



Redwood Burls



The knobby growths at the base of a coast redwood are filled with unsprouted bud tissue, storage compartment for the genetic code of the parent tree. If the redwood falls or is damaged, the burl may sprout another redwood tree.

There are moments in time that each one of us would like to freeze, to experience again. And there are places that seem to have achieved frozen moments in time.

The redwood forest is one of these places, both ancient and timeless, with gigantic sprawling ferns, lush green moss, and towering trees. The forest has flourished along the North Coast for 20 million years with individual coast redwoods living up to 2000 years.

However, the exact genetic code of one tree can be replicated through the large, bumpy masses on redwood trunks that can take the shape of gnarled faces or fanciful animals. These shapes are burls, masses of unsprouted bud tissue that store copies of the trees' genetic material.

While the redwood forest can be easily harmed by human and natural events, the coast redwood's (*Sequoia sempervirens*) ability to resprout from burls lends a sense of timelessness to individual trees.

Burl Development

Coast redwoods begin to develop their burls as seedlings. Most commonly, burls emerge in a “bud collar” near the base of the tree. As the tree grows, the dormant stems in the burl grow and branch out, but do not become longer, giving burls a bulbous, knobby look that

contrasts to the straight trunk of the redwood. Less commonly, burls may develop higher on the trunk and along branches. These burls continue to develop as the tree grows, storing the entire genetic code of the parent tree.

From Burl to Tree

Occasionally, an almost perfect circle of redwood trees grows in the forest. These “fairy rings” or “family circles” sprouted from the basal burls of one parent tree, long harvested or fallen.

reproduce via burls as well as seeds. If a redwood falls or is otherwise damaged, the burl may begin to sprout from the trunk or branch it developed on, sharing or taking over the established root system of the parent tree. The new tree is an exact clone of the original tree, carrying its genetic identity far into the future.

Redwood trees are unique cone-bearing trees because they can

Not Just Redwood Burls

Other burl-like growths can form on redwood trees. These growths are normally scar tissue, formed as a redwood regenerates its protective bark following injury, such as fires, cuts, or breaks. The healing scars will not sprout and do not contain the telltale buds that mark the bottom of a true burl.

Other plant species in the redwood forest also grow and regenerate from burls. These include big-leaf maple (*Acer macrophyllum*), bay laurel (*Umbellularia californicum*), rhododendron (*Rhododendron macrophyllum*), and huckleberry (*Vaccinium parvifolium*).

Burl Harvesting



Burl shops are found throughout the North Coast. These burls are cut from trees in privately-owned forest; it is illegal to harvest any wood from Redwood National and State Parks. The dormant buds in burls may sprout if placed upside-down in a shallow tray of water.

Roots rarely develop, but if they do, the burl may be planted and could grow into a tree. Sprouted burl tissue can survive for several years, but under-watering, over-watering, and subsequent fungi will often kill the burl.

A walk through the forests of Redwood National and State Parks offers a glimpse at a seemingly timeless ecosystem. Redwood burls, in their twisted, knotted forms, offer the potential for coast redwoods to grow and thrive for millennia. If the environmental health of the redwood forest is carefully protected, the burls you observe at Redwood National and State Parks may become the coast redwood forest of the future.