

Unsightly Galls on Oak Leaves Caused by Insects

Texas A&M AgriLife Extension Service — Galveston County Office



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Homeowners may encounter a variety of strange, misshapen growths on the leaves of oak trees during late spring through fall. These growths are called galls.

Every year I receive numerous questions about strange, misshapen growths on the leaves of trees. These growths, known as galls, are often the result of certain types of insects depositing eggs on leaves or feeding on leaves.

Galls are tumor-like growths produced by the plant in response to chem-

icals 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 poorly 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 pepper. These wasps are harmless to people or animals.

The interesting thing is that each gall making insect 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 deposited eggs on young oak leaves. The cells within a young leaf are rapidly dividing and the larva of gall-making wasps can alter the development of new cells in a leaf and cause an oak leaf 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.

Insect-induced galls provide a sheltered feeding site for the developing young of gall-making insect. Because galls provide benefit for the insect at little expense to the plant (only a very few types of gall significantly affect plant growth or health), 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.

Once a gall has formed on a plant leaf, control by an insecticide is not possible. The good news for the gardener or tree owner is that most galls rarely cause much harm to plants.

Gardening Q&As

Question: Help! My satsuma tree has a heavy load of fruit but many of the fruits suddenly started to split last week. What caused this and what can I do about it?

A: After weeks and weeks of ample rainfall, we entered into an extended period of dry weather. This type of damage typically occurs when citrus trees rapidly take up water from irrigation (or rain) after a long dry period. The fruit expands and bursts the peel in a crack across the bottom or blossom end of the fruit.

The buildup of excess fluids in the fruit produces sufficient internal pressure to cause the skin to burst. Young trees have the highest incidence of splitting. Fruit splitting occurs commonly on or-

anges, mandarins and tangelos. In contrast, grapefruits are rarely affected by this problem. Maintaining adequate and even soil moisture levels by regular irrigation during extended periods of dry weather is the best defense against fruit splitting.

Question: I can't seem to get my hydrangeas to rebloom. What am I doing wrong?

Answer: The common garden hydrangea develops flower buds on 2-year-old wood. Therefore, these flower buds must survive your pruning in order to develop this spring. Do not prune back hydrangeas in the fall or in the spring. If pruning is needed, do so immediately after flowering.

