

Cottony Maple Scale



Cottony maple scale (CMS), as its name implies, produces a conspicuous, white, cottony mass beneath its cover during early

summer. These masses and the scale's large size (1/4 in) make it very easy to spot on the undersides of tree branches. Although trees are rarely killed, dieback of individual branches and a general decline in plant vigor will occur in only a few seasons.

Damage Symptoms

Check for dieback of individual branches or yellowing of foliage in early summer, sooty mold on foliage in mid to late summer, and the presence of white, cottony masses on branches in June.

Similar Damage

Lecanium scale also may cause branch dieback and growth of sooty mold, but it does not produce cottony masses. Wood boring insects, disease or a physiological problem may cause dieback or off color foliage.

Hosts

Cottony maple scale prefers maple trees, especially silver maple, but it also attacks other deciduous trees and shrubs, including alder, apple, beech, black locust, boxelder, dogwood, elm, euonymus, honeylocust, linden, mulberry, oak, osage orange, peach, pear, plum, poplar, rose and sumac.

Identification

Crawlers are about 0.5 mm long (1/50 in), flat, oval and pale yellow. Adults are light to dark brown, 46 mm (1/4 in) long and oval or convex. A large, white, cottony mass protrudes from beneath one end of the scale cover in June.

Life Cycle

Cottony maple scale overwinters as immature females (nymphs) on twigs and branches. The females mature when plant growth resumes in the spring. They secrete conspicuous, white, cottony masses, beneath which they lay 500 or more eggs in late May and early June. The eggs hatch around July 1, and the tiny crawlers exit from beneath the female to migrate to the leaves. The crawlers settle on the leaf undersides, where they insert their threadlike mouthparts into plant tissue along the major leaf veins and begin sucking plant sap. The males mature in late August and early September, mate with the immature females and die. In late September, just before leaf drop, fertilized female nymphs migrate from leaves to twig and branches to overwinter. Only one generation occurs each year.

Destructive Stages

The crawlers feeding on the leaves during July and August secrete large amounts of a sticky substance called honeydew onto the lower leaves. A sooty mold (fungus) frequently develops on the honeydew-coated leaves and greatly reduces the amount of sunlight available to the leaves for photosynthesis. The most serious damage, however, is done to the branches and twigs by

the maturing nymphs in the spring. In severe cases, large numbers of scale can cause a yellowing of foliage, followed by premature leaf drop and death of individual branches. Trees rarely die from cottony maple scales, but they may become more susceptible to other insects and diseases.

Control

Whether you control cottony maple scale depends on its population and the number and size of infested trees. When scale numbers are low (fewer than five females/branch), chemical control is not necessary. However, control may be advisable when scale are extremely abundant, especially on young trees. Mature trees often can tolerate high scale numbers for several years, after which time the scale population may begin to decline naturally. Frequently, mature trees may be too large or numerous to be treated effectively by the homeowner. If a commercial sprayer is not economically feasible, regularly water and fertilize infested trees to promote vigorous growth and to lessen the impact of the scale.

Biological

Many parasites and predators attack maple scale, including several species of ladybird beetles. Outbreaks often subside in two to three years because natural enemies control the scale. Unfortunately, the predators and parasites are extremely susceptible to many

insecticides used in the urban environment and are often eliminated before they can adequately control the scale. If this happens, you may need to control the scale with chemicals.

Non-Chemical

For small trees that can be reached safely with a stepladder, hand remove the female scale from infested branches.

Chemical

- Crawler Control: The ideal time to control this scale is early July, when the crawlers become active. Foliar insecticides including horticultural oil, insecticidal soap, acephate, carbaryl and pyrethroids can be applied. Do not use acephate on red or sugar maple. Direct the spray at the leaf undersides where the crawlers settle. One application during the first 7 to 10 days of July should adequately control this insect, but foliar sprays later in July and even August also are effective.
- Dormant oils applied in early spring before new growth develops can provide excellent control of overwintering scale nymphs without killing predators, but sugar and Japanese maples can be injured by oils; therefore, be cautious if you treat with oils. Dormant applications of insecticides in early spring will have less impact on predators.
- Trunk & Soil Injections: Imidacloprid trunk or soil injection can be done in the fall or spring.

Would you like additional information?

Additional information is available on-line. Please see [MSU Extension-Oakland County's publications](#) as well as [MSU Extension's Bulletin Office](#) on campus.

Contact our [Plant & Pest Hotline](#) (248/858-0902) for assistance with plant identification, pests and diseases, weeds, trees and shrubs, lawn, flowers, fruits, vegetables, grasses and groundcovers, native plants, plant propagation, and many other gardening topics.