Species Datasheet

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Datasheet No. G-007.005.024
(family.genus.species)

1.Taxon:

Species: *Pinus thunbergii* Parl.
Subspecies:
Variety:
Cultivar:
Hybrid:

Image file

2. Synonyms:*Pinus massoniana* Siebold&Zucc., *P. sylvestris* Thunb., *P. thunbergiana* Franco, *P. thunbergii* var. *oculus-draconis* Mayr, *P. thunbergii* f. *oculus-draconis* (Mayr) Rehder, *P. thunbergii* var. *pendula* Mayr

3. Systematic Position:

Christenhusz*et al.* (2011)

- Class: Equisetopsida C. Agardh
- Subclass: PinidaeCronquist
- Order: PinalesGorozh.
- Family: PinaceaeSpreng.
- Genus:*Pinus*L.
- Species: *P.thunbergii*Parl.

Bentham and Hooker (1862)
Kingdom: Plantae
Division: Phanerogamia
Class: Gymnospermeae
Ordo: Coniferae
Tribus: AbietineaeEichler
Genus: *Pinus*L.
Species: *P. thunbergii*Parl.

4.Distribution:

Global: Native to coastal areas of Japan

India: Karnataka and Uttarakhand

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

6.Threat Status:

IUCN: Least concern

BSI:

7.Habit and Habitat: Evergreen tree (40 m tall).this pine grows at low to middle elevations (up to ca. 1,000 m above sea level) in the coastal hills and mountains of the islands of Japan and South Korea, where the climate is warm temperate (with little or no frost) and moist. These regions would have had a predominantly deciduous angiosperm forest cover, with conifers mixed in especially on poor, water-logged soils and on dry slopes and mountain ridges.

8.LifeForm: Phanerophytes

9.Economic Importance: The wood of this pine is similar to that of the Black pine and is used for general construction, poles, railway sleepers, fences, pallets and crates, flooring, fibreboard, and wood pulp.

10. Probable Progenitor of:

11.DNA

C-value	**Methodology**
2C (44.00 pg) [63]	Feulgen microdensitometry[63]
2C (45.80 pg) [32]	Flow cytometry[32]
2C (50.80 pg)[96]	Flow cytometry[96]
2C (54.72 pg) [20]	Flow cytometry[20]

12.Basic chromosome number(s):x=12[8, 23, 24, 25, 26, 27, 35, 52, 53, 84, 89]

13. Zygotic chromosome number(s):2n=24[8, 23, 24, 25, 26, 27, 52, 53, 89] , 48[85]

14. Gametic chromosome number(s):n=12[84, 97]

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

Image file

16.Ploidy level: Diploid[8, 23, 24, 25, 26, 52, 53, 84, 89, 97],

Tetraploid (sporadic) [85]

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:[23, 24, 25, 26, 27]

KaryotypeMedian two shorter pairs submedian[23, 25, 24, 26, 27]

Chromosome size Large[23, 25, 24, 26, 27]

NOR chromosome(s)10[23] , 12[24], 14[26]

Degree of asymmetry Symmetrical[23, 25, 24, 26, 27]

Image file

22. Banding pattern(s):DAPI+, CMA+ Bands[25]

Image file

23.Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization:45SrDNA, 5S rDNA**,** Arabidopsis type telomere sequence, centromeric repeat (PCSR)[24, 26] , telomere sequence repeats [27]

Image file

24.Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26.Chromosome associations:

Female meiosis

Male meiosis12II [97]

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.):