

Foothill Oaks Full of Jumping Oak Galls



If you have an oak tree growing in your yard you may notice a strange phenomenon occurring this year. The ground beneath many oaks is covered with pinhead-sized yellow or brown seedlike objects, most of which are hopping around. The tiny things are called “jumping oak galls”, and are formed by a tiny, dark wasp. The wasp belongs to an interesting family of wasps called the “cynipids.”

The galls are actually malformations of plant growth. The tiny gall-forming wasp lays an egg in an oak leaf at a precise moment in the tree’s growth cycle, causing normal plant cells to multiply at an unusually high rate. As a result, the tiny egg becomes encased in the gall composed of oak leaf tissue.

When the egg hatches, the gall provides both food and a living chamber for the larvae. In summer, the oak gall drops to the ground with the tiny wasp larvae inside. The insect moves in jerks, causing the entire gall to jump around on the ground. It’s believed that the larvae hop around in an attempt to find a crack in the soil to hide up in. At maturity it transforms into a pupae, and later into an adult which chews its way out of the gall. The wasps themselves are dark colored, so tiny that you’ll probably never see them, and harmless to people.

The entire oak tree is fair game for the cynipid wasps, which form galls on leaves, buds, twigs, branches, roots and even the acorns. Each cynipid wasp species forms a gall of particular size, shape and color; no other species forms one quite like it. Also, each one lays its eggs in a specific plant part.

Besides the jumping oak gall, you may be familiar with the common oak “apple”, a large gall up to three inches in diameter. These large galls are common on the deciduous Valley oaks, and contain one or more tiny cynipid wasp larva inside. You may also find a pink, star shaped gall on the undersides of Blue Oaks, these could be urchin or turbin galls. Other galls are cone shaped, or round and fuzzy, or shaped like tiny loaves of bread.

In California, most insect-caused galls are not harmful to the plant. In some cases though, the galls may damage leaves or even cause twigs to die. However, the insect galls cause no serious permanent injury. Because of their complex life cycle, it is very difficult to prevent cynipid wasps from forming galls; in most cases, it is unnecessary to do so.

This article adapted from Cooperative State Research, Education and Extension Service, USDA (Ed Perry). Please contact Ken Churches at cdcalaveras@ucdavis.edu or (209) 754-6475 with your agricultural questions. To speak with a Certified Master Gardener: Calaveras (209) 754-2880, Tuolumne (209) 533-5696, Amador (209) 223-6837, El Dorado (530) 621-5543.

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