

Species Datasheet

Datasheet No. G-011.004.001
(family.genus.species)

1. Taxon:

Species: *Cryptomeria japonica* (Thunb. ex L. f.) D. Don

Subspecies:

Variety:

Cultivar

Hybrid

Image file

2. Synonyms: *Cryptomeria araucarioides* Henkel & W. Hochst., *C. compacta* Beissn., *C. elegans* Jacob-Makoy, *C. fortunei* Hooibr. ex Billain, *C. generalis* E. H. L. Krause, *C. japonica* f. *araucarioides* (Henkel & W. Hochst.) Beissn., *C. japonica* var. *caespitosa* Makino, *C. japonica* var. *compacta* (Beissn.) C. K. Schneid., *C. japonica* f. *compacta* Beissn., *C. japonica* var. *dacrydioides* Carrière, *C. japonica* f. *dacrydioides* (Carrière) Rehder, *C. japonica* f. *elegans* (Jacob-Makoy) Beissn., *C. japonica* var. *fortunei* (Hooibr. ex Billain) A. Henry, *C. japonica* var. *japonica*, *C. japonica* var. *lobbii* Carrière, *C. japonica* f. *lobbii* (Carrière) Beissn., *C. japonica* var. *lobbii* Lavalley, *C. japonica* var. *nana* Carrière, *C. japonica* f. *nana* (Carrière) Beissn., *C. japonica* var. *pendula* Leroy ex Dallim. & A. B. Jacks., *C. japonica* var. *pungens* Carrière, *C. japonica* f. *pungens* (Carrière) Beissn., *C. japonica* var. *radicans* Nakai, *C. japonica* var. *sinensis* Miq., *C. japonica* subsp. *sinensis* (Thunb. ex L. f.) Sell, *C. japonica* subsp. *sinensis* (Miq.) P. D. Sell, *C. japonica* var. *spiralis* Miq., *C. japonica* f. *spiralis* (Miq.) Rehder, *C. kawaii* Hayata, *C. lobbiana* Billain, *C. lobbii* (Carrière) Lavalley, *C. mairei* (H. Lev.) Nakai, *C. mucronata* Beissn., *C. nana* Lindl. & Gordon, *C. nigricans* Carrière, *C. pungens* Beissn., *C. variegata* Beissn., *C. viridis* Beissn., *Cupressus japonica* Thunb. ex L. f., *C. mairei* H. Lev., *Schubertia japonica* (Thunb. ex L. f.) Jacques, *S. japonicum* (Thunb. ex L. f.) Brongn., *Taxodium japonicum* (Thunb. ex L. f.) Brongn.

3. Systematic Position:

Christenhusz et al. (2011)

- Class: Equisetopsida C. Agardh
- Subclass: Pinidae Cronquist
- Order: Cupressales Link
- Family: Cupressaceae Gray
- Genus: *Cryptomeria* D. Don
- Species: *C. japonica* (Thunb. ex L. f.) D. Don

Bentham and Hooker (1862)

Kingdom: Plantae

Division: Phanerogamia

Class: Gymnospermeae

Ordo: Coniferae

Tribus: Taxodieae Eichler

Genus: *Cryptomeria* D. Don

Species: *C. japonica* (Thunb. ex L. f.) D. Don

4. Distribution:

Global: Native to Japan

India: Arunachal Pradesh, Sikkim, West Bengal

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

6. Threat Status:

IUCN: Near Threatened

BSI:

7. Habit and Habitat: Evergreen tree (70 m tall)

8. Life Form: Phanerophytes

9. Economic Importance: The wood is rather coarse grained, with reddish heartwood and light yellowish sapwood, and a typical coniferous fragrance due to volatile terpenes. It is used in house construction, panelling, flooring, carpentry, joinery, and furniture making. The fibrous bark was traditionally used for roofs of houses but is now more often processed as a general fibre or composted.

10. Probable Progenitor of:

11. DNA

C-value Methodology

2C (22.10 pg)⁵ Flow cytometry⁵

2C (22.60 pg)²⁴ Flow cytometry²⁴

12. Basic chromosome number(s): $x=11$ 1, 4, 8, 7, 9, 10, 11, 12 13, 14, 15, 16, 17, 25

13. Zygotic chromosome number(s): $2n=22$ 1, 2, 3, 4, 8, 9, 10, 11, 12 13, 14, 15, 16, 17 339

14. Gametic chromosome number(s): $n=11$ 2, 3, 15, 17, 25

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

Image file

16. Ploidy level: Diploid 1, 2, 3, 4, 8, 9, 10, 11, 12 13, 14, 15, 16, 17, 25

Triploid (sporadic) 9

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: 1,2, 3, 4, 8, 9, 10, 11, 12 13, 14, 15, 16, 17

KaryotypeAll median one pair submedian1,2, 3, 4, 8, 9, 10, 11, 12 13, 14, 15, 16, 17

Chromosome sizeLarge1,2, 3, 4, 8, 9, 10, 11, 12 13, 14, 15, 16, 17

NOR chromosome(s)24

Degree of asymmetrySymmetrical1,2, 3, 4, 8, 9, 10, 11, 12 13, 14, 15, 16, 17

Image file

22. Banding pattern(s):CMA+, DAPI+bands3,8, 9

Image file

23.Physical mapping of chromosomes:

In situ hybridization18SrRNA2

Image file

Fluorescent in situ hybridiza_on:45SrDNA4

Image file

24.Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26.Chromosome associations:

Female meiosis

Male meiosis11II2,3, 25

Image file

27.Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level18, 19, 20, 21

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