Species Datasheet

Datasheet No. G-007.004.005
(family.genus.species)

1.Taxon:

Species: *Picea smithiana* (Wall.) Boiss.
Subspecies:
Variety:
Cultivar:
Hybrid:

Image file

2. Synonyms:*Abies khutrow* (Royle ex Turra) Loudon, *A. morinda* (Link) Wender.,*A. smithiana* (Wall.) Lindl., *Picea khutrow* (Royle ex Turra) Carriere, *P. morinda* Link, *P. smithiana* var. *nepalensis* Franco, *P. smithiana* subsp. *nepalensis* (Franco) Silba, *P. smithiana* var. *pendula* Senecl., *Pinus khutrow* Royle ex Turra, *P. morinda* Gordon, *P. pendula* Griff.*P. smithiana* Wall.

3.Systematic Position:

Christenhusz*et al.* (2011)

- Class: Equisetopsida C. Agardh
- Subclass: PinidaeCronquist
- Order: PinalesGorozh.
- Family: PinaceaeSpreng.
- Genus:*Picea*A. Dietr.
- Species: *P. smithiana* (Wall.) Boiss.

Bentham and Hooker (1862)
Kingdom: Plantae
Division:Phanerogamia
Class: Gymnospermeae
Ordo: Coniferae
Tribus:AbietineaeEichler
Genus: *Picea*A. Dietr.
Species: *P. smithiana*(Wall.) Boiss.

4.Distribution:

Global: Native to Afghanistan, China (Tibet); India, Nepal

India: Himachal Pradesh, Western Himalaya, Uttarakhand,Uttar Pradesh

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

6.Threat Status:

IUCN: Least concern

BSI:

7.Habit and Habitat: Large evergreen tree (40-55 m tall), *P.smithiana* is a high mountain species, occurring in the Himalayas in a belt between (2,300-)2,500-3,600(-3,750) m a.s.l. on alpine lithosols.

8.Life Form: Phanerophytes

9.Economic Importance: Timber is valuable for construction work, as Railway sleepers, New sprint production etc.

10. Probable Progenitor of:

11.DNA

C-value **Methodology**

12.Basic chromosome number(s):x=12[5,7,8, 9, 11]

13. Zygotic chromosome number(s):2n=24[5,7, 9, 11]

14. Gametic chromosome number(s):n=12[11, 12]

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

Image file

16.Ploidylevel: Diploid[5,7, 9, 11]

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, 11]

KaryotypeMedian and submedian[5, 11]

Chromosome size Large[5, 11]

NOR chromosome(s)6 [11]

Degree of asymmetry Symmetrical[5, 11]

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 meiosis12 II[11, 12]

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.):