



Galls made by aphids, adelgids, phylloxerans, psyllids, and midges

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Galls made by made by aphids, adelgids, phylloxerans, psyllids, and midges occur on many different plants. Galls are abnormal growths of plant tissue induced by insects and other organisms. Gall-making parasites release growth-regulating chemicals as they feed, causing adjacent plant tissues to form a gall. The parasite then develops within the relative security of the gall. Most are harmless to trees, but a few are pests.

Aphid Galls: Many aphids are well known plant pests, but only a few cause galls.



Slippery Elm Pouch Galls are elongated pouches on the upper surface of elm leaf. The galls appear in May and are soon filled by female aphids and their offspring. Usually, only one gall occurs per leaf. Image Citation:(?) Haruta Ovidiu, University of Oradea, Bugwood.org



Elm Cockscomb Galls are named for their resemblance to the comb of a rooster. One of several of the galls may appear on the upper surface of leaves on American and slippery elm. Howard Ensign Evans, Colorado State University, Bugwood.org

Adelgid Galls: Adelgids are commonly called aphids, but they are only close relatives. Several different species produce galls on spruce.



Cooley Spruce Galls are elongated cone-like galls on the new growing trips of Colorado blue spruce. The Cooley adelgid has an interesting and complicated life history. Immature females overwinter on spruce. In the spring they mature and lay eggs on the twigs. Feeding by young nymphs causes abnormal tissue growth, which soon surrounds them and forms the gall. By midsummer, openings appear on the galls, and the adelgids, which then molt and develop wings, migrate to Douglas fir. A generation of "woolly aphids" occurs on this host. Their feeding causes yellowish spots and bent needles, but no galls. A year later, another generation returns to spruce. This pest sometimes needs to be controlled. Photo by Eric Day, Virginia Tech

Several other adelgids attack spruce, such as Spruce Gall Adelgids. The resulting galls are usually cone-like, but many appear as scraggly, deformed twigs.

Phylloxeran Galls: These curious insects are also close relatives of aphids. They produce a variety of galls on hickory.



Hickory Leaf Stem Galls appear as irregular, globular growths on the leaves, petioles, and twigs. This phylloxeran overwinters in bark crevices as eggs that hatch when the buds begin to open. As the insects feed, they cause the formation of galls. Eggs are then laid inside the galls, and a new generation of winged phylloxerans develops. By the end of June the galls open, and the insects fly off to summer hosts. Minor pest, but can be controlled by spraying at bud break or picking up and destroying fallen twigs in the summer.

Other phylloxeran galls on hickory usually occur on the leaves and may be disk-, button-, or bead-shaped.

Psyllid Galls: Psyllids, commonly known as jumping plant lice, resemble miniature cicadas. Little is known about their biology. All species feed on plant juices, but only a few produce galls.



Psyllids that feed on hackberry cause the Hackberry Button Gall, Hackberry Flask Gall, Hackberry Nipple Gall, Hackberry Star Gall and the Hackberry Melon Gall. In the Gulf States, several galls on bay are caused by psyllids. Image Citation:⁽²⁾ Steven Katovich, USDA Forest Service, Bugwood.org

Midge Galls: Gall midges are a large group of tiny, delicate flies about 1/8 inch long. Most species lay their eggs in plant tissue, and feeding by their larvae produces a wide variety of galls.



Dogwood Club Galls are elongate swellings at the tips of small twigs of flowering dogwood. Female midges deposit their eggs in the tiny terminal leaves just as the buds begin to open. Larvae work their way into the tips of the new twigs. The first symptom of their presence is a wilted, gnarled leaf. Soon after, the adjacent tissue begins to swell, and the gall forms. By late summer, the maggots chew exit holes in the gall and drop to the ground where they overwinter.



Vein Pocket Galls are hard, tan-colored swellings along the midrib and major veins of pin oak. Rake and remove leaves in the fall to control.

Other galls caused by gall midges include: Beaked Willow Gall, Willow Pine Cone Gall, Woolly Fold Gall on oak, Maple Leaf Spot Gall, Gouty Vein Gall on maple, Grape Tomato Gall, Ash Midrib Gall, Pine Needle Gall, Gouty Pine Gall, and many others.

(See separate fact sheets for galls made by wasps or mites.)