

Species Datasheet

Datasheet No. G-012.002.001
(family.genus.species)

1.Taxon:

Species: *Taxus wallichiana* Zucc.

Subspecies:

Variety:

Cultivar

Hybrid

Image file

2. Synonyms: *Taxus baccata* subsp. *wallichiana* (Zucc.) Pilg., *T. baccata* var. *wallichiana* (Zucc.) C.K. Schneid. ex Silva Tar., *T. chinensis* var. *yunnanensis* (W.C.Cheng&L.K.Fu) L.K.Fu, *T. contorta* Griff., *T. contorta* var. *mucronata* Spjut, *T. florinii* Spjut, *T. nucifera* Wall., *T. orientalis* Bertol., *T. phytonii* Spjut, *T. suffnesii* Spjut, *T. wallichiana* subsp. *contorta* (Griff.) Silba, *T. wallichiana* var. *wallichiana*, *T. wallichiana* var. *yunnanensis* (W.C.Cheng&L.K.Fu) C.T.Kuan, *T. wallichiana* subsp. *yunnanensis* (W.C.Cheng&L.K.Fu) Silba, *T. yunnanensis* W.C.Cheng&L.K.Fu

3.Systematic Position:

Christenhusz et al. (2011)

- Class: Equisetopsida C. Agardh
- Subclass: Gnetidae Pax
- Order: Cupressales Link
- Family: Taxaceae Gray
- Genus: *Taxus* L.
- Species: *T. wallichiana* Zucc.

Bentham and Hooker (1862)

Kingdom: Plantae

Division: Phanerogamia

Class: Gymnospermeae

Ordo: Coniferae

Tribus: Taxeae Rich. ex Duby

Genus: *Taxus* L.

Species: *T. wallichiana* Zucc.

4.Distribution:

Global: Native to the [Himalaya](#) and parts of south-east Asia, Afghanistan, Bhutan, Myanmar, China, Vietnam

India: Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Uttarakhand

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

6.Threat Status:

IUCN: Endangered

BSI:

7.Habit and Habitat: Medium sized evergreen tree 20m high, *Taxus wallichiana* is a small to large understorey or lower canopy tree in montane, temperate, warm temperate, and tropical submontane to high montane forest, both angiosperm and conifer dominated, deciduous or evergreen, or in mixed forests. In open situations on rocky slopes and cliffs it usually forms a

large, broadly spreading shrub. Elevation ranges from 900 m to 3,700 m asl and soils are mostly derived from silicate-bearing rocks, i.e. acidic to neutral.

8.Life Form:Phanerophytes

9.Economic Importance: The tree has medicinal use in Ayurveda and Tibetan medicine. *Taxus wallichiana* is also a source of the chemical precursors to the anticancer drug paclitaxel. The wood is also burnt as incense in Nepal and parts of Tibet. In other areas the wood is used as fuel. The leaves are toxic but can be given as fodder to goats if no other foliage is available.

10. Probable Progenitor of:

11.DNA

C-value Methodology

12.Basic chromosome number(s): $x=12^{5,9}$

13. Zygotic chromosome number(s): $2n=24^5$

14. Gametic chromosome number(s): $n=12$ (endosperm mitosis)⁹

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

Image file

16.Ploidy level: Diploid^{5,9}

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:^{5,9}

KaryotypeMedian, submedian and terminal^{5, 9}

Chromosome sizeLarge^{5, 9}

NOR chromosome(s)

Degree of asymmetryModerately asymmetrical^{5, 9}

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

Image file

27.Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level^{1, 2, 3, 4, 6, 7, 8,10 , 11, 12}

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