



Oak cynipid galls

Several species
Order Hymenoptera, Family Cynipidae; gall wasps
Native pests

Host plants: Of the more than 700 species of gall-forming insects listed from the United States and Canada, nearly 80% are reported to form galls on oaks (*Quercus*). Each species of oak gall wasp attacks one to several host species, but none attack both white and red oaks. Most of the remaining species are on flowering fruits (Rosaceae).

Description: The small adult wasps are seldom seen. However, galls can be found on any part of the tree (including roots), with most occurring on the stems or leaves. The shape, size, color, and arrangement of these galls is highly variable among species but rather consistent within each one.

Life history: Life histories range from the simple to the complex. Many species have alternating generations, each of which may last from several weeks to three or four years. Wasps from the same species but from alternate generations are morphologically distinct and produce different galls. In spring and early summer, tiny adult female wasps emerge from woody galls on twigs or branches. These females then deposit eggs in the midribs on the underside of oak leaves. The eggs hatch, and larvae cause small, oblong, blister-like galls to develop in the leaf veins. Inside the galls, the larvae mature, pupate, and then emerge as male or female adult wasps. These second-generation adults then mate and deposit eggs in young oak twigs. The woody galls from this generation of wasps will not appear on the twigs until the next spring or early summer. It may take from one to three years for the larvae living in the woody twig galls to mature. Dogwood borers (Order Lepidoptera, Family Sesiidae) may also attack young woody galls.

Overwintering: Larvae in woody twig galls.

Damage symptoms: Gall wasps inject plant growth-regulating chemicals, which react with the tissue in the tree to produce the abnormal plant tissue that comprises these galls. Galls not only provide larvae with a nutritious source of food, but they also protect them from parasitoids, predators, and insecticides. Galls mostly cause cosmetic damage to trees, but some can cause serious damage and reduce vitality.

Monitoring: Look for distinctive woody galls on twigs, stems and leaves.

Chemical control: Woody galls protect larvae from insecticidal sprays, and adults are rarely seen. Control for these wasps is not effective.

Biological control: Numerous species of parasitoids attack cynipid galls.

Plant mortality risk: Low



Horned oak gall winter generation on oak shoot. (176)
Photo: John Davidson



A small, oak twig gall, probably oak bullet gall.
Photo: John Davidson



Rough bullet gall. (W40)
Photo: Whitney Cranshaw

Biorational pesticides: None

Conventional pesticides: carbaryl



Oak cynipid galls (continued)



Oak spangle gall summer generation on oak leaves. (175)
Photo: unknown



Rough bullet gall wasp adult ovipositing into an oak bud scale. (W39)
Photo: Whitney Cranshaw



Gall on water oak. (179)
Photo: Clemson University Cooperative Extension Service



Cynipid gall wasp. (345)
Photo: John Davidson



Succulent oak gall forming on newly developing leaf. (178)
Photo: David Laughlin