

California Phenology Project: species profile for Valley Oak (*Quercus lobata*)



CPP site(s) where this species is monitored: Santa Monica Mountains National Recreation Area



Photo credit: Adam Dale (Flickr)

What does this species look like?

This deciduous tree can be over 30 meters tall. The light grey bark has a texture reminiscent of alligator hide. When trees are very old, the branches may droop. The deeply lobed leaves are rounded and 5-12 centimeters long. The shiny leaves are dark green on the upper surface and pale green with a soft fuzzy covering on the lower surface. The individuals are monoecious; each tree bears both male and female flowers but the male flowers produce only anthers and the female flowers produce only pistils.

When monitoring this species, use the USA-NPN deciduous trees and shrubs (with pollen) datasheet.

Species facts!

- The CPP four letter code for this species is **QULO**.
- Native Americans ground the acorns for mush, soup and bread.
- Acorns generally fall in October and are eaten by mammals, birds, and beetles.
- Valley oaks can have large galls on their twigs and leaves made by small wasps.
- They tolerate wildfire and hybridize often with other oak species.
- Requires access to groundwater to survive.



Photo credit: KP Botany (Wikipedia)



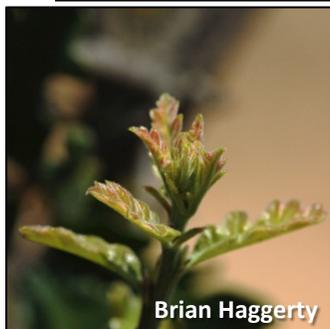
Breaking leaf buds with developing male catkins, Photo credit: Crystal Anderson

Where is this species found?

- *Quercus lobata* is found on slopes and in valleys
- Found at elevations less than 1700 meters.
- Endemic to California; distributed from Shasta County south through the Central Valley and lower-elevation foothills and valleys of the Sierra Nevada and Coast Ranges to Los Angeles County.

For more information about phenology and the California Phenology Project (CPP), please visit the CPP website (www.usanpn.org/cpp) and the USA-NPN website (www.usanpn.org)

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Breaking leaf buds

Brian Haggerty



Leaves

Brian Haggerty



Increasing leaf size

Brian Haggerty



Colored leaves

Tracie Hall



Flowers or flower buds

The male inflorescence is a catkin which is initially compact and stiff, but eventually unfolds, lengthens, and hangs loosely from the branch. Female flowers are very small and petal-less, emerging from the growing stem at the point where a new leaf is attached.

Marc Kummel



Open flowers

The male flowers will open once the catkin has unfolded and is hanging loosely. Female flowers are open when the pistils are visible, but will be very difficult to see where they are out of reach.

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When monitoring **flower or flower bud abundance** for this species, count each inflorescence as a single flowering structure!

When monitoring **the proportion of open flowers**, estimate the number of individual flowers that are open, not inflorescences! For big trees, estimate proportions of open flowers for a few branches and extrapolate for the rest of the tree.



Fruits

The fruit is an acorn that changes from green to light brown, and drops from the plant.

©Keir Morse



Ripe fruits/Recent fruit or seed drop

The fruit is ripe when it is light brown and drops from the plant. Since fruits drop from the plant when ripe, do not observe the **Ripe Fruits** phenophase (leave this line blank on your datasheet). Instead record **Recent fruit or seed drop** (as pictured).

Steven Ryan

Important Note: USA- NPN flower and fruit phenophases are nested. If you say "Y" to "open flowers" you should also have said "Y" to "flowers or flower buds" and if you say "Y" to "ripe fruits" you should also have said "Y" to "fruits"

Phenophases not pictured: **falling leaves, pollen release**