P. ferruginea*; but the leaves are broader, greenish, and scarcely wrinkled; and the calyx is distinct. Leaves form of those of *P. fruticòsa*, rather villous above. Whorls about 10-flowered. Corollas yellow. villous outside.

Clammy Phlomis. Fl. June, July. Clt.? Shrub 2 to 3 feet.?

§ 4. Oxyphlòmis (from ὄξυς, *oxys*, sharp; and φλόμος, *phlomos*, the Greek name of Mullein; in reference to the very acute, stiff, sub-pungent bracteas.) Benth. lab. p. 628. *Herbs or under-shrubs. Whorls usually many-flowered, rarely so few as 6-flowered. Bracteas very acute, with stiff, rather pungent tops.*

17 P. glaucо'sa (D. Don, in bot. reg. t. 1300.) subfruticose; branches clothed with white floccose wool; leaves ovate-oblong, cordate at the base, greenish above, and much wrinkled, and clothed with floccose wool beneath; whorls densely many-flowered; bracteas linear, clothed with white wool, and are, as well as the calycine teeth, subulate, stiff, glabrous, and hooked at apex. ♄. F. Native of Egypt. Leaves with the auricles closed at the base, covered with canescent villi above. Whorls few, distant, large, 20-30-flowered. Corollas yellow, size of those of *P. Sàmia*.

Floccose Phlomis. Fl. July, Oct. Clt. 1828. Shrub 2 feet.

18 P. bi'color (Benth. lab. p. 629.) corolla deep yellow outside; lower lip purplish above; bracteas entire; calyxes mucro-

uate; mucrones blackish, glabrous, hooked. ♄. H. Native of Lybia, in the mountains of Cyrenaica Viviani. P. Sàmia, Sims, bot. mag. t. 1891. S. Sàmia, β, bicolor, Viv. fl. lib. spec. 30. t. 15. f. 2. Habit almost of *P. fruticòsa*. Bracteas not joined at the base, as in *P. Sàmia*. Calyxes and bracteas hairy, not woolly as represented in Viviani's figure.

Two-coloured-flowered Phlomis. Fl. June, July. Clt. 1714. Pl. 2 to 3 feet.

19 P. Russellia'na (Lag. mss. Benth. lab. p. 629.) herbaceous; branches tall, almost simple; radical leaves very ample, ovate, deeply cordate at the base, and are, as well as the cauline leaves, wrinkled, green above, and canescent from tomentum beneath; whorls large, many-flowered; bracteas linear, very acute, and are, as well as the calyxes, green and pubescent; calyx truncate, with long stiff subulate spreading teeth. ♃. H. Native of Syria, near Aleppo. P. hérba-vénti, var. Russ. nat. hist. alep. 2. p. 269. t. 16. P. lunarifòlia, β, Russelliàna, Sims, bot. mag. 2542. Branches clothed with loose white tomentum. Leaves 6-8 inches long. Whorls 40-50-flowered. Corollas yellow or brownish? tomentose outside. Appendages of superior filaments subulate.

Russell's Phlomis. Fl. June, July. Clt. 1821. Pl. 3 to 5 feet.

20 P. lunariifo'lia (Sibth. et Smith, prod. fl. græc. p. 414.) stems herbaceous, tall, pubescent; leaves ovate, wrinkled above, canescently tomentose beneath; whorls many-flowered; bracteas broad-lanceolate or oblong, acute, subciliated, and are, as well as the calyxes, green; calyx truncate at apex, rather membranous, with subulate stiff pungent teeth. ♃. H. Native of the Peloponnesus, in various places; and on Mount Athos. Bracteas 3 times as broad as those of *P. Russelliàna*. Corollas yellow.

Honesty-leaved Phlomis. Fl. June, July. Clt. 1818. Pl. 3 to 4 feet.

21 P. Sa'mia (Lin. spec. 819.) stems herbaceous, tall, pubescent; leaves ovate, wrinkled above, and clothed with canescent tomentum beneath; whorls many-flowered; bracteas linear, very acute, pungent, and are, as well as the calyxes, green and pubescent; calyx elongated, plicate, with lanceolate-subulate stiff pungent teeth. ♃. H. Native of Eubœa, Samos, Ceramania, &c. Vent. choix. t. 4. Sibth. et Smith, fl. græc. 6. p. 52. t. 564. Allied to *P. Russelliàna*; but the stems are less tomentose, the whorls sometimes 10-15-flowered. Calyx 9-10 lines long, pubescent and clammy. Corollas purple. "Leaves ovate-cordate, crenated," ex Desf.

Samos Phlomis. Fl. June, July. Clt. 1714. Pl. 2 to 3 feet.

22 P. ri'gida (Labill. icon. pl. syr. rar. 3. p. 15. t. 10.) herbaceous; leaves oblong-lanceolate, wrinkled, clothed with subfloccose tomentum, having the nerves and petioles pilose; whorls many-flowered; bracteas subulate, stiff, pungent; calyx hairy, with subulate stiff teeth. ♃. H. Native of Syria, near Damascus, in sandy places. Stems woolly from short hairs, intermixed with long hairs. Leaves obtuse, crenulated, cordate at the base, but the cauline ones are roundly cuneated at the base. Corollas yellow, almost like those of *P. Lychnitis*. Filaments not appendiculate, ex Labill.

Stiff Phlomis. Pl. 2 feet.

23 P. Cashmeria'na (Royle, ex Benth. in Hook. bot. misc. 3. p. 382, lab. p. 630.) herbaceous, erect: stem densely clothed with floccose tomentum; leaves ovate-lanceolate, obtuse, crenated towards the apex, broadly rounded at the base, wrinkled, pubescent or villous above, and clothed with dense white tomentum beneath; bracteas subulate, ciliated, longer than the calyxes; calyx clothed with floccose wool, with subulate stiff spreading teeth. ♃. H. Native in the valley of Cashmere, Royle. Corollas larger than in *P. hérba-vénti* and *P. púngens*, to which species it comes nearest. Galea densely villous.

Cashmere Phlomis. Pl. 1 to 1½ foot.?

24 P. herba-ve'nti (Lin. spec. 819.) herbaceous, erect, divaricately much branched; branches beset with long hairs; leaves oblong-lanceolate, crenated, rounded at the base, coriaceous, green on both surfaces, or canescent beneath, always shining and rather scabrous above; bracteas subulate, ciliated, longer than the calyxes; calyx hairy, with subulate stiff rather spreading teeth. ♃. H. Native of the region of the Mediterranean, in dry places; as of Spain, Sicily, Italy, Tauria. Sims, bot. mag. t. 2449. Sibth. et Smith, fl. græc. t. 564.—Sabb. hort. rom. 3. t. 17. Branches green or purplish. Leaves often 6-8 inches long: floral ones sessile, all much exceeding the whorls. Whorls 10-20-flowered. Corollas purplish-violet, tomentose outside. Appendages of upper filaments acute, sub-recurved. In autumn, after the substance of the leaves has decayed, the veins remain perfect, showing the complete skeletons of them; hence the specific name. We believe this is also the case in *P. púngens*.

Var. β, tomentòsa (Benth. lab. p. 631.) leaves tomentose beneath.

Wind-herb Phlomis. Fl. July, Sept. Clt. 1596. Pl. 1 to 1½ foot.

25 P. pu'ngens (Willd. spec. 3. p. 121.) herbaceous, divaricately branched; branches clothed with hoary tomentum; leaves on short petioles, ovate-lanceolate, quite entire or serrated, rounded at the base, shining and green above, and rather scabrous, but clothed with hoary tomentum beneath; bracteas subulate, ciliated, rather longer than the calyxes; calyx hairy, with subulate stiff rather spreading teeth. ♃. H. Native of the south-east of Europe, and west of Asia, in dry mountain places; as of Galicia, Greece, Tauria, Caucasus, Persia, &c. Sweet, fl. gard. n. s. t. 38. Nearly allied to *P. hérba-vénti*; but is distinguished from it in the tomentosely pubescent, not pilose, stem; in its narrower, quite entire, or serrated, not crenated, leaves, which are constantly tomentose beneath; and the whorls are more numerous, usually 6-10-flowered, &c. Corolla purplish-violet.

Pungent Phlomis. Fl. July. Clt. 1820. Pl. 1½ to 2 feet.

Sect. II. Phlomidópsis (from φλόμος, *phlomos*, the Greek name of Mullien; and ὄψις, *opsis*, resemblance; so called because it has been considered a distinct genus allied to *Phlomis* by some authors.) Benth. lab. p. 631. *Phlomidópsis*, *Link*, handb. p. 179. Phlomoides, *Mœnch*, meth. p. 403. Galea of corolla erectish, pilose, bearded inside and on the margins with long pili; middle lobe of lower lip hardly larger than the lateral ones.—Green, hairy, or pilose herbs, rarely rather woolly. Whorls dense. Bracteas adpressed. Corollas purple or white.

26 P. brevifo'lia (Benth. in Wall. pl. rar. 1. p. 62.) herbaceous, erect, nearly glabrous; leaves petiolate, broad-ovate, acuminated, crenated, truncate or subcordate at the base, rather hispid above, and glabrous beneath; bracteas linear, and are, as well as the calyxes, nearly glabrous; galea of corolla pubescent, erect. ♃. H. Native of Nipaul, on Gossainsthan, Wall. Leaves all petiolate. Whorls 15-20-flowered. Calyx truncate, with very short emarginate or acuminated teeth. Filaments scarcely drawn out at the base. Corolla hardly a half again as long as the calyx, white.?

Short-flowered Phlomis. Pl.

27 P. macrophy'lla (Wall. pl. rar. asiat. 1. p. 62. Benth. lab. p. 631.) herbaceous, tall, nearly glabrous. Leaves on long petioles, very ample, basisately cordate; floral leaves ovate, narrowed at the base; bracteas subulate, and are, as well as the

calyxes, a little ciliated; galea of corolla erect, very pilose inside. ♃. H. Native along with the preceding. Herb many feet high, branched. Allied to *P. tuberòsa*. Branches furnished with short reflexed rufescent pili at top. Petioles ciliated with long rufous hairs. Leaves 6 inches long, hispid above, and tomentose beneath. Whorls numerous, remote, 30-40-flowered. Corollas white.

Long-leaved Phlomis. Pl. 3 to 6 feet.

28 P. TUBEROSA (Lin. spec. p. 819.) herbaceous, tall, nearly glabrous; leaves ample, ovate, obtuse, crenated, deeply cordate at the base: floral leaves oblong-lanceolate; bracteas subulate, and are, as well as the calyxes, subciliated; galea of corolla erectish, very pilose inside. ♃. H. Native of the East of Europe and Middle Asia, in exposed fields; as of Bohemia, Moravia, Austria, Hungary, Podolia, South of Russia, Siberia, Tauria, Caucasus, &c. Sims. bot. mag. t. 1555. Hall. comm. gratt. 1751. t. 11. Phlomoides tuberòsa, Moench, meth. p. 404. Phlomidòpsis tuberòsus, Link, handb. p. 480. Root tuberous in this, and probably in many other species of the present section. Branches and stems purplish. Lower leaves ½ foot long; floral ones 2-3 inches long, usually hastately dilated at the base or a little cut, all green and glabrous. Whorls remote, 30-40-flowered. Corollas purple; galea crenulated. Appendages of upper filaments recurved. Several varieties of this species occur in the gardens.

Tuberous-rooted Phlomis. Fl. June, July. Clt. 1759. Pl. 3 to 5 feet. 6

29 P. AGRARIA (Bunge, in Ledeb. fl. alt. 3. p. 411.) stem herbaceous, simple or a little branched, hispid; lower leaves on long petioles, hastately cordate; upper floral leaves shorter than the calyxes; bracteas subulate, and are, as well as the calyxes ciliated and tomentosely pubescent; galea of corolla erect, very pilose inside. ♃. H. Native of Altaia, in cultivated fields near Semipalatinsk. Led. fl. ross. ait ill. t. 364. Stems many, generally simple. Leaves deeply toothed, pubescent, green above, and subcanescent beneath; floral leaves sessile. Whorls about 10-flowered. Corollas purplish, almost similar to those of *P. tuberòsa*. Appendages of upper filaments long, subulate.

Field Phlomis. Fl. June, Aug. Clt. 1830. Pl. 1½ to 3 foot.

30 P. ALPINA (Pall. in act. petrop. 1779. 2. p. 265. t. 13.) stems herbaceous, simple, hispid; radical leaves very ample, deeply cordate; cauline leaves ovate-lanceolate: upper floral ones linear-lanceolate, elongated, quite entire, soft; bracteas subulate, and are, as well as the calyxes, hairy; galea of corolla very pilose, erect. ♃. H. Native of the Altaian mountains, in subalpine shady places. Stems numerous, green. Radical leaves 8 inches long and 6 broad, rather hispid on both surfaces. Whorls 20-30-flowered. Corollas purple, similar to those of *P. tuberòsa*.

Alpine Phlomis. Fl. June, Sept. Clt. 1802. Pl. 1 to 1½ foot.

31 P. BRACTEOSA (Royle, ex Benth. in Hook. bot. misc. 3. p. 383. lab. p. 633.) herbaceous, tall, erect, a little branched; stems obversely villous; leaves petiolate, ovate, obtuse, coarsely crenated, broadly cordate at the base, wrinkled, clothed with adpressed pili above and pale short tomentum beneath: floral leaves almost similar to the rest; bracteas oblong; outer ones large, foliaceous; calycine teeth truncate, subulate, acuminated at top; galea of corolla very pilose. ♃. F. Native of the Himalaya, on Mount Choor, and at Kidarkonta, Royle; Simla, Countess of Dalhousie. Outer bracteas almost similar to the leaves, an inch long; sometimes oblong, quite entire, all green like the leaves. Filaments exappendiculate. Root probably tuberous.

Bracteate Phlomis. Pl. 1 to 1½ foot.

32 P. LAMIIFOLIA (Royle, ex Benth. in Hook. bot. misc. 3. p. 383. lab. p. 633.) herbaceous, humble, simple; stems obversely villous; leaves petiolate, broad-ovate, crenated, deeply cordate at the base, wrinkled, villous on both surfaces, pale beneath: floral leaves oblong-lanceolate; bracteas lanceolate or subulate, ciliated, equalling the calyxes; calyx nearly glabrous, with truncate subulately acuminated teeth; galea of corolla villous. ♃. F. Native of Cashmere, on Mount Choor, and in Mussooree, Royle; and the mountains of Kamaon, Wall. P. latifòlia, Royle, ex Benth. in Hook. bot. misc. 3. p. 383. Upper floral leaves scarcely exceeding the flowers. Whorls 15-20-flowered. Corollas like those of *P. tuberòsa*. Filaments exappendiculate. Root probably tuberous.

Archangel-leaved Phlomis. Pl. ½ to 1 foot.

33 P. SIMPLEX (Royle, ex Benth. in Hook. bot. misc. 3. p. 382. lab. p. 634.) herbaceous, humble, erect, nearly simple; stem obversely pilose; leaves petiolate, broad-ovate, obtuse, crenated, cordate at the base, wrinkled, green on both surfaces, villous: floral leaves nearly sessile, oblong, narrowed at both ends; bracteas linear, ciliated, equalling the calyxes; calyx membranous, rather coloured, ciliated at apex, with truncate subulately acuminated teeth; galea of corolla very pilose. ♃. F. Native of Cashmere, on the mountains of Kamaon, and at Peer Punjale, Royle. This species differs from *P. lamiifòlia* in the leaves being narrower, more villous, in the corollas being larger, and in the tube being exserted.

Simple Phlomis. Pl. ½ to 1 foot.?

34 P. CORDATA (Royle, ex Benth. l. c.) herbaceous, humble, erect, nearly simple; stem obversely pilose; leaves on long petioles, ovate-roundish, obtuse, crenated, cordate at the base, wrinkled, densely clothed with silky villi on both surfaces: floral leaves oblong-lanceolate; bracteas linear, subulate, rather shorter than the calyxes, villous; calyx rather villous, with roundish subulately acuminated teeth; galea of corolla very pilose. ♃. F. Native of Cashmere, on the mountains of Kamaon, Royle. This differs from the two preceding species in the leaves being densely clothed with soft silky villi on both surfaces, but is perhaps only a variety of one of them.

Cordate-leaved Phlomis. Pl. ½ to 1 foot.?

35 P. RUCOSA (Benth. in Wall. pl. rar. 1. p. 69. lab. p. 634.) suffruticose, erect, simple, rather fleshy, finely tomentose; leaves on long petioles, ovate-oblong, acute, serrated, narrowed or rounded at the base; whorls much shorter than the petioles: bracteas subulate, and are, as well as the calyxes glabrous; calycine teeth lanceolate-subulate; corollas nearly glabrous. ♄. S. Native of Silhet, among the mountains. Different in habit from the other species of this section, but it is allied in characters to *P. breviflòra*. Leaves all petiolate, green, rather fleshy, nearly glabrous, 4-6 inches long. Corollas yellowish, ex Wall. similar to those of *P. breviflòra*. Stamens a little exserted. Filaments all naked at the base.

Wrinkled-leaved Phlomis. Shrub.

N.B. P. condensàta, Mart. ex. Steud. nom. and P. scariòsa, Presl. ex Steud. nom. are only known by name.

Cult. All the species of *Phlomis* prefer a light dry soil, in which even the more tender kinds will endure our winters. The shrubby kinds are readily increased by young cuttings in spring; and the herbaceous perennial species by division and seeds. Those marked frame should be protected in winter from frosts. Being all ornamental, they are worth cultivating in every collection.

XCIV. NOTOCHÆTE (from *νωτος, notos*, the back; and *χαιτη, chaite*, a bristle or beard; in reference to the nerves of the calyx being drawn out into stiff hooked bristles under the apex of the calyx.) Benth. in Wall. pl. rar. 1. p. 68. lab. p. 635.

LIN. SYST. *Didynàmia, Gymnospérmia*. Calyx tubular, equal,

membranaceous at apex, shortly 5-toothed, 5-nerved; nerves drawn out into subulate, stiff, uncinately revolute awns under the top of the calyx. Corolla with an inclosed, exannulate tube; upper lip galeate, very pilose; lower lip spreading, somewhat equally trifid. Stamens 4, ascending, didynamous; lower 2 the longest. Filaments naked at the base; anthers approximate by pairs, 2-celled; cells at length divaricate. Lobes of style short, equal. Achenia dry, truncate at apex, naked. This genus is allied to section *A. Phlomidópsis* of *Phlòmis*, and particularly to *Phlòmis breviflòra*, but differs in the structure of the calyx and that of the anthers.

1 N. ramòsa (Benth. l. c.) ♃.? F. Native of Nipaul, Wall. Stems herbaceous, branched, erect, pubescent. Leaves on long petioles, 3-5 inches long, ovate, acuminated, serrately crenated, obliquely and roundly cuneated at the base, nerved, green on both surfaces and nearly glabrous, but tomentose beneath while young. Whorls remote, globose, densely many-flowered, much shorter than the petioles. Bracteas subulate, stiff, revolute, exceeding the corolla. Corollas small, purplish.

Hooked-calyxed Notochaite. Pl. 2 feet.

Cult. For culture and propagation, see *Phlòmis*, p. 854.

XCV. EREMO'STACHYS (from *ερημος, eremos*, deserted; and *σταχυς, stachys*, a spike; in reference to the species being inhabitants of desert places, and from the flowers growing in verticillate spikes.) Bunge, in Ledeb. fl. alt. 2. p. 414. Benth. lab. p. 636.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx amply tubular, subcampanulate or funnel-shaped, with 5 spinose or mucrone-formed teeth; limb large and membranaceous. Corolla with an inclosed tube, which is annulate or naked inside, and a gaping bilabiate limb; upper lip elongated, galeate, somewhat compressed, attenuated at the base, pubescent outside, and bearded inside and on the margins; lower lip spreading, trifid, the lobes all rounded, but the middle one is the broadest. Stamens 4, ascending, didynamous, the lower 2 the longest. Superior filaments thickened into an obtuse or fringed appendage at the base; anthers approximate by pairs, 2-celled: cells divaricate. Style bifid at top; lobes subulate, equal, or the upper one is scarcely a half shorter than the lower. Achenia dry, densely pilose at apex.—Rather branched herbs. Radical leaves larger than the cauline ones, entire or dissected. Whorls many-flowered, usually approximate at the tops of stem or branches. Bracteas adpressed. Corollas usually yellow or cream-coloured, rarely purple.

1 E. laciniàta (Bunge, in Led. fl. alt. 2. p. 416.) leaves pinnate; leaflets oblong-lanceolate or linear, deeply pinnatifid; calyx amply tubular, campanulate, hardly dilated at apex. ♃. H. Native of the Levant, Eastern Caucasus, and Siberia, Persia, &c. Phlòmis laciniàta, Lin. spec. 819. Sweet fl. gard. 1. t. 24. Stems nearly simple. Radical leaves ½ foot long: floral leaves scarcely exceeding the calyxes. Petioles, stems, and nerves of leaves clothed with loose wool. Whorls 10-20-flowered, upper ones approximate. Calycine teeth spinosely mucronate. Corollas purplish; tube annulate. Appendages of upper filaments obtuse, nearly entire. Lobes of style unequal.

Jagged-leaved Eremostachys. Fl. July. Clt. 1731. Pl. 1 to 1½ foot.

2 E. superbà (Royle, ex Benth. in Hook. bot. misc. 3. p. 281. lab. p. 637.) radical leaves large, pinnate; leaflets 2-3 pairs: lower ones petiolulate: outer one very long; all broad and coarsely crenate-lobed, green on both surfaces: floral leaves ovate, acute, almost quite entire; calyx amply tubular, scarcely dilated at apex. ♃. H. Native of the East Indies, at Kheere Pass, and Deyra Dhoon, Royle. Royle, ill. pl. himal. t. 74. Radical leaves 1½ foot long, the ultimate leaflet 10 inches long; petioles and petiolates villous; but the limb is almost glabrous. Stems woolly towards the top. Whorls 6-flowered, disposed in dense racemes. Calycine teeth ending in spiny mucrones. Corollas almost as in *E. laciniàta*, but yellow; tube exannulate. Appendages of upper filaments obtuse, scarcely fringed. Lobes of style equal.

Superb Eremostachys. Pl. 1 to 2 feet.

3 E. phlomoi'des (Bunge, in Ledeb. fl. alt. 1. p. 414. fl. ross. alt. ill. t. 122.) leaves ovate, toothed; calyx tubular, scarcely dilated at apex, with spreading spinose teeth. ♃. H. Native of Altaia, in saltish places, adjacent to the Arkaul and Dolenkara mountains. Stems branched, hairy from long soft white pili, as well as calyxes and bracteas. Radical leaves petiolate, obtuse; and floral leaves sessile, acute, spiny-toothed, narrowed at the base. Whorls 6-flowered, distinct. Bracteas subulate, spinose. Corolla pale yellow, one half smaller than in *E. laciniàta*. Appendages of upper filaments short, fringed.

Phlomis-like Eremostachys. Pl. 1 foot.

