

Species Datasheet

Datasheet No. P-032.002.001
(family.genus.species)

DBT- Network Programme

1. Taxon:

Species: *Cystopteris fragilis* (L.) Bernh.

Subspecies:

Variety:

Cultivar

Hybrid

Image file

2. Synonyms:

[*Aspidiumdentatum* Sw.](#)

[*Aspidiumfragile* \(L.\) Sw.](#)

[*Aspidiumfragile* var. *fumarioides* M. Martens & Galeotti](#)

[*Aspidiumviridulum* Desv.](#)

[*Athyriumdentatum* \(Sw.\) Gray](#)

[*Athyriumfragile* \(L.\) Spreng.](#)

[*Athyriumfumarioides* C. Presl](#)

[*Cyatheaanthriscifolia* \(Hoffm.\) Roth](#)

[*Cyatheacynapifolia* \(Hoffm.\) Roth](#)

[*Cyatheafragilis* \(L.\) J. Sm.](#)

[*Cyclopterisfragilis* \(L.\) Gray](#)

[*Cystefragilis* \(L.\) Dulac](#)

[*Cysteaangustata* \(Hoffm.\) Sm.](#)

[*Cysteadentata* Sm.](#)

[*Cysteafragilis* \(L.\) Sm.](#)

[*Cystopterisacuta* Fée](#)

[*Cystopterisbaenitzii* Dörfl.](#)

[*Cystopterisdentata* \(Sw.\) Desv.](#)

[*Cystopterisdiaphana* \(Bory\) Blasdell](#)

[*Cystopterisdickieana* R. Sim](#)

[*Cystopterisemarginato-denticulata* Fomin](#)

[*Cystopterisfilix-fragilis* \(L.\) Gilib.](#)

[*Cystopterisfragilis* var. *acutidentata* Döll](#)

[*Cystopterisfragilis* var. *angustata* \(Hoffm.\) Link](#)

[*Cystopterisfragilis* f. *angustata* \(Hoffm.\) W.D.J. Koch](#)

[*Cystopterisfragilis* f. *angustata* \(Hoffm.\) Milde](#)

[*Cystopterisfragilis* f. *anthriscifolia* \(Hoffm.\) W.D.J. Koch](#)
[*Cystopterisfragilis* f. *anthriscifolia* \(Hoffm.\) Milde](#)
[*Cystopterisfragilis* var. *apiiformis* C. Chr.](#)
[*Cystopterisfragilis* var. *baenitzii* \(Dörfl.\) Asch. & P. Graebn.](#)
[*Cystopterisfragilis* f. *cynapifolia* \(Hoffm.\) W.D.J. Koch](#)
[*Cystopterisfragilis* f. *cynapifolia* \(Hoffm.\) Milde](#)
[*Cystopterisfragilis* var. *dentata* \(Sw.\) Hook.](#)
[*Cystopterisfragilis* subsp. *diaphana* \(Bory\) Litard.](#)
[*Cystopterisfragilis* subsp. *dickieana* \(R. Sim\) Hyl.](#)
[*Cystopterisfragilis* var. *dickieana* \(R. Sim\) T. Moore](#)
[*Cystopterisfragilis* subsp. *emarginato-denticulata* Fomin](#)
[*Cystopterisfragilis* subsp. *fragilis*](#)
[*Cystopterisfragilis* var. *fragilis*](#)
[*Cystopterisfragilis* f. *fragilis*](#)
[*Cystopterisfragilis* var. *genuina* Bernoulli](#)
[*Cystopterisfragilis* var. *lobulatodentata* Milde](#)
[*Cystopterisfragilis* var. *pinnatipartita* W.D.J. Koch](#)
[*Cystopterisfragilis* var. *rupestris* Neill](#)
[*Cystopterisfumarioides* \(C. Presl\) Schott](#)
[*Cystopterisorientalis* Desv.](#)
[*Cystopterispolyomorpha* Bubani](#)
[*Cystopterissikkimensis* Ching ex Bir](#)
[*Cystopteristranslucens* Desv.](#)
[*Cystopterisviridula* \(Desv.\) Desv.](#)
[*Filixfragilis* \(L.\) Gilib.](#)
[*Polypodiumanthriscifolium* Hoffm.](#)
[*Polypodiumcynapifolium* Hoffm.](#)
[*Polypodiumdiaphanum* Bory.](#)
[*Polypodiumfragile* L.](#)
[*Polypodiumfragile* var. *angustatum* Hoffm.](#)

3. Systematic Position:

Christenhusz 2011

- Class: Equisetopsida C. Agardh
- Subclass: Polypodiidae Cronquist, Takht. & Zimmerm.
- Order: Polypodiales Link.
- Family: Cystopteridaceae Schmakov
- Subfamily:
- Genus: *Cystopteris* Bernh.
- Species: *Cystopteris fragilis* (L.) Bernh.
- Subspecies:
- Variety:

4. Distribution:

Global: Cosmopolitan

India: Throughout Himalayas from Kashmir to Kumaon rarer eastwards

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

6.Threat Status:

IUCN:

BSI:

7.Habit and Habitat:Moist shady places, cold temperate climate 3000-4500m

8.Life Form:

9.Economic Importance:

10. Probable Progenitor of:

11.DNA

C-value Methodology

2C: 16.57 pg²⁷

Flow cytometry²⁷

12.Basic chromosome number(s): $x=42$ ^{1, 4, 5, 7, 9, 10, 11, 15, 16, 17, 18, 20, 22, 23, 24, 25, 26, 28, 29, 30, 31, 34, 35, 36, 38, 39, 41}

13. Zygotic chromosome number(s): $2n=168$ ^{1, 4, 5, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 27, 33, 34, 35, 36, 37, 39, 40, 41, 42},
²⁵²^{22, 40}

14. Gametic chromosome number(s): $n=42$ ³⁸,
⁸⁴^{1, 4, 5, 7, 9, 10, 15, 16, 17, 18, 20, 22, 25, 28, 29, 30, 31, 34, 35, 36, 39, 41},
¹²⁶^{5, 11, 22, 23, 24, 25, 26},
¹⁶⁸⁵

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

Image file

16.Ploidylevel:Diploid (sexual)³⁸ ,

Tetraploid (sexual)^{1, 4, 5, 7, 8, 9, 10, 16, 17, 18, 20, 22, 25, 28, 29, 31},

Hexaploid (sexual)^{5, 22, 25},

Octoploid (sexual)^{1, 2, 3, 4, 5}

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

Chromosome size

NOR chromosome(s)

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 Diploid: 41II^{38} ,

Tetraploid: $84\text{II}^{1, 4, 5, 7, 8, 9, 10, 16, 17, 18, 22, 25, 28, 29, 30, 31, 39}$

Hexaploid : $126\text{II}^{5, 22, 25}$,

Octoploid: $168\text{II}^{1, 2, 3, 4, 5}$

Image file

27.Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level

29.Any other information (Apomixis; Inversion; Male sterility;Pollen grain mitosis; Pollen stainability;Translocationsetc.):