

Olea europaea Olive

John Muir National
Historic Site

Why Observe?

Understanding how seasonal climatic events such as rainfall and temperature changes affect fruit production informs fruit growers on which types of fruit are best suited to grow in their region and how successful the harvest will be in a given year. Valuable insight can also be obtained when reporting data after an abnormal weather event, like a sudden freeze or drought. Additionally, knowing the timing of flowering and fruit ripening can help fruit growers make decisions regarding the optimal times to plant trees, apply pesticides, prune trees, and harvest ripe fruit.



Photo credit: National Park Service

Tips for Identification

An evergreen tree that can grow up to 40 feet but most grow to about 25 feet. Leaves are leathery, oblong, dark green above, silvery on the underside, and paired opposite each other on the branch. Small flowers with four white petals grow in inflorescences from leaf axils on the previous year's wood.



Photo credit: National Park Service

Be aware there is variation from individual to individual within a species, so your plant may not look exactly like the one pictured. If you are uncertain whether or not a phenophase is occurring, report a "?" for its status until it becomes clear what you are observing after subsequent visits.

Olea europaea
Olive



Breaking leaf buds

One or more breaking leaf buds are visible on the plant. A leaf bud is considered "breaking" once a green leaf tip is visible at the end of the bud, but before the first leaf from the bud has unfolded to expose the leaf base at its point of attachment to the leaf stalk (petiole) or stem. For *Olea europaea*, the naked leaf bud is considered "breaking" once the two halves (each a tiny leaf) begin to separate from each other, but before they have completely separated and grown long enough to appear more or less like a small version of the adult leaf.

Photo credit: National Park Service



Young leaves

One or more young, unfolded leaves are visible on the plant. A leaf is considered "young" and "unfolded" once its entire length has emerged from a breaking bud, stem node or growing stem tip, so that the leaf base is visible at its point of attachment to the leaf stalk (petiole) or stem, but before the leaf has reached full size or turned the darker green color or tougher texture of mature leaves on the plant. Do not include fully dried or dead leaves. For *Olea europaea*, the first leaves from a naked bud are considered "unfolded" when they have completely separated and grown long enough to appear more or less like a small version of the adult leaf.

Photo credit: National Park Service



Flowers or flower buds

One or more fresh open or unopened flowers or flower buds are visible on the plant. Include flower buds or inflorescences that are swelling or expanding, but do not include those that are tightly closed and not actively growing (dormant). Also do not include wilted or dried flowers.

Photo credit: National Park Service



Open flowers

One or more open, fresh flowers are visible on the plant. Flowers are considered "open" when the reproductive parts (male stamens or female pistils) are visible between or within unfolded or open flower parts (petals, floral tubes or sepals). Do not include wilted or dried flowers.

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Fruits

One or more fruits are visible on the plant. For *Olea europaea*, the fruit is a small, fleshy "olive" that changes from green to reddish-purple to purple-black or black.

Photo credit: National Park Service



Ripe fruits

One or more ripe fruits are visible on the plant. For *Olea europaea*, a fruit is considered ripe when it has turned purple-black or black.

Photo credit: National Park Service

Phenophases not pictured: Pollen release, Recent fruit or seed drop