4 E. tuberòsa (Bunge, in Ledeb. fl. alt. 2. p. 415.) leaves ovate, toothed; calyx glabrous, tubular at the base, with a membranaceous rather spreading limb, which is shorter than the tube, and ending in 5 spinose teeth. ♃. H. Native of Siberia, at Lake Inderio. Molucélla tuberòsa, Pall. itin. 3. append. no. 101. t. 1. Leaves clothed with loose wool, and the petioles with dense wool, the rest of the plant glabrous; radical leaves petiolate; cauline ones sessile. Whorls 6-flowered, rather distant. Corolla cream-coloured, about twice as long as the calyx. Appendages of upper filaments, shortly fringed.

Tuberous-rooted Eremostachys. Pl. ½ to 1 foot.

5 E. molucelloi'des (Bunge, in Ledeb. fl. alt. 2. p. 416.) leaves ovate, toothed; base of calyx tubular, pubescent, and with the limb large and membranaceously dilated, furnished with 5 short mucrones. ♃. H. Native of the Kirghisean Steppe, in dry sandy places. Ledeb. fl. ross. alt. ill. t. 437. Phlòmis lanigera, Sievers in Pall. beytr. 7. ex Bunge. Root thick, tuberous. Stems usually almost simple, clothed with white wool at the knees and base, the rest with spreading white hairs. Radical leaves wrinkled, rather hispid above, and clothed with villous wool beneath. Whorls 6-flowered. Corolla cream-coloured, like that of *E. tuberòsa*. Genitals and achenia like those of *E. tuberòsa*.

Molucella-like Eremostachys. Pl. 1 to 2 feet.

Cult. For culture and propagation, see *Phlòmis*, p. 854.

XCVI. ERIOPHYTON (from *εριον, erion*, wool; and *φυτον, phyton*, a plant; in allusion to the plant, which is clothed with long white wool.) Benth. in Wall. pl. rar. asiat. 1. p. 63. lab. p. 638.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx membranous, amply campanulate, equal, 5-toothed. Corolla with an inclosed tube and a bilabiate limb; upper lip large, galeate, compressed, incumbent; lower lip small, trifid, with rounded lobes. Stamens 4, ascending, didynamous, the lower ones the longest; superior filaments appendiculately thickened at the base; anthers approximate by pairs, 2-celled: cells divaricate. Style about equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia dry, naked. This genus is nearly allied to *Eremóstachys*, but differs in the form of the calyx and corolla, as well as in habit, which is nearly that of *Phlòmis*.

1 E. Wallichia'num (Benth. in Wall. l. c.) ♃. F. Native of Nipaul, on Gosainsthun. Wall. Stems rising from a tuberous root, ? simple. Lower leaves small; superior and floral ones rhomboid or orbicular, subcuneated at base, sessile, crenated, very soft. Whorls 6-flowered. Calycine teeth rather

spiny at top. Corollas yellow; galea large, orbicular. The upper parts of the stems, leaves, calyxes, and galea of corolla clothed with very long loose white wool.

Wallich's Eriophytum. Pl.

Cult. For culture and propagation, see *Phlòmis*, p. 854.

XCVII. MOLUCE'LLA (a dim. from Molucca Islands, of which one of the species was supposed to be a native.) Lin. gen. no. 724. Schreb. gen. 979. Gærtn. fruct. 1. p. 320. t. 66. Juss. gen. p. 115. Benth. lab. p. 639.—Molùcca, Tourn. Mœnch.—Chasmònia, Presl.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx obliquely campanulate at the base, striated; limb ample, dilated, reticulately veined, with 5-10 mucrones or spines. Corolla with an inclosed tube, which is obliquely annulate inside; limb bilabiate; upper lip erect, entire or emarginately bifid; lateral lobes of lower lip erectish; middle lobe spreading broad, obcordate. Stamens 4, didynamous, ascending, lower ones the longest; filaments naked at the base; anthers laterally pedicellate at the tops of the filaments, 2 celled: cells almost distinct, divaricate. Style about equally bifid at apex; stigmas nearly terminal. Achenia dry, acutely triquetrous, truncate at apex.—Annual quite glabrous herbs. Leaves petiolate, deeply crenated or cut; floral leaves similar to the cauline ones. Whorls axillary, many-flowered. Bracteas subulate, spinose.

1 M. læ'vis (Lin. spec. 821.) limb of calyx large, membranaceous, subpentagonal, with 5 very short mucrones or teeth. ☉. H. Native of Syria and Palestine. Sibth. et Smith, fl. græc. 6. p. 53. t. 566. Sims, bot. mag. t. 1852. Molùcca læ'vis. Riv. mon. t. 64. Mœnch, meth. p. 404.—Sabb. hort. rom. 3. t. 45. Plant quite glabrous in every part, smooth. Stem a little branched, floriferous almost from the base. Leaves on long petioles, roundish, coarsely crenated, rounded or cuneated at the base. Whorls usually 6-flowered, distant. Corolla white, shorter than the limb of the calyx, furnished with an almost complete membranaceous not pilose ring inside the throat.

Smooth Molucca Balm. Fl. July, Aug. Clt. 1570. Pl. 1 to 1½ foot.

2 M. spinòsa (Lin. spec. 821.) limb of calyx short, coriaceous, sub-bilabiate, with 8 spines. ☉. H. Native of the region of the Mediterranean; as of Sicily, Naples, Palestine, Mount Parnassus, &c. Sibth. et Smith, fl. græc. 6. p. 54. t. 567. Lam. ill. t. 510.—Sabb. hort. rom. 3. t. 46. Chasmònia incisa, Presl. fl. sic. 37. Bot. reg. 1244. M. armàta, Sieb. pl. exs. Molùcca spinòsa, Mœnch, meth. p. 404. Habit of *M. læ'vis*, but more rigid. Leaves smaller, with mucronulate teeth. Inflorescence and bracteas like those of *M. læ'vis*. Corolla exceeding the calyx a little, furnished with a pilose ring inside, cream-coloured.

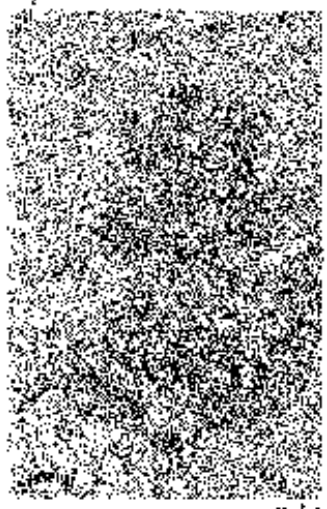
Spiny Molucca Balm. Fl. July, Aug. Clt. 1596. Pl. 1½ to 2 feet.

Cult. The seeds of these plants should be reared on a hot-bed early in autumn or spring; and when the plants are of sufficient size they should be planted in separate pots, and kept under glass, until the middle of May, when they may be planted out of doors in any warm dry situation, where they will flower and seed freely; for if the seeds are sown out in the open ground in spring, the plants in this case come into flower so late that they seldom, if ever, ripen seed.

XCVIII. HOLMSKIO'LDIA (named in memory of Theodore Holmskiold; author of Coriphæi clavarias Ramarius complectentes, 1 vol. fol.: Copenhagen, 1790, and other works.) Retz, obs. 6. p. 31. Benth. lab. p. 642. Hastingia, Smith, exot. bot. 2. t. 80.—Platùnium, Juss. ann. mus. 7. p. 76.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx with a very short tube and a large subrotately campanulate, membranaceous, veiny, almost entire limb. Corolla with an elongated, incurved tube, which is naked inside, a subdilated throat, and a sub-bilabiate limb; upper lip bifid, with erectly spreading segments; lateral segments of the lower lip small, reflexed; middle one ovate, spreading. Stamens 4, ascending, didynamous, lower ones the longest and exserted; upper filaments dilated a little at the base; anthers 2-celled: cells parallel. Style nearly entire, or the upper lobe is very short, stigmatiferous at apex. Ovarium bipartite, with deeply bifid, scarcely bipartite lobes. Achenia rugose, rather fleshy.? Shrub with the habit of *Verbenàceæ*. Allied to *Molucélla* by the calyx; and to *Melissíneæ* in the corolla; and to the tribes *Prasièæ* and *Ajugoìdeæ*.

1 H. sanguínea (Retz. l. c.) ♄. S. Native of Hindostan and Silhet, &c. Hastingia coccínea, Smith, l. c. Platùnium rùbrum, Juss. l. c. Shrub with divaricate, tetragonal, glabrous, often tubercled branches. Leaves petiolate, ovate, acuminated, hardly toothed, somewhat truncate at the base, 2-4 inches long, glabrous, green on both surfaces. Racemules axillary, scarcely longer than the petioles, constantly composed of a few 2-4-flowered whorls. Calyx red or blood coloured. Corolla red. Genitals exserted. (fig. 87.)



Bloody-calyxed Holmskioldia. Fl.? Clt. 1796. Shrub.

Cult. Any light rich earth, or a mixture of equal parts of loam, sand, and peat, will suit this shrub; and young cuttings will be readily rooted in the same kind of soil in heat, with a hand-glass placed over them.

XCIX. HYMENOCRA'TER (from ὑμὴν, *hymen*, a membrane; and κρατὴρ, *krater*, a cup; in allusion to the large membranous calyx.) Fisch. et Meyer, ind. sem. hort. petrop. 1835. p. 39.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx with a short 13-nerved tube, and a large membranous spreading 5-cleft limb; lobes ovate. Corolla with an exserted tube and a sub-bilabiate limb; upper lip bipartite; lower lip tripartite, having the middle segment large and emarginate. Stamens inclosed, didynamous, ascending under the upper lip: cells of anthers divaricate. Stigma bilabiate. Achenia dry, subovate, glabrous, tubercled. This genus comes near to *Róylea* and *Holmskiòldia*, but differs from the first in the quinquefid limb of the calyx, bipartite upper lip of corolla, as well as in the divaricate cells of anthers; and from the latter in the spreading limb of calyx, exserted corolla, bipartite upper lip and tubercled achenia; and from *Molucélla* in the form of the corolla.

1 H. bituminòsus (Fisch. et Meyer, l. c.) ♄. F. Native of the North of Persia, on arid hills. A humble glabrous shrub, having leaves much like those of *Népeta Pannónica*, viscid, and smelling of bitumen. Cymes axillary, 5-7-flowered, crowded. Throat of calyx closed by villi. Corollas violaceous, painted with white lines. Achenia black.

Bituminous Hymenocrater. Shrub humble.

Cult. For culture and propagation, see *Phlòmis*, p. 854.

C. ACHYROSPE'RMUM (from ἄχυρον, *achyron*, chaff; and σπέρμα, *sperma*, a seed; so called because the achenia are

crowned by a paleaceous arillus.) Blum. bijdr. p. 840. Benth. lab. p. 643.

Lin. syst. *Didynámia, Gymnospérmia.* Calyx larger than the corolla, sub-bilabiate; upper lip erect, trifid; lower one a little shorter, spreading, bifid. Corolla longer than the calyx, tubular; limb bilabiate; upper lip short, erect, emarginate; lower lip semitrifid, the middle lobe large and concave. Stamens 4, nearly equal, ascending; anthers 1-celled. Achenia 4, inclosed in the permanent calyx, crowned by a paleaceous aril above. —Herbs with opposite toothed leaves, which are clothed with soft pubescence. Flowers verticillately spicate, terminal.

1 A. densiflórum (Blum. bijdr. p. 841.) spike cylindrical, dense-flowered; bracteas many-flowered; leaves obovate-oblong, acute, quite entire at the base. ♃.? S. Native of Java, on the edges of rivulets about Linga Jattie in the province of Cheribon.

Dense-flowered Achyrospermum. Pl. ½ to 1 foot.

2 A. rhlomoídes (Blum. bijdr. 841.) spike loose; bracteas 1-flowered, biglandular at the base inside; leaves obovate, obtuse, quite entire at the base. ♃.? S. Native of Java, in the higher woods, in humid places on Mount Burangrang.

Phlomis-like Achyrospermum. Pl. ½ to 1 foot.?

3 A. fruticósum (Benth. lab. p. 643.) shrubby, with pubescent branches; leaves ovate, obtuse, broadly crenated, rounded at the base, minutely glandular beneath, on cuneated winged petioles; whorls 6-flowered, disposed in loose terminal spikes. ♄. S. Native of Madagascar, Lyall, Bojer. Siphotáxis rósea. Bojer, mss. Ovarium densely beset with pubescent scales at apex. Calyx pubescent, with an oblique 5-toothed mouth. Corolla of *Holmskiöldia*, twice as long as the calyx, of a splendent rose colour.

Shrubby Achyrospermum. Shrub.

Cult. For culture and propagation, see *Holmskiöldia*, p. 856.

CI. COLQUHOUNIA (named in honour of Sir Robert Colquhoun, Bart., resident at Kamaon.) Wall. in Lin. trans. 13. p. 603. tent. fl. nep. 1. p. 13-14. Benth. lab. p. 644.

Lin. syst. *Didynámia, Gymnospérmia.* Calyx tubularly campanulate, 10-nerved, subincurved, almost equally 5-toothed, and having the throat naked inside. Corolla with an exserted incurved tube, which is naked inside, a dilated throat, and a bilabiate limb; upper lip erect, entire, flattish; lower one rather spreading, with 2 short ovate entire lobes. Stamens 4, ascending, didynamous, lower ones the longest; filaments naked at the base; anthers approximate, 2-celled: cells at length divaricate. Style about equally bifid at top; lobes subulate, stigmatiferous at apex. Achenia oblong, dry, smooth, drawn out into a membrane at top.—Twining or scandent, usually tomentose, not pilose shrubs. Whorls loose, axillary, or approximating into a terminal spike. Bracteas minute. Corollas scarlet.

1 C. coccínea (Wall. l. c. tent. fl. nap. 1. p. 13. t. 6.) leaves nearly glabrous, roughish, canescent from fine tomentum while young, as well as the calyxes; calycine teeth ovate, obtuse; upper lip of corolla ovate. ♄. ⌒ G. Native of Nipaul. Hastingia scándens, Roxb.? Holmskiöldia scándens, Sweet.? Leaves ovate, acuminated, 3-4 inches long. Whorls few-flowered, approximating into a spike, which is leafy at the base, and sometimes disposed in short axillary racemules. Calyxes tomentose. Corolla scarlet, twice the length of the calyx.

Var. β, *parviflóra* (Benth. lab. p. 644.) young leaves and calyxes hardly tomentose. ♄. ⌒ S. Native of Gosainsthan.

Scarlet-flowered Colquhounia. Shrub twining.

2 C. vestíta (Wall. tent. fl. nap. 1. p. 14. pl. asiat. rar. 3. p. 43. t. 267.) under surfaces of leaves, stems, and calyxes clothed with white tomentum; calycine teeth ovate, obtuse; upper lip of corolla ovate. ♄. ⌒ G. Native of Kamaon, Wall. Corollas a little smaller than those of *C. coccínea*, but the habit is similar.

Clothed Colquhounia. Shrub twining.

3 C. elégans (Wall. pl. rar. asiat. 1. p. 65, and 3. p. 43. t. 268.) stems, leaves, and calyxes clothed with velvety pubescence; calycine teeth broad-lanceolate, acutish; upper lip of corolla oblong. ♄. ⌒ S. Native of Ava, on Mount Taong Dong. This differs from both the preceding by the calyx being one half smaller, in the corolla being more exserted, with a wider throat, and in the colour being orange, dotted with blood red, not scarlet.

Elegant Colquhounia. Shrub twining.

Cult. These elegant and curious shrubs are well fitted for ornamenting rafters in greenhouses or stoves. A light rich soil will answer them well, or one composed of equal parts of loam, sand, and peat; and young cuttings will strike root readily in the same kind of earth under a hand-glass in a little bottom heat.

Tribe X.

PRASIEÆ (the genera contained in this tribe agree with *Prásium* in the characters given below.) Benth. lab. p. 646. Calyx nearly equal. Corolla bilabiate. Stamens 4, ascending, didynamous; lower ones the longest. Achenia fleshy, rather baccate.

CII. GOMPHOSTE'MMA (from γομφος, *gomphos*, a club; and στεμμα, *stemma*, a crown; in reference to the tube of corolla being inflated above the middle.) Wall. pl. rar. asiat. 2. p. 12. Benth. lab. p. 646.

Lin. syst. *Didynámia, Gymnospérmia.* Calyx ovate-campanulate or tubular, nearly equal, 5-toothed, with the throat naked inside. Corolla with a straight usually exserted tube, which is exannulate inside, and inflated above the middle, bilabiate; lips nearly equal; upper one erect, entire, arched; lower lip spreading trifid. Stamens 4, ascending under the upper lip, lower ones the longest. Anthers approximate by pairs; cells parallel, transverse. Style about equally bifid at top, with subulate lobes; stigmas minute. Achenia fleshy.—Perennial herbs with usually simple erect stems, or with the stems procumbent and rooting at the base. Leaves generally ample, thick, villous or tomentose. Flowers rather large. Whorls sometimes spicate, and sometimes axillary and remote.

1 G. strobilínum (Wall. l. c. Benth. lab. p. 647.) stem erect; leaves elliptic-ovate, wrinkled, hispid above, and tomentose beneath; whorls crowded into a terminal spike or the lower ones are remote and axillary; floral leaves bractea-formed, broad ovate, exceeding the calyxes; calyx campanulate, clothed with soft tomentum, with ovate-lanceolate teeth; corolla about 3 times as long as the calyx. ♃. S. Native of the Burman Empire, at Meong, Prome, and on Mount Taong Dong. Stems tomentose, erect. Cauline leaves 6-10 inches long, and 3-6 broad. Corollas yellow, pubescent outside; tube exceeding the calyx, hardly incurved.

Strobile-spiked Gomphostemma. Pl. 1 to 3 feet.

2 G. villíre (Wall. l. c. Benth. l. c.) stem erect; leaves elliptic-ovate, flaccid, rather hispid above and pubescent beneath; whorls few-flowered, crowded into a short terminal spike; floral leaves bractea-formed, broad-ovate, exceeding the calyxes; calyx campanulate, clothed with soft villi: teeth lanceolate; corollas twice as long as the calyx. ♃. S. Native of the Burman Empire, in the province of Tavoy. Very nearly allied to *G. strobilínum*, but of more humble stature. Leaves pale green. Spike few-flowered. Calyx large.

Green Gomphostemma. Pl. 1 foot.?

3 G. Heynea'num (Wall. l. c. Benth. l. c.) stem erect; leaves elliptic-ovate, wrinkled, clothed with soft tomentum above and dense floccose tomentum beneath; whorls crowded into a terminal spike, or the lower ones are rather remote and axillary: floral leaves bractea-formed, broad-ovate, exceeding the calyxes; calyx campanulate, clothed with soft tomentum, with ovate-lanceolate teeth, which are hardly shorter than the corolla. ♃. S. Native of the Indian Peninsula, on mountains near Courtallum. Habit and stature of *G. strobilinum*, but differs in the tomentum being floccose, in the floral leaves being wrinkled above and tomentose, not glabrous, in the corollas being smaller, inclosed tube, &c.

Heyne's Gomphostemma. Pl. 1 to 3 feet.

4 G. oblóngum (Wall. l. c. Benth. lab. p. 648.) stem erect; leaves oblong-elliptic, wrinkled, rather hispid above, and clothed with dense tomentum beneath: floral leaves similar to the rest; whorls axillary, remote, few-flowered; calyx campanulate, tomentose, with lanceolate-linear elongated acute teeth; corolla 3 times as long as the calyx. ♄. G. Native of the Burman Empire in the province of Tavoy. Leaves smaller and narrower than in *G. strobilinum*. Whorls 2-4-axillary, 6-10-flowered. Corolla pubescent outside.

Oblong-leaved Gomphostemma. Pl. 1 to 2 feet.

5 G. lu'cidum Wall. l. c. Benth. l. c.) stem erect; leaves elliptic-ovate, shining above and pilosely hispid, and densely clothed with rufous tomentum beneath: floral leaves similar to the rest; whorls axillary, remote; calyx tubularly campanulate, tomentose, with short lanceolate teeth; corolla 3 times as long as the calyx. ♃. S. Native of the East Indies at Choppedong, on the Tenasserim coast; and in Pundua. Habit of the preceding, but more robust. Stems clothed with dense rufous tomentum. Leaves toothed or quite entire. Whorls 10-30-flowered. Corollas yellow, tomentose outside.

Shining Gomphostemma. Pl. 2 to 3 feet.

6 G. parviflòrum (Wall. l. c. Benth. l. c.) stem erect; leaves elliptic-ovate, pubescent above and tomentose beneath: floral ones conform to the rest; whorls axillary, remote, loosely many-flowered; bracteas lanceolate or linear, exceeding the calyxes; calyx campanulate, with lanceolate linear teeth, which are subulate at apex; corolla slender, twice as long as the calyx. ♃. S. Native of Nipaul, Silhet, and Penang. Habit of preceding, but the flowers are more numerous in the axils, loosely fasciculate. Corolla yellow, pubescent outside; throat less inflated.

Small-flowered Gomphostemma. Pl. 2 to 3 feet.?

7 G. multiflòrum (Benth. lab. p. 648.) stem erect; leaves elliptic, scarcely pubescent above, and tomentose beneath: floral leaves similar to the rest; whorls axillary, remote, loosely many-flowered; bracteas ovate, foliaceous, exceeding the calyxes; calycine teeth lanceolate-linear; corolla slender, many times longer than the calyx. ♃. S. Native of Silhet. This and *G. parviflòrum* differ from the other specimens in the form of the bracteas, &c.

Many-flowered Gomphostemma. Pl. 2 to 3 feet.?

8 G. crinítum (Wall. l. c. Benth. l. c.) stem erect: leaves elliptic-ovate, pubescent above, and tomentose beneath: floral leaves similar to the rest; whorls axillary, remote, loosely many-flowered; bracteas linear-setaceous, about equalling the calyxes; calyx tubularly campanulate, inflated in the fructiferous state, quite glabrous at the base, with elongated setaceous hispid teeth; corolla slender, twice as long as the calyx. ♃. H. Native of the Burman Empire, in the province of Tavoy. Habit, inflorescence, and corollas of *G. parviflòrum*, but the bracteas and calyxes are very distinct, and the leaves are more ample and less wrinkled.

Long-haired Gomphostemma. Pl. 2 to 3 feet.?

9 G. eriocárpum (Benth. in Wall. pl. rar. asiat. 2. p. 12. lab. p. 649.) stem ascending; leaves elliptic-oblong, coarsely toothed, rather hispid above and tomentose beneath; floral leaves similar to the others; whorls remote, few-flowered; bracteas ovate, denticulated; calyx campanulate, at length inflated, tomentose, with linear setaceous teeth; corolla villous, twice as long as the calyx; achenia tomentose. ♃. S. Native of the Indian Peninsula, near Courtallum. Stems elongated, slenderer than the preceding species. Leaves 3-4 inches long, and 1½ broad. Whorls few, about 10-flowered.

Woolly-fruited Gomphostemma. Pl. ascending.

