

Aboriginals backed their yew bows with sinew to help absorb stress and prolong bow life, while modern bow makers laminate yew bows with layers of fiberglass to enhance durability.

Longbows made from the related English yew were a major factor in English warfare for more than 1000 years, but by late in the seventeenth century, archery was no longer viable because the natural stands of yew had been plundered (Hartzell 1991). English yew, widely planted as an ornamental in Northwest gardens, is distinguished from Pacific yew by its more luxuriant foliage and larger leaves.

In the 1990s, the specter of excessive exploitation suddenly loomed over Pacific yew, which became known as the prime source for a unique and highly valuable substance called Taxol, known in the chemical industry as paclitaxel, which inhibits ovarian and breast cancer. Soon Taxol was being extracted from the thin bark of Pacific yew stems harvested across

thousands of acres of Northwestern forests and sold by the ton to pharmaceutical buyers. Forest biologists shuddered at the consequences of continuing this scale of exploitation of a small, slow-growing tree, but compelling demand was driven by a pharmaceutical giant, aided by testimony from desperate cancer patients!

Suddenly, by the year 2000, the volatile Taxol supply chain was abandoning use of wild Pacific yew. It had become clear to pharmaceutical companies that other sources were needed, and proprietary patents had run out, opening the market to worldwide competition. By 2003 Taxol was being produced from agricultural plantations of various yew species in different parts of the northern hemisphere, and the drug was also being synthesized. Thus, it appears that after a decade in the limelight and in peril, Pacific yew will drift back into safe semi-obscurity as the Northwest's little under-story conifer.

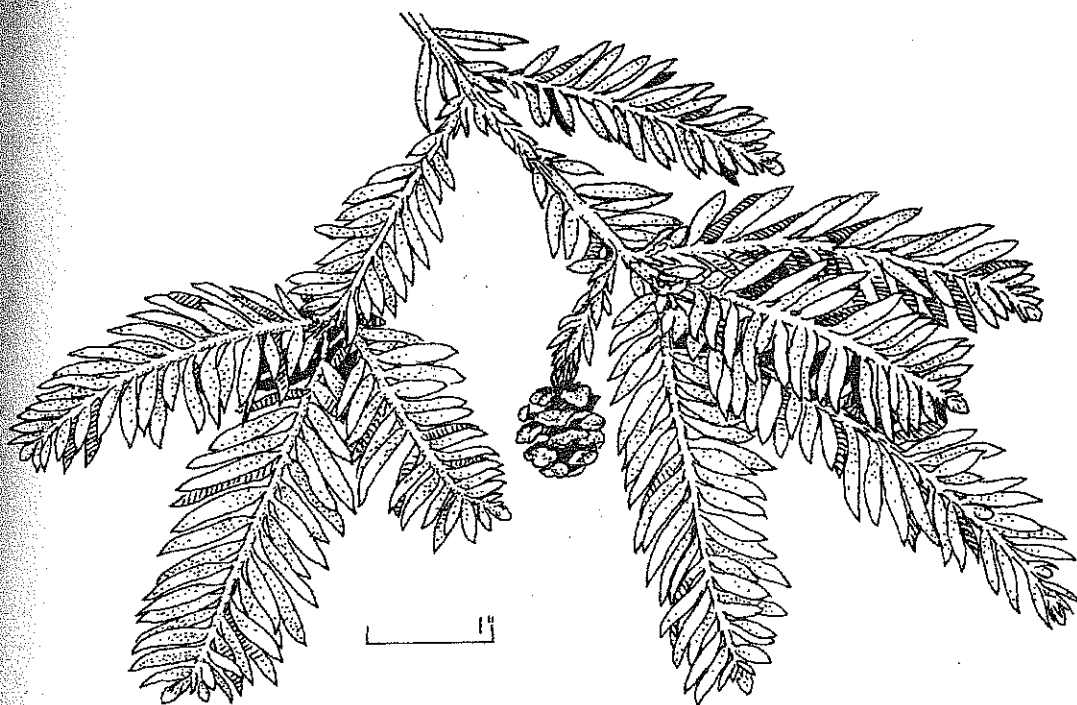
REDWOOD

Sequoia sempervirens, Cypress family—Cupressaceae

Any tree spotter who travels coastal US 101 southward crossing into California will suddenly notice a new kind of giant tree scattered among the pastures and woodlands. Magnificent redwoods grace more than 400 miles (650 km) of the California coast but barely, and almost unnoticeably, extend into the southwestern corner of Oregon. Redwoods have branchlets with flat, two-ranked needles, much like Pacific yew, but with white bands on the bottom. The bark is extremely thick, fibrous, and reddish brown to cinnamon red. The trees grow rapidly to such large size that their identity becomes increasingly obvious.

The very restricted appearance of redwood north of the California border is puzzling, since some of the finest redwoods inhabit the Jedediah Smith Grove only 15 miles (24 km) southward into California. A few miles north of the border in Oregon, two redwood groves are located on the Chetco River. Here, a small grove is reached by trail from just beyond the entrance to Loeb State Park.

Redwood's distribution suggests it is not suited to the northwestern environment, but reasons behind this are unclear. In the vicinity of its northern limits, redwood no longer occupies the coastal strip but is restricted to sites a few miles inland and is typically found on slopes rather than in river bottoms (Franklin and Dyrness 1973). Redwood is closely associated with California's coastal fog belt, where its gargantuan crowns are bathed in moisture-laden air and both killing frost and drought are rare. As an example, Eureka, California, in the redwood belt has remarkably mild all-time record temperatures of 20 and 87 degrees F (−6 and 30 C).



redwood

This mild, humid environment is consistent with climates linked to redwood forests in fossil records from millions of years ago.

Conversely, lowland forests of western Washington and Oregon are exposed to harsher climatic conditions. One vivid example was the mid-November 1955 cold wave that sent temperatures plunging to near 0 degrees F (-18 C) in the Puget Sound region and Willamette Valley and began a stretch of more than 100 days of frost at Astoria on the Oregon coast. This event killed many redwoods planted north of their natural range. Similarly, in January 1972, severe frost in southwestern Oregon's Rogue River valley killed tender tops of planted redwoods and entire trees where the ground froze.