

Genus Datasheet

Datasheet No. A-030.001
(Family.Genus)

DBT- Network Programme

1. Genus: *Alisma* L.

2. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Alismatales R. Br. ex Bercht. & J. Presl
- Family: Alismataceae Vent.
- Genus: *Alisma* L.

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Apocarpae
Ordo: Alismaceae
Genus: *Alisma* L.

3. Species:

Global: ~11

India: 4

4. Taxonomic riddles: yes 8, 9, 26, 47, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83

5. Distribution:

Global: Throughout the Northern Hemisphere

India: Assam, East Himalaya, West Himalaya.

6. Habit and Habitat: Perennials aquatic or marsh herb

7. Economic Importance: Food and traditional Native American and Chinese medicine.

8. DNA content range:

4C (41.2pg- 73.2 pg) ^{17,70}

Methodology

Feulgen microdensitometry ^{17,70}

9. Basic chromosome number(s):
x=13 ^{1,72}
x=7 ^{1,8,9,36,48,60,72}
x=6 ^{1,72}
x=5 ⁷²

10. Zygotic chromosome number(s): 2n=10 ^{67,68}

2n= 12 ^{7, 37,55,56,61,66}

$2n=14$ ^{1,3,9,10,11,12,13,14,15,16, 20,21,22, 25,26,27,28,}

^{31,32,34,36,38,39,40,41,42,43,44,46,47,48,49,50,51,52,53,54,57,58,59,60,62,63,64,6}

$2n=16$ ^{2,6,33,69}

$2n=24$ ^{4,5,18,45,66}

$2n=26$ ^{1, 3,5,8, 9,11,12,15,17,18,19,20,21,22,23,24,25,26,27,28,29,3}

$2n=28$ ^{5, 9,13, 23,27,33,34,35,47,69}

11. Gametic chromosome number(s): $n=6$ ^{7,37}

$n=7$ ^{1,33,53}

$n=13$ ^{1,12}

$n=14$ ³³

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

13. Ploidy level: Diploid^{1,6, 9,26, 65, 70}

Tetraploid^{1, 9,11,26,33}

Hexaploid⁹

14. Nature of polyploidy (auto, segmental, allo, autoallo): Amphidiploid¹, Allopolyploid¹², Autotetraploid¹³

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

16. Karyograms: ^{1,6, 60,65}

Meiosis: ^{1,7,12,33,37,53}

17. Banding pattern(s):

18. Physical mapping of chromosomes: GISH:

19. Phylogenetic relationship at Chromosomal; DNA level: Chromosome level⁸³; DNA level^{73,84,85,86,87,88,89,90}

20. Cytogenetic mechanism (s) underlying evolution: Break at centromere, polyploidy, amphi