Species Datasheet

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Datasheet No. G-011.012.001
(family.genus.species)

1.Taxon:

Species:*Thujaoccidentalis*L.
Subspecies:
Variety:
Cultivar:
Hybrid:

Image file

2. Synonyms:*Chamaecyparis boursieri* Carriere, *Cupressus arborvitae* O.Targ.Tozz.,*C. nobleana* (Beissn.) Lavallee, *Juniperus ericoides* Mast.,*Retinispora devriesiana* Mast., *R. dubia* Carriere, *R. ellwangeriana* Carriere, *R. glaucescens* Hochst. ex Beissn., *R. keteleeri* Beissn., *R. meldensis* Carriere, *R. nobleana* Beissn., *R. pygmaea* Beissn., *R. troubetzkoyana* auct., *Thuja bodmeri* Beissn., *T. canadensis* K.Koch, *T. caucasica* Gordon, *T. compacta* Standish ex Gordon, *T. devriesiana* Carriere, *T. ellwangeriana* Carriere, *T. ericoides* Gordon, *T. globosa* Beissn., *T. hoveyi* Gordon, *T. minor* Carriere, *T. nana* Carriere, *T. obtusa* Moench, *T. occidentalis* var. *alba* Maxwell ex Gordon, *T. occidentalis* f. *alba* (Maxwell ex Gordon) C.K.Schneid., *T. occidentalis* var. *aurea* J.Nelson, *T. occidentalis* f. *aurea* (J.Nelson) Beissn., *T. occidentalis* var. *aureovariegata* Henkel &W.Hochst., *T. occidentalis* f. *aureovariegata* (Henkel &W.Hochst.) Beissn., *T. occidentalis* var. *buchananii* Spath, *T. occidentalis* f. *buchananii* (Spath) Beissn., *T. occidentalis* var. *compacta* Carriere, *T. occidentalis* f. *compacta* (Carriere) Rehder, *T. occidentalis* var. *cristata* Carriere, *T. occidentalis* f. *cristata* (Carriere) C.K.Schneid., *T. occidentalis* var. *douglasii* Rehder, *T. occidentalis* var. *douglasii-pyramidalis* Spath, *T. occidentalis* f. *ellwangeriana* (Carriere) Beissn., *T. occidentalis* f. *ericoides* (C.Lawson) Beissn., *T. occidentalis* var. *fastigiata* H.Jaeger, *T. occidentalis* f. *fastigiata* (H.Jaeger) Beissn., *T. occidentalis* f. *filicoides* Beissn., *T. occidentalis* var. *filiformis* Beissn., *T. occidentalis* f. *filiformis* (Beissn.) Rehder, *T. occidentalis* f. *gaspensis* Vict.&J.Rousseau, *T. occidentalis* var. *globosa* Gordon, *T. occidentalis* f. *globosa* (Gordon) Beissn., *T. occidentalis* var. *hoveyi* Hoopes, *T. occidentalis* f. *hoveyi* (Hoopes) Beissn., *T. occidentalis* var. *lutea* A.H.Kent, *T. occidentalis* f. *lutea* (A.H.Kent) C.K.Schneid., *T. occidentalis* var. *magnifica* Beissn., *T. occidentalis* f. *magnifica* (Beissn.) Rehder, *T. occidentalis* f. *mastersii* Rehder, *T. occidentalis* f. *occidentalis*, *T. occidentalis* f. *ohlendorffii* Beissn., *T. occidentalis* var. *pendula* Gordon, *T. occidentalis* f. *pendula* (Gordon) Beissn., *T. occidentalis* f. *pendula-glauca* Beissn., *T. occidentalis* var. *plicata* Mast., *T. occidentalis* f. *prostrata* Vict.&J.Rousseau, *T. occidentalis* f. *pumila* (Otto) Rehder, *T. occidentalis* f. *riversii* Beissn., *T. occidentalis* var. *robusta* Carriere, *T. occidentalis* f. *robusta* (Carriere) Rehder, *T. occidentalis* var. *rosenthalii* Beissn.,*T. occidentalis* f. *rosenthalii* (Beissn.) C.K.Schneid., *T. occidentalis* var. *sempervirens* Rehder, *T. occidentalis* f. *sempervirens* (Rehder) Rehder, *T. occidentalis* var. *umbraculifera* Beissn.,*T. occidentalis* f. *umbraculifera* (Beissn.) C.K.Schneid., *T. occidentalis* var. *variegata* Weston, *T. occidentalis* f. *variegata* (Weston) Rehder, *T. occidentalis* var. *variegata-aurea* Carriere, *T. occidentalis* var. *vervaeneana* Gordon, *T. occidentalis* f. *vervaeneana* (Gordon) Beissn., *T. occidentalis* f. *viridis* Beissn., *T. occidentalis* f. *wareana-lutescens* Beissn., *T. occidentalis* var. *woodwardii* Spath, *T. occidentalis* f. *woodwardii* (Spath) Rehder, *T. odorata* Marshall, *T. procera* Salisb., *T. recurva* Beissn., *T. recurvata* Beissn., *T. sibirica* Gordon,

T. sibirica var. *pendula* (Gordon) J.Nelson, *T. tatarica* Gordon, *T. theophrasti* Nieuwl., *T. variegata* Marshall, *T. vervaeneana* Van Geert ex Gordon

3.Systematic Position:

Tracheophyte Phylogeny (2012)

- Kingdom: Spermatophytes
- Clade: Gymnosperms
- Order: Cycadales Pers. ex Bercht. & J. Presl
- Family: Zamiaceae Horan.
- Genus: *Thuja*L.
- Species: *T. occidentalis*L.

Bentham and Hooker (1880)
Kingdom: Plantae
Division: Phanerogamia
Class: Gymnospermeae
Ordo: Cycadaceae Pers.
Tribus:Cupressineae

4.Distribution:

Global: Native to eastern Canada, central and North Unite States

India: Rajasthan

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

6.Threat Status:

IUCN: Least concern

BSI:

7.Habit and Habitat: Small evergreen tree (10-20 m tall) The altitudinal range is (10-)150-600(-670) m a.s.l. It grows equally well in swamps and on dry ground, but avoids extremes of both habitats; it is often growing abundantly on soils over limestone in upland areas and on alluvial soils with a high organic and mineral content in lowlands (rich fens supporting forest).

8.LifeForm: Phanerophytes

9.Economic Importance: Lumber, ornamental

10. Probable Progenitor of:

11.DNA

C-value	**Methodology**
2C (23.23pg)	[5]Feulgenmicrodensitometry [5]
2C (23.20 pg)	[8]Flow cytometry[8]

2C (24.71) [9]Flow cytometry[9]

12.Basic chromosome number(s):x=11[1,2, 3, 4, 6]

13. Zygotic chromosome number(s):2n=22[2, 3, 4, 6]

14. Gametic chromosome number(s):n=

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

Image file

16.Ploidy level: Diploid[2, 3, 4, 6]

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17.Agametoploidy:

18.Nature of polyploidy (auto, segmental, allo, autoallo):

19.Genomic formula:

20.Aberrant chromosome number(s)(aneuploidy, aneusomaty, polysomaty):

21.Somatic chromosomes:[2, 3, 4]

KaryotypeMedian and submedian[2, 3, 4]

Chromosome size Large[2, 3, 4]

NOR chromosome(s)2[2, 3, 4]

Degree of asymmetry Symmetrical[2, 3, 4]

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

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