

Unsightly Galls on Live Oak Leaves Caused by Insects

Texas A&M AgriLife Extension Service — Galveston County Office



PHOTO CREDIT: Dr. William M. Johnson

Homeowners may encounter a range of odd growths on the leaves and stems of live oak trees during late spring through fall. These growths are known as insect galls and do not cause measurable harm to plants. Shown above is a mealy oak gall produced by the offspring of small wasps.

Every year I receive numerous questions about strange, misshapen growths on the leaves and stems of oak trees (primarily live oaks). These growths, known as galls, are often the result of certain types of very small insects that lay their eggs on oak leaves or stems.

Galls are tumor-like growths produced by the plant in response to chemicals injected into the plant by the larval stage of a gall-making insect. The shape, size and form of the gall are determined by the precise “cocktail” of chemicals produced by each species of gall-maker.

The mechanisms of gall formation and how these chemicals result in very distinctively shaped galls are still not well-understood.

Most gall making insects are tiny wasps. By tiny, I mean smaller than a gnat, smaller than a fruit fly, and, in some cases, as small as a grain of



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Dr. William Johnson is a horticulturist with the Galveston County Office of Texas A&M AgriLife Extension Service. Visit his website at <http://aggie-horticulture.tamu.edu/galveston>.

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pepper. These wasps are harmless to people or animals.

The interesting thing is that each species of wasp makes its own distinctive gall — distinctive enough that it is possible to identify the species of wasp or other insect that created the gall. While galls can occur on any tree species, in our growing area oak and hackberry trees are the most commonly affected. It's not usually difficult to find multiple kinds of galls on a single tree.

Gall formation usually takes place in the spring, when leaves are rapidly growing. However, the final results of this gall formation activity are not noticed until later into the spring and summer growing season.

During the spring growing season, gall-making wasps deposit eggs on young oak leaves or stems that are growing rapidly. Only during this time of rapid cell division and growth can these insects bend plant cell division to do their bidding.

The cells within a young oak leaf or stem are rapidly dividing and the larva of gall-making wasps can alter the development of new tissue cells and can cause such developing tissue to grow a specific type of protective gall that will serve as a home for their developing offspring. Once a leaf or stem has stopped growing (i.e., cell division has stopped), these hormone

-like chemicals can no longer affect the plant.

The galls provide a protective feeding site for the developing offspring. Because galls provide benefit for the insect at little expense to the plant (only a very few species galls-inducing insects affect plant growth or overall appearance significantly), this is sometimes referred to as a form of commensal relationship.

The two most commonly encountered galls that occur on oaks in this area develop on the underside of leaves. One gall looks like small (up to one-fourth inch diameter) grapes or marbles that range in color from red or yellow or creamy white. The other type of gall also occurs on the underside of leaves, is yellow to brown in color and looks like the cottony end of Q Tip swab.

The mealy-oak gall is another commonly seen gall on live oaks. The mealy-oak gall is found only on small stems of live oaks and look like ping pong balls only smaller in size and grey-to-tan in color.

Once a gall has formed, control by an insecticide is not possible. The good news for the gardener or tree owner is that most types of insect galls that occur on live oak trees do not cause much harm to plants. As live oaks mature, they become more re-

sistant to gall formation.

Seminar on Irises for the Gulf Coast Garden

Iris enthusiast and Master Gardener Monica Martens will talk about the types of irises that can be grown locally and elsewhere in Texas. She will provide an overview of irises commonly grown in home and public gardens. This presentation will include tips for growing irises and information about ways to obtain irises. Monica will discuss her landscaping mishaps and successes in growing irises in her home landscape in League City. After growing tall bearded irises for more than ten years in Colorado, she has learned how to successfully incorporate Louisiana irises and other water-loving irises into her new Texas garden. The audience will learn about common types of this fabulous iris, recommended varieties, companion plants, landscape ideas, pests, how to divide and replanting irises, as well as where these beauties can be obtained for your own garden.

This seminar will be presented on Saturday, July 14, from 1:00 to 3:00 p.m. at the Galveston County AgriLife Extension Office located in Carbide Park (4102-B Main St. in La Marque). Pre-registration is required (phone 281-309-5065 or e-mail galvcountymgs@gmail.com) to ensure the availability of handouts.

