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Masting in California Native Oaks
By Heidi Napier
UCCE Master Gardener of El Dorado County

Masting in oaks is a fascinating phenomenon. It has nothing to do with sailing ships; mast comes from the Old English *maest*, meaning a bumper crop of nuts on the ground. Acorns and other nuts were important sources of livestock feed in the Middle Ages, so a *maest* year was good. Masting refers to reproductive cycles in plants that are coordinated over many thousands of square miles.

You may have noticed that, in spite of four years of drought, our Blue and Valley Oaks are producing tons of acorns in 2015. This is happening all over California; somehow all the deciduous oaks turn up acorn production at the same time. Last year I could find hardly any acorns from Blue or Valley Oaks. The mast years occur every two to five years.

Theories abound as to how and why masting occurs, but no one has come up with a good answer yet. Masting is not correlated with climate, and, although the trees seem to communicate with each other, no one knows how. Plants do release some chemicals that serve as communication with each other, but the masting occurs over a much larger area than chemicals can travel. Some scientists think that the average temperature in April correlates with masting, and April is when California oaks flower.

What advantage is there to all producing huge crops of acorns the same year? One reasonable theory is that if the trees all produce huge crops the same year, predators (acorn eaters) will become so full that plenty of acorns will remain to sprout. Another theory is that loading the air with pollen increases the chance of high pollination rates. Oaks are wind-pollinated, so this seems to make sense.

There is a cost to masting because producing a huge crop of acorns takes a lot of resources. So the trees grow less in masting years.

There are also ecological effects. Acorn Woodpeckers depend heavily on acorns for food, and their population fluctuates as acorn production rises and falls. Field mice also depend on acorns, and when their population rises, they consume more Gypsy moth caterpillars and more eggs

from ground-nesting birds. White-Footed mice and deer carry Lyme disease and the ticks that spread the disease, so a mast year may indirectly cause more cases of Lyme disease.

Oaks are not the only plants that mast. Beeches, various conifers, grasses and tropical trees have been found to mast and have been studied.

Is your yard inundated with pesky weeds, and would you like to know how to get rid of them? Plan to join UCCE Master Gardener Steve Savage for this Saturday's free public education class on Noxious Weeds. Identification of weeds, their origins, and effective treatment methods will be covered. The November 14th class is from 9:00 a.m to noon at the Government Center Hearing Room in Building C, 2850 Fairlane Court in Placerville.
UCCE Master Gardeners are available to answer home gardening questions Tuesday through Friday, 9:00 a.m. to noon, by calling (530) 621-5512. Walk-ins are welcome at our office, located at 311 Fair Lane in Placerville. For more information about our public education classes and activities, go to our UCCE Master Gardeners of El Dorado County website at http://ucanr.edu/edmg. Sign up to receive our online notices and e-newsletter at http://ucanr.edu/mgenews/. You can also find us on Facebook.