



## LEAF GALLS ON MAPLE

Maple, *Acer* spp., leaves are often infested with a wide variety of brilliantly colored, odd-shaped galls and blotches. Some of these abnormal plant cell growths called galls, are caused by very small eriophyid mites in the family Eriophyidae (Figure 1). Members of this family of mites are commonly referred to as eriophyid mites. Several species of eriophyid mites cause leaf galls on maple. They are the maple bladdergall mite, *Vasates quadripedes* Shimer, maple spindle gall mite, *V. aceriscrumena* (Riley), and some erineum gall mites, *Eriophyes* spp.

### DESCRIPTION

The maple bladdergall mite, *V. quadripedes*, is a native pest in eastern North America on silver maple, *A. saccharinum*, and red maple, *A. rubrum* foliage. Foliar feeding by this species results in the formation of green or red globular growths that are about 2.5-3 mm in diameter on the upper leaf surface (Figure 2). These galls are usually noticed during May, about the time the leaves are fully expanded. At first, these growths are green, then they turn red, and eventually black. In some cases, galls become so abundant that infested leaves become deformed.

The maple spindle gall mite, *V. aceriscrumena*, causes galls to form on the upper surface of sugar maple, *A. saccharum* foliage. These galls are small, elongate, projecting growths that give the leaf a spiked appearance.

Erineum galls are caused by several species of eriophyid mites in the genus *Eriophyes*. These eriophyid mite-caused galls are crimson-red patches on the lower and upper leaf surfaces of silver and sugar maples. Erineum galls vary in size and shape, usually resembling patches of red felt. When viewed under magnification, these galls look like the beaded surface of a slide projection screen.

### LIFE HISTORY

Eriophyid mites that infest maple foliage overwinter as adults under bark scales and other protected sites on the host tree where they are able to withstand severe weather conditions. Early in the spring they migrate to newly expanding leaves and begin to feed.

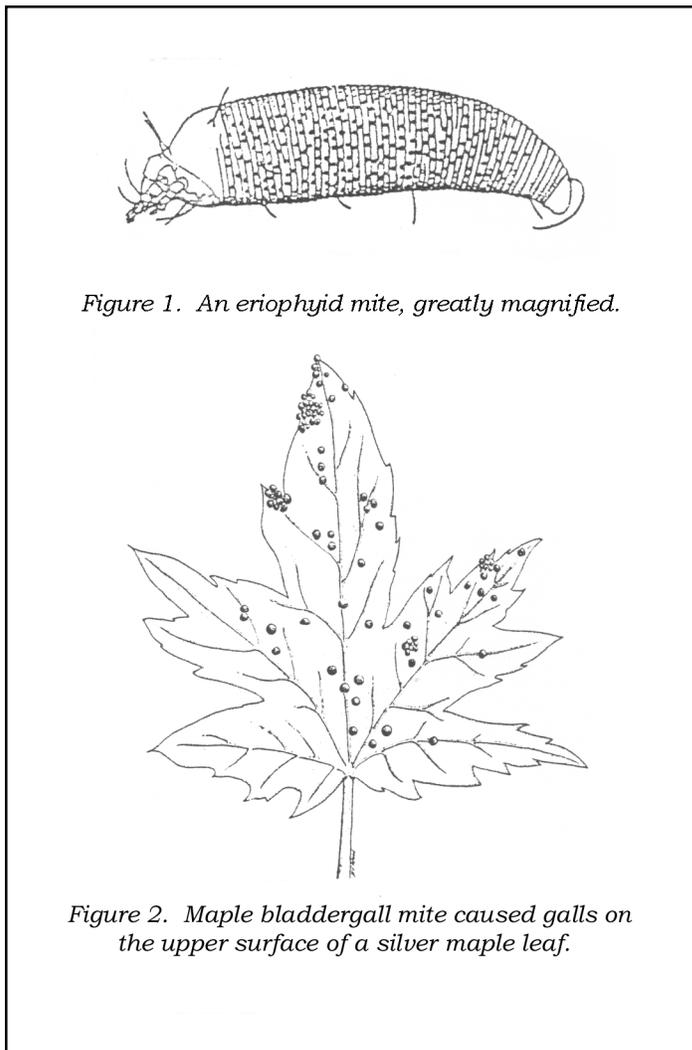


Figure 1. An eriophyid mite, greatly magnified.

Figure 2. Maple bladdergall mite caused galls on the upper surface of a silver maple leaf.

Eriophyid mites that are responsible for the formation of bladder galls and spindle galls feed on the lower leaf surface. At first, a slight depression results from their feeding, followed by the leaf rapidly producing a pouch-like gall that encloses the mites. An opening remains on the underside of the leaf. The mites continue to feed and mature within the leaf gall. Mating and egg deposition also takes place within the gall. Young mites hatch from the eggs and remain within the gall until they reach maturity. At that time, they move to new leaves to start other galls.

## **DAMAGE**

In general, these galls are not harmful to the health of a tree. The brilliant red color associated with these galls generally alarms some people who believe the trees are “diseased” or seriously damaged. Feeding by eriophyid mites appears to stimulate the formation of galls on the upper and lower surface of the leaves. Occasionally, photosynthesis (food making process by plants) may be reduced in individual leaves that are heavily infested. If many leaves on a tree are heavily infested, there may be some reduction in growth.

## **MANAGEMENT**

In general, leaf galls do not seriously affect the normal growth of a tree. Thus, chemical control is seldom suggested. If indicated, the best time to treat an infested tree with a registered insecticide applied according to label directions for management of eriophyid mites is mid-April, before buds swell. Adults move from their overwintering sites to new growth at this time of the year. This treatment may help reduce the eriophyid mite population on an infested tree.

## **WARNING**

Pesticides are poisonous. Read and follow the label directions and safety precautions. Handle them carefully and store in original, labeled containers—out of the reach of children, pets, and livestock. Dispose of empty containers quickly, in a safe manner and place. Do not contaminate forage, streams, or ponds.

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