

Yolo Basin Foundation: Gall Wasps



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NATURE PHOTOGRAPHY

If you look closely at the leaves and twigs of California native oak trees you will often find a variety of odd structures. Quite often these are galls produced by wasps in the Cynipidae family. You don't often see the *adult* wasps, which are generally around 1-4mm in size. Often these wasps are specific to a particular group (such as white oaks) or species of oaks.

Most of the oak trees around the Yolo Basin Wildlife Area Headquarters are valley oaks, *Quercus lobata*, which is found only in California. All of the photos included here were taken by Charlie Russell at the YBWA HQ demonstration ponds.



California Gall Wasp, *Andricus quercuscalifornicus*: On twigs. Black ones are from the prior season. No adult male of this species has been discovered. Females lay eggs in the fall, the larvae hatch in the spring and induce the galls. They emerge as adults in late summer or fall.



Red Cone Gall Wasp, *Andricus kingi*: Often on the underside of the leaf, usually red.



Convuluted Gall Wasp, *Andricus confertus*: On a midrib on the underside of the leaf.



California Jumping Gall Wasp, *Neuroterus saltatorius*: Sometimes a tree will be colonized by these in great numbers. In mid summer these fall to the ground and you can see them jump very actively, as they try to lodge into the soil to overwinter. This is an example of a wasp that has different galls at different times of the year: the first generation (sexual) gall looks quite different than the second (asexual) generation in a season. The photos above are second generation.



Yellow Wig Gall Wasp, *Andricus fullawayi*.



Irregular Spindle Gall Wasp, *Andricus chrysolepidicola*



Spined Turban Gall Wasp, *Cynips douglasii*



Disc Gall Wasp, *Andricus parmula*



Possibly the **Round honeydew gall wasp**, *Disholcaspis canescens* (not sure of ID)



1 Valley oak, *Quercus lobata*

When attempting to identify oak gall wasps it is important to note the species of oak, the placement of the gall (twig, top of leaf, bottom of leaf, on the midrib, etc.), and time of year. Note that some species of gall wasps create galls later in the season that look different than the ones they create earlier in the season.

There are approximately 800 species of Cynipidae wasps in North America, and about 70% of those are found on oak trees. The galls form when the female lays eggs in the host plant, and the developing larvae will eat the gall tissue. The mechanism that creates the gall is not known. It is interesting to note that some wasps are “inquilines” (live in galls created by *other* wasps), that some wasps will parasitize other gall wasps, and that there are also some hyperparasitoid wasps that in turn prey upon those parasitoid wasps.

A wonderful resource for identifying wasp galls on California native oaks is the website by Joyce Gross at https://joycegross.com/galls_ca_oak.php. Also, iNaturalist can be an excellent resource for identifying galls.