10 G. ová'tum (Wall. l. c. Benth. l. c.) stem erectish, rooting at the base; leaves broad-ovate, shining and hispid above, but clothed with soft tomentum beneath: floral leaves similar to the rest; whorls axillary, remote, many-flowered; bracteas broad-ovate, outer ones about equalling the calyxes; calyx campanulate, villously tomentose, with lanceolate-linear teeth; corolla 3 times as long as the calyx. ♃. S. Native of Nipaul, Wall. Leaves smaller and broader than in the preceding. Corolla yellow, pubescent, nearly 1½ inch long.

Ovate-leaved Gomphostemma. Pl. 1 foot. ?

11 G. melissæfòlium (Wall. l. c. Benth. l. c.) stem creeping at the base, radicant; branches ascending; leaves ovate, nearly glabrous or rather hispid above, and sparingly tomentose beneath: floral leaves similar to the rest; whorls axillary, remote, loosely many-flowered; bracteas ovate: outer ones equalling the calyxes; calyx hispid, with lanceolate-linear teeth; corolla about 3 times as long as the calyx. ♃. S. Native of Silhet. Prásium melissæfòlium, Roxb. hort. beng. p. 45. fl. ind. 3. p. 26. Very nearly allied to *G. ovátum*, but differs in the creeping stems, in the leaves being scarcely tomentose beneath, and in the flowers being smaller.

Balm-leaved Gomphostemma. Pl. creeping.

12 G. velutí'num (Benth. in Wall. pl. rar. asiat. 1. p. 13. lab. p. 649.) stem creeping at the base, rooting; branches ascending; leaves ovate, thick, densely clothed with velvety pubescence on both surfaces: floral leaves similar to the rest; whorls axillary, remote, few-flowered; bracteas oblong, equalling the calyxes; calyx tomentose, with ovate-lanceolate teeth; corolla about twice as long as the calyx. ♃. S. Native of Silhet, Wall. Allied to *G. melissæfòlium*. Leaves 12-18 lines long, 8-15 lines broad. Corolla yellow, 11-12 lines long, with a slender tube, which is much dilated at top.

Velvety Gomphostemma. Pl. creeping.

13 G. philomoi'des (Benth. lab. p. 649.) leaves oblong, acute at both ends, denticulated, pilose above, and densely clothed with stellate tomentum beneath; flowers fascicled, axillary. ♃. S. Native of Java, in the higher mountain woods. Prásium phlomoides, Reinw. herb. ex Blume, bijdr. p. 840.

Phlomis-like Gomphostemma. Pl. ?

14 G. Java'nicum (Benth. lab. p. 650.) leaves rather large, oblong, acuminated at both ends, denticulated, hairy above, and clothed with stellate tomentum beneath; flowers subfascicled, axillary. ♃. S. Native of Java, in humid mountain woods. Prásium Javánicum, Blum. bijdr. p. 840.

Java Gomphostemma. Pl. ?

Cult. Plants of easy culture. Any light rich soil will suit the species; and they will be readily increased by cuttings and seeds.

CIII. PHYLLOSTE'GIA (from φύλλον, *phyllon*, a leaf; and στέγος, *stegos*, a covering; in allusion to the foliaceous lobes of the calyx.) Benth. in bot. reg. vol. 15. under no. 1292. lab. p. 650. Prásium species, Gaud. in Freyc. voy. pt. bot. p. 452.

Lin. syst. *Didynámia, Gymnospérmia.* Calyx campanulate, ovate or tubular, 10-nerved, nearly equal, sometimes quinquefid, with foliaceous lobes, and sometimes shortly 5-toothed. Corolla

having the tube exceeding the calyx, sometimes much exserted, usually incurved, exannulate inside, with a nearly equal throat and a bilabiate limb; upper lip spreading a little, entire, flattish: lower lip longer, spreading, trifid, with ovate lobes, the middle lobe larger and entire. Stamens 4, ascending under the upper lip; anthers 2-celled: cells diverging, at length divaricate. Style nearly entire, clavate at top or shortly bifid, with clavately divaricate or arched lobes; stigmas terminal, usually thickening into heads. Achenia fleshy.—Erect or ascending, almost simple herbs. Leaves petiolate, ovate, usually toothed. Whorls 6-10-flowered, disposed into a terminal loose raceme, or the lower whorls are axillary. Upper floral leaves small, bractea-formed. Bracteas small, subulate, or wanting.

1 P. dentàta (Benth. in bot. reg. vol. 15. lab. p. 651.) very hairy; leaves rounded at the base; racemes dense; calyx ample, with foliaceous toothed segments; lobes of style clavate. ♃.? G. Native of Owhyhee, on Mount Raah, and Byron's Bay, Macrae. Stem herbaceous, erect, nearly simple, beset with long stiff hairs like the rest of the plant. Leaves on long petioles, 3-4 inches long; upper floral leaves nearly sessile, shorter than the fructiferous calyxes. Whorls about 10-flowered. Corolla small.

Toothed-calyxed Phyllostegia. Pl. 1 foot.

2 P. vestìta (Benth. l. c.) very hairy; leaves roundly truncate at the base: floral leaves similar to the others; whorls axillary, distant; calyx ample, with foliaceous quite entire segments; lobes of style clavate. ♃.? G. Native of Owhyhee, in Byron's Bay. This differs from *P. dentàta*, in the leaves being smaller, and in the other characters given.

Clothed Phyllostegia. Pl. 1 foot.

3 P. grandifiòra (Benth. l. c.) nearly glabrous or clothed with adpressed pubescence; leaves rounded at the base; raceme loose; calycine teeth broad-ovate, foliaceous, quite entire, spreading; corolla incurved, more than thrice as long as the calyx; lobes of style arched. ♃.? G. Native of the Island Oahu. Prásium grandiflòrum, Gaud. in Freyc. voy. pt. bot. p. 453. t. 65. f. 2. Stems hard, procumbent or ascending. Leaves petiolate, 1-2 inches long, or the lower ones are 3 inches long, crenulated; upper ones small, bractea-formed. Whorls 6-flowered.

Great-flowered Phyllostegia. Pl. ascending.

4 P. Chamissònis (Benth. in Linnæa. 6. p. 79.) quite glabrous, rounded at the base; racemes loose; peduncles elongated, trifid; calyx shortly 5-toothed; corolla incurved, 4 times as long as the calyx. ♃.? G. Native of the Islands of Oahu and Mowee. Prásium glàbrum, Gaud. in Freyc. voy. pt. bot. p. 452. t. 64. Stem branched. Leaves almost the form of those of *P. grandiflòra*. Peduncles trifid towards the middle. Corollas size of those of *P. grandiflòra*.

Chamisso's Phyllostegia. Pl. 1 foot.

5 P. gla'bra (Benth. in bot. reg. vol. 15. lab. p. 652.) quite glabrous; leaves roundly cuneated at the base; racemes short, loose, leafy; lower peduncles elongated, trifid; calyx shortly 5-toothed; corolla erectish, scarcely 3 times the length of the calyx; lobes of style clavate. ♃.? G. Native of the Island of Oahu. Allied to the preceding, but differs in the stem being more branched, in the racemes being irregularly branched, and in the flowers being one half smaller.

Glabrous Phyllostegia. Pl. 1 to 2 feet.

6 P. macrophy'lla (Benth. l. c.) nearly glabrous or pubescent at top; leaves oblong, rounded at the base; raceme short, loose; calyx shortly 5-toothed; corolla straight, about 3 times as long as the calyx; lobes of style arched. ♃.? G. Native of several of the Sandwich Islands. Prásium macrophyllum, Gaud. in Freyc. voy. pt. bot. p. 453. t. 65. f. 3. Leaves nearly like those of *P. grandiflòra*, but narrower and longer. Inflorescence of *P. grandiflòra*. Corolla pubescent.

Long-leaved Phyllostegia. Pl. 2 to 3 feet.

7 P. parviflòra (Benth. in Linnæa. 6. p. 79.) pubescently villous; leaves rounded or cordate at the base, clothed with soft villi beneath; pedicels longer than the calyxes; calycine teeth short, acute; tube of corolla about 3 times as long as the calyx; lobes of style clavate, recurvedly divaricate. ♃. G. Native of the Island of Oahu. Prásium parviflòrum, Gaud. in Freyc. voy. pt. bot. p. 453. t. 65. f. 1. Phyllostègia leptóstachys, Benth. in bot. reg. vol. 15. Leaves broad-ovate, crenated, 3-4 inches long, canescent beneath. Corolla half an inch long, glabrous; tube a little incurved.

Small-flowered Phyllostegia. Pl. 1 to 2 feet.

8 P. mòllis (Benth. in Linnæa. 2. p. 79.) clothed with soft velvety pubescence; leaves cordate at the base; pedicels shorter than the calyxes; calycine teeth short, obtuse; tube of corolla exceeding the calyx a little; lobes of style clavate, recurvedly divaricate. ♃.? G. Native of the Sandwich islands. Whorls 6-flowered. Allied to *P. parviflòra* and *P. clavàta*.

Soft Phyllostegia. Pl. 1 to 2 feet.

9 P. clava'ta (Benth. in bot. reg. vol. 15. lab. p. 658.) pubescent; leaves roundly truncate at the base or subcordate; pedicels rather shorter than the calyxes; calycine teeth short, obtuse; tube of corolla exceeding the calyx a little; style clavate at apex, with flattened recurved stigmas. ♃.? G. Native of Owhyhee. Leaves form and size of those of *P. grandiflòra*, but less coriaceous and more villous. Whorls 6-10-flowered. Corollas small, pubescent.

Clavate-styled Phyllostegia. Pl. 1 to 2 feet.

10 P. racemòsa (Benth. l. c.) villous; leaves ovate-lanceolate, cordate at the base; whorls many-flowered; pedicels very short; corolla one half longer than the calyx; lobes of style clavate. ♃.? G. Native of Owhyhee, on Mount Raah, Macrae. Habit of *Stàchys grandidentàta*. Pubescence rather clammy. Leaves 1½ inch long. Whorls about 10-12-flowered. Corollas small, form of those of *P. clavàta*.

Racemose Phyllostegia. Pl. 1 foot.

11 P.? hirsu'ta (Benth. l. c.) very hairy; leaves ample, cordate at the base; racemes branched; calyx glabrous, shortly 5-toothed. ♃.? G. Native of the island of Oahu, Macrae. Stem as in *P. dentàta*. Calyxes as in *P. mòllis*.

Hairy Phyllostegia. Pl. 1 to 2 feet.

12 P. floribu'nda (Benth. lab. p. 653.) pubescent or hairy; leaves elliptic, ample, rounded at the base or narrowed; cymes axillary, loosely much branched, many-flowered, very hairy; calyx hairy, with linear teeth, which are about equal in length to the tube of the corolla; corolla exceeding the calyx a little. ♃.? G. Native of the Sandwich islands, Nelson. Branches hard, woody.? Leaves on long petioles, 2-5 inches long. Corymbs or cymes as in *Bystropógon*. Corollas small, almost like those of *P. racemòsa*, but more slender.

Bundle-flowered Phyllostegia. Pl. 1 to 2 feet.

Cult. For culture and propagation, see *Gomphostémma*, p. 858.

CIV. STENOGYNE (from στενος, *stenos*, narrow; and γυνη, *gyne*, a female; so called in reference to the subulate lobes of the style.) Benth. in bot. reg. vol. 15. lab. p. 654.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx ovate-campanulate, 10-nerved, nearly equal or obliquely bilabiate; sometimes 5-cleft, with ovate foliaceous lobes; and sometimes 5-toothed, having the 3 upper teeth less deeply cleft than the lower ones. Corolla with the tube exceeding the calyx, and incurved, and usually furnished with a pilose ring inside; a dilated throat, and a bilabiate limb; upper lip erect, emarginate; lower lip spreading trifid, with nearly equal entire segments. Stamens 4, ascending under the upper lip; anthers 2-celled: cells at

length divaricate. Style almost equally bifid at top, with subulate lobes; stigmas minute. Achenia fleshy.—Branched, procumbent, ascending or erect herbs, with divaricate subscandent? branches. Leaves usually coriaceous, crenated. Whorls about 6-flowered, axillary, distant, or approximate at the tops of the branches. Floral leaves similar to the cauline ones. Bracteas small, subulate, or almost wanting. This genus differs chiefly from *Phyllostègia* in the form of the style and corolla, and in the axillary inflorescence.

1 S. macra'ntha (Benth. l. c.) very hairy; leaves petiolate, ovate, cordate at the base; whorls axillary, distant; pedicels equalling the calyxes. ♃.? G. Native of Owhyhee, on Mount Raah, Macrae.

Large-flowered Stenogyne. Pl.

2 S. se'ssilis (Benth. lab. p. 654.) glabrous; leaves sessile, roundish, cordate at the base, coriaceous; whorls approximate at the tops of the branches. ♃.? G. Native of the Sandwich islands, Menzies. Stem glabrous or pilose at the nodi. Whorls few, secund. Corolla villous, twice as long as the calyx. Genitals exserted a little.

Sessile-leaved Stenogyne. Pl. ascending.

3 S. cordà'ta (Benth. lab. p. 654.) glabrous; lower leaves on short petioles: upper ones sessile, all ovate and cordate at the base, coriaceous; whorls axillary, distant. ♃.? G. Native of the Sandwich islands, Nelson. Allied to *S. sèssilis*, but differs in the more slender branches, smaller narrower leaves, inflorescence, and smaller flowers.

Cordate-leaved Stenogyne. Pl.

4 S. rugòsa (Benth. in bot. reg. vol. 15. lab. p. 655.) glabrous; leaves on short petioles, oblong, coriaceous, roundly truncate at the base; whorls axillary, distant; pedicels shorter than the calyxes. ♃.? G. Native of Owhyhee, on Mount Raah, Menzies. Stems erect.? Leaves 1½ to 2 inches long, rough. Whorls about 6-flowered; corolla scarcely twice as long as the calyx, nearly glabrous.

Wrinkled-leaved Stenogyne. Pl. erect.

5 S. microphy'lla (Benth. lab. p. 655.) glabrous; leaves small, petiolate, acute, narrowed at the base; whorls few, 2-flowered, secund; calyxes on short pedicels, equalling the leaves in length. ♃.? G. Native of Owhyhee, at Mount Raah, Macrae. Branches subscandent. Leaves scarcely 3-4 lines long, acutely serrated. Pedicels bibracteate under the calyxes. Corolla twice as long as the calyx.

Small-leaved Stenogyne. Pl. scandent.?

6 S. scrophulariοi'des (Benth. in bot. reg. vol. 15. lab. 655.) quite glabrous; leaves petiolate, ovate, flaccid; whorls axillary, distant; fructiferous pedicels longer than the calyxes; corolla pubescent, twice as long as the calyx. ♃.? G. Native of the Sandwich islands, Menzies. Branches subscandent.? Leaves 1 to 1½ inch long, roundly truncate at the base. Whorls 6-flowered. Corollas pubescent.

Figwort-leaved Stenogyne. Pl. scandent.?

7 S. Nelsòni (Benth. lab. p. 655.) glabrous; leaves petiolate, ovate, rather flaccid; whorls axillary, distant; fructiferous pedicels longer than the calyxes; corolla nearly glabrous, 3-4 times longer than the calyx. ♃.? G. Native of the Sandwich islands, Nelson. Allied to *S. scrophularioìdes*, but differs in the larger subcoriaceous leaves, many-flowered whorls, longer calyxes, longer corollas, and much exserted stamens.

Nelson's Stenogyne. Pl.

Cult. For culture and propagation, see *Gomphostémma*, p. 858.

CV. PRA'SIUM (from πρασιον, a name given by Dioscorides to a plant resembling Horehound or Marjoram, and called by Pliny *Pràsium*.) Lin. gen. no. 737. Schreb. gen. no. 992. Gærtn. fruct. 1. p. 321. t. 66. Juss. gen. p. 117. Benth. lab. p. 655.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx campanulate, 10-nerved, irregularly bilabiate; upper lip shortly trifid; lower lip deeply bifid; all the segments ovate and foliaceous. Corolla with an inclosed tube, furnished with a ring of scale-like hairs inside, and a bilabiate limb; the upper lip ovate, entire, and the lower lip trifid: the middle segment the largest and entire. Stamens 4, ascending under the upper lip; anthers 2-celled: cells at length divaricate. Style about equally bifid at top, with subulate lobes; stigmas minute. Achenia fleshy.

1 P. ma'jus (Lin. spec. 838.) ♄. F. Native of Europe and the North of Africa, in the region of the Mediterranean, and of Madeira. Sibth. et Smith, fl. græc. t. 584. P. minus, Lin. spec. p. 838.—Sabb. hort. rom. 3. t. 37.—Zan. hist. t. 80.—Mor. hist. 3. p. 408. sect. 11. t. 21. f. 3.—Barrel. icon. t. 895. A divaricately branched, usually glabrous evergreen shrub, rarely with some of the young leaves hispid. Leaves ½ to 1 inch long, ovate, acute, roundly truncate at the base or subcordate, irregularly serrate crenated; floral leaves similar, or the upper ones are smaller and more entire, all exceeding the calyxes. Whorls 2-flowered, distant, axillary. Flowers on short pedicels. Corollas white or pale purple, glabrous. Stamens inclosed.

Greater Prasium. Fl. June, Aug. Clt. 1699. Shrub 1 to 2 feet.

Cult. This is a curious evergreen small shrub, which will survive our milder winters in the open air if grown in a dry sandy or gravelly soil, in a sheltered situation; but in moist strong ground it is sure to perish. A reserve plant or two should be grown in pots, that they may be sheltered by placing under a frame in winter. The plant is readily increased by cuttings and seeds.

Tribe XI.

AJUGOI'DEÆ (from *Ajuga*, Bugle; and *idea*, similar; this tribe contains genera agreeing with *Ajuga* in the characters given below.) Benth. lab. p. 657. Upper lip of corolla sometimes very short, sometimes cleft, with cast down, rarely erect, arched segments; lower lip elongated. Stamens 2-4, ascending, usually exserted, opposite the lip. Achenia more or less reticulately wrinkled. In many *Ajugoìdeæ*, especially in some *Teùcria*, *Ajuga*, *Cymària*, &c., the ovarium is less deeply cleft than in other *Labiàtæ*; and in *Cymària* it is very evidently bipartite, with bifid divisions, instead of being equally 4-parted; thus connecting the tribe with the closely allied order of *Verbenàceæ*, ex Benth.

CVI. AMETHY'STEA (so called from the amethystine colour of the flowers.) Lin. gen. no. 34. Schreb. gen. no. 45. Gærtn. fruct. 1. p. 315. t. 66. Juss. gen. 111. Benth. lab. p. 657.

Lin. syst. *Diàndria, Monogynia.* Calyx sub-globose, campanulate, erect, equal, 5-toothed. Corolla having the tube shorter than the calyx, exannulate inside, and a declinate limb; the 4 upper lobes nearly equal, and cast down, and the lower lobe larger. Stamens 2, (inferior,) ascending, exserted between the upper segments of the corolla; the rudiments of the 2 upper ones minute and filiform; anthers 2-celled: cells at length divaricate and sub-confluent. Style almost equal, bifid at apex. Achenia reticulately wrinkled.—This genus only differs from *Teùcrium* in the abortion of the upper stamens. In habit it closely resembles *Teùcrium corymbòsum*.

1 A. caru'lea (Lin. spec. p. 30.) ☉. II. Native of Asiatic Russia; as of Altaia, Dahuria, &c., Pallas; and of

China, Sir G. Staunton. Sims, bot. mag. t. 2448.—Hall. in comm. gœtt. 1751. t. 10. act. ups. 1742. p. 51. f. 1. Herb erect, branched, glabrous, often bluish. Leaves petiolate, 3-5-parted; segments oblong-lanceolate, deeply toothed; floral leaves smaller: upper ones minute. Cymes peduncled, loose, racemosely panicled. Bracteas minute. Calyxes erect, bluish, quite glabrous, with lanceolate acute teeth. Corolla blue, scarcely exceeding the calyx.

Blue-flowered Amethystea. Fl. June, July. Clt. 1759. Pl. 1 to 1½ foot.

Cult. This being a hardy annual, the seeds of it should be sown in the open ground, where the plants are intended to remain.

CVII. TRICHOSTE'MA (from *θριξ τριχος, thrix trichos*, a hair; and *στημων, stemon*, a stamen; in reference to the capillary filaments.) Lin. gen. no. 733. Schreb. gen. no. 988. Juss. gen. no. 116. Benth. lab. p. 658.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx sometimes campanulate, nearly equal, deeply 5-cleft, sometimes depressedly campanulate, very oblique, with the 3 upper teeth (from the twisting of the pedicel inferior) elongated and connate; and the 2 lower ones (superior) very short. Corolla with a slender, usually exserted tube, which is exannulate inside, and a somewhat equally 5-cleft limb; segments oblong, declinate: lower ones scarcely larger. Stamens 4, didynamous: lower ones the longest, and much exserted; filaments sometimes monadelphous; anthers about 2-celled: cells divaricate or diverging. Style bifid at apex; lobes subulate; stigmas minute.—Herbs, with quite entire leaves, and axillary or racemose inflorescence. Very nearly allied in character to *Teùcrium*, but differs in habit. *Isánthus* ought probably to be placed near this genus.

Sect. I. Streptopòdium (from *στρεπτος, streptos*, twisted; and *πους ποδος, pous podos*, a foot; in allusion to the pedicels being twisted.) Benth. lab. p. 658. Calyx very oblique, reversed from the twisted pedicel. Pedicels solitary, opposite, 1-flowered.

1 T. linea're (Nutt. gen. amer. 2. p. 39.) glabrous; leaves linear; flowers reversed. ☉. H. Native of North America, from Philadelphia and New Jersey to Louisiana. T. dichótomum, Roth, nov. pl. spec. p. 280. T. brachiàtum, Lam. ill. 3. t. 515. but not of Lin.—Dill. elth. t. 285. f. 369.? Hardly differing from *T. dichótomum*, unless in being constantly glabrous, taller in stature, larger corollas, &c. Flowers purple or blue.

Linear-leaved Trichostema. Fl. June, Aug. Clt. 1759. Pl. 1 foot.

2 T. dicho'tomum (Lin. spec. p. 834.) glabrous or pubescent; leaves petiolate, oblong; flowers reversed. ☉. H. Native of North America, from Canada to Carolina. T. pilósum, Roth, nov. pl. spec. p. 280. Herb paniculately branched at top. Lower leaves about an inch long: upper floral ones bractea-formed, shorter than the pedicels. Flowers secund. Corollas small, blue or purple.

Dichotomous-branched Trichostema. Fl. June, Aug. Clt. 1759. Pl. ½ to 1 foot.

Sect. II. Orthopo'dium (from *ορθος, orthos*, straight; and *πους ποδος, pous podos*, a foot; in reference to the straight pedicels.) Benth. lab. p. 659. Calyx straight, equal. Cymes many-flowered.

3 T. oblóngum (Benth. lab. p. 659.) pubescent or villous; leaves oblong, narrowed at the base; cymes axillary; calyx about 5-cleft; tube of corolla inclosed. ☉. H. Native of North-west America, in grassy places about Fort Vancouver, Douglas. Leaves green, distant, about an inch long, obtuse. Whorls remote. Corolla small, blue or purple.? Genitals exserted, *free*.

Oblong-leaved Trichostema. Pl. ½ to 1 foot.

