Galls and Gall Damage

"Shazam" and "Gall lee" those are some hypertrophies!

Gomer Pyle was right about those tumorous outgrowths that develop on our trees and leaves that resemble marbles, apples, dunce caps, saucers and sea urchins.

For countless centuries plants have been forming galls or hypertrophies to ward off the attacks of bacteria, fungi, mistletoe, mites, nematodes, viruses, and insects.

It's all about influence and timing!

Plant galls are formed from abnormal vegetative growth produced by a plant under the influence of an insect, mite, bacterium, fungus, or nematode. Gall formation involves an intimate association between the plant host and gall maker. Galls can be found on any part of the plant, but are most often observed as large, swollen growths on a leaf, on the petiole (stalk that joins the leaf to the stem), twig, or branch.

Gall makers must attack at a particular time in the year to be successful. Otherwise, they may not be able to stimulate the plant to produce the tissue which forms the gall. Generally, initiation of leaf galls occurs around "bud break" or as new leaves begin to unfold in the spring.

There are some 1500 species of gall producers, the majority of which are insects and mites. Some galls form where insects or mites feed or lay eggs. They may also develop as a response to infections by several kinds of fungi, bacteria, and viruses.

The three major groups of insects that cause galls are aphids, gall midges, and gall wasps. Following are illustrations of the gall wasps, their damage, and the other initiators of galls - fungus and bacteria.

The Female gall wasp is 6 to 8 mm (0.25 to 0.30 inch)

The gall wasp causes mid-summer foliar scorching on oaks

Also known as jumping oak gall, these spots are actually tightly packed larva that jump when they fall to the ground.

Gall wasp damage can be found on oaks, but roses, maples, and other plants also serve as viable host plants. The galls they form may be located on any part of the plant, and in diverse forms and shapes and even as speckles.

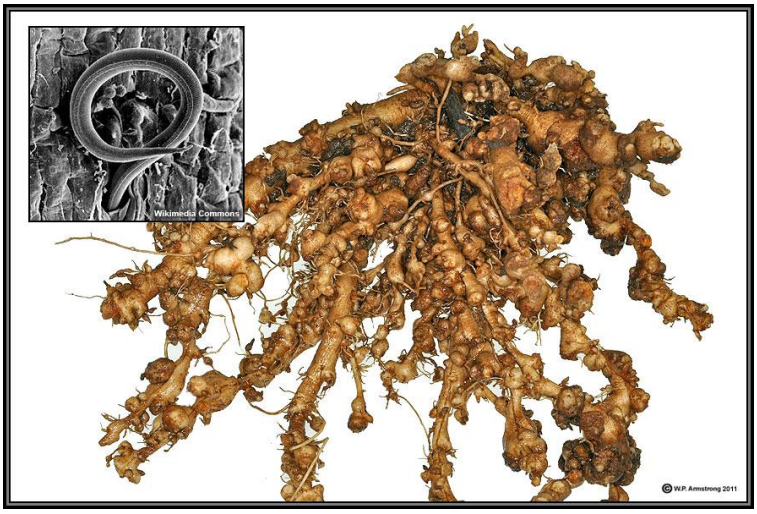
Horned oak gall, the 'horns' contain the wasp larvae that trigger the gall formation

Gall midges cause leaf spot galls

The galls on these Pin Oak leaves are caused by a midge

Other Gall initiators

Unsightly peach leaf curl caused by a parasitic fungus



Root-knot nematodes cause damage on many vegetables and fruits, including bean, cabbage, cantaloupe, and carrots. When the galls are sliced open, pinhead sized female nematodes can be seen.

Cedar apple rust is caused by a fungus which attacks apples and eastern red cedar trees

This cedar-apple rust gall can erupt into gelatinized tentacles after wet weather in the spring

Crown Gall on a young juniper. Crown gall bacterium enter plant roots through wounds.

Control is often not necessary

Despite the visual impact that heavy gall infestations can cause, the relationship between the plant host and the gall maker is so nicely balanced that infested plants are rarely killed by the gall maker.

This makes control of gall insects difficult and often unnecessary. Some varieties of a tree seem to be less susceptible to gall formation. Research suggests that less susceptible trees have leaves that open later in the season. Sometimes, the most effective control method is to prune out isolated infested plant parts and destroy them. Simply cleaning up and destroying infested leaves, twigs, and branches in the fall will help suppress an infestation.

For expanded information and gall photos for comparison, see Oklahoma State Fact sheet: EPP-7168 (Plant Galls Caused by Insects and Mites).

For complete control of galls consider hiring an arborist to identify the gall-producing organism who can then recommend and carry out proper control measures.

Specific chemical control suggestions can be found in OSU Extension Fact Sheet: EPP-7306 (Ornamental and Lawn Pest Control for Homeowners).

The word Gall is a nickname of Celtic origin, meaning 'foreigner' or 'stranger'.
Seeing these gall photos, there is no doubt Gomer knew what he was talking about.

JT