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Thuja plicata (Western Red Cedar)



Range

Thuja plicata is found along the west coast of North America. It ranges from northern California to southern Alaska, through Oregon, Washington, and British Columbia. East to Montana.

Climate, elevation

Prefers maritime climates with cool summers, and mild but wet winters. It can be found at elevations from 610 – 1,798 meters in the northern Rocky Mountains, 0 – 910 meters in Alaska, 0 – 1,190 meters in British Columbia, and 0 – 2,290 meters in Oregon.

Local occurrence (where, how common)

Wet sites such as wet ravines, along streams and rivers, narrow, poorly drained canyons, bottomlands, and depressions, and forested swamps.

Habitat preferences

Moist to wet soils, shaded forests, bogs.

Plant strategy type/successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)

Very shade tolerant species. Usually considered a climax species, but is prevalent in all stages of succession.

Associated species

(Trees) *Populus trichocarpa*, *Acer macrophyllum*, *Tsuga heterophylla*, *Tsuga mertensiana*, *Picea sitchensis*, *Pinus monticola*, *Pinus contorta*, *Chamaecyparis lawsoniana*, *Chamaecyparis nootkatensis*, *Libocedrus decurrens*, *Pseudotsuga menziesii*, *Abies grandis*, *Abies amabilis*, *Alnus rubra*, *Arbutus menziesii*, *Taxus brevifolia*, *Abies lasiocarpa*, *Larix occidentalis*, *Picea engelmannii*, *Picea glauca*, and *Pinus ponderosa*.

(Shrubs) *Amelanchier alnifolia*, *Menziesia ferruginea*, *Rubus parviflora*, *Holodiscus discolor*, *Oplopanax horridum*, *Symphoricarpos albus*, *Berberis nervosa*, *Vaccinium ovatum*, *Rhododendron macrophyllum*, *Gaultheria shallon*, and *Rubus spectabilis*.

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May be collected as: (seed, layered, divisions, etc.)

Seeds are the most common type of collection. Rooting of cuttings also works.

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Collection restrictions or guidelines

Collection of seeds should be done in October and November.

Seed germination (needs dormancy breaking?)

Germination is accomplished without stratification. Seeds sown on a mineral soil with adequate moisture and shade will germinate in autumn, winter, and spring. No or little dormancy.

Seed life (can be stored, short shelf-life, long shelf-life)

Retain viability for approximately 7 years when stored at adequate moisture and climate conditions.

Recommended seed storage conditions

5-8% moisture content, 0°F (-18°C)

Propagation recommendations (plant seeds, vegetative parts, cuttings, etc.)

Sow seeds into medium, being aware of the high mortality rate of seedlings. Plant large quantities of seeds.

Soil or medium requirements (inoculum necessary?)

Mineral soil that has been disturbed is the best, but undisturbed mineral soil also works. Cuttings should be dipped in 3000ppm solution for 1 minute.

Installation form (form, potential for successful outcomes, cost)

Sown from seeds, containerized seedlings from nurseries, bare root, cuttings. Containerized seedlings are the most successful, but bare root are cheaper. Seed mortality is very high.

Recommended planting density

Dense planting with light thinning until approximately age 25.

Care requirements after installed (water weekly, water once etc.)

Is very important to keep the soil moist, to keep the roots watered. The roots are very slow to establish.

Normal rate of growth or spread; lifespan

Very slow growing tree. Can reach 130 feet tall. Trunk tapers out but the diameter can reach 6+ feet. They can be as old as 800-1000 years old.

Sources cited

- 1.) http://www.or.blm.gov/Medford/Wa_rest/rip_plants_gallery/pages/thpl2.htm
- 2.) <http://www.fs.fed.us/database/feis/plants/tree/thupli/all.html>
- 3.) http://www.na.fs.fed.us/spfo/pubs/silvics_manual/Volume_1/thuja/plicata.htm
- 4.) Pojar, Jim, Mackinnon, Andy. Plants of the Pacific Northwest Coast. Canada: Lone Pine, 1994.

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