4 T. lanceola'tum (Benth. lab. p. 659.) villous; leaves lanceolate; cymes axillary; calyx equally 5-cleft; tube of corolla exserted. ☉.? H. Native of North-west America, near Fort Vancouver, in dry places at the river Multnomah; and of New California. Herb branched, hard at the base, and probably perennial. Leaves sessile, an inch long, stem-clasping at the base. Whorls secund, distant. Corollas pubescent. Genitals exserted. Filaments connate at the base.

Lanceolate-leaved Trichostema. Pl. ½ to ¾ foot.

5 T. lana'tum (Benth. lab. p. 659.) leaves linear, with revolute edges; flowers racemose, woolly; calyx about equally 5-cleft; tube of corolla much exserted. ☉.? H. Native of California, Douglas. Perennial or shrubby.? Branches clothed with hoary tomentum. Leaves numerous, fasciculated, form of those of rosemary, 1-2 inches long, glabrous above, and tomentose beneath. Upper floral leaves bractea-formed. Whorls sub-secund, rather loose, 10-20-flowered. Corolla woolly. Genitals exserted. Filaments free.

Woolly Trichostema. Pl. 1½ foot.

Cult. The seeds of these annual plants should be sown in autumn, in pots filled with light earth; and in winter the pots should be placed under a frame, to shelter them from frosts, but expose them at all times to the open air when the weather is mild. In the spring transplant them on to a bed of light earth, shading them from the sun until they have taken root.

CVIII. TEU'CRIUM (so named from Teucer, son of Scamander, and father-in-law of Dardanus, king of Troy.) Lin. gen. no. 706. Schreb. gen. no. 960. Juss. gen. p. 112. Benth. lab. p. 660.—Chamæ'drys, Scorodònia, Scórdium, and Pòlium, Tourn. inst. t. 93. 97. and 98. and Mœnch. Leucoscéptrum, Smith.

Lin. syst. *Didynàmia, Gymnospérmia.* Calyx tubular or campanulate, rarely inflated, 5-toothed; teeth equal, or the superior one is broadest. Corolla with a short tube, which is exannulate inside; the 4 upper segments of the limb nearly equal, or the uppermost one is broader or longer, sometimes oblong and declinate, and sometimes very short, and erectish; lower segment very large, roundish or oblong, usually concave. Stamens 4, exserted between the upper segments, didynamous; the lower ones the longest; cells of anthers confluent. Style about equally bifid at apex; stigmas minute. Achenia more or less wrinkled.—Herbs and shrubs, variable in habit and inflorescence.

Sect. I. Leucoscе'ptrum (from *λευκος, leucos*, white; and *σκηπτρον, sceptrum*, a sceptre; in allusion to the long verticillate spikes of white flowers.) Benth. lab. p. 663.—Leucoscéptrum, Smith, exot. bot. p. 113. Whorls many-flowered, densely spicate. Calyx turbinate, incurved, with nearly equal teeth. Corolla incurved, reflexed; the upper segments very short, broad, truncate, erect.—An Indian shrub, clothed with hoary tomentum.

1 T. macrosta'chyum (Wall. mss. ex Benth. lab. p. 663.) shrubby; branches hoary; leaves oblong, clothed with dense white tomentum beneath; whorls many-flowered, densely spicate; calyx almost equally toothed; upper segments of corolla

very short and erect. ♄. G. Native of Nipaul and Silhet. Leucoscéptrum cánum, Smith, exot. bot. p. 113. t. 116. Clerodéndron Leucoscéptrum, D. Don, prod. fl. nep. p. 103. Leaves crowded at the tops of the branches, 6-8 inches long. Spikes 3-6 inches long. Corollas white, hardly exceeding the calyxes. Genitals much exserted.

Long-spiked Germander. Fl.? Clt. 1826. Shrub 6 feet.?

SECT. II. TEUCRÓPSIS (an alteration of the generic name.) Benth. lab. p. 664. Teucrópsis, Ging. in herb. D. C. mss. Whorls 2-flowered, axillary, or disposed in terminal racemes. Calyx campanulate, declinate; the upper tooth broader, and spreading. Corolla tomentose outside; the upper segments very short, broad, truncate, erect, or hardly declinate.—Hoary shrubs, natives of the Canary Islands.

2 T. HETEROPHY'LLUM (Lher. stirp. 1. p. 84.) shrubby; branches hoary; leaves ovate-elliptic, hoary beneath, or on both surfaces: floral ones similar to the rest; whorls 2-flowered, axillary, remote; calyx straight, with equal teeth; superior segments of corolla very short, erect; ovaria very villous. ♄. G. Native of the Canary Islands. T. Canariénse, Lam. dict. 2. p. 692. Leaves petiolate, 1-2 inches long, obtuse, quite entire, or crenated towards the top. Corolla dark purple, twice as long as the calyx. Genitals much exserted. Whorls 2-4 flowered.

Various-leaved Germander. Fl. June, July. Clt. 1759. Shrub 4 to 6 feet.

3 T. BETÓNICUM (Lher. stirp. 1. p. 83. t. 49.) shrubby; branches clothed with hoary tomentum; leaves ovate-oblong, hoary beneath or on both surfaces; whorls 2-flowered, secund, loosely racemose; floral leaves bractea-formed; calyx declinate, with the upper tooth very large; superior segments of corolla very short: uppermost one broad, erect: lateral ones sub-declinate, tomentose; achenia very villous. ♄. G. Native of Madeira, among rocks. Sims, bot. mag. t. 1114. T. betonicæfòlium, Jacq. coll. 1. p. 145. t. 17. f. 2. T. canéscens, Forst. comm. gœtt. 9. p. 58. ex Willd. T. Maderénse, Lam. dict. 2. p. 692. Scorodònia betonicæfòlia, Link, handb. p. 458. Leaves 1 to 1½ inch long, crenated. Racemes loose, 3-6 inches long. Corolla purple or lilac, pubescent; tube a little exserted. Genitals much exserted.

Betony Germander. Fl. May, Aug. Clt. 1775. Shrub 2 to 3 feet.

SECT. III. TEU'CRIS (see genus for derivation.) Benth. lab. p. 668. Teûcris, Ging. in herb. D. C. mss. Peduncles axillary, opposite, 1-flowered: or loosely cymose, many-flowered. Calyx campanulate, erect, equal, 5-toothed or 5-cleft. Four upper segments of corolla oblong, declinate, but the lower one is oblong and concave. Achenia reticulately wrinkled, glabrous, rarely very villous.—Herbs, under-shrubs, or shrubs, with quite entire or cut, rarely crenated leaves.

4 T. FRUTI'CANS (Lin. spec. 787.) shrubby; leaves ovate, quite entire, flat, clothed with white tomentum beneath; peduncles 1-flowered; calyx tomentose, campanulate, equal, with ovate obtuse teeth. ♄. F. Native of Europe and Africa, in the region of the Mediterranean; as of Barbary, Spain, Italy, Naples, Corsica, Melita. Sibth. et Smith, fl. græc. 6. p. 23. t. 572. Dill. hort. elth. t. 284. f. 368. T. latifòlium, Lin. spec. p. 788. Curt. bot. mag. t. 245. T. tomentòsum, Mœnch, meth. p. 382. Zan. hist. t. 163.—Subb. hort. rom. 3. t. 98. —Barrel. icon. t. 512. Shrub divaricately branched. Leaves on short petioles, glabrous and green above, or loosely cobwebbed. Racemes terminal, or in short, lateral, few-flowered branches. Corolla blue or purple, twice as long as the calyx. In Italian and Melita specimens, the leaves are sometimes rufescent beneath.

Shrubby Germander. Fl. June, Sept. Clt. 1640. Shrub 2 to 3 feet.

5 T. BREVIFO'LIUM (Schreb. unilab. p. 27.) shrubby; leaves oblong, quite entire, with revolute margins, canescent on both surfaces; racemes short; peduncles 1-flowered; calyx tomentose, campanulate, equal, semiquinquefid. ♄. F. Native of Candia, on the sea shore, Melos and Astypalea; among rocks. Sibth. et Smith, fl. græc. 6. p. 24. t. 528. T. Créticum, Lam. dict. 2. p. 692. but not of Lin. Shrub divaricately much branched. Branches short, leafy. Leaves scarcely ½ an inch long, obtuse, sessile: floral leaves similar to the others. Calycine teeth acute. Corolla purplish or red, similar to those of *T. Créticum*. (fig. 88.)

FIG. 88.



Short-leaved Germander. Fl. June, July. Clt. 1824. Shrub 1 to 2 feet.

6 T. CRE'TICUM (Lin. spec. p. 788.) shrubby; leaves oblong-linear, quite entire, with revolute edges, and clothed with white tomentum beneath, but at length almost glabrous above; racemose elongated, strict; flowers nearly sessile, solitary or by threes; calyx clothed with white tomentum, campanulate, with acute teeth. ♄. F. Native of the region of the Mediterranean, and of the Islands of Cyprus, Melos, and Astypalea, among rocks; also of Palestine and Egypt. Sibth. et Smith, fl. græc. 6. p. 25. t. 529. T. hyssopifòlium, Schreb. unil. p. 28. T. rosmarinifòlium, Lam. dict. 2. p. 693. T. Charamoniénse, Cav. descr. 1. p. 82.—Alp. exot. 103. t. 102.—Mor. hist. 3. p. 410. sect. 11. t. 16. f. 3. Leaves approximate at the base of the branches, very like those of rosemary. Whorls 2-6-flowered. Corollas reddish purple. Genitals shorter than the lip.

Cretan Germander. Fl. July, Aug. Clt. 1824. Shrub 1 to 3 feet.

7 T. RACEMO'SUM (R. Br. prod. p. 504.) stem herbaceous, strict, branched; leaves small, oblong: lower ones a little toothed: superior ones quite entire, all glabrous above, and clothed with white tomentum beneath; racemes elongated, strict; peduncles 1-flowered; calyx campanulate, tomentose, equal. ♃.? G. Native of New Holland, on the south coast, R. Br.; in bogs at the river Lachlan, Cunningham. Branches twiggy, canescent. Leaves hardly ½ an inch long, but generally much smaller, furnished with 1-2 teeth on both sides. Corolla downy outside. Genitals shorter than the lip.

Racemose Germander. Pl. erect.

8 T. LANCEOLA'TUM (Benth. lab. p. 666.) herbaceous?; leaves lanceolate, narrowed at the base: lower ones a little toothed: upper ones quite entire, all clothed with canescent pubescence beneath; cymes axillary, pedunculate, corymbose; calyx pubescent, campanulate, with lanceolate acute nearly equal teeth. ♃.? G. Native of New Holland, near Bathurst. Branches ascending, pubescent. Leaves 1 to 1½ inch long. Cymes loose, longer than the leaves. Corolla pubescent, twice as long as the calyx; lobes all nearly equal. Stamens exserted.

Lanceolate-leaved Germander. Pl. ascending.

9 T. CORYMBO'SUM (R. Br. prod. p. 504.) herbaceous?; cloth-ed with fine pubescence; leaves ovate, toothed or cut, green on

both surfaces: cymes axillary, pedunculate, corymbose; calyx nearly glabrous, campanulate, with lanceolate acute teeth. ♃.? G. Native of New Holland, among rocks about Port Jackson; and of Van Diemen's Land. Stem a little branched. Leaves distant: lower ones an inch long: upper floral ones minute, quite entire, clothed with fine pubescence above, and tomentose pubescence beneath. Cymes 5-7-flowered. Genitals exserted.

Corymbose-flowered Germander. Pl. 1 to 2 feet.

10 T. CAPE'NSE (Thunb. prod. p. 95.? Benth. lab. p. 667.) herbaceous, finely pubescent; leaves cuneated at the base, 3-5-cleft, with lanceolate-linear entire or 3-5-cleft segments, green on both surfaces, or canescent beneath; cymes axillary, pedunculate, corymbose; calyx glabrous, campanulate, equal, deeply 5-cleft, with lanceolate acute segments. ♃.? G. Native of the Cape of Good Hope. A'juga Capénsis, Pers. ench. 2. p. 109. Peduncles sub-secund, filiform, 3-5-flowered. Corolla hardly larger than the calyx. Stamens one half longer than the calyx.

Cape Germander. Pl. 1 to 3 feet.

11 T. ORIENTA'LE (Lin. spec. p. 786.) herbaceous, erect, nearly glabrous; leaves bipinnate, with linear, quite entire, or cut segments, green on both surfaces; peduncles loosely racemose; pedicels much longer than the floral leaves; racemes panicled; calyx glabrous, campanulate, with lanceolate equal acute teeth. ♃. H. Native of Asia Minor, and Caucasus, on the gravelly banks of rivulets; as of Armenia, Syria, Iberia. Sims, bot. mag. t. 1279.—Riv. mon. irr. 19.?—Commel. rar. t. 25. Herb branched, sometimes glabrous, and sometimes pubescent or canescent. Lower leaves 1½ to 2 inches long. Corollas glabrous, blue; lower segment large. Genitals longer than the lip.

Eastern Germander. Fl. July, Aug. Clt. 1752. Pl. 1 foot.

12 T. PARVIFLO'RUM (Schreb. unilab. p. 31. icone.) herbaceous, clothed with soft tomentum; leaves deeply twice or thrice ternate; the segments of the lower leaves broad, obtuse; of the superior ones linear; peduncles much longer than the floral leaves, divaricate, 1-flowered; racemes panicled; calyx clothed with soft tomentum, campanulate, equal, semiquinquefid. ♃. H. Native of Armenia and Syria. Stem erect, trichotomously much branched at top, canescent as well as the leaves and calyxes. Floral leaves minute. Corollas small, numerous, hardly longer than the calyxes, blue.

Small-flowered Germander. Pl. 1 to 3 feet.

13 T. OLIVIERIA'NUM (Ging. in herb. D. C. mss. ex Benth. lab. p. 668.) herbaceous, clothed with soft pubescence; leaves cuneiform, deeply toothed at apex, or 3-5-cleft; peduncles much longer than the floral leaves, divaricate, 1-flowered; calyx villous, campanulate, equal, deeply 5-cleft. ♃. F. Native of Syria, between Aleppo and Bagdad, Olivier. Stems leaves, and calyxes canescent. Lower leaves petiolate, 1½ inch long; the upper ones much smaller, and nearly sessile. Flowers disposed in a few-flowered panicle. Lip of corolla 3 times as long as the calyx. Achenia very villous.

Olivier's Germander. Pl. 1 foot.

14 T. CAMPANULA'TUM (Lin. spec. 786.) herbaceous, procumbent, glabrous; leaves sub-bipinnatifid, with linear, cuneated, quite entire, or cut, divaricate segments, glabrous on both surfaces; flowers solitary, almost sessile, shorter than the leaves; calyx campanulate, equal, glabrous. ♃. F. Native of the region of the Mediterranean; as of Spain, Balearic Islands, Sicily, Naples. T. diversifòrum, Mœnch, ex Steud. nom. p. 828.—Riv. mon. irr. t. 24.? Stems prostrate at the base. Branches ascending a little. Corollas blue. Stamens shorter than the lip. Floral leaves less cut, exceeding the flowers.

Campanulate-calyxed Germander. Fl. July, Aug. Clt. 1728. Pl. prostrate.

15 T. CUBE'NSE (Lin. mant. p. 80.) herbaceous, glabrous; lower leaves ovate-cuneated, obtuse, deeply toothed: superior leaves deeply trifid or pinnate, with lanceolate or linear flat segments, green on both surfaces; peduncles axillary, 1-flowered, shorter than the floral leaves; calyx campanulate, equal, glabrous, deeply 5-cleft; stamens scarcely twice as long as the calyx. ♂. S. Native of Mexico, near Papantla, Tampico, Vera Cruz; Texas; Island of Cuba; Bahama Islands; South of Brazil; Buenos Ayres; Mendoza, and Cordova. Jacq. amer. p. 172. t. 188. f. 74. obs. 2. p. 5. t. 30. T. lævigàtum, Vahl, symb. 1. p. 40. T. chamædrifòlium, Mill. dict. no. 15.—Herb erect, branched, densely leafy. Lower leaves broad, cut to the middle. Racemes terminal, subsecund. Corollas blue, glabrous or pubescent; lip hardly twice the length of the calyx.

Cuba Germander. Fl. May. Clt. 1788. Pl. 1 foot.

16 T. BI'COLOR (Smith, in Rees' cycl.) herbaceous, glabrous; leaves ovate-oblong or lanceolate, obtuse, quite entire or cut, green on both surfaces; peduncles axillary, 1-flowered, shorter than the floral leaves; calyx campanulate, equal, glabrous, semiquinquefid; stamens about 3 times as long as the calyx. ♃. F. Native of Chili, on the mountains; and in Pampas de Santa Fe, Gillies. T. heterophýllum, Cav. icon. 6. p. 56. t. 577. T. orchideum, Lindl. bot. reg. t. 1255. Leaves about an inch long, or cut into a few segments, sometimes nearly ovate, trifid; the young ones often linear, quite entire, and trifid. Corollas yellowish, tinged with red; tube inclosed.

Two-coloured Germander. Fl. July, Aug. Clt. 1826. Pl. 1 to 2 feet.

17 T. NUDICAU'LE (Hook. bot. misc. 2. p. 235?) herbaceous? glabrous, or clothed with fine pubescence; branches twiggy, nearly naked; leaves small, remote, trifid, with linear obtuse segments, green on both surfaces; flowers on short peduncles, solitary, spicately racemose; calyx campanulate, equal, semiquinquefid, and is, as well as the corollas, pubescently hairy. ♃.? G. Native of Peru, in the valley of Canta, Cruikshanks. Flowers approximate towards the tops of the branches. Corollas almost of *T. bicolor*, but more villous, and the lower segment smaller.

Naked-stemmed Germander. Pl. 1½ foot.

18 T. AFRICA'NUM (Thunb. prod. p. 95.? Benth. lab. p. 669.) suffruticose; branches erect, tomentosely pubescent; leaves deeply trifid, with linear, quite entire, rarely trifid segments, revolute on the margins, clothed with canescent tomentum beneath; peduncles axillary, solitary, 1-flowered, or the lower ones are subcymose, rather shorter than the floral leaves; calyx campanulate, equal, sub-canescent, deeply 5-cleft. ♄. G. Native of the Cape of Good Hope. T. trifidum, Retz, obs. 1. p. 21.? A'juga Africàna, Pers. ench. 2. p. 109. Stems numerous, rising from a woody base. Leaves fascicled in the axils. Flowers smaller than those of the next species. Racemes many-flowered.

African Germander. Shrub ½ to 1 foot.

19 T. PSEUDOCHAMÆPI'THYS (Lin. spec. p. 787.) suffruticose; branches erect, pilosely hairy; leaves deeply 3-5-cleft, with linear, quite entire, or trifid segments, revolute on the edges, rather hispid above, and finely pubescent beneath; peduncles axillary, solitary, 1-flowered, at length rather longer than the floral leaves; calyx campanulate, equal, pubescent, deeply 5-cleft. ♄. F. Native of Europe and Africa, in the region of the Mediterranean; as of Spain, Barbary, Syria; South of France, about Marseilles.—Sabb. hort. rom. 3. t. 95.—Mor. hist. 3. sect. 11. t. 21. f. 2. Branches numerous, simple, rising

from a woody base, hairy, as well as the peduncles and lower leaves. Racemes terminal, loose, subsecund. Lower segment of corolla 3 times as long as the calyx. Corollas purple or white. ?

False-Ground-Pine Germander. Fl. June, July. Clt. 1820. Pl. ½ to 1 foot.

20 T. LACINIA'TUM (Torrey, in ann. lyc. 2. p. 231.) shrubby, glabrous; leaves pinnately 5-parted: upper ones tripartite: segments linear; flowers axillary, solitary, pedicellate; pedicels much shorter than the leaves; calyx subcampanulate, 5-parted, the lower segment bifid or tridentate. ♄. F. Native of North America, among the Rocky Mountains. Branched. Lower leaves sessile; segments blunt. Corollas large for the size of the plant, violaceous? villous outside; lower segment ovate, acute.

Jagged-leaved Germander. Shrub small.

SECT. IV. PYCNÓBOTRYS (from πυκνος, *pychnos*, dense; and βοτρυς, *botrys*, a bunch of grapes; in reference to the whorls being crowded into simple or branched spikes or racemes.) Benth. lab. p. 671. Whorls from 4 to many-flowered, crowded into simple or branched spikes. Calyx inflated, or tubularly campanulate, declinate, with nearly equal teeth, or the upper teeth are broader. Upper segments of corolla very short, broad, truncate, or declinate: lateral ones small, oblong, declinate: the lower one broad and concave. Achenia wrinkled, glabrous.—Villous or glabrous herbs or shrubs, but never hoary.

21 T. ABUTILOI'DES (Lher, stirp. 1. p. 84.) shrubby; branches pubescent; leaves simple, heart-shaped, green on both surfaces, villous; racemes simple, paniculately branched; whorls 2-6-flowered; calyx declinate, hairy, with ovate obtuse teeth; the upper tooth rather the broadest. ♄. G. Native of Madeira. Jacq. schœnbr. 3. t. 358. T. macrophýllum, Lam. dict. 2. p. 692. Leaves like those of *Sida móllis*, on long petioles, 3-6 inches long, crenated. Corolla 1½ inch long, red. Genitals much exserted.

Mulberry-like Germander. Fl. April, May. Clt. 1777. Shrub 3 to 4 feet.

22 T. WALLICHIA'NUM (Benth. in Wall. pl. rar. asiat. 2. p. 19. lab. p. 671.) herbaceous, ascending; leaves elliptic-ovate, acuminated, narrowed a long way at the base, green on both surfaces; racemes simple; whorls many-flowered; calyx declinate, with hardly unequal teeth. ♃. G. Native of Silhet, in the East Indies. Stems simple, rooting at the base, clothed with rufous villi. Leaves 3-4 inches long, hispid from stiff scattered hairs, quite entire at the base. Whorls about 10-flowered. Calyx hispid.

Wallich's Germander. Pl. 1 foot.

23 T. JAPÓNICUM (Willd. spec. 3. p. 23.) herbaceous, erect, or ascending, nearly glabrous; leaves ovate-oblong or lanceolate, rounded at the base, green on both surfaces; raceme branched; whorls equal, 6-flowered; floral leaves lanceolate; calyx declinate, tubularly campanulate, glabrous, with lanceolate acute nearly equal teeth. ♃. F. Native of Japan, on the mountains. T. Virgínicum, Thunb. fl. jap. p. 244. Stems glabrous or pubescent on the angles. Leaves on short petioles, deeply and sharply serrated, pale beneath: floral ones bractea-formed, ciliated. Genitals about equal in length to the lower lip.

Japan Germander. Pl. 1 to 2 feet.

SECT. V. STACHY'BOTRYS (from σταχυς, *stachys*, a spike; and βοτρυς, *botrys*, a bunch of grapes; so called in reference to the whorls being disposed in terminal, simple, terete spikes.) Benth. lab. p. 672. Whorls from 6 to many-flowered, disposed in simple, terminal, terete spikes. Calyx campanulate, declinate; the upper teeth, and especially the upper tooth, broadest, rarely almost equal. Upper segments of corolla oblong, declinate: lower one oblong, concave. Achenia reticulately wrinkled, glabrous.—Perennial, ascending, or erect, branched herbs.

