



# Entomological Notes

Department of Entomology

## COTTONY MAPLE SCALE

*Pulvinaria innumerabilis* (Rathvon)

The cottony maple scale is one of the largest and most conspicuous soft scale insects that attack ornamental plants. Its favored host is silver maple, *Acer saccharinum*. A large number of other deciduous trees are also attacked including other species of maple, such as boxelder, *A. negundo*; basswood, *Tilia americana*; white ash, *Fraxinus americana*; dogwood, *Cornus spp*; locust, *Robinia spp.*; hackberry, *Celtis spp.*; sycamore, *Platanus spp.*; birch, *Betula spp.*; elm, *Ulmus spp.*; willow, *Salix spp.*; and poplar, *Populus spp.*

### DESCRIPTION

Eggs masses are conspicuously white and cottony in appearance. Each mass usually contains 1,000-1,500 eggs. Male scales are tiny, winged insects. Immature females are flat and inconspicuous. Mature females are pale to dark brown, convex, and about 3-6 mm long (Fig. 1). The cottony maple scale is most easily recognized by the characteristic egg masses on twigs and branches.

### LIFE HISTORY

This soft scale overwinters as a second instar nymph on the bark of host twigs and branches. The female completes development in June and lays egg masses through late summer. They hatch into crawlers (first instar nymphs) from mid-June through mid-July, and migrate to the underside of host plant foliage where they insert their piercing-sucking mouthparts. They feed by withdrawing sap from vascular cells of the plant. This pest spends the remainder of the summer feeding on leaves. Male scales mature in late summer, mate with the female and then die. Just before leaf drop in the fall, nymphs move back to host plant twigs and branches to overwinter.

### DAMAGE

Severely infested trees appear as though they were covered with a string of popcorn. Heavy scale insect populations withdraw plant fluid and cause dieback of twigs and branches. Under severe conditions an infestation may kill the entire tree. Also, when this soft scale feeds on leaves and twigs, a large quantity of honeydew is excreted. Honeydew promotes the growth

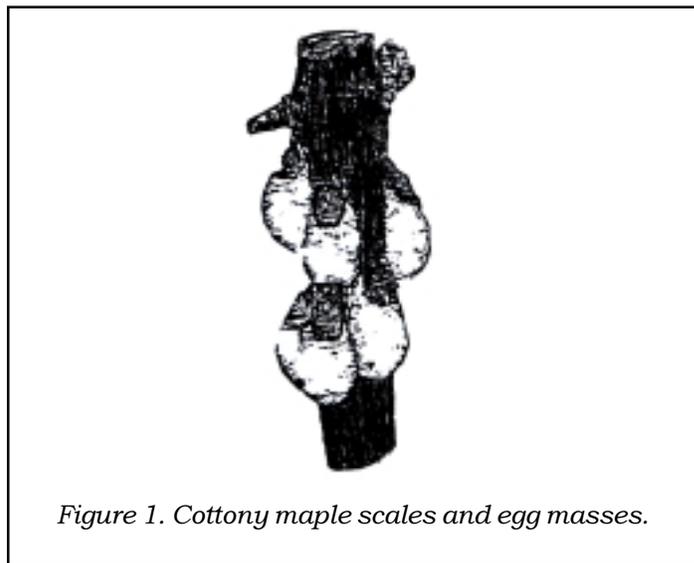


Figure 1. Cottony maple scales and egg masses.

of a black sooty mold, that imparts a blackened appearance to leaves, twigs, branches, and other substrates beneath an infested host plant. In some cases, premature loss of foliage may result from an infestation of this soft scale insect.

### MANAGEMENT

Overwintering nymphs may be managed with an application of horticultural oil made in early spring before new growth starts as adormant treatment. Crawlers may be managed with an application of a registered insecticide made in late June and repeated according to label directions in early July. Certain insecticides may cause damage to soft maples; do not apply insecticidal soap to Japanese maple.

### WARNING

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

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