

Species Datasheet

Datasheet No. A-028.002.006
(family.genus.species)

DBT- Network Programme

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1. Taxon:

Species *Alocasia macrorrhizos* (L.) G. Don

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Alocasia cordifolia* (Bory) Cordem., *A. grandis* N.E.Br., *A. indica* (Lour.) Spach, *A. indica* var. *diversifolia* Engl., *A. indica* var. *heterophylla* Engl., *A. indica* var. *metallica* (Schott) Schott, *A. indica* var. *rubra* (Hassk.) Engl., *A. indica* var. *typica* Engl., *A. indica* var. *variegata* (K.Koch & C.D.Bouché) Engl., *A. macrorrhizos* var. *rubra* (Hassk.) Furtado, *A. macrorrhizos* var. *variegata* (K.Koch & C.D.Bouché) Furtado, *A. marginata* N.E.Br., *A. metallica* Schott, *A. montana* (Roxb.) Schott, *A. pallida* K.Koch & C.D.Bouché, *A. plumbea* Van Houtte, *A. rapiformis* (Roxb.) Schott, *A. uhinkii* Engl. & K.Krause, *A. variegata* K.Koch & C.D.Bouché, *Arum cordifolium* Bory, *A. indicum* Lour., *A. macrorrhizon* L., *A. montanum* Roxb., *A. mucronatum* Lam., *A. peregrinum* L., *A. rapiforme* Roxb., *Caladium indicum* K.Koch, *C. macrorrhizon* (L.) R.Br., *C. metallicum* Engl., *C. odoratum* Lodd., *C. plumbeum* K.Koch, *Calla badian* Blanco, *C. maxima* Blanco, *Colocasia boryi* Kunth, *C. indica* (Lour.) Kunth, *C. indica* (Lour.) Hassk., *C. indica* var. *rubra* Hassk., *C. macrorrhizos* (L.) Schott, *C. montana* (Roxb.) Kunth, *C. mucronata* (Lam.) Kunth, *C. peregrina* (L.) Raf., *C. rapiformis* (Roxb.) Kunth, *Philodendron peregrinum* (L.) Kunth, *P. punctatum* Kunth

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Alismatales R. Br. ex Bercht. & J. Presl
- Family: Araceae Juss.
- Genus: *Alocasia* (Schott) G. Don
- Species: *A. macrorrhizos* (L.) G. Don

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledon
Series: Nudiflorae
Ordo: Aroideae Arn.
Genus: *Alocasia* (Schott) G. Don
Species: *A. macrorrhizos* (L.) G. Don

4. Distribution:

Global: Malesia, Philippines, Indonesia, , West Indies, Africa, India, Sri Lanka, Taiwan, Thailand, Vietnam, Guinea, Cuba, Brazil, New Zealand, Costa Rica, Cuba, Saint Lucia, Paraguay, Peru, American Samoa, Fiji

India: Andhra Pradesh, Arunachal Pradesh, Assam, Delhi, Diu, Sikkim

5. Indigenous/Exotic/ Endemic; Cultivated/Wild:

6. Threat Status:

IUCN:

BSI:

7. Habit and Habitat: Herb. Found in Moist areas.

8. Life Form: Geophytes

9. Economic Importance: Commonly used as decorative plant, used as traditional medicine in India and the Pacific islands and also stems formerly used as a subsistence crop in times of famine.

10. Probable Progenitor of:

11. DNA

C- value

Methodology

12. Basic chromosome number(s): $x=7^9$

13. Zygotic chromosome number(s): $2n=14^{28}$

$2n=26^{5,21}$

$2n=28^{1,2,5,7,9,10,11,12,19,22,23,24,29,30,31}$

$2n=42^2$

14. Gametic chromosome number(s): $n=13^{25}$

$n=14^{2,31}$

$n=21^{2,5}$

15. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/Neocentric chromosomes):

Image file

16. Ploidy level: Diploid 19,24

Image file

17. Agametoploidy

18. Nature of polyploidy (auto, segmental, allo, autoallo):

19. Genomic formula:

20. Aberrant chromosome number(s) (aneuploidy, aneusomaty, polysomaty):

21. Somatic chromosomes:

Karyotype: Majority metacentric chromosomes ^{19,28}, Majority metacentric to submetacentric chromosomes ^{29,30}, Majority submetacentric chromosomes ²¹

Chromosome size: Small ³⁰, Small to medium ^{19,28,29}, Medium ⁹

NOR chromosome(s): 6 NOR ^{29,30}

Degree of asymmetry:

Image file

22. Banding pattern(s):

Image file

23. Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization

Image file

24. Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26. Chromosome associations:

Female meiosis

Male meiosis

Image file

27. Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level ¹⁴

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc): Pollen sterility 95% ³¹, Desynapsis ³¹

