

Valley Oak (*Quercus lobata*)



Summary:

The valley oak, ranging over the interior valleys of California, grows into the largest of North American oaks. They are fast-growing trees, reaching up to 20 feet in 5 years, up to 40 feet in 10 years, and up to 60 feet in 20 years. Mature trees may live up to 600 years in ideal conditions (Calscape 2026). Valley oaks tolerate cool, wet winters and hot, dry summers, but require an abundance of water. They are most commonly found in the rich, deep soils of valley floors below 2,000 feet in

elevation, but can also be found at higher elevations up to 5,600 ft. Valley oak trees are found anywhere from dense riparian forests to open foothill woodlands and valley savannas (Calscape 2026).

Valley Oaks and Fire:

Similar to other California oak species, the valley oak is considered highly resilient to low and mid-intensity wildfires, and moderately resilient to high-intensity wildfires. One case study conducted near Davis, California, indicates that valley oak saplings exposed to a low-intensity prescribed fire experience very low mortality rates despite high topkill rates (Holmes et al n.d.). Tree height, fire temperature, and the density of understory ladder fuels all contributed to the tree's response to fire. Smaller trees, trees exposed to higher fire temperatures, and trees surrounded by denser understory ladder fuels were more likely to experience death or topkill in response to the fire. These results display the importance of reducing ladder fuels and understory vegetation (Holmes et al n.d.).

Valley oaks have a number of adaptations and ecological factors that enable them to survive fires. Mature valley oak trees are fire-resistant due to their thick bark and high canopies, while top-killed seedlings and saplings sprout from the root crown (Howard 1992). The symbiotic relationship between valley oaks and animals also gives them an advantage. This is because small animals store acorns underground, which increases tree regeneration after a fire, as buried acorns usually survive (Howard 1992).



References

Calscape. 2026. "Valley Oak." Calscape, California Native Plant Society.

[https://calscape.org/plant/3150/Quercus-lobata-\(Valley-Oak\)](https://calscape.org/plant/3150/Quercus-lobata-(Valley-Oak)).

Holmes, Katherine, Kari Veblen, Truman Young, and Alison Berry. n.d. *California Oaks and Fire: A Review and Case Study*. University of California Agriculture and Natural Resources (UCANR). Accessed September 7, 2026.

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