Species Datasheet

Datasheet No. A-030.001.003 **DBT- Ne**
(family.genus.species)

1. Taxon:

Species: *Alisma plantago-aquatica* L.
Subspecies
Variety
Cultivar
Hybrid

Image file

2. Synonyms: *Alisma angustifolium* Hoppe*, A. ceretanica* Sennen*, A. heterophyllum* Schur*, A. latifolium* Gilib., *A. major* Gray*, A. major* var. *lanceolatum* Gray, *A. michaletii* (Asch. & Graebn.) Asch. & Graebn., *A. natans* Pollich., *A. paniculatum* Stokes, *A. plantagineum* St.-Lag., *A. plantaginifolium* St.-Lag., *A. plantago-aquatica* f. *latifolium* (Kunth) Buchenau, *A. plantago-aquatica* var. *latifolium* Kunth, *A. plantago-aquatica* subsp. *michaletii* Asch. & Graebn., *A. plantago-aquatica* var. *michaletii* (Asch. & Graebn.) Buchenau, *A. plantago-aquatica* var. *parviflorum* Eaton, *A. plantago-aquatica* subsp. *plantago-aquatica*, *A. plantago-aquatica* var. *plantago-aquatica, A. plantago-aquatica* var. *pygmaeum* Regel , *A. verticillatum* Dulac, *Echinodorus vulgaris* Bubani.

3. 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.
- Species: *Alisma plantago-aquatica* L.

Bentham and Hooker **(1862)**
Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Apocarpae
Ordo: Alismaceae
Genus: *Alisma* L.
Species: *Alisma plantago-aquatica* L.

4. Distribution:

Global: Temperate regions of Europe, Asia, Australia and Africa

India: Assam, East Himalaya

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

6. Threat Status:

IUCN: Least concern
BSI:

7. Habit and Habitat: Herb; Temperate Mixed Forest, marshes and river margins, usually growing in shallow water.

8. Life Form: Hydrophytes

9. Economic Importance: Ornamental and medicinal

10. Probable Progenitor of:

11.DNA

C-value:	**Methodology:**
4C (66.20pg)[17], (41.2pg)[70]	Feulgen microdensitometry[17,70]

12.Basic chromosome number(s): x=7 [1,36,48,60]

13. Zygotic chromosome number(s): 2n=10 [67,68]

2n= 12 [7, 37,55,56,61,66]

2n=14[1,3,9,11,12,13,14,15,16,20,21,22,25,26,27,28,32,34,36,38,39,40,41,42,43,44,46,47,48,49,50,51,52,53,54,57,58,59,60,62,63,64,65,69,

2n=16 [6,33,69]

2n=24 [45]

2n=26[17]

2n=28 [35, 47,69]

14. Gametic chromosome number(s): n= 7 [1,33,53]

n= 6 [7,37]

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

Image file

16.Ploidy level: Diploid [1,6,9,26, 65, 70]

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[1,6,65] ; majority acrocentric chromosomes [60]

Chromosome size: Small to medium[1,6];small to large [65]

NOR chromosome(s): 2 NOR[1,6,65]

Degree of asymmetry

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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: 7 II [1]

Image file

27.Chromosome distribution at anaphase I: Smallest bivalent disjuncted early, Sticky Bridges observed but ultimately all 7 reached respective poles [1]

28. Genetic diversity:

Chromosomal level

Image file

DNA level: 73

29.Any other information (Apomixis ; Inversion; Male sterility;Pollen grain mitosis; Pollen stainability;Translocations etc): Pollen stainability- 95 % 1