

Mountain Hemlock (*Tsuga mertensiana*)



Summary:

The mountain hemlock is an evergreen tree typically found in cold and snowy subalpine environments, with its range extending from Sequoia National Park in central California to Cook Inlet in south-central Alaska. They are slow-growing trees, reaching heights of 50 to 150 feet when fully mature, and can attain over 800 years of age in ideal conditions (Means 1990). Mountain hemlocks do best in full sun. To capture as much sunlight as possible, their needle-like leaves grow in a “bottlebrush” pattern, extending outwards in every direction (Calscape 2026).

Arguably, the most important uses of mountain hemlocks are watershed protection and the scenic beauty they add to subalpine landscapes. They are well adapted to produce appealing forest on the more extreme subalpine sites (Means 1990). Stands of mountain hemlocks are also well suited to the conservation of snow. Their slow growth contributes to their dense foliage and usually balanced form, making them a desirable ornamental tree (Hoss 2024).

Mountain Hemlocks and Fire:

Mountain hemlocks are considered to be highly susceptible to fire for a variety of reasons. They often retain branches close to the ground and grow in clusters (Crater Lake Institute 2020). In some regions, the forest floor gets dried out in the summer months, increasing the surrounding fuel load (Means 1990). Fires in mountain hemlock forests commonly occur as severe stand-replacing fires. Due to the historical suppression of fires, a lot of mountain hemlock trees are old-growth and even more susceptible to stand-replacement (Crater Lake Institute 1990).



References

Calscape. 2026. "Mountain Hemlock - Calscape." Calscape, California Native Plant Society.

[https://calscape.org/plant/3770/Tsuga-mertensiana-\(Mountain-Hemlock\)](https://calscape.org/plant/3770/Tsuga-mertensiana-(Mountain-Hemlock)).

Crater Lake Institute. 2020. "Vegetation – Mountain Hemlock." Crater Lake Institute – Enhancing the Visitors Experience, Crater Lake Institute.

<https://www.craterlakeinstitute.com/research-at-crater-lake/geology/historic-geology/soil-survey/80-09/>.

Hoss, Theodore. 2024. "Mountain Hemlock - a Subalpine Snow Survivor That Adapts Well to the Home Garden." *Washington Park Arboretum Bulletin*, 22–25.

https://arboretumfoundation.org/wp-content/uploads/hoss_mountain-hemlock.pdf.

Means, Joseph E. 1990. "Mountain Hemlock | Silvics of North America." USDA.Gov, US Department of Agriculture. <https://research.fs.usda.gov/silvics/mountain-hemlock>.