

Species Datasheet

Datasheet No. A-028.023.006
(family.genus.species)

DBT- Network Programme

-

1. Taxon:

Species *Typhonium roxburghii* Schott

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Arum diversifolium* Blume, *A. roxburghii* Thwaites, *Dracunculus divaricatus* Raf., *Typhonium amboinense* Blatt. & McCann, *T. divaricatum* Blume, *T. divaricatum* var. *mottleyanum* (Schott) Engl., *T. divaricatum* var. *robustum* Blume, *T. divaricatum* var. *roxburghii* (Schott) Engl., *T. divaricatum* var. *schottii* (Prain) Engl., *T. javanicum* Miq., *T. mottleyanum* Schott, *T. schottii* Prain

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperm
- Clade: Monocots
- Order: Alismatales R. Br. ex Bercht. & J. Presl
- Family: Araceae Juss.
- Genus: *T.* Schott
- Species: *T. roxburghii* Schott

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Nudiflorae
Ordo: Aroideae Arn.
Genus: *Typhonium* Schott
Species: *T. roxburghii* Schott

4. Distribution:

Global: Tropical & Subtropical Asia

India: South & East India.

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

6. Threat Status:

IUCN:

BSI:

7. Habit and Habitat: Herb, tropical dry forest

8. Life Form: Tuberous geophytes

9. Economic Importance:

10. Probable Progenitor of:

11. DNA

C- value

4C (8.28±0.09pg) ³

Methodology

Feulgen cytophotometry ³

12. Basic chromosome number(s): x=13 ^{1,17}

13. Zygotic chromosome number(s): 2n=16 ¹⁰

2n=26 ^{3,17}

2n=52 ^{1,16}

2n=65 ¹

14. Gametic chromosome number(s):

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

Image file

16. Ploidy level: Tetraploid ¹

Pentaploid ¹

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 ³

Chromosome size: Very small to small ¹

NOR chromosome(s): 6 NOR ³

Degree of asymmetry: Symmetrical or asymmetrical ³

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 In Tetraploid- 6-9 quadrivalents in rings and chains; remaining chromosomes being pair as bivalents ¹

In Pentaploid- chromosomes association in rings and chains. Chain made of 5 chromosomes and ring consists of only 4 chromosomes. A variable number of univalent, bivalents and trivalents also present ¹

Image file

27. Chromosome distribution at anaphase I: In Tetraploid- regular ¹, In Pentaploid- irregular ¹

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): In Tetraploid- Pollen stainability 90% ¹

In Pentaploid- pollen stainability 86% ¹