

Lecanium Scale Insects Make Life Sticky

High populations of scale insects are drawing attention in yards and woodlands throughout Vermont. The insects, commonly called lecanium scales, feed on the sap of a variety of trees including maple, oak and many others. Heavy populations of lecanium scale last occurred in Vermont in the 1980s.

Symptoms: The signs of scale infestation are often noticed before one sees the insect itself. Most noticeable is the sticky, wet substance on understory plants. This material, known as



Leaves shiny and sticky with honeydew

honeydew, is excess fluid that is excreted in copious amounts as the insects feed. Understory leaves and other surfaces may be lightly speckled with the shiny drops of honeydew, or they may be heavily coated with the sugary secretion and appear as if covered with shellac.



Honeydew dripping from scale insects

Ants, wasps and bees are attracted to the honeydew, and sooty mold fungus sometimes grows on this substrate, blackening the foliage, twigs, and bark, along with cars and other objects beneath scale-infested trees. Dieback of twigs and branches and premature leaf drop may result as heavily-infested trees compete with scale insects for necessary moisture. In 2004, populations were heavier on lower branches; dieback will be more likely to occur there.



Scale insects along twig of sugar maple

Appearance: Lecanium scales can vary in size and color but are generally oval in shape. Females molt several times before reaching adulthood. With each molt, the female's body grows bigger, while her legs and antennae become proportionately smaller. By the time of the second molt, the female scale, with her hardened, brownish, hemispherical body, is incapable of moving from the spot on which she has become fixed. Male scales are delicate, flat and nearly transparent.

Life Cycle: Female scales spend the winter in a semi-mature state on the twigs of last year's growth. They mature in early spring and lay eggs beneath their sedentary bodies. Eggs hatch from mid June to July and the small, young, yellow "crawlers" migrate to the leaves and settle on the undersides along the midrib and veins. In late summer, crawlers migrate back to the twigs and settle there for the winter.



Yellow crawlers on the underside of leaf



Parasitic wasp on lecanium scale

Control: Normally, scale populations are kept in check by environmental factors and natural enemies such as parasites and predators. However, when populations are heavy on specimen trees, pesticides can be applied. ★For the crawler (mobile) stage, which is on leaves from mid- to late summer, several organophosphate, carbamate and pyrethroid insecticides can provide effective control. Examples include acephate (Orthene), carbaryl (Sevin) and cyfluthrin. With applications aimed at the crawler stage, timing is critical. A good time to treat would be during the month of July when crawlers are sure to be on leaf surfaces. These products may also kill any beneficial insects that are present. ★In early spring before leaves

appear, dormant oil sprays can be applied to the overwintering scales to suffocate them. ★For systemic control, a pesticide that contains imidacloprid (eg., Bayer Advanced Garden Tree and Shrub Insect Control) can be mixed with water and poured around the base of the tree. This pesticide is taken up by the roots and transported throughout the tree. Best timing is in spring when uptake is optimal and crawlers have not yet hatched. ★There are no pesticides registered for use on maples tapped for syrup production that are effective against this insect.

Help trees recover from stress: Heavily-infested trees may show some dieback of twigs and branches and there may be some early leaf drop. Landowners can reduce other stress on trees to help them recover. For landscape trees, avoid disturbances such as pruning and root damage. For forest trees, postpone plans to thin or harvest trees until after the outbreak. Thinning can allow drying of soil, stressing trees. For sugarbush trees, consider reducing the number of taps or converting to smaller spouts for next year.

For more information, see:

<http://bugs.osu.edu/~bugdoc/Shetlar/factsheet/ornamental/Lecaniumscales.PDF>

Photographs courtesy of Ron Kelley and Jonathan Draudt

