Cupressus torulosa

D. Don

Cupressaceae

Himalayan cypress

LOCAL NAMES
Chinese (xizangbaimu); English (Himalayan cypress,cypress,Bhutan cypress); Hindi (raisal,leauri,galla,devidiar); Italian (cipresso dell'Imalaia); Trade name (Himalayan cypress); Vietnamese (hoàng dàn)

BOTANIC DESCRIPTION
Cupressus torulosa is an evergreen tree 15-25(45) m tall, with a dbh of 40-60(90) cm. Crown large oval to broadly conical. Bark thick, grey brown or brown, peeling off in longitudinal strips. Branches slender, drooping, with thin, whip-like tips. Branchlets cylindrical, nearly quadrangular, branching in whorls, shoots in a single plane.

Leaves scale-like, closely appressed, obtuse, dark green, often with a small dorsal furrow.

Male cone subglobular, 5-6mm long. Female cones globose or elliptic, grouped on very short stalks, 10-20 mm across, green or purple when young, later turning dark brown, composed of 6-8(10) scales, with a small central depression and a small, triangular, reflexed mucro.

Seeds 6-8 to each scale, red-brown.

C. torulosa var. cashmeriana, the Kashmir cypress, is found in Tibet. It is a smaller tree of conical habit and flattened shoots. Leaves blue-green, outspread. Cones globose, 12 mm across, initially pale green and bluish pruinose, later dark brown, composed of 10 scales depressed at the centre, with a pointed, triangular and reflexed process, about 10 seeds to each scale.

The Latin name ‘Cupresssus’ comes from the Greek ‘kuparissos’, which commemorates a youth of that name who was turned into a cypress tree by Apollo. The specific epithet means cylindrical with bulges or contractions at intervals.

BIOLOGY
Cones appear in February-March, seed matures in May-June.

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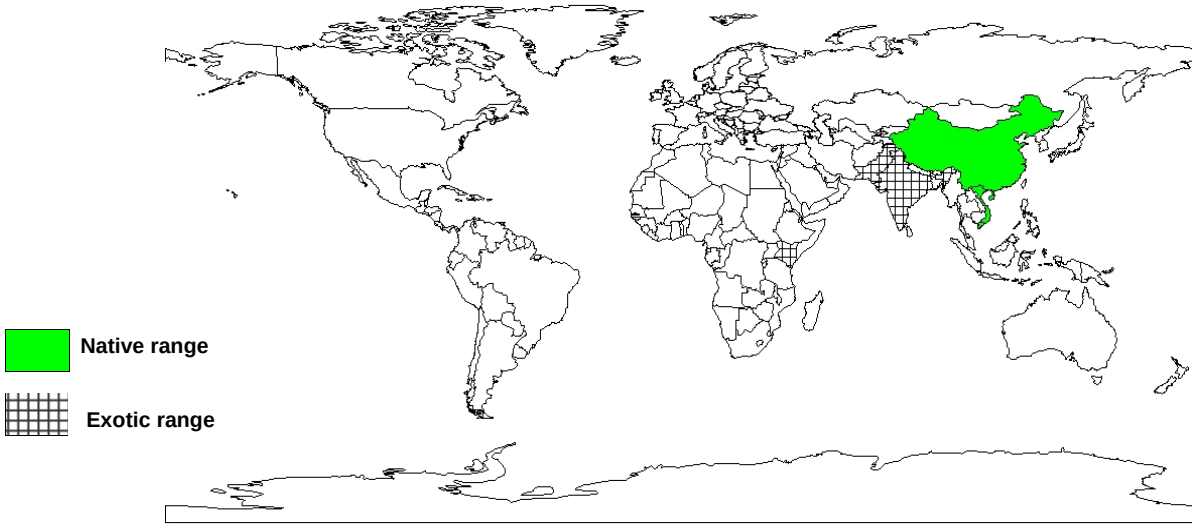
ECOLOGY
C. torulosa is a shade intolerant species, thriving in tropical and subtropical rainforests, where it prefers calcareous substrates. It occurs naturally as a dominant in mixed stands with Markhamia stipulata and Burretiodendron hsienmu, sometimes forming pure stands on mountain slopes and summits. The tree is resistant to frost.

BIOPHYSICAL LIMITS
Altitude: 800-3 000 m
Mean annual temperature: 12-22 deg C
Mean annual rainfall: 650-1 600 mm
Soil type: The tree prefers freely draining, fertile soils but is adaptable to most conditions including calcareous soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: China, Vietnam
Exotic: India, Kenya, Pakistan



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

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PRODUCTS
Fuel: The tree is used as fuelwood.

Timber: Wood is pale yellow with pale brown heartwood, hard and durable with a specific gravity of 0.48-0.52. It is a prime timber with straight grain and fine texture, resistant to termites and insects. Used for cabinetwork, office furniture, fine art articles, construction, fence posts, poles and railway carriage making.

Essential oil: The wood is aromatic, especially the root-wood, and an essential oil extracted from these parts is used in cosmetics.

Medicine: The essential oil is used in medicine to cure inflammatory wounds, or as an antiseptic.

SERVICES
Shade or shelter: The tree is planted as a windbreak.

Nitrogen fixing: It forms associations with mycorrhiza.

Ornamental: It is planted as an ornamental in Yugoslavia and elsewhere in the West.

TREE MANAGEMENT
It is rather slow growing, with limited natural regeneration.

GERMPLASM MANAGEMENT
Seed storage is orthodox with viability maintained for up to 18 months in open storage and 3 years in hermitic storage. There are 160 000-280 000 seeds/kg. Seeds should be stratified in damp sand before planting.

PESTS AND DISEASES
The tree is less susceptible to Monochaetia unicornis than other cypress.

FURTHER READNG

Hong TD, Linington S, Ellis RH. 1996. Seed storage behaviour: a compendium. Handbooks for Genebanks: No. 4. IPGRI.

Iqbal SH, Shahbaz and Ghazala-Nazim. 1990. State of mycorrhizae in some ornamental gymnospermous tree species of Pakistan. Pakistan Journal of Forestry. 40(3): 237-246.

Webb DB, Wood PJ, Henman GS. 1984. A guide to species selection for tropical and sub-tropical plantations. Tropical Forestry Papers No. 15, 2nd edition. Commonwealth Forestry Institute, Oxford University Press.

SUGGESTED CITATION

Orwa C, Mutua A , Kindt R , Jamnadass R, Simons A. 2009. Agroforestree Database:a tree reference and selection guide version 4.0 (http://www.worldagroforestry.org/af/treedb/)