

Coast Live Oak (*Quercus agrifolia*)



Summary:

The coast live oak is a California native tree, primarily found in Oak Woodlands along the coast, where it thrives in heavy fog and mild winters. It is one of the few native California oaks found in coastal regions (Calscape n.d.). You can find coast live oaks primarily starting north in Mendocino County, extending south through California's coastal ranges and foothills into northern Baja California, Mexico. They are commonly found in shaded ravines and on north-facing slopes (UCSB 2025).

Coast live oaks are evergreen and flower in winter and spring. They are often identified by their gnarled branches and grand canopies, which can reach up to 130 feet in width, and can grow over 75 feet tall (Sherman and Horowitz 2024). They also have a long lifespan, often reaching over 250 years in age. The vast understory of these trees includes a wide diversity of native plants, though you will only find leaf litter below the densest canopies. Over 270 species rely on coast live oaks for habitat and food (Calscape n.d.).

Coast Live Oaks and Fire

Coast live oaks are highly fire-resistant, significantly more so than other native oak species. This is primarily due to their thick bark and ability to quickly resprout. They sprout from the main trunk and upper crown even after severe fires. When they are completely top-killed, they sprout again from the roots. Coast live oaks have an extensive root system protected by a corky outer layer, which allows the tree to draw sufficient energy from its food reserves to resprout (Steinberg 2002).



California oaks, including the coast live oak, have become a recurring topic of discussion in wildfire management conversations. A range of studies suggests that native oaks can mitigate or slow wildfires through a variety of measures. Many oaks, coast live oaks included, retain moisture throughout the entire year and can shade out invasive annual plants with their dense canopy and leaf litter, resulting in reduced hazardous fuels. Stands of oaks also provide wind

protection, which helps to keep fire from spreading and intensifying. Finally, some studies suggest that coast live oaks can increase fog drip, changing moisture levels in the soil, further reducing the chance for wildfires to spread (Shepherd and Brehm 2023).

References:

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