

Oak Mistletoe

Weakening Our Oak Trees One Branch at a Time



Picture from "A Field Guide to Insects and Diseases of California Oaks". USDA, July 2006.

What is mistletoe?

Oak mistletoe infestation is most noticeable in winter. Look up into the bare branches of a towering oak and you're likely to see a leafy green mass on at least one branch. Heavily infested trees are covered in these clumps of parasitic plants.

The mistletoe fruit matures in early winter and is eaten by birds that transport it to other branches and trees through their droppings. The seed in the fruit sprouts and new mistletoe begins to grow.

What does it do to oak trees?

Mistletoe sends out thread-like strands into branches, tapping the tree's nutrients and water to survive. A healthy oak can survive with one or two mistletoe growths, but the long-term burden of supporting this parasite depletes the nutrients and water in the soil faster than the tree would by itself. This means a heavily infested tree will become weak, unhealthy and eventually die, even in years with plenty of rain and snow.

Why are healthy oak trees important?

Oaks and oak woodlands provide important wildlife habitat and have higher levels of biodiversity than nearly any other land-based ecosystem in California. At least 300 different animal species (birds, reptiles, small and large mammals, and amphibians), plus 1,100 native plant species and thousands of different beneficial insects are associated with California oak woodlands.

What can I do to reduce mistletoe infestations?

The best, most effective way to control the growth and spread of mistletoe is by removing infected branches as soon as this parasite appears. Because birds deposit seeds from tree to tree, a good idea is to coordinate with your neighbors to remove as much mistletoe in your area as possible. This is best done after the oak has shed its leaves in the fall.

When it is found on tree trunks or large branches too big to remove, the growth can be cut back to the bark, then the area is wrapped in black plastic to deprive the mistletoe of light. If the skimmed area is not covered, the mistletoe will re-sprout from the same site. The UC integrated pest management website (below) offers detailed directions for this method of removal.

One brand of chemical control, Florel®, (ethephon) is registered in the U.S. but only suppresses mistletoe growth, spread and seed production. It does not kill it. To slow the spread of mistletoe, the chemical must be sprayed on every 1-4 years.

Further information on Oak Mistletoe (*Phoradendron villosum*):

1. *A Field Guide to Insects and Diseases of California Oaks*. USDA, July 2006. Online at: http://www.fs.fed.us/psw/publications/documents/psw_gtr197/psw_gtr197.pdf
2. UC Agriculture and Natural Resources, Integrated Pest Management. Online at: <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7437.html>