24 T. INFLA'TUM (Swartz, prod. p. 88. fl. ind. occ. 2. p. 1003.) herbaceous, erect, pubescent or villous; leaves ovate or ovate-lanceolate, roundly truncate at the base, or subcordate, rather canescent beneath; racemes almost simple; whorls equal, 6-flowered; bracteas lanceolate; calyx declinate, inflated, pubescent, or villous, with a contracted mouth: the upper tooth the broadest. ♃. S. Native of Mexico, Jamaica, Spanish Main, Brazil, Island of Tongatabou, Buenos Ayres, &c. T. villósum, Forster, prod. no. 232. T. palústre, H. B. et Kunth, nov. gen. amer. 2. p. 306. T. vesicárium, Mill. ex Steud. nom. p. 830. Habit of *T. Canadénse*; but differs in the leaves being cordate at the base; and particularly in the inflated calyxes, and shorter, usually obtuse teeth. Corolla red or purplish.

Inflated-calyxed Germander. Fl. Aug. Oct. Clt. 1778. Pl. 2 feet.

25 T. CANADE'NSE (Lin. spec. 789.) herbaceous, erect, canescent, or villous; leaves ovate-lanceolate, rounded at the base, rather canescent beneath; racemes simple; whorls equal, 6-flowered; bracteas subulate; calyx declinate, campanulate, hoary, or sub-villous: the upper teeth the broadest. ♃. H. Native from Canada to Carolina; and of Texas. T. Virginicum, Lin. spec. p. 789. T. speciósum, Hill. veg. syst. 14. t. 14. Stems simple, or a little branched. Leaves on short petioles, 2-3 inches long, serrated, hispid and green above, rarely glabrous. Corollas purplish.

Canadian Germander. Fl. Aug. Sept. Clt. 1768. Pl. 1 to 3 feet.

26 T. HIRCA'NICUM (Lin. spec. p. 789.) herbaceous, erect, pubescent; leaves ovate-cordate, sub-canescent beneath; raceme simple; whorls equal, 6-flowered; bracteas subulate, rather shorter than the calyxes; calyx declinate, bilabiate, having the upper tooth very broad. ♃. H. Native of Eastern Caucasus; also of Iberia, in woods and in hedges. Sims, bot. mag. t. 2013. Scorodònia spicàta, Mœnch, meth. p. 385.—Hall, comm. gœtt. 2. p. 343. t. 13.—Ard. spec. 13. t. 4.? Leaves petiolate, 1-3 inches long, coarsely crenated; floral leaves subulate. Spikes dense. Corolla purple, villous outside.

Hircanean Germander. Fl. Aug. Oct. Clt. 1783. Pl. 1 to 3 feet.

27 T. ARDUI'NI (Lin. mant. p. 81.) herbaceous, erect, clothed with soft villi; leaves ovate, rounded at the base, greenish on both surfaces; racemes simple; whorls equal, 6-flowered; bracteas sessile, lanceolate, acuminated, exceeding the calyxes; calyx bilabiate, the upper tooth very broad. ♃. H. Native of the South-east of Europe; as of Dalmatia, Bulgaria, and the Bithynian Olympus, in rocky places. Sibth. et Smith, fl. græc. 6. p. 26. t. 531. T. lamiifólium, D'Urv. pl. arch. in mem. soc. Lin. par. 1. p. 320. Scutellària Crética, Lin. spec. 836. Scorodónia Arduíni, Rchb. fl. germ. exc. p. 315.—Ard. spec. 12. t. 3. Leaves nearly sessile, or the lower ones are on short petioles, 1-2 inches long, serrately crenated. Spikes dense, very villous. Corollas white, villous outside.

Arduini's Germander. Fl. June, Oct. Clt. 1823. Pl. 1½ foot.

28 T. BRACTEA'TUM (Desf. fl. atl. 2. p. 7. t. 120.? Benth. lab. p. 673.) herbaceous, ascending, villous; leaves ovate, cordate at the base, green on both surfaces; racemes simple; whorls equal, 6-flowered; bracteas petiolate, ovate, or lanceo-

late, equalling the calyxes; calyx bilabiate, the upper tooth very broad. ♃. F. Native of the North of Africa, on uncultivated hills near Tangiers, Salzmann; Tariffa, Durand; Mascar and Tlemsen, Desfontaines. Herb a little branched. Leaves ½ to 1 inch, bluntly crenated, petiolate. Racemes loose. Corolla pubescent outside.

Bracteate Germander. Pl. ½ foot.

29 T. conpa'ctum (Lag. nov. gen. et spec. 17.) suffruticose, procumbent, villous; leaves cuneate-ovate, deeply crenated, hairy; floral leaves petiolate, lanceolate, ciliated; flowers spicate. ♄. F. Native of Spain, in Granada, Clemente. Leaves quite entire at the base, narrowed into the short petioles. Calyx inflated, with a narrow throat, semiquinquefid; upper segments ovate, and shorter than the others.

Compact-flowered Germander. Shrub procumbent.

Sect. VI. Scorodo'nia (from σκορδον, *scorodon*, garlic; the *T. scorodònia* has an odour somewhat like garlic.) Benth. lab. p. 674. Whorls 2-flowered, secund, disposed in terminal, usually branched racemes. Calyx campanulate, declinate, the upper teeth, but especially the uppermost one, broader. Upper segments of corolla oblong, declinate. Achenia small, nearly globose, wrinkled or smoothish.—Perennial, ascending, or erect, branched herbs.

30 T. tomento'sum (Heyne, ex Benth. in Wall. pl. rar. asiat. 1. p. 58. lab. p. 674.) herbaceous? erect; branches clothed with tomentose pubescence; leaves ovate, rounded at the base, villous above, and clothed with tomentose pubescence, and canescent beneath, rarely almost glabrous; racemes paniculately much branched; calyx declinate, pilose, bilabiate, the upper tooth the broadest. ♃. H. Native of the Indian peninsula. Herb hard and woody at the base.? Leaves large, 2-4 inches long, and 1½ to 2 inches broad, coarsely and acutely crenated. Panicles dense. Corolla yellowish; tube inclosed.

Var. β, glabriúsculum (Benth. lab. p. 674.) plant nearly glabrous. ♃. G. Native of Ceylon, on Mount Nuera Ellia, Macrae.

Tomentose Germander. Pl. 2 to 4 feet.

31 T. stoloni'ferum (Hamilt. ex Benth. in Wall. pl. asiat. rar. 1 p. 58. and perhaps of Roxb. fl. ind. 3. p. 8. Benth. lab. p. 674.) herbaceous, ascending or erect, glabrous or finely pubescent; leaves ovate, rounded or cuneated at the base, green on both surfaces, not wrinkled; raceme paniculately branched; calyx declinate, ovoid, inflated in the fructiferous state, the upper tooth the broadest; tube of corolla inclosed. ♃. G. Native of Silhet; and the Burman Empire, on Mount Taong-Dong. Root stoloniferous according to Roxb. Leaves on longish petioles, 1-2 inches long, thin, scarcely wrinkled, deeply crenated; the floral leaves in the racemes bracteæ-formed. Flowers pendulous, yellowish.

Stoloniferous Germander. Pl. 1 to 2 feet.

32 T. vi'scidum (Blum. bijdr. p. 827.) leaves ovate, coarsely and unequally serrated, wrinkled; racemes axillary and terminal, secund, and are, as well as the calyxes, clothed with viscid pubescence; bracteas lanceolate, length of calyxes; stem a little branched. ♃.? S. Native of Java, in humid mountain places near Tugu, and at the foot of Mount Burangrang. Allied to *T. Lusitánicum*.

Viscid Germander. Pl.?

33 T. la'xum (D. Don, prod. fl. nep. p. 109.) herbaceous, procumbent? or scandent? finely pubescent; leaves ovate-lanceolate, acuminated, serrated, green on both surfaces; racemes nearly simple, axillary, and terminal; calyxes opposite, declinate, rather pilose, the upper tooth very broad. ♃. H. Native of Nipaul, Hamilt. Differing from *T. stoloníferum* in habit, narrower leaves, and short, loose, few-flowered racemes.

Loose-flowered Germander. Pl. scandent.?

34 T. Royle'anum (Wall. pl. rar. asiat. 1. p. 58. Benth. lab. p. 675.) herbaceous, ascending; branches hispid; leaves on short petioles, lanceolate-ovate, acute, serrated, subcordate at the base, wrinkled, villous, canescent beneath; racemes short, nearly simple; superior floral leaves shorter than the calyxes; calyx declinate, hispid, bilabiate, the upper tooth broader; tube of corolla exserted a little. ♃. F. Native of the North of India, on stony mountains; at Deyra Dhoon, and at Kheeree Pass, Royle; and between Mussooree and Lagrasson, Jacquemont. Allied to *T. quadrifárium*, but the habit and characters are very distinct. Stems procumbent at the base. Racemes few-flowered. Corollas larger than in *T. quadrifárium*, purple or white.

Royle's Germander. Pl. 1 to 1½ foot.

35 T. quadrifa'rium (Hamilt. ex D. Don, prod. fl. nep. p. 108.) herbaceous, erect; branches tomentosely villous or hispid; leaves on short petioles, ovate, serrated, cordate at the base, wrinkled, villous, rather canescent beneath; racemes branched; floral leaves broadly ovate, acuminated, exceeding the calyxes; calyx declinate, hispid, sub-bilabiate, the upper tooth the broadest; tube of corolla inclosed. ♃. H. Native of Silhet, Nipaul, and Himalaya, in stony places and by way sides. Stems usually rufescent. Leaves 1-2 inchys long: upper ones sessile. Racemes dense. Corolla purple, twice as long as the calyx.

Four-ranked Germander. Pl. 1 to 3 feet.

36 T. argu'tum (R. Br. prod. p. 504.) herbaceous, humble, erect; branches villous; leaves lanceolate-ovate or ovate, crenately serrated, truncate at the base, green on both surfaces, and rather hispid; racemes almost simple; floral leaves lanceolate, exceeding the calyxes; calyx declinate, villous, sub-bilabiate: upper tooth the broadest; tube of corolla inclosed. ♃. F. Native of New Holland. Floral leaves ciliated. Flowers subsecund. Nearly allied to *T. quadrifárium*, in the more humble stature, longer petioles, and narrower floral leaves.

Sharp-toothed-leaved Germander. Pl. ½ foot.

37 T. Scorodònia (Lin. spec. 789.) herbaceous, erect, hispid, pubescent, or nearly glabrous; leaves ovate, obtuse, crenated, rounded or cordate at the base, green on both surfaces; racemes a little branched: upper ones panicled; floral leaves minute; calyx declinate, rather villous, broadly campanulate, sub-bilabiate, the upper tooth large; tube of corolla exserted. ♃. H. Native throughout Europe, in woody hilly situations, among bushes and under hedges, where the soil is dry and stony; plentiful in Britain, in like situations. Hook. fl. lond. vol. 2. icone. Smith, engl. bot. t. 1543. Curt. lond. 5. t. 40. Fl. dan. t. 485. Scorodònia heterophýlla, Mœnch, meth. p. 384. T. sylvéstre, Lam. fl. fr. 2. p. 412. Scorodònia sylvéstris, Link, handb. p. 458. Scorodònia, Riv. mon. irr. t. 12. Blackw. t. 9.—Sabb. hort. rom. 3. t. 92. Stems simple, or a little branched. Leaves 1-2 inches long, wrinkled, on short petioles. Racemes slender, loose. Corollas pale yellow, downy outside. Stamens violaceous. The smell and taste of this plant are said to resemble hops. It is called *Ambroise* in Jersey; and in that island when cyder fails, they malt their barley at home, and instead of hops use to a very good purpose the *Ambroise* of the hedges. Rutty says, that when the herb is boiled in wort, the beer sooner becomes clear than when hops are used.

Wood-sage Germander. Fl. July. Britain. Pl. 1 to 2 feet.

38 T. pseudoscorodo'nia (Desf. fl. atl. 2. p. 5. t. 119.) suf-

fruticose, erect, hispid, or pubescent; leaves ovate, obtuse, crenated, rounded or cordate at the base, green on both surfaces, or canescent beneath; racemes nearly simple; floral leaves minute; calyx declinate, rather villous, sub-bilabiate, the upper tooth large; tube of corolla inclosed, or a little exserted. ♄. F. Native of the North of Africa, at Mount Lazar, near Mayane, in Algiers; Tangiers and Gibraltar. Scorodònia salviástrum, Link, handb. p. 458.? Scorodònia Fontanesiàna, Ser. bull. bot. p. 315. This differs from *T. Scorodònia*, in the shrubby stem, erect branches, more simple racemes, rather larger calyxes, and shorter corollas. Flowers yellow.

False-Wood-Sage. Fl. July, Aug. Clt. 1818. Shrub 1 to 2 feet.

39 T. Massilie'nse (Lin. spec. 789.) herbaceous or suffruticose, ascending; branches clothed with hoary pubescence; leaves ovate, crenated, rounded or cordate at the base, wrinkled: lower ones canescent beneath; racemes nearly simple or branched, loose, secund; floral leaves shorter than the calyxes; calyx declinate, rather villous, sub-bilabiate: upper tooth the largest; tube of corolla inclosed. ♃. H. Native of Europe, in the region of the Mediterranean; as about Marseilles, Corsica, Sardinia, Candia, &c. Jacq. hort. vind. 1. t. 94. Scorodònia Massiliénsis, Link, handb. p. 458. Scorodònia cordàta, Mœnch, meth. p. 385. T. odorâtum, Lam. fl. fr. 2. p. 413. T. Créticum, Clus. hist. 1. p. 348.—Ger. fl. gallopr. 277. t. 11. Leaves ½ an inch long, rarely 1 inch, much wrinkled. Racemes and flowers like those of the preceding, to which it is very nearly allied. Corollas purple.

Marseilles Germander. Fl. June, July. Clt. 1731. Pl. 1 foot.

40 T. Lusita'nicum (Lam. dict. 2. p. 692.) herbaceous or suffruticose; branches clothed with hoary pubescence; leaves lanceolate, crenated, wrinkled, rather canescent beneath; racemes a little branched, loose, secund; calyx declinate, upper tooth the broadest; tube of corolla inclosed. ♃. H. Native of the south-west of Europe; as of Spain, Portugal, Balearic Islands, in the fissures of rocks. T. Asiáticum, Lin. mant. p. 80. Jacq. hort. vind. 3. t. 41. T. salviástrum, Hoffm. et Link, fl. port. p. 84. t. 2. Mœnch, meth. p. 384. Habit of *T. Massiliénse*, from which it hardly differs, unless in the form of the leaves. Racemes usually more loose. Corollas purplish.

Portugal Germander. Fl. June, Oct. Clt. 1822. Pl. 1 foot.

† *A species belonging to the present section, but is not sufficiently known.*

41 T. salvia'strum (Schreb. unilab. p. 38.) stems erect, pubescent, clammy; leaves oval, crenulated, wrinkled, tomentose beneath, petiolate; racemes secund. ♃.? H. Native of Portugal. Leaves rounded at both ends, clothed with hoary, silky, short villi above, white beneath; floral leaves lanceolate, acute: upper ones minute, quite entire. Corolla villous outside.

Sage-like Germander. Pl. 1 foot.?

Sect. VII. Scórdium (from σκορδιον, *scordion*, garlic; the *T. scordium* has a smell approaching to that of garlic.) Benth. lab. p. 678. Whorls 2-6-flowered, distant, axillary. Floral leaves similar to the cauline leaves. Calyx tubular, declinate, gibbous at the base beneath; teeth 5, nearly equal, or the upper one is broadest. Upper segments of corolla oblong, declinate. Achenia very or scarcely wrinkled.—Annual or perennial herbs.

42 T. spinòsum (Lin. spec. 793.) herbaceous; branches spinescent at top; whorls axillary, remote, 1-6-flowered; calyx declinate: upper tooth very broad. ☉. H. Native of Europe and Africa, in the region of the Mediterranean; as of Portugal, Spain, Sicily, Naples, Syria, and the Canary Islands. Sibth. et Smith, fl. græc. 6. p. 31. t. 530. T. muconàtum, Lin. spec. 793. Scórdium spinòsum, Cav. icon. rar. 1. p. 19. t. 31. Scorodònia spinòsa, Link, handb. p. 458.—Barrel. icon. p. 319. t. 202.—Mor. hist. 3. p. 423. sect. 11. t. 22. f. 17. Herb procumbent, divaricately branched. Branches stiff, villous, nearly all spinescent. Lower leaves oblong, deeply serrated at apex: upper and rameal ones small, green on both surfaces, but pubescent. Calycine teeth spinescent. Corollas small, white, resupinate from the twisting of the tube.

Spinose Germander. Fl. May, June. Clt. 1640. Pl. procumbent.

43 T. resupina'tum (Desf. fl. atl. 2. p. 4. t. 117.) annual, villous; leaves oblong, narrowed at the base, green on both surfaces; floral leaves similar to the others, but narrower; whorls axillary, 2-flowered; calyx declinate, tubular beneath the gibbosities at the base? with awned teeth: upper tooth the broadest. ☉. H. Native of the North of Africa, on argillaceous hills, near Masear, Tangiers, Algiers. Herb divaricately branched. Whorls secund. Corollas yellowish, resupinate from the twisting of the tube.

Resupinate-flowered Germander. Fl. July, Aug. Clt. 1801. Pl. ½ foot.

44 T. Scórdium (Lin. spec. 790.) herbaceous, perennial, villous, rarely glabrous; leaves oblong, toothed, narrowed at the base or rounded, sessile, green on both surfaces; floral leaves similar to the rest; whorls axillary, 2-6-flowered; calyx declinate, campanulate, with short nearly equal teeth. ♃. H. Native of Europe, and the temperate parts of Asia, in bogs and watery places. Chamæ'drys Scórdium, Mœnch, meth. p. 384. T. palústre, Lam. fl. fr. 2. p. 411. T. arenàrium, Gmel. itin. 1. p. 149. t. 26. f. 2.—Riv. mon. t. 11. Scordium legitimum, Park. theatr. 111. f. 1.—Mor. hist. 3. p. 423. sect. 11. t. 22. f. 14. Stems creeping or rooting at the base; floriferous branches erect or ascending, more or less villous. Leaves about an inch long, hairy, soft: floral ones longer than the flowers. Corollas small, purplish. The fresh leaves are bitter, and rather pungent. Powdered, they destroy worms. A decoction of the plant is a good fomentation in gangrenous cases. It has a strong disagreeable smell, somewhat approaching to that of garlic; whence its specific name from σκορδον, garlic. It was once in high esteem as an antiseptic and an alexpharmic, to which it certainly had no claim. Cullen says it has a bitter, joined with some volatile parts; but that neither of these qualities is considerable enough to retain it in the present practice.

Garlic or Water Germander. Fl. July, Aug. England. Pl. ½ to 1 foot.

45 T. scordioi'des (Schreb. unilab. p. 37.) herbaceous, perennial, woolly, rarely almost glabrous; leaves ovate-oblong, crenated, cordately stem-clasping at the base, green on both surfaces; floral leaves similar to the rest; whorls axillary, 6-flowered; calyx declinate, campanulate, with short nearly equal teeth. ♃. H. Native of the South of Europe, in bogs, especially near the sea; as of Portugal, Spain, South of France, Italy, Sicily, Sardinia, Candia, &c.; in England, but not common; plentiful in the fens of the Isle of Ely; from Cambridge to Histon; at Westbeach, Cottenham; on the banks of the Isis, near Highbridge, and on Fynsham Common, Oxfordshire, &c. T. Scórdium, Brot. fl. lus. 1. p. 164. Woodv. med. bot. t. 57. Oeder, fl. dan. t. 593. Bieb. fl. cauc. 2. p. 36. Smith, engl. bot. t. 828. and of many other authors, but not of Lin. T. lanuginòsum, Bauh. pin. p. 247. Hoffm. et

Link, fl. port. 1. p. 84. t. 9. Habit of *T. Scórdium*, but usually more villous, and differs particularly in the shorter cordately stem-clasping leaves, which are not narrowed at the base. Corollas small, purplish.

Scordium-like Germander. Fl. July, Aug. England. Pl. ⅓ to 1 foot.

46 T. Bótrys (Lin. spec. 786.) annual, villous; leaves deeply pinnate, with oblong, quite entire or cut, divaricate segments, green on both surfaces; floral leaves similar to the cauline ones; whorls axillary, 6-flowered; calyx inflately tubular, gibbous beneath at the base? with equal, lanceolate teeth. ☉. H. Native of the South of Europe and North of Africa, in calcareous arid, dry places; as of France, Spain, Germany, Italy, Sicily, Algiers, &c. Mill. fig. 176. t. 264. f. 1. Sabb. hort. rom. 3. t. 91. Chamæ'drys Bótrys, Mœnch, meth. p. 388. Scorodónia Bótrys, Ser. bull. bot. p. 317.—Riv. mon. irr. t. 14.—Mor. hist. sect. 11. t. 22. f. 18. Herb erect, branched, more or less villous. Leaves petiolate: floral ones exceeding the flowers. Corollas small, purplish. The plant has a pleasant aromatic smell; it may, therefore, be successfully used in fevers, rheumatism, gout, &c.

Botrys or Cut-leaved annual Germander. Fl. July, Sept. Clt. 1633. Pl. ½ foot.

Sect. VIII. Chamæ'drys (from χαμαι, *chamai*, on the ground; and δρυς, *drus*, an oak; the plants are dwarf, with leaves resembling that of the oak.) Benth. lab. p. 680. Whorls 2-6-flowered, distinct, disposed in a loose terminal raceme. Calyx tubularly campanulate, declinate, oblique at the base; teeth 5, nearly equal, or the superior ones rather the broadest. Upper segments of corolla oblong, declinate. Achenia reticulately wrinkled.—Small shrubs, erect or procumbent at the base.

47 T. Lu'cidum (Lin. spec. 790.) herbaceous, perennial, quite glabrous; leaves petiolate, ovate, deeply toothed, crenated at the base: floral ones smaller, scarcely toothed; whorls 2-6-flowered: the upper ones racemose; calyx declinate, tubularly campanulate, with lanceolate nearly equal teeth. ♃. H. Native in the region of the Mediterranean, in the fissures of rocks; as of Provence, Piedmont, Mount Atlas, and the mountains of Cyrenaica. Mud. act. pal. 3. phys. 211. t. 12. f. 7. Chamæ'drys lùcida, Mœnch, meth. p. 389. Magn. hort. 52. icone. This differs from *T. Chamæ'drys*, in the stems being more firm, more erect, and taller; in the cauline leaves being larger and thinner, and in the floral leaves being usually smaller; but especially in the plant being quite glabrous. Calyxes purplish. Corollas reddish purple. Root creeping.

Shining Germander. Fl. June, Sept. Clt. 1730. Pl. 1 to 1½ foot.

