

Genus Datasheet

Datasheet No. A-377.025
(Family: Genus)

DBT- Network Progr

1. Genus: *Hygrophila* R.Br.

2. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Eudicots
- Clade: Asterids
- Clade: Superasterids
- Order: Lamiales
- Family: Acanthaceae Juss.
- Genus: *Hygrophila* R.Br.

Bentham and Hooker (1862)

- Kingdom: Plantae
- Division: Phanerogamia
- Class: Dicotyledons
- Subclass: Gamopetalae
- Series: Bicarpellatae
- Cohors: Personales
- Ordo: Acanthaceae Juss.
- Genus: *Hygrophila* R.Br.

3. Species:

Global: 46

India: 17

4. Taxonomic riddles: Yes¹⁰

5. Distribution:

Global: Australia, Bahamas, Bangladesh, Bhutan, Cambodia, China, Cuba, Dominican Republic, Haiti, India, Indonesia, Jamaica, Laos, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Suriname, Thailand and Vietnam.

India: Andhra Pradesh, Goa, Gujarat, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Orissa, Sikkim, Tamil Nadu and West Bengal.

6. Habit and Habitat: Erect shrub or under shrub. Found in tropical, sub-tropical forests. Some species grown in dry deciduous forests, often found near shallow waters.

7. Economic Importance: Potential ornamental aquatic plant.

8. DNA content range:

Methodology:

2C

4C

9. Basic chromosome number(s): $x=12^4$, $x=16^4$

10. Zygotic chromosome number (s): $2n=34^{1,2}$, $2n=32^{3,5,6,7,8,9}$, $2n=44^{1,2}$

11. Gametic chromosome number (s): $n=17^2$, $n=16^{3,5,6,7}$, $n=22^2$

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

13. Ploidy level:

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

15. Aberrant chromosome number(s) (aneuploidy, aneusomy, polysomy): Aneuploid chromosomal variations²

16. Karyograms: Majority metacentric to sub-metacentric chromosomes^{2,8} Meiosis: Normal²

17. Banding pattern(s):

18. Physical mapping of chromosomes:

GISH:

19. Phylogenetic relationship at Chromosomal; DNA level: Chromosomal level^{1,2,3,8}

20. Cytogenetic mechanism (s) underlying evolution: Genetic complexity at the chromosomal level in the genus *Hygrophila* R.Br. is accompanied by variation in chromosome number from $2n=32^{3,5,6,7,8,9}$ (reported in *H. balsamica*, *H. polysperma* and *H. ringens* var. *ringens*), $2n=34^{1,2}$ in *H. balsamica*,

to $2n = 44^{1, 2}$ in *H. ringens* var. *ringens*. The basic chromosome number reported for the genus is $x = 12^4$, $x = 16^4$. There is a small variation in chromosome size across species reported so far.

21. Linkage map:

22. Any other information:

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