

Your Name: Kate Marianchild

Species: Mistletoe

50 Species Challenge Journal Page



Photos by Mark Stromberg of Hastings Reserve

Common Name(s):	Mistletoe, “Basket on High” (Navajo), Oak Mistletoe		
Scientific Name:	<i>Phoradendrum villosum</i> (this is the mistletoe that grows on oaks in California and Oregon. <i>Phoradendrum</i> means “thief of the tree”).		
Where Seen:	Round Mountain Ranch, Ukiah, Mendocino County, CA		
Type of Habitat:	Oak woodland, oak savannah	Native?	Yes
What does it eat or need for nourishment, shelter, warmth, camouflage, nest material etc:	For nourishment it depends on water and minerals in valley and blue oak trees, although it also photosynthesizes its own nutrients from sunshine. For pollination it depends on wind and a variety of flies, ants, and beetles. For seed dispersal it depends on birds and mammals.		
Who eats it, uses it, or lives on it, in it, or near it?	The berries are eaten by many species, including the following species found in Lake and Mendocino Counties: Hermit Thrushes, Cedar Waxwings, Western Bluebirds, American Robins, Mourning Doves, Blue Grouse, Crows, Ravens, California Thrashers, and Band-tailed Pigeons. Birds that nest in this species of mistletoe include White-tailed Kites, Bushtits, and Robins. Birds also burrow into mistletoe for protection from wind and cold. Mistletoe berries and leaves are a rich source of protein for Ring-tailed Cats, Black-tailed Deer, chipmunks, porcupines, and elk. Mistletoe is also an important nectar and pollen plant for honeybees and other native bees. Mistletoe flowers often provide the first pollen available in the late fall and early winter for bees. Exclusive mistletoe-eaters include a twig beetle and several species of thrip.		
What threatens it as a species?	Foresters and lumber companies who consider it a pest.		

Description: From a distance it is a rounded clump of green hanging in an oak tree. The leaves are dull yellowish-green ovals, ½-1 inch in length. This mistletoe has small, sticky, whitish berries.

Research, Observations, Drawings, Questions, Resources: Mistletoe plants are either **female (produce berries)** or **male (produce only pollen)**. The berries of the female plant are small, **sticky**, and whitish. The birds feed on and digest the pulp of the berries, excreting living **seeds that stick to their bills and feet, and stick to the fur of mammals**. This stickiness contributes to the spread of mistletoe.

After the mistletoe seed germinates, it grows through the bark and into the tree's water-conducting tissues, where root-like structures called **haustoria** develop. The haustoria gradually extend up and down within the branch as the mistletoe grows. Once on a host tree, the mistletoe sends out roots that penetrate the tree and eventually starts pirating some of the host tree's nutrients and minerals. In actuality, though, this mistletoe is not a true parasite; instead it is what scientists call a "hemi-parasite" because it has the green leaves necessary for photosynthesis.

Mistletoe is a native plant that has been around for thousands of years. It spreads very slowly, and is not a huge threat to timber production, as was once thought. It is a natural component of healthy forest ecosystems, and is now known to be **essential to the survival of several species, and vital to many others. Many more species live and nest in areas where mistletoe is thriving than in areas without mistletoe.**

The leaves are quite brittle. In early January several of us on a Fifty Species Challenge walk observed clumps of what looked like buds on a mistletoe plant. Were they buds? When are the berries ripe?

(Dwarf mistletoe, which should be the subject of a separate Journal Page, lives on conifers. Often referred to as "witches broom," it is used as nesting habitat and thermal cover for many raptors, as well as many other birds and some mammals. In eastern Oregon 64% of all Cooper's Hawk's nests were found in witches broom. Sharp-shinned Hawks, Goshawks, Long-eared Owls, and about twelve species of migratory birds also nest in witches broom, which provides protection against Great Horned Owls.

Resources: <http://www.usgs.gov/newsroom/special/mistletoe/>
<http://www.hastingsreserve.org/OakStory/Mistletoe2.html>