48 T. Chamæ'drys (Lin. spec. 790.) perennial or suffruticose, procumbent at the base, pubescent or villous, rarely glabrous; leaves on short petioles, ovate or oblong, deeply crenated, cuneated at the base, green on both surfaces, or canescent beneath; floral leaves smaller, scarcely toothed; whorls 2-6-flowered; the superior ones racemose; calyx declinate, tubularly campanulate, with lanceolate nearly equal teeth. ♃. H. Native throughout Europe and Asia Pontica, on walls, rocks, and by way sides; as of Spain, France, Germany, Italy, Sicily, Turkey, Tauria, and Caucasus; in England, among the ruins of old castles and walls, but by no means plentiful. Smith, engl. bot. t. 680. Woodv. med. bot. suppl. 82. t. 218. Sabb. hort. rom. 2. t. 88. Chamæ'drys officinàlis, Mœnch, meth. p. 389. T. pseudochamæ'drys, Wender. in bot. zeit. 1826. p. 358. T. multiflòrum, Hort. but not of Lin. T. officinàle, Lam. fl. fr. 2. p. 414.—Riv. mon. t. 10. f. 2. Root creeping. Leaves often shining above, glabrous or villous: upper floral ones bracteaformed, quite entire, reddish. Racemes subsecund. Corollas reddish purple, villous outside. This plant has been esteemed chiefly as a mild aperient and corroborant, and was recommended in intermitting fevers, rheumatism, and gout. It has been employed in various forms and combinations, of which the Portland powder is one of the most celebrated instances. Its qualities seem nearly allied to those of horehound, and therefore it may be equally useful in asthmatic affections and coughs.

Germander, Common. Fl. May, Aug. England. Pl. ½ to ¾ foot.

49 T. ca'num (Fisch. et Meyer, ind. sem. hort. petrop. 1835. p. 40.) clothed with hoary tomentum, frutescent at the base, many-stemmed; stems erectish, simple; leaves oblong, toothed, cuneated at the base; floral leaves quite entire; whorls 6-flowered; pedicels length of calyx; calycine teeth equal, acute, mucronulate. ♄.? or ♃.? H. Native of the Transcaucasian province Somchetia. Allied to *T. Chamæ'drys* and *T. quadrátulum*; but differs from the first in being clothed with canescent villi; in the distant loose whorls, and quite entire floral leaves; and from the last in the elongated, almost simple stems, 6-flowered whorls, longer pedicels, villous corollas, &c. Corolla purple.

Hoary Germander. Pl. 1 to 2 feet.?

50 T. multiflòrum (Lin. spec. 788.? Benth. lab. p. 681.) suffruticose, nearly glabrous, or clothed with fine hoary pubescence; leaves on short petioles, ovate, acute, narrowed at the base, acutely toothed at apex, green on both surfaces, or canescent beneath; floral leaves smaller; whorls 2-6-flowered, distant, racemose; calyx declinate, tubularly campanulate, with lanceolate nearly equal teeth. ♄. F. Native of Spain.—Bocc. mus. t. 117.? Intermediate between *T. Chamæ'drys* and *T. Màrum*. Habit of the first, but more branched. Leaves 2-4 inches long. Flowers like those of *T. Chamæ'drys*, but one half smaller.

Many-flowered Germander. Fl. July, Sept. Clt. 1781. Shrub 1 foot.

51 T. Ma'rum (Lin. spec. p. 788.) shrubby, hoary; leaves small, ovate, quite entire, hoary beneath: floral ones smaller; whorls 2-4-flowered, racemose; calyx declinate, hairy, tubularly campanulate, with short nearly equal teeth. ♄. F. Native of the region of the Mediterranean; as of Spain, Corsica, Italy, &c. Woodv. med. bot. 153. t. 56.—Blackw. t. 47.—Riv. mon. irr. t. 23.—Sabb. hort. rom. 3. t. 90. Chamæ'drys Màrum, Mœnch, meth. p. 383. T. maritimum, Lam. fl. fr. 2. p. 414. —A small branched shrub, with the habit of *Thymus vulgàris*. Leaves small, petiolate, rarely obscurely crenated, canescent above, and tomentose beneath. Whorls subsecund, approximate into spikes. Corollas purplish, villous outside. The leaves and younger branches of *Màrum*, when recent, on being rubbed between the fingers, emit a volatile aromatic smell, which readily excites sneezing; but to the taste they are bitterish, accompanied with a sensation of heat and acrimony. Judging from the sensible qualities of this plant, it may be supposed to possess very active powers; and on this consideration it is strongly recommended by Wedelius as an important remedy in many diseases requiring medicines of a stimulant, aromatic, and deobstruent quality: his opinion seems in some measure to have been since verified by actual experience of its efficacy. At present, however, *Màrum* is chiefly used as an errhine, and is an ingredient in pulvis asari compositus. Cats are very fond of this plant, and often destroy it.

Marum Germander, or Cat-Thyme. Fl. July, Sept. Clt. 1640. Shrub 1 to 3 feet.

52 T. microphy'llum (Desf. cor. pl. Tourn. in ann. mus. 10. p. 300. t. 22.) suffruticose, humble, divaricately much branched; leaves small, ovate, crenated, glabrous above and

hoary beneath; whorls few, about 2-flowered; calyx declinate, tubularly campanulate, with lanceolate nearly equal teeth. ½. F. Native of Candia, among rocks. T. quadrátulum, Smith, et Sibth. fl. græc. 6. p. 25. t. 530. but hardly of Schreb. T. divaricàtum, Sieb. pl. exs.? Corollas red. Habit of *T. flàvum*.

Var. β; branches short, canescent; leaves smaller; flowers smaller and fewer.

Small-leaved Germander. Shrub humble.

53 T. flàvum (Lin. spec. 791.) shrubby; branches tomentosely pubescent; leaves broad-ovate, crenated, truncate or cuneated at the base, green on both surfaces, or canescent beneath; superior floral leaves quite entire, acute; whorls 2-6-flowered, racemose; calyx declinate, tubularly campanulate, with lanceolate nearly equal teeth. ½. F. Native of Europe and Africa, in the region of the Mediterranean; as of Spain, Eastern Pyrenees, South of France, Corsica, Sardinia, Italy, Sicily, Dalmatia, Grecian Islands, Algiers, and Mount Atlas. Sibth. et Smith, fl. græc. 6. p. 27. t. 533. Chamæ'drys flàva, Mœnch, meth. p. 383.—Sabb. hort. rom. 3. t. 89.—Jungh. icon. cent. 1. f. 5.—Besl. eyst. 7. p. 11. f. 1.—Mor. hist. 3. p. 421. sect. 11. t. 22. f. 1.? Shrub much branched. Leaves thickish, variable in size, 3-10 lines long. Calyx coloured at top. Corolla yellowish.

Var. β, purpùreum (Benth. lab. p. 682.) flowers reddish purple; leaves usually canescent beneath. ½. F. Native of Spain, Mount Parnassus, Syria, Cyprus, &c. T. règium, Hort. and probably of Schreb. T. lùcidum, Sibth. et Smith, fl. græc. 6. p. 27. t. 532. but not of Lin. T. divaricàtum, Sieb. pl. exs.?

Yellow-flowered Germander. Fl. July, Sept. Clt. 1640. Shrub 1 to 2 feet.

54 T. ramosíssimum (Desf. fl. atl. 2. p. 4. t. 118.) shrubby, much branched, hoary; branchlets filiform; leaves obovate, crenated; flowers solitary, axillary, and terminal; calyx slender, elongated, with nearly equal acute teeth. ½. F. Native of Barbary, in the fissures of rocks near Cafsa. Leaves size of those of *T. Màrum*. Corollas small, violaceous. The whole plant exhales a very sweet scent.

Much-branched Germander. Shrub.

55 T. scórodon (Schreb. unilab. p. 35.) shrubby; stems bifariously bearded; leaves on short petioles, ovate, crenated, glabrous, shining, but bearded on the middle nerve at the base; floral leaves quite entire; whorls dimidiate, racemose. ½. F. Native of Mauritania. Leaves entire at the base, with reflexed cut margins; floral leaves almost lanceolate, more pilose than in *T. flàvum*. Corollas purple. Perhaps a variety of *T. flàvum*.

Shining-leaved Germander. Shrub 1 to 2 feet.?

56 T. resupinum (Schreb. unilab. p. 35.) shrubby, diffuse; branches pubescent; leaves on short petioles, ovate, toothed in front: floral ones quite entire, sessile; whorls racemose. ½. F. Native of Spain and Italy. Leaves deep green, with reflexed edges, shining, beset with short hairs, which are only seen under a lens, hoary beneath: floral ones equalling the calyxes. Whorls contiguous. Corollas purple. Probably a variety of *T. Chamæ'drys*.

Royal Germander. Fl. May, Oct. Clt. 1699. Shrub 1 to 1½ foot.

57 T. myrtifòlium (Poir. dict. suppl. 2. p. 766.) shrubby, erect, pubescent; leaves ovate, a little toothed, villous beneath, and cinereous; flowers spicate; calyx villous, with 5 acute, nearly equal teeth. ½. F. Native of the Levant. Said to be nearly allied to *T. microphýllum*. Leaves petiolate, 3-5 lines long. Middle segment of lower lip of corolla dilated, roundish, crenulated. Perhaps a variety of *T. Màrum*.

Myrtle-leaved Germander. Shrub.

58 T. quadra'tulum (Schreb. unilab. p. 36.) perennial; stems and under sides of leaves clothed with white tomentum; leaves ovate-rhomboid, toothed, shining above; whorls racemose. 4. H. Native of Spain. Stems erect, branched at the base. Leaves similar to those of *T. Màrum*, but a little broader. Racemes short. Calyx pubescent. Corolla purple. This appears to be nearest allied to *T. multifidum* and *T. Chamæ'drys*, ex Benth.

Small-square Germander. Pl. ⅓ foot.

59 T. subspinòsum (Pourr. ex Willd. enum. p. 596.) perennial; leaves quite entire, ovate, acute, petiolate, pubescent, with revolute margins, tomentose beneath; flowers racemose; branches spinescent. ½. F. Native of the Balearic Islands. Very like *T. Màrum*, ex Willd.

Subspinose Germander. Fl. June, Aug. Clt. 1816. Shrub 1 to 1½ foot.

Sect. IX. Pòlium (from πολιος, *polios*, white; the *T. Polium* and some other species are white from tomentum.) Benth. lab. p. 684. Whorls few, condensed into terminal subglobose heads. Calyx tubularly campanulate, subdeclinate, oblique at the base, with 5 nearly equal teeth; the superior teeth hardly broader. Upper segments of corolla oblong, declinate; lateral ones small. Achenia much wrinkled.—Perennial herbs or under-shrubs. Stems generally procumbent at the base, much branched; floriferous branches ascending.

60 T. Pyrena'icum (Lin. spec. p. 791.) creeping, villous; leaves roundish, crenated, green on both surfaces; whorls few, crowded into a terminal head; calyx tubularly campanulate, declinate, with nearly equal teeth. 4. H. Native of the South of Europe; as of Catalonia, Arragon, Pyrenees, and Auvergne, Pòlium Pyrenàicum, Mill. dict. no. 6. T. réptans, Pourr. act. toul. 3. p. 330. T. rotundifòlium, Schreb. unilab. p. 42.?—Boc. mus. 2. t. 61.—Barrel. icon. t. 1086. Stems rooting at the base, creeping under the earth. Sterile branches prostrate; floriferous ones ascending. Leaves on short petioles. Heads solitary, terminal. Corollas pale yellow, the lower segment sometimes purplish.

Pyrenean Germander. Fl. June, Aug. Clt. 1731. Pl. procumbent.

61 T. buxifòlium (Schreb. unilab. p. 42.) suffruticose; leaves obovate-cuneated, with subrevolute crenated margins, green and nearly glabrous above, and canescent beneath; whorls crowded into a terminal head; calyx tubularly campanulate, declinate, with nearly equal teeth. ½. F. Native of Spain, in the fissures of rocks. T. saxátile, Cav. icon. rar. 2. p. 19. t. 121. f. 1. Stems procumbent at the base, ascending, often much branched, pilosely pubescent. Leaves ½ an inch long, numerous, narrowed into short petioles at the base. Heads, calyxes, and flowers of *T. Pyrenàicum*. Corollas whitish, and often reddish.

Box-leaved Germander. Shrub procumbent.

62 T. cuneifòlium (Sibth. et Smith, fl. græc. 6. p. 30. t. 537.) procumbent, clothed with dense tomentose wool; leaves roundish, crenated, cuneated at the base, thick, densely tomentose on both surfaces; whorls few, condensed into a terminal head; calyx tubular, tomentose, with short nearly equal teeth. 4. H. Native of Candia, on the Sphaciotic mountains. This differs from the two preceding species, at first sight, in the whole plant being canescent or yellowish from dense tomentum; but the habit is similar. Leaves scarcely ½ an inch long, thick. Corolla white, yellowish at base.

Wedge-leaved Germander. Pl. procumbent.

63 T. alpe'stre (Sibth. et Smith, fl. græc. 6. p. 31. t. 538.) suffruticose, humble, divaricately much branched, clothed with hoary or yellowish villi; leaves small, obovate-cuneated, round-

ish, crenated, with revolute edges; whorls very few, subcapitate at the tops of the branches; calyx declinate, ovate-tubular, pilose, with nearly equal short obtuse teeth. ♄. H. Native of Candia, on the Sphaciotic Mountains, and near Mirabello. T. saxátile, Sieb. pl. cret. exs. but not of Cav. Habit of *T. thymifólium*, but allied to *T. Pólium* in character. Leaves distant, 2-3 lines long, greenish on both surfaces. Heads terminal, size of peas, composed of 4-6 flowers. Corollas small, white.

Alp Germander. Shrub humble.

64 T. Pólium (Lin. spec. p. 792.) suffruticose, canescent from tomentum, woolly, rarely pilosely hispid; leaves cuneated, oblong or linear, with revolute edges; whorls few, condensed into globose or oblong terminal heads; calyx tubularly campanulate, with nearly equal teeth. ♄. F. Native of Europe and Africa, in the region of the Mediterranean; as well as of Tauria and Caucasus. Stems much branched; branches procumbent or ascending, rarely erect. Leaves sessile, variable in form. Whorls 2-6-flowered. Corollas small, white, yellowish, or purple.

Var. α, flavéscens (Benth. lab. p. 685.) leaves broader; heads very hairy; tops of branches yellowish. ♄. F. In the western region common. T. aúreum, Schreb. unilab. p. 48. Cav. icon. 2. p. 16. t. 117. T. flávicans, Lam. dict. 2. p. 700. T. tomentósum, Vill. fl. dauph. 2. p. 352. Pólium aúreum, Mœnch, meth. p. 385. Pólium lúteum, Mill. dict. no. 2.—Barrel. icon. t. 1082.—Blackw. 456. Flowers of a deep yellow colour. The yellow Poly or Mountain Germander.

Var. β, hirsútum (Benth. lab. 685.) leaves oblong, scarcely canescent, and are, as well as the heads, pilose. ♄. F. Native of Egypt. T. Ægyptiacum, Pers. ench. 2. p. 112.

Var. γ, vulgáre, (Benth. lab. p. 685.) leaves oblong, and are, as well as the heads, clothed with tomentose wool; corolla white. ♄. F. Common throughout the region of all the varieties. T. Pólium, Lin. and other authors. Sibth. et Smith, fl. græc. 6. p. 29. t. 555. T. pseudobyssòpus, Schreb. unilab. p. 45. T. Teúthrion, Schreb. unilab. p. 46. T. Bélion, Schreb. unilab. p. 47. T. Lusitánicum, Schreb. unilab. p. 47.? but not of Lam. T. álbum, Poir. dict. suppl. 2. p. 770. T. trifoliátum, Vahl, symb. 1. p. 40. T. subtriphýllum, Lag. gen. et spec. nov. p. 17. Pólium álbum, Mill. dict. no. 4. Pólium latifólium, Mill. dict. no. 7. Pólium Smyrnéum, Mill. dict. no. 15. Pólium angustifólium, Mill. dict. no. 3. Pólium ramósum, Mill. dict. no. 2. Pólium diffúsum, Mill. dict. no. 13.— Lob. icon. 486.—Barrel, icon. 1074.—Column. ecphr. 1. p. 59. t. 67. White Poly or Mountain Germander.

Var. δ, gnaphalódes (Benth. lab. p. 686.) humble; leaves and heads densely woolly. ♄. F. Native of Spain. T. gnaphalódes. Vahl, symb. 1. p. 41. Lber. stirp. T. lanígerum, Lag. gen. et spec. nov. p. 17.?

Var. ε, purpuráscens (Benth. lab. p. 686.) leaves oblong, and are, as well as the heads, clothed with tomentose wool; corollas reddish purple. ♄. F. On the sea-shore about Marseilles, and on the shores of the Adriatic sea. T. Achænénsis, Schreb. unilab. p. 44. Pólium integérrimum, Mill. dict. no. 14.—Mor. hist. 3. sect. 11. t. 2. f. 12. The purple Poly or Mountain Germander.

Var. ζ, angustifólium (Benth. lab. p. 686.) leaves linear or linear-oblong, and are, as well as the heads, which are small, clothed with hoary, rarely yellowish, tomentum; corollas red. ♄. F. Native throughout the whole region of the species. T. capitátum, Lin. spec. 792. Cav. icon. 2. p. 17. t. 119. Sibth. et Smith, fl. græc. 6. p. 30. t. 536. T. flavéscens, Schreb. unilab. p. 44. T. Valentínum, Schreb. unilab. p. 46. T. pycnophyllum, Schreb. unilab. p. 48.? T. lavandulátum, Pourr. T. corymbíferum, Desf. fl. atl. 2. p. 8.? T. cylíndricum, Lam. ex Steud. nom. p. 829. Pólium capitátum, Mill. dict. no. 5. Pólium serrátum, Mill. dict. no. 12. Pólium spicátum, Mill. dict. no. 18. Pólium fruticósum, Mill. dict. no. 11. Pólium eréctum, Mill. dict. no. 8.—Barrel. icon. t. 1079 and 1078. Pólium Monspessulánum, Bauh. hist. 3. p. 299.

Poly Mountain. Fl. July, Sept. Clt. var. α, 1731.; γ, 1562.; ε, 1816.; ζ, 1731. Shrub ½ to 1 foot.

65 T. amplexicaúle (Benth. lab. p. 687.) suffruticose; branches clothed with white wool; leaves ovate-oblong or oblong, crenated, usually cordately stem clasping at the base, with revolute margins, at first tomentose above, but at length nearly glabrous, and clothed with dense white wool beneath; whorls few, globosely capitate; calyx declinate, tubularly campanulate, with nearly equal broad acute teeth; tube of corolla exserted. ♄. F. Native of Spain. Habit and leaves of some of the varieties of *T. Pólium*, but stiffer. Flowers similar to those of *T. montánum*, and *T. Pyrenáicum*, but much larger than in *T. Pólium*. It differs from *T. thymifólium* in the taller stature, form of leaves, and larger heads.

Stem-clasping-leaved Germander. Shrub.

66 T. thymifólium (Schreb. unilab. p. 50. Benth. lab. p. 687.) suffruticose, humble, much branched; branchlets hoary, ascending; leaves oblong or obovate, hoary on both surfaces or only beneath; whorls about 2-flowered, very few, subcapitate at the tops of the branches; calyx declinate, tubularly campanulate, with nearly equal broad acute teeth; tube of corolla subexserted. ♄. F. Native of Spain. Habit of *T. alpéstre*, tufted. Leaves short, crowded, less wrinkled and less tomentose than in *T. Pólium*, but more so than in *T. montánum*. Flowers 2-6 on each branch, hardly capitate. Calyx one half smaller than in *T. montánum*, and the corollas are reddish.

Thyme-leaved Poly or Germander. Fl. June, Oct. Clt. 1816. Shrub ¼ to ½ foot, tufted.

67 T. monta'num (Lin. spec. 791.) suffruticose, prostrate; branches hoary or pubescent; leaves oblong-linear, quite entire, hoary on both surfaces or only beneath, flat or the margins are revolute; whorls few, condensed into a terminal head; calyx subdeclinate, tubularly campanulate, glabrous or hoary, with nearly equal lanceolate subulately acuminated teeth. ♄. F. Native of the southern parts of Europe, on hills and mountains, in calcareous places; as of Spain, South of France, South of Germany, Italy, Sicily, Grecian Mountains; and of Volhynia and Tauria. Sibth. et Smith, fl. græc. 6. p. 28. t. 534. T. supínum, Lin. spec. 791. Jacq. austr. 5. p. 8. t. 447. Pólium montánum, Mill. dict. no. 1.—Lob. icon. 488. Stem much branched. Leaves smoothish above. Heads larger than in *T. Pólium*, each usually composed of 2-4, 4-6-flowered whorls. Corollas cream-coloured or white.

Mountain Poly or Mountain Germander. Fl. June, Oct. Clt. 1710. Shrub prostrate.

68 T. pu'milum (Lin. spec. p. 792.? Benth. lab. p. 687.) suffruticose, procumbent or erect; branches hoary; leaves narrow-linear, quite entire, hoary beneath, with revolute margins; whorls few, condensed into terminal heads; calyx subdeclinate, tubularly campanulate, with nearly equal lanceolate subulately acuminated teeth. ♄. F. Native of Spain. T. Libanóris, Schreb. unilab. p. 38.? Cav. icon. 2. p. 17. t. 118.—Barrel. icon. t. 1091 and 1093.? This hardly differs from *T. montánum*, except in the more erect stems, narrower leaves, and purplish flowers.

Dwarf Mountain Poly. Fl. July, Aug. Clt. 1816. Shrub procumbent.

69 T. verticilla'tum (Cav. icon. 2. p. 77. t. 198.) stems erect; leaves linear, verticillate, whitish, glaucous, sessile, with revolute margins; heads terminal, leafy at the base; calyx turbi-

nate, tomentose, 5 crenate. ♃. F. Native of Spain, among the mountains. Roots woody. Leaves 4-6 in a whorl. Whorls approximate. Corollas yellowish.

Whorled-leaved Poly or Germander. Pl. ½ to 1 foot.

† *Species belonging to sect.* IX. *Pòlium, but are not sufficiently known.*

70 T. angustí'ssimum (Schreb. unilab. p. 39.) shrubby, erect; leaves linear, quite entire, nearly naked; heads of flowers terminal, pilose; calyx pilose, with a bearded mouth. ♄. F. Native of Spain.—Barrel. icon. t. 1080. Stems filiform, clothed with dense white tomentum. Leaves narrowed, with revolute edges. Heads solitary, usually composed of 3 whorls, small. Corolla white, hardly longer than the calyx. Perhaps a variety of *T. Pòlium*.

Very narrow-leaved Poly or Germander. Fl. June, July. Clt. 1818. Shrub ½ foot.

71 T. cælé'ste (Schreb. unilab. p. 39.) suffruticose, erect; hoary from tomentum; leaves linear, quite entire; heads terminal, tomentose: calyx green, but loosely tomentose, with triangular teeth. ♄. F. Native of Spain, among the mountains in Valentia.—Barrel. icon. t. 1081. Heads solitary or by threes. Corollas white, smaller than those of the preceding. Perhaps a variety of *T. Pòlium*.

Heavenly Poly or Germander. Shrub ½ to 1 foot. ?

