

Species Datasheet

Datasheet No. A-030.001.002
(family.genus.species)

DBT- Ne

1. Taxon:

Species: *Alisma lanceolatum* With.
Subspecies
Variety
Cultivar
Hybrid

Image file

2. Synonyms: *Alisma plantago-aquatica* f. *aquaticum* Glück, *A. plantago-aquatica* var. *lanceolatum* (With.) Lej., *A. plantago-aquatica* f. *pumilum* Glück, *A. plantago-aquatica* var. *stenophyllum* Asch. & Graebn., *A. plantago-aquatica* f. *stenophyllum* (Asch. & Graebn.) Buchenau, *A. plantago-aquatica* f. *terrestris* Glück, *A. stenophyllum* Sam., *A. subcordatum* var. *stenophyllum* (Asch. & Graebn.) Lunell.

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 lanceolatum* With.

Bentham and Hooker (1862)

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

4. Distribution:

Global: From Macaronesia and North Africa to Scandinavia, East through Siberia, Caucasus, Turkey, Iraq, Iran, Palestine, Afghanistan, Pakistan, India, Western Himalayas to China. Widespread in north and central Europe, abundant in the Mediterranean basin.

India: West Himalaya

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

6. Threat Status:

IUCN: Least concern

BSI:

7. Habit and Habitat: Herb; Temperate Mixed Forest, marshes, canals, ditches and on margin of ponds and lakes as weeds in paddy fields.

8. Life Form: Hydrophytes

9. Economic Importance:

10. Probable Progenitor of:

11.DNA

C-value

Methodology

4C (73.2 pg)¹⁷

Feulgen microdensitometry¹⁷

12. Basic chromosome number(s): x=13¹

13. Zygotic chromosome number(s): $2n=14$ ³²

$2n=26$ ^{1, 3, 5, 8, 9, 11, 12, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 36}

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

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

14. Gametic chromosome number(s): $n=13$ ^{1, 12}

$n=14$ ³³

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

Image file

16. Ploidy level: Tetraploid or Amphidiploid¹ ; Tetraploid ^{9, 11, 26, 33}

Image file

17. Agametoploidy:

18. Nature of polyploidy (auto, segmental, allo, autoallo): Allopolyploid ¹²,

Autotetraploid ¹³

19. Genomic formula:

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

21. Somatic chromosomes:

Karyotype: Majority metacentric chromosomes ¹

Chromosome size: Medium to large ¹

NOR chromosome(s): 2 NOR ¹

Degree of asymmetry

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: 13 II ¹

Image file

27. Chromosome distribution at anaphase I: Smallest pair showed late disjunction, bridges and laggards common ¹

28. Genetic diversity:

Chromosomal level: ^{9,23,27}

Image file

DNA level: ^{73,74}

29. Any other information (Apomixis ; Inversion; Male sterility; Pollen grain mitosis;

Pollen stainability; Translocations etc): Pollen stainability-92 % ¹