



Oak pests

September 2023

Oaks are one of Oregon's more drought-tolerant trees and they provide habitat and food (acorns) for a variety of birds and mammals. Oak species native to Oregon include Oregon white oak, California black oak and the evergreen canyon live oak. Oregon white oak is a stately tree that spans the entire Willamette Valley and can live for up to 500 years. Most of the insects found on oak cause only superficial damage or infest only dying trees. More recently Oregon oaks have been damaged by exotic insects such oak lace bug and Mediterranean oak borer (MOB), the latter of which spreads fungi that can kill oaks. Signs and symptoms of pests and non-pests of oak may be confused and are differentiated below.

Common insects on oak:

- Gall-making wasps, flies, etc.
- Squirrels
- Oak lace bug
- Oak looper and other caterpillars
- Woodboring insects (various beetles, carpenterworm, invasive Mediterranean oak borer which vectors disease)

Oaks can host many types of pests that damage foliage and look unsightly but do not detrimentally harm trees. Deciduous oaks, such as Oregon white oak, drop their leaves each year and damage from insects that feed on foliage or create galls does not affect the trees from flushing new leaves the following year.



Gall-making wasps and flies, mites, aphids, adelgids and psyllids lay eggs in leaves, branches,

acorns, flowers, or roots. These attacks cause tissues to swell, forming galls. Galls made in branches may cause bark to rupture and girdle the branch causing tip dieback. This damage is compounded by squirrels that dig for grubs in twigs and cause twig dieback. Scattered, small patches of dead leaves throughout the canopy are a common sight from this damage but it is mostly cosmetic, or minimal relative to the size of the crown.



Exotic oak lace bug causes yellow mottled leaves. Transparent adults, cast skins of nymphs, black excrement, and

black eggs laid in groups can be seen on the underside of leaves. Damage from this insect is typically aesthetic and treatment is not necessary. Although they are small, these insects can cause a mild stinging bite.



Oak looper is a periodic defoliator whose caterpillar stage feeds on leaves. An outbreak of feeding leaves behind skeletonized, orange/brown discolored foliage throughout the entirety of the crown. Outbreaks are often occasional or short-lived and buds are not harmed so that trees

can reflush as normal the next year.





Various other bark beetles or woodboring insects such as the larvae of beetles and moths can also be found tunneling under the bark or into the wood of oaks but *most* species do not cause damage.



Repeated attacks by carpenterworm moth larvae can cause branches to weaken and break. These attacks most often start in tree crotches, crevices, or existing wounds. Adult females don't fly far and often continue to lay eggs in the same location.

Management includes preventing injury and thereby susceptibility. Carpenterworm may also be treated by skewering individual larvae in their tunnels or applying nematodes to larval tunnels: <http://ipm.ucanr.edu/pmg/pestnotes/pn74105.html>



One type of woodboring beetle however is of concern. The invasive Mediterranean oak borer (MOB) is a tiny insect that has recently been found

killing oaks in Oregon. This insect vectors fungi that causes oak wilt, a deadly disease for multiple species of oak.

Symptoms of MOB attack include:

1. dieback of whole sections of crown, sometimes starting at the top
2. pale boring dust around the base of the trunk
3. 1/16 inch entrance holes
4. black-stained, branched galleries in the sapwood



It is common to see some dieback in the canopy of older oaks, however the presence of these other symptoms above should be used for confirmation of MOB.

Factsheet: <https://tinyurl.com/MOB-oregon>

Report suspected MOB infestation to Oregon Invasive Species Hotline: <https://oregoninvasiveshotline.org/login/?next=/reports/detail/2018>

Management of oak

Oak is quite drought-tolerant and is therefore sensitive to waterlogging, but despite this drought-tolerance it too can be weakened by prolonged, intense drought.

Healthy trees are susceptible, although less attractive to MOB and may be able to resist or tolerate attacks longer. Maintain health of oaks by avoiding construction within 2x the height of the tree or alteration of current irrigation systems practices (causing an increase or decrease in the watering schedule trees have become accustomed to).

Oregon Department of Forestry | Forest Health

<http://tinyurl.com/odf-foresthealth>

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