72 T. cymòsum (Pers. ench. 2. p. 112.) flowers paniculately cymose; leaves linear, toothed; stem woolly, suffruticose. ♄. F. Native of Spain, near Aranjuez. Perhaps a variety of *T. Pòlium*.

Cymose-flowered Poly or Germander. Shrub.

73 T. marjora'na (Pers. l. c.) spikes ovate; peduncles subcymose; leaves linear, with revolute edges; stem almost filiform. ♄. F. Native of Spain. Perhaps a variety of *T. Pòlium*.

Marjoram Poly or Germander. Shrub.

† † *Doubtful species.*

74 T. sessilifòlium (Clarke's trav. 4. p. 555.) leaves hairy, sessile, obtuse: lower ones lanceolate, quite entire: upper ones and bracteas crenated, elliptic-lanceolate; flowers axillary, solitary; peduncles very short. ♄. F. Native of Turkey, between Constantinople and Rutschuk, Clarke. Stems erect, woolly. Leaves more than an inch long. Flowers an inch long, with a bearded throat.

Sessile-leaved Germander. Pl. ?

75 T. undula'tum (Lour. coch. p. 362.) leaves oblong, undulated, a little crenated; corymbs terminal. ♄. G. Native of Cochinchina, in hedges. Stem shrubby, erect, branched. Leaves obtuse, glabrous, petiolate. Flowers pale, disposed in terminal racemose corymbs. Corolla 5-cleft, with a short tube and obtuse segments, the superior segments divaricate. Stamens very long, ascending. Achenia naked.

Undulated-leaved Germander. Shrub 5 feet.

76 T. the'a (Lour. coch. p. 363.) leaves ovate-lanceolate; stem procumbent; peduncles axillary, 3-flowered. ♄. G. Native of Cochinchina, among bushes. Stem shrubby, 8 feet, procumbent, glabrous, unarmed, terete, branched. Leaves ovate-oblong, acute, quite entire, petiolate, glabrous. Flowers white. Stamens longer than the corolla. Stigma bipartite, acute.

Tea Germander. Shrub procumbent.

77 T. rotundifòlium (Poir. dict. suppl. 2. p. 767.) leaves ovate-rounded, crenated, glabrous, on long petioles; spike terminal, few-flowered; peduncles very long; stem simple, tetragonal. ♃. F. Native of Buenos Ayres, Commerson. T. Commersònii, Spreng, syst. 2. p. 710. Leaves distant, glabrous, petiolate. Peduncle slender, terminal, bearing a short spike of flowers at top. Calyx pubescent, acutely 5-toothed. Lip of corolla blue.

Round-leaved Germander. Pl. 1 foot.

78 T. fasciculá'tum (Poir. dict. suppl. 2. p. 767.) stem shrubby; leaves subfasciculate, narrow-linear, glabrous, with a subtubercular tooth on one or other side; spike short, terminal. ♄. F. Native country unknown. Stem brown, glabrous, terete. Leaves sessile, 6-8 lines long. Corollas yellow.

Fascicled-leaved Germander. Shrub.

Cult. The greater number of the species grow best in a dry soil and shady situation; but *T. Scórdium* and *T. lanuginósum* require a moist boggy soil. All the perennial herbaceous kinds are readily propagated by division and by seeds. Most of the shrubby species being rather tender require the protection of a frame or greenhouse in winter; and they are readily increased by cuttings of young wood. The seeds of annual kinds only require to be sown in the open border in spring, where they are intended to remain.

CIX. A'JUGA (said to be from a priv. and ζυγος, *zugos*, a yoke; in reference to the calyx being equal, not bilabiate; or either from *Abigo*, or from a priv. and Jugo, to yoke: both from a supposed power of procuring abortion, which, however, the plants do not possess.) Benth. lab. p. 690. A'juga and Teûcrium species, Lin. and other authors.—Phleboánthe, Tausch. —Bûgula and Chamæ'pithys, Tourn.

Lin. syst. *Didynàmia, Gymnospérmia*. Calyx ovate or globosely campanulate, nearly equal, 5-cleft or toothed. Corolla with an inclosed or exserted tube, straight or somewhat spirally twisted, usually furnished with a pilose ring inside; limb bilabiate; upper lip short, but generally very short, emarginate: lower lip elongated, spreading, trifid, having the lateral segments oblong, and the middle segment broader, emarginate, or bifid. Stamens 4, ascending, usually exserted from the upper lip, didynamous, lower ones the longest; anthers 2-celled: cells divergent or divaricate, at length confluent. Style about equally bifid at top; stigmas minute. Achenia reticularely wrinkled.—Annual or perennial herbs, usually procumbent or ascending, sometimes stoloniferous. Whorls 2 or many-flowered, dense, sometimes all axillary, when the floral leaves conform to the cauline ones; sometimes the superior whorls are approximate into spikes, then the floral leaves are small, and of a different form from the cauline ones.

Sect. I. Bu'gula (the Latin name of *Comfrey*.) Benth. lab. p. 692. Whorls 6, but generally many-flowered. Corollas usually blue, rose-coloured, white, purplish, but never yellow.

1 A. lobа'ta (D. Don, prod. fl. nep. p. 108.) stolons creeping; leaves on long petioles, roundish, coarsely crenated or lobed, nearly glabrous. ♃. F. Native of Nipaul and Gosainsthan. Herb nearly glabrous or sparingly pilose. Leaves 1-2 inches long, usually deeply cordate at the base, but sometimes truncate and cuneated. Lower whorls 2-flowered, upper ones approximate. Calyx 4-5 cleft.

Lobed-leaved Bugle. Pl. ½ foot. ?

2 A. re'ptans (Lin. spec. 785.) stolons creeping; leaves ovate or obovate, quite entire or sinuated, and are, as well as the stems, nearly glabrous. ♃. H. Native of Europe and Middle Asia, in grassy humid places; plentiful in Britain. Hook. fl. lond. vol. 2. icone. Smith, engl. bot. 7. t. 489. Bûgula réptans, Mill. dict. no. 1. Mœnch, meth. p. 382. Bûgula, Riv. mon. irr. t. 75. f. 1.—Blackw. t. 64. f. 1. Floriferous branches

erect, glabrous, or pubescent. Radical leaves petiolate; cauline ones nearly sessile. Lower whorls remote; upper ones spicate, 6-20-flowered. Corollas varying from blue to rose-colour and white. This was formerly recommended as a vulnerary herb, but it is now altogether neglected.

Creeping or Common Bugle. Fl. May, July. Britain. Pl. ½ foot.

3 A. orienta'lis (Lin. spec. 785.) plant without stolons ascending, pilosely woolly; leaves ovate, coarsely and sinuately toothed, narrowed at the base: floral ones sessile, broad-ovate, deeply lobed or toothed, exceeding the flowers; whorls distant, or the upper ones are approximate; tube of corolla twisted, exserted, naked inside; limb of corolla resupinate. ♃. H. Native of Europe and Asia, in the region of the Mediterranean, on dry hills and pastures; as of Spain, Sicily, Italy, Grecian Islands, Syria, Tauria, and Caucasus, &c. Bùgula obliqua, Moench, meth. p. 382. Bùgula orientàlis, Mill. dict. no. 5.—Dill. elth. t. 53. f. 61. Radical leaves petiolate, large. Calyx deeply 5-cleft, with narrow, very pilose segments. Corollas blue.

Eastern Bugle. Fl. May, June. Clt. 1732. Pl. 1 to 1½ foot.

4 A. pyramida'lis (Lin. spec. p. 785.) plant without stolons, pilosely hispid or glabrous, erect; cauline leaves approximate, scarcely petiolate, obovate: floral leaves broad-ovate, clasping the flowers, tetragonally pyramidate, the upper ones often coloured, all quite entire or obscurely sinuated; upper whorls or all spicate; tube of corolla straight, exserted, annulate inside. ♃. H. Native of Europe, in shady mountain-places; and of Eastern Caucasus; as of Lapland, Sweden, Pyrenees, Cevennes, Provence, Switzerland, Piedmont, Greece, &c. in several parts of the North of Scotland. Smith, engl. bot. t. 1270. Œd. fl. dan. 185. Bùgula pyramidàlis, Mill. dict. no. 3. Teùcrium pyramidàle, Crantz, stirp. austr. Radical leaves 1½ to 2 inches long, gradually becoming smaller as they ascend the stem. Whorls many-flowered. Calyx 5-cleft. Corollas blue or purple.

Pyramidal Bugle. Fl. May, June. Scotland. Pl. ½ foot.

5 A. cilia'ta (Bunge, enum. pl. chin. bor. p. 51.) plant without stolons; stems erect, elongated, glabrous; cauline leaves remote, ovate, coarsely toothed, membranaceous, almost glabrous, with ciliated margins: lower floral leaves similar to the cauline ones: upper ones ovate, acute, quite entire, coloured a little, ciliated; whorls spicate, or the lower ones are remote; tube of corolla much exserted. ♃. H. Native of the North of China, in humid shady places at the rivulet called Ssi-jui-ssy, Bunge. Stems a little branched. Corollas blue. Bracteas purplish. Very nearly allied to *A. Genevénsis*.

Ciliated Bugle. Pl. 1½ foot.

6 A. Geneve'nsis (Lin. spec. p. 785.) plant without stolons; stem erect, pilose; cauline leaves oblong-elliptic or obovate, narrowed at the base: lower ones petiolate: floral ones ovate or cuneated: superior ones scarcely equalling the flowers or shorter, all usually coarsely toothed, membranaceous, green on both surfaces, and beset with scattered hairs; upper whorls spicate: lower ones distant; tube of corolla much exserted. ♃. H. Native of Europe and Asiatic Russia, on grassy mountains; as of Sweden, France, Germany, Italy, Tauria, and Caucasus, North of China, &c.; North of England, among the mountains. A. alpina, Lin. mant. p. 80. Smith, engl. bot. t. 477. A. foliòsa, Tratt. arab. 1. p. 25, with a figure. ? A. rugòsa, Host, fl. austr. 2. p. 120. A. multiflòra, Bunge, enum. pl. chin. bor. p. 51. A. pyramidàlis, Bieb. fl. cauc. 2. p. 82. Lasch. in Linnæa. 5. p. 445, and of many other authors, but not of Lin. A. alpéstris, Dumort, florul. belg. p. 42. ? Teùcrum Genevénsis, Crantz, stirp. austr. Bùgula alpina, All. ped. 1. p. 45. Bùgula decúmbens, Mill. dict. no. 2. Bùgula Genevénsis, Mill. dict. no. 4. Bùgula montàna, Riv. mon. irr. t. 140. f. 2. Plant very variable in stature, form of leaves, and hairiness, as sometimes hardly to be distinguished from *A. pyramidàlis*, and sometimes it is also allied to *A. austràlis* and *A. remòta*. Leaves more or less pilose, with a few teeth or lobes; upper floral ones coloured. Calyx 5-cleft, hairy. Corollas varying from blue to rose-colour and white: tube annulate inside.

FIG. 89.



Geneva Bugle. Fl. May, July. England. Pl. ½ to 1 foot.

7 A. remòta (Benth. in Wall. pl. rar. asiat. 1. p. 59. lab. p. 694.) plant without stolons, branched at the base, procumbent; floriferous branches ascending, villous: leaves oblong-elliptic or ovate, narrowed at the base: floral leaves ovate-cuneated, exceeding the flowers, all thickish and somewhat coriaceous, villous, coarsely few-toothed; whorls remote or the upper ones are approximate; tube of corolla exserted; middle segment of lower lip scarcely emarginate. ♃. H. Native of India, in the provinces of Oude, Hurdwar, and Kamaon, Wall; Himalaya at Nag-kanda, Royle; Deyra Dhoun, Royle and Jacquemont; Beralt and Mirpoor, Jacquemont. This differs from *A. Genevénsis* in the characters given. Whorls many-flowered. Calyx inflately globose after inflorescence. Corollas varying from violaceous or blue to rose colour and white, more slender and smaller than in *A. Genevénsis*.

Remote Bugle. Pl. ascending or procumbent.

8 A. O'Phrydis (Burch. cat. geogr. pl. afr. austr. no. 8700.) plant without stolons, erect, pilosely hispid; leaves obovate, narrowed at the base: floral leaves ovate, equalling the flowers or scarcely exceeding them, all thickish and somewhat coriaceous, glabrous or villous, coarsely few-toothed; lower whorls remote: upper ones spicate; tube of corolla equalling the calyx; middle lobe of lower lip bifid. ♃. G. Native of the Cape of Good Hope, Masson, Burchell. Allied to *A. Genevénsis* and *A. remòta*, but differs from both in the stems being erect and hispid, in the floral leaves being broad, and in the flowers being twice the size, and in the form of the corolla. Corollas blue; tube annulate inside.

Ophrys-like Bugle. Pl. ½ to ¾ foot.

9 A. austra'lis (R. Br. prod. p. 503.) plant without stolons; stems ascending or erect, pubescent, rather villous or glabrous; leaves narrow-oblong, narrowed at the base, quite entire or sinuated, thickish, rather villous: floral leaves similar to the cauline leaves, exceeding the flowers; lower whorls remote: upper ones subspicate; tube of corolla exserted; middle segment of lower lip emarginately bifid. ♃. F. Native of New Holland, in grassy places, at Port Jackson, and in the interior, &c. Very like *A. Genevénsis*, but differs in the leaves being narrower, longer, and more entire, especially the floral leaves. Stem, leaves, and calyxes pubescent, with short adpressed hairs. Teeth of calyx short. Corolla blue; tube annulate inside.

Southern Bugle. Fl. May, July. Clt. 1822. Pl. ½ foot.

10 A. Dieme'nica (Benth. lab. p. 695.) plant humble, without stolons, ascending; leaves narrow-oblong, narrowed at the base, petiolate, or the superior ones are sessile, quite entire or sinuately toothed, thickish: floral leaves similar to the cauline ones, much longer than the flowers; whorls all remote; tube of corolla equalling the calyx: middle segment of lower lip shortly emarginate. ♃. F. Native of Van Diemen's Land, Gunn and Lawrence. Plant more humble, more villous, and less erect than *A. austràlis*. Leaves, especially the floral ones, usually toothed. Corollas blue; ? tube annulate inside.

Van Diemen's Land Bugle. Pl. ¼ foot.

11 A. ACAU'LIS (Brocchi, Osserv. sulli. abruz. p. 22.) plant without stolons; stems very short; leaves oblong or obovate, narrowed a long way at the base, hardly sinuately toothed: floral leaves similar to the cauline leaves, but smaller, all glabrous or pilose; whorls few, condensed; tube of corolla straight, much exserted. ♃. H. Native of the South of Italy, in the higher mountain pastures, in Abruzzo and Calabria; also of Sicily. A. decúmbens, Tenor. fl. nap. but not of Thunb. A. Tenòrii, Presl. fl. sic. p. 34. Stems shorter than the leaves, scarcely 2 inches. Leaves approximate, 1½ to 2 inches long, or longer; floral ones narrower, generally quite entire, about equal in length to the corollas. Whorls few-flowered. Calyx semiquinquefid. Corolla nearly an inch long; tube annulate inside.

Stemless Bugle. Pl. 2 to 3 inches.

12 A. SINUA'TA (R. Br. prod. p. 503.) hairy; stems many, procumbent; radical leaves longer than the petioles, and are, as well as the floral ones, sinuated, attenuated at the base; whorls 6-flowered; calyx very hairy; corolla rather pilose. ♃.? F. Native of New Holland, at the Coal river near Port Jackson. A very distinct species, with the habit of *A. parviflòra*. Flowers small, blue.

Sinuated-leaved Bugle. Pl. procumbent.

13 A. PARVIFLÒRA (Benth. in Wall. pl. rar. asiat. 1. p. 59. lab. p. 696.) plant diffuse, without stolons; branches ascending, villous; leaves broad-ovate, narrowed into the petioles at the base, sinuately subdentate; floral leaves ovate, almost quite entire, exceeding the flowers, all thick, very villous, and subcanescent; flowers minute; tube of corolla shorter than the calyx. ♃. F. Native of the Himalaya, in Kamaon, Wall; at Simlah, Lady Dalhousie; Mussooree, Royle and Jacquemont; at Illahabad, and in the valley of the Jumna, Jacquemont. Stems numerous. Whorls many-flowered. Corollas pale violet, exannulate. Stamens inclosed.

Small-flowered Bugle. Pl. ¼ to ½ foot.

14 A. BRACTEÒSA (Wall. ex Benth. l. c. lab. p. 696.) plant without stolons, diffuse; branches ascending, villous; leaves broad-ovate, narrowed into the petioles at the base: floral leaves similar to the rest, exceeding the flowers, all sinuately toothed or quite entire, thick, very villous, subcanescent; upper whorls spicate; flowers small; tube of corolla exserted. ♃. F. Native of Nipaul, Hamilt. A. integrifòlia, Hamilt. in D. Don, prod. fl. nep. p. 108. Habit and hairiness of *A. parviflòra*, but taller and more branched; cauline and floral leaves larger; whorls more approximate; flowers as large again, but one half smaller than those of *A. Genevénsis*. Corollas blue; tube annulate inside.

Bracteate Bugle. Fl. July, Aug. Clt. 1821. Pl. ½ to ⅔ foot.

15 A. DENSIFLÒRA (Wall, ex Benth. l. c. lab. p. 696.) plant without stolons, humble, ascending, or erect, villous; leaves oblong or ovate, suberenated, narrowed at the base, thick, villous: upper floral leaves or all are shorter than the flowers; whorls spicate or the lower ones hardly remote; tube of corolla equalling the calyx: middle segment of lower lip scarcely emarginate. ♃. F. Native of Nipaul. Allied to *A. parviflòra* and *A. bracteòsa*. Corolla blue; lower lip size of that of *A. Genevénsis*.

Dense-flowered Bugle. Pl. ¼ to ½ foot.

16 A. DECU'MBENS (Thunb. fl. jap. 243.? Benth. lab. p. 697.) plant procumbent, without stolons; leaves subovate, coarsely toothed or cut, narrowed at the base, glabrous or villous: lower floral leaves almost similar to the cauline leaves: superior ones or all are bractea-formed, shorter than the flowers; whorls spicate, or the lower ones are few, axillary, and distant; calycine teeth bluntish; tube of corolla inclosed or a little exserted. ♃. F. Native of Nipaul and Kamaon, Wall; Kheree Pass and Deyra Dhoun, Royle; China, Sir G. Staunton. Intermediate between *A. densiflòra* and *A. macrospérma*. Whorls globose.

Decumbent Bugle. Pl. procumbent.

17 A. MACROSPE'RMA (Wall, ex Benth. l. c. lab. p. 697) plant without stolons, erect or ascending, branched; cauline leaves simple, ovate, coarsely toothed, narrowed a long way at the base, membranaceous, glabrous or sparingly pilose: lower leaves almost similar to the rest: upper floral leaves or all bractea-formed, and shorter than the flowers; whorls spicate, or the lower ones are subremote; calycine teeth obtuse; tube of corolla shortly exserted. ♃. F. Native of the East Indies, on the Pundua Mountains, and on Mount Taong Dong near Ava. Stem paniculately branched. Lower leaves on long petioles, 2-4 inches long. Calyx turbinate. Corolla small, with an elongated tube, which is inflated in the middle, and annulate inside.

Large-seeded Bugle. Pl. 1 to 2 feet.

SECT. II. CHAMÆ'PITHYS (from χαμαι, *chamai*, on the ground, and πιτυς, *pitus*, a pine; the odour of Chamæ'pithys is bitter and resinous like that of the pine.) Benth. lab. p. 697. Whorls 2, rarely 4-flowered. Corollas red or yellow; upper lip very short and truncate.

18 A. LAXMA'NNI (Benth. lab. p. 697.) stems ascending, pilosely woolly; leaves sessile, oblong or elliptic, obtuse, quite entire, pubescent or pilose: floral leaves similar to the cauline ones; whorls 2-flowered; calyx ample, semiquinquefid, with oblong, bluntish, nearly equal segments; tube of corolla inclosed. ♃. H. Native of the South-east of Europe and Middle Asia; as of Hungary, Transylvania, Bessarabia, Tauria, Caucasus, and Iberia. Teùcrium Laxmánni, Lin. syst. p. 489. Waldst. et Kit. pl. rar. hung. 1. t. 69. Phlebonánthe Laxmánni, Tausch. in bot. zeit. 1828. 1. p. 823. Stems branched, clothed with long hairs. Leaves about 2 inches long, stem-clasping; lower ones narrowed at the base; upper ones roundish; floral leaves all exceeding the flowers. Corollas yellow, nearly an inch long. Genitals equal in length to the segments of corolla.

Laxmann's Ground-pine. Fl. June, Aug. Clt. 1800. Pl. 1 to 2 feet.

19 A. OBLONGA'TA (Bieb. fl. cauc. suppl. p. 388.) stem erectish, very pilose; leaves nearly sessile, narrowly oblong, obtuse, quite entire, pilose: floral leaves similar to the cauline leaves; whorls 2-flowered; upper tooth of calyx minute: lower ones equal in length to the tube; tube of corolla shortly exserted. ♃. H. Native of Caucasus, in sandy places; and of Syria, between Bagdad and Aleppo. A. salicifòlia, Stev. mem. soc. nat. cur. mosq. 3. p. 265, but not of Lin. This differs from *A. Laxmánni* in the smaller stature and leaves, more stiff hairs, and form of calyx. Stems usually panicled. Corollas yellow, about the size of those of *A. Laxmánni*, but the lateral segments are rather broader.

Oblong-leaved Ground-pine. Pl. 1 foot.

20 A. SALICIFÒLIA (Schreb. unilab. p. 26.) herbaceous, pubescent; leaves oblong-lanceolate, bluntish, quite entire or a little toothed, narrowed into the short petioles at the base; calyx tomentosely hairy, with oblong obtuse teeth, the upper tooth the shortest; flowers on short pedicels. ♃. H. Native of Syria, between Smyrna and Bursa; and of Tauria and Armenia. Sibth. et Smith, fl. græc. 6. p. 22. t. 526. Teùcrium salicifòlium, Lin. mant. p. 80. Schreb. dec. 1. p. 17. t. 9. This differs from *A. oblongàta* in the short stiff pubescence. Habit and flowers almost the same, but the calyx is larger.

Willow-leaved Ground-pine. Pl. procumbent.?

21 A. CHAMÆCI'STUS (Ging. in herb. D. C. ex Benth. lab. p. 698.) suffruticose; branches white, nearly glabrous; leaves sessile, ovate-elliptic, obtuse, quite entire, green on both surfaces, but finely pubescent or glabrous; flowers pedicellate; calyx attenuated at the base, with oblong obtuse equal teeth. ♄. F. Native of Persia. A very distinct species. Leaves an inch long. Calyx tomentose at the base, whitish, with green teeth. Tube of corolla a little exserted.

Dwarf-cistus Ground-pine. Shrub.

