

Species Datasheet

Datasheet No. A-028.002.005
(family.genus.species)

DBT- Network Programme

-

1. Taxon:

Species *Alocasia fornicata* (Roxb.) Schott

Subspecies

Variety

Cultivar

Hybrid

Image file

2. **Synonyms:** *Arum fornicatum* Roxb., *Colocasia fornicata* (Roxb.) 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. fornicata* (Roxb.) Schott

Bentham and Hooker (1862)

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

4. Distribution:

Global: Bangladesh, China, India, and Sri Lanka

India: Andhra Pradesh, Assam, Bihar, Karnataka, Orissa, Tripura, West Bengal

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

6. Threat Status:

IUCN:

BSI:

7. **Habit and Habitat:** Herb. Found in shady moist places.

8. **Life Form:** Geophytes

9. **Economic Importance:** Rhizome paste is used as a cure for boils. Almost all parts of the plants are used as food due to high starch content.

10. Probable Progenitor of:

11. DNA

C- value

Methodology

12. Basic chromosome number(s):

13. Zygotic chromosome number(s): $2n=28$ ^{5,17,18}
 $2n=42$ ^{5,19}

14. Gametic chromosome number(s): $n=14$ ⁵
 $n=70$ ²⁰

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

Image file

16. Ploidy level: Pentaploid ²⁰

Image file

17. Agametoploidy

18. Nature of polyploidy (auto, segmental, allo, autoallo): segmental pentaploidy ²⁰

19. Genomic formula:

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

21. Somatic chromosomes:

Karyotype: Majority metacentric chromosomes ¹⁷, Majority metacentric to submetacentric chromosomes ¹⁸

Chromosome size: Small to medium ^{17,19}

NOR chromosome(s)

Degree of asymmetry: Symmetrical ¹⁸

Image file

22. Banding pattern(s): CMA⁺ and DAPI⁺ bands ¹⁸

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: Occurrence of univalents, bivalents, trivalents, tetravalents, pentavalents ²⁰

Image file

27. Chromosome distribution at anaphase I: Late separation of bivalents and lagging of chromosomes ²⁰

28. Genetic diversity:

Chromosomal level

Image file

DNA level ¹⁸

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc): Pollen sterility was found to be as high as 95% ²⁰