22 A. Iva (Schreb. unilab. p. 25.) annual, diffuse, pilosely hispid; leaves oblong-linear, coarsely toothed or almost quite entire, with subrevolute edges: floral leaves similar to the cauline leaves; whorls 2-6-flowered; tube of corolla exserted. ☉. H. Native of the South of Europe and North of Africa, in the region of the Mediterranean. A. moschàta, Schreb. unilab. p. 26. Teûcrium Iva, Lin. spec. p. 787. Cav. icon. 2. t. 120. Teûcrium moschàtum, Lam. fl. fr. 2. p. 409. Moschària asperifòlia, Forsk. fl. ægypt. 154.—Mor. hist. sect. 11. t. 22. f. 3.—Lob. icon. t. 384. Branches numerous, tufted, leafy. The whole plant beset with stiff hairs. Leaves about an inch long, narrowed at the base. Corolla rose-coloured; tube annulate inside. This species possesses the same qualities as *A. Chamæpithys*. Var. β, flowers yellow. ½. F. A. pseudoiva, D. C. fl. fr. suppl. p. 395. A. Iva, Sibth. et Smith, fl. græc. 6. p. 22. t. 525. This does not differ from the species, unless in the colour of the flower.

Iva Ground-pine. Fl. July, Aug. Clt. 1759. Pl. ¼ to ½ foot.

23 A. tridactylì'tes (Ging. mss. ex Benth. lab. p. 699.) suffruticose, diffuse, pilosely hispid; leaves cuneated-oblong, deeply tridentate at the apex or trifid, with short ovate-oblong teeth: floral leaves similar to the cauline ones: upper ones shorter than the flowers; whorls 2-flowered; tube of corolla exserted. ½. F. Native of Palestine, on the top of Mount St. Catherine, N. Bové; and at the foot of Mount Libanon, Meryon. Habit of *A. Iva*, but differs in the form of the leaves and smaller flowers. Corolla rose-coloured. Filaments pilose, like those of *A. Iva*.

Three-fingered-leaved Ground-pine. Shrub ¼ to ½ foot.

24 A. Cìva (Schreb. unilab. p. 25.) herbaceous, erect, pilosely hispid; leaves deeply trifid, with linear, quite entire or trifid lobes: floral leaves similar to the others, rather shorter than the corollas; whorls 2-flowered, distinct. ☉. H. Native of Europe and Asia, in the region of the Mediterranean, on dry hills; as of Sicily, Italy, Island of Chio, and other Grecian islands; also of Tauria. Sibth. et Smith, fl. græc. 6. p. 21. t. 524. A. Chamæ'pithys, Guss. fl. sic. prod. 2. p. 66. Teûcrium Chium, Poir. suppl. 2. p. 772. Hardly differing from *A. Chamæ'pithys*, unless in the corollas being twice as long, and in the stems and leaves being more hairy.

Var. β, *minor* (Benth. lab. p. 699.) ☉. H. Native of Syria, near Aleppo, Russell. This variety is nearly allied to *A. tridactylites*.

Chio Ground-pine. Pl. ½ to 1 foot.

25 A. Chamæ'pithys (Schreb. unilab. 24.) herbaceous, diffuse; leaves deeply trifid, with linear, quite entire or trifid lobes: floral leaves similar to the others, exceeding the flowers; whorls 2-flowered. ☉. H. Native of Middle and South Europe; also of Asia, in the Pontic region; Tauria and Caucasus. In England it abounds in Kent and Surrey, but otherwise a scarce plant. Smith, engl. bot. t. 77. Teûcrium Chamæ'pithys, Scop. carn. no. 718. Œd. fl. dan. t. 733. Bûgula Chamæ'pithys, Schreb. unilab. p. 453. Chamæ'pithys Chamæ'pithys vulgàris, Link, handb. p. 458.—Riv. Chamæ'pithys trifìda, Dumort, florul. belg. p. 42.—Ludw. ect. t. 130.—Riv. mon. irr. t. 14. f. 1.—Mor. hist. sect. 11. f. 22. f. 1. Stems procumbent at the base, much branched, beset with long hairs like the leaves, which are ciliated with long hairs. Corolla yellow, dotted with red, pubescent outside. Filaments rather pilose. The whole plant has a highly aromatic odour, and was much esteemed in the same disorders as *Teûcrium Bòtrys*, and was an ingredient in the Portland powder.

Ground-Pine, Common. Fl. April, July. England. Pl. diffuse ¼ to ½ foot.

26 A. gla'bra (Presl. fl. sic. p. 56.? Benth. lab. p. 700.) herbaceous, glabrous; leaves dilated at the base, deeply trifid, with linear, quite entire lobes; floral leaves similar to the others; whorls 2-flowered; calycine teeth lanceolate, obtuse, glabrous. ☉.? H. Native of Sicily and Syria. Teûcrium lævigàtum, Russ. nat. hist. alepp. 2. p. 255. This differs from the preceding by its being glabrous, and by the flowers being twice the size; and from *A. Chia* by its being glabrous.

Glabrous Ground-Pine. Pl. ¼ to ½ foot.?

Sect. III. Pseudoanisómeles (so called from the species having the habit of the genus *Anisómeles*, with the anthers of *Ajuga*. False Anisomeles.) Benth. lab. p. 700. Whorls 2-6-flowered. Upper lip of corolla hardly thrice as short as the lower lip. Australian plants. The two species have the calyx, corolla, and nearly the habit of *Anisómeles*, with the anthers of *Ajuga*. The achenia have not been seen.

27 A.? virga'ta (Benth. lab. p. 700.) stems elongated, twiggy, nearly simple; leaves oblong; cauline leaves coarsely serrated, somewhat canescently villous; floral leaves quite entire, exceeding the calyxes; whorls distant, 2-6-flowered, disposed in long racemes; tube of corolla inclosed. ☿.? G. Native of New Holland, in the interior, at the river Lachlan, Cunningham. Stems pubescent. Leaves almost of *Anisómeles*; lower ones petiolate; upper ones sessile, narrow at the base, 1-2 inches long. Flowers nearly sessile.

Twiggy Bugle. Pl. 1 to 1½ foot.

28 A.? tridenta'ta (Benth. lab. p. 701.) stems elongated, twiggy, simple; cauline leaves oblong, petiolate: floral leaves sessile, ovate, trifid at apex, exceeding the flowers; whorls distant, 2-6-flowered, disposed in long racemes; tube of corolla exserted. ☿.? G. Native along with the preceding, Cunningham. Whorls occupying the larger part of the stem, usually 2-flowered. Flowers nearly sessile. Calyx glabrous or pubescent, campanulate, deeply 5-toothed. This differs from the preceding in the smaller calyxes, larger corollas, and tridentate floral leaves.

Tridentate-leaved Bugle. Pl. 1 to 1½ foot.

† *A species not sufficiently known.*

29 A. re'pens (Roxb. fl. ind. 3. p. 3.) biennial, procumbent, villous; leaves oblong-lanceolate, narrowed into the petioles at the base, coarsely and unequally serrated; spikes terminal, cylindrical; bracteas oblong, ventricose, 5-flowered, therefore the whorls are 10-flowered. ♂. G. Native of the East Indies, in the province of Chittagong. A robust diffuse plant, having the lower branches generally radicant.

Creeping Bugle. Pl. robust.

Cult. For culture and propagation see *Teûcrium*, p. 870. Most of the species belonging to section *Búgula* require a moist soil.

CX. CYMA'RIA (from *cyma*, a cyme; in allusion to the flowers being disposed in cymes.) Benth. in bot. reg. vol. 15. lab. p. 705.

Lin. syst. *Didynàmia, Gymnospérmia*. Calyx nearly globose, about 10-nerved, equal, 5-toothed; throat coarctate, naked inside. Corolla with a subexserted straight tube and a bilabiate limb; lips nearly equal; upper lip erect, entire, arched; lower lip spreading, trifid, having the middle segment entire. Stamens 4, ascending under the lower lip, didynamous; lower ones the longest; anthers 2-celled: cells at length divaricate. Upper lobe of style very short; stigmas minute. Achenia dry, wrinkled.—Shrubs. Flowers small, cymose; cymes racemose. This genus resembles *Cremóstome* and *Plectránthus* in habit; yet the rugose achenia, less deeply separated than in most *Labiatæ*,

seem to indicate its station as lying between *Ajugoideæ* and *Verbenàceæ*.

1 C. DICHÓTOMA (Benth. in Wall. pl. rar. 1. p. 64. lab. p. 705.) leaves ovate, nearly glabrous above, scarcely wrinkled; cymes loose, panicled; peduncles slender, 3-4 times longer than the petioles. ♄. S. Native of the Burman Empire, on Mount Taong Dong and at Segaen. Branches tomentose. Leaves on short petioles, crenated, tomentose beneath while young.

Dichotomous Cymaria. Shrub 2 to 3 feet.

2 C. ELONGA'TA (Benth. in Wall. l. c. lab. p. 705.) leaves wrinkled, tomentose on both surfaces; cymes dense, on short pedunoles; racemes terminal, elongated, loose. ♄. S. Native along with the preceding. This differs from the first in the branches being elongated and densely tomentose, in the leaves being on shorter petioles, and usually rounded at the base; cymes of flowers more numerous, disposed into an elongated terminal raceme. Calyx densely tomentose.

Elongated-branched Cymaria. Shrub 3 to 4 feet.

Cult. For culture and propagation, see *Plectránthus*, p. 682.

THE END.

A CATALOGUE

OF THE

NAMES OF BOOKS AND OTHER AUTHORITIES REFERRED TO;

WITH THE ABBREVIATIONS USED.

In this catalogue the abbreviations used in the text are in Italics, and the full titles of the works in Roman letters.

Abel Chin. Abel (Clarke). Voyage to China, 4to. London, 1818.

Abbot, ins. } Abbott's natural history of the insects
Abbott, insect. georg. } of Georgia, 2 vols. fol. London, 1798.

Abercrombie. Abercrombie (John). The practical gardener's companion, or horticultural calendar, &c., London, and The gardener's pocket journal and annual register, &c., 1 vol. 12mo., 1791.

Abhand. acad. wiss. Abhandlungen der churfürstlich baierischen Akademie der Wissenschaften, 6 vols. 4to. Munchen, 1763. Continued. New Series, 1807.

Abhand. nat. ges. dantz. Versuche und Abhandlungen der naturforschenden Gesellschaft in Dantzig, 4 vols. 4to. Dantzig, 1747-1778.

Abhand. nat. ges. hall. Abhandlungen der Hallischen natürforschenden Gesellschaft, 1 vol. 8vo. Leipsig, 1783.

Abhand. acad. ges. zur. Abhandlungen der natürforschenden gesellschaft in Zurich, 3 vols. 8vo., 1761-1766.

Abhand. böhm. Abhandlungen einer Gesellschaft in Böhmen zur Aufnahme der vaterländischen Geschichte und der Natural geschichte, 8vo. Prague, 1775-1789.

Abhand (neu) Böhm, or *bohem.* Neuen Abhandlungen der Böhmischen Gesellschaft, 8vo. Prague.

Achar. lich. Acharius (Erick). Lichenographia universalis, 1 vol. 4to. Göttingen, 1810.

Act acad. erford. Acta academiæ electoralis moguntinæ scientiarum utilium quæ Erfordi est. 2 vols. 8vo. 1778-1795

Act. acad. petrop. Acta academiæ scientiarum imperialis petropolitanæ, 4to. Petersburg, 1777-1782.

Act. nov. acad. petrop. Nova acta academiæ scientiarum imperialis petropolitanæ, 4to. Petersburg, 1785-1816.

Act. soc. bot. ratisb. Denkschriften der königlich-baierischen botanischen Gesellschaft in Regensburg, 4to. Ratisbon, 1815. Continued.

Act. amstel. See Verhand. amstel.

Act. batav. See Verhand. batav.

Act. berol. See Mem. acad. berol. and Hist. acad. sc. berol.

Act. bonn. See Comm. inst. berol.

Act. gott. See Comm. gott.

Act. hafn. Acta litteraria universitatis hafniensis, 1788. Continued.

Act. harl. See Verhand haarl.

Act. hass. See Act. soc. acad. hass.

Act. helv. Acta Helvetica physico-mathematico-botanico-medica, 8 vols. 4to. Basil, 1751-1777.

Act. helv. nov. Nova acta helvetica, 1 vol. 4to. Basil, 1787.

Act. holm. See Handl. svensk. acad.

Act. ital. See Mem. soc. ital.

Act. lips. See Schrift leipz. akad. soc.

Act. lus. See Mem. acad. lisb.

Act. monsp. See Hist. soc. roy. sc. monsp.

Act. nat. cur. Acta physico-medica academiæ cæsareæ naturæ curiosorum, 10 vols. Norimberg, 1725-1754.

Act. nov. nat. cur. Nova acta physico-medica academiæ cæsareæ leopoldino-carolinæ naturæ curiosorum, 7 vols. 4to. Noremberg, 1757-1783.

Act. par. See Mem. inst. and Mem. acad. sc. par.

Act. petrop. See Comm. acad. sc. petrop. and Act. acad. petrop.

Act. phil. amer. See Trans. amer. soc.

Act. acad. böhm. See Abhand. böhm.

Act. soc. acad. hass. Acta phil sophico-medica societatis academicæ scientiarum principalis Hassiacæ, 1 vol. 4to. Geissa. 1771.

Act. suec. See Handl. svensk. acad. and Act. ups.

Act. soc. hist. nat. par. Actes de la société d'histoire naturelle de Paris, 1 vol. fol. Paris, 1792.

Act. taur. See Mem. acad. taur. and Misc. taur.

Act. tol. See Mem. acad. toul.

Act. tur. See Abhand. acad. ges. zur.

Act. univ. hafn. Acta litteraria universitatis Hafniensis, 1 vol. 4to. Copenhagen, 1778.

Act ups. Acta societatis regiæ scientiarum upsaliensis, 4to. Many vols. New series. Nova Acta, &c. Upsal, 1720-1816.

Act. vliss. See Verhand. vliss.

Adam in Web. et Mohr beytr. Adam (John Fred). See Web. et Mohr beytr.

Adams in act. mosc., *Adams in soc. hist. nat. mosc.*, *Adams in mem. nat. cur. m. sc.* Adams (M. F.) See Mem. mosc.

Adams in act. acad. petrop. Ibid. See Act. acad. petrop.

Adams et Fisch in mem. soc. nat. mosc. Ibid. See Mem. mosc.

Adans. sen. Adanson (Michael). Histoire naturelle du senegal, 1 vol. 4to. Paris, 1757.

Adans. fam. Ibid. Familles des plantes, 2 vols. 8vo. Paris, 1763.

Afz. obs. Afzelius (Adam). De vegetabilibus suecaniis observationes et experimenta, resp. Wadsberg, 1 fasc. 4to. Upsal, 1785.

Afz. rem. guin. Ibid. Remedia guineensia, 4to. Upsal, 1816.

Afz. gen. guin. Ibid. Genera plantarum guineensium, 4to. Upsal, 1804.

Afz. in act. holm. Ibid. See Act. holm.

Ainslie. Ainslie (Whitelaw). Materia medica of the East Indies, 2 vols. 8vo. London, 1826.

Ait. hort. kew. Aiton (William). Hortus kewensis, 1st edit. 3 vols. 8vo. London, 1789. Second edition by William Townsend Aiton, 5 vols. 8vo. London, 1810-1813. The last edition is the one principally referred to.

Ait. icon. kew. See Bauer, icon. kew.

Ait. epit. Aiton (William Townsend). An epitome of the second edition of Hortus kewensis, 1 vol. 8vo. London, 1814.

Alb. fl. med. Alberti (D.). Flora medica, 4 fasc. 8vo. Milan, 1817.

Ald. farn. Aldinus (Tobias). Exactissima descriptio rariorum quarundam plantarum quæ continentur romæ in horto Farnesiano, 1 vol. fol. Rome, 1625.

Aldr. dend. Aldrovandus (Ulysses). Dendrologia naturalis libri duo, 1 vol. fol. Bologna, 1667.

Alib. mat. med. Alibert (J. L.) Nouveaux élémens de thérapeutique et de matière médicale, 2 vols. 8vo. Paris, 1808.

All. rar., *All. rar. stirp.* Allioni (Carolus). Rariorum pedemontani stirpium specimen, 1 vol. 4to. Turin. 1755.

All. nic. Ibid. Stirpium præcipuarum littoris et agri niceensis enumeratio methodum, 1 vol. 8vo. Paris, 1757.

All. ped., *All. pedem.*, *Allion pedem.* Ibid. Flora pedemontana, 3 vols. fol. Turin, 1785.

All. auct. Ibid. Auctuarium ad floram pedemontanum, 1 fasc. 4to. Turin, 1789.

All. miscell. taur. Ibid. See Misc. taur.

All. in act. taur. See Act. taur.

Allg. gart. mag., *Allg. teutsch.* Allgemeine Gartenzeitung, 4to. Berlin, 1837. Weekly, in Numbers.

Alph. D'C. mon. De Candolle fils (Alphonse). Monographie des campanulées, 4to. Paris, 1830.

Alph. D'C. in Lin. trans. Ibid. See Lin. Trans.

Alp. ægypt., *Alp. pl. ægypt.* Alpinus (Prosper). De plantis ægypti liber, 1 vol. 4to, 1st edit. Venice, 1592. 2nd edit. Padua, 1640.

Alp. exot., *Alp. exot. ægypt.* Ibid. De plantis exoticis libri duo, 1 vol. 4to. Venice, 1629.

Alp. hist. Ibid. Historia naturalis Ægypti, 2 vols. 4to. 1735.

Amer. phil. trans. Transactions of the american philosophical society, 5 vols. 4to. Philadelphia, 1802. New Series, 1818. Continued.

Amm. ruth., *Amm. stirp.* Amman (John). Scirpium rariorum in imperio rutheno sponte provenientium icones et descriptiones, 1 vol. 4to. Petersburg, 1739.

Amm. act. petrop. Ibid. See Act. petrop.

Anders. in Lin. trans. Anderson (George). See Lin. trans.

Anders. in trans. soc. arts and man. Anderson (William). See Trans. soc. arts.

Andr. rep., *Andr. bot. rep.* Andrews (Henry). The Botanist's repository for new and rare plants, 9 vols. 4to. London, 1797, and following years.

Andr. ger. Ibid. Coloured engravings of Geraniums, fol. London.

Andr. heaths. Ibid. Coloured engravings of heaths, 4 vols. fol. London, 1802, and following years.

Andrz. in litt. Andrzewsk (Anton). Coadjutor of Besser. See Bess.

Andrz. cruc. ined. Ibid. Cruciferæ. Not published.

Ann. bot. Annals of botany, by C. König and John Sims, 2 vols. 8vo. London, 1805-1806.

Ann. hist. nat. madr. Annales de historia naturali, 4 vols. 8vo. Madrid, 1799-1801.

Ann. mus. Annales du museum d'histoire naturelle, 20 vols. 4to. Paris, 1802-1813.

Ann. lyc., *Ann. lyc. New York.* Annals of the lyceum of natural history of New York, several vols. 8vo. New York, 1824. Continued.

Ann. sc. nat. par., *Ann. sc. nat.*, *Ann. sc.* Annales des sciences naturelles. Paris. Many vols. 8vo. Continued.

Ann. nett. Annalen der wetteranischen Gesellschaft für die gesammte Naturkunde.

Ann. soc. Lin. par. Annales de la société Linnéenne de Paris. 1814. Continued.

Ann. agric. Annales de l'agriculture française, par M. M. Tessier et Bosc. 68 vols. 8vo. 1789. Continued.

Ard. specim., *Ard. spec.*, *Arduin. specim.* Arduino (Pietro). Animadversionum botanicarum specimen, 1 vol. fol. Basil, 1562.

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THE END.

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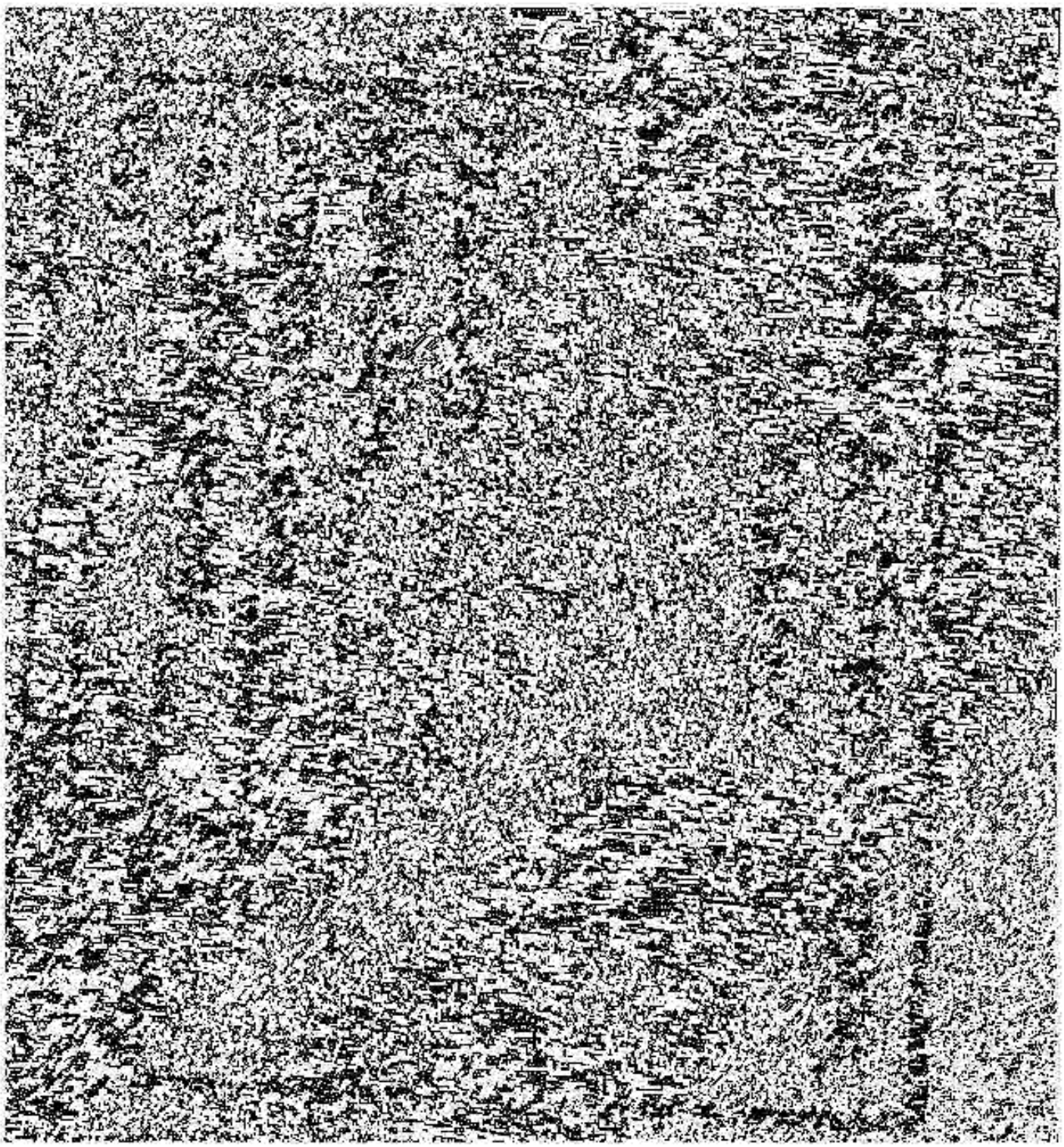

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