



The Plant Doctor's LANDSCAPE TIPS

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LECANIUM SCALE: THE STICKY MENACE

INTRODUCTION:

Scales comprise a large group of interesting insects that attack plants. Generally, scales are classified as hard shell (armored) or soft shell. Lecanium scales are a group of soft-shell scales that belong to the genus *Parthenolecanium*, and suck plant sap from foliage, twigs and branches. Lecanium scales typically appear rounded and brown in color (Photo 1) and measure approximately one-eighth to one-quarter inches (about 3-6mm). Oaks, Maples, and a wide variety of trees and shrubs may be infested by lecanium scales. Plants affected by lecanium scale may be stunted, may lose leaves and may exhibit twig dieback in severe cases. The first sign of a lecanium scale problem is usually the presence of a sticky excrement known as "honeydew" on automobiles, decks, chairs, etc., and on understory plants (Photos 2 and 3). The honeydew attracts dust and dirt, and may also turn black from the growth of sooty mold fungi, which use the nutrient-rich honeydew as a growth medium. The honeydew also attracts ants, wasps and bees.

LIFE CYCLE:

Typically, lecanium scales overwinter as immature adults (second instar nymphs). During the spring, the scales mature, and females lay eggs beneath their stationary bodies in May and June. Scale babies, otherwise known as crawlers, hatch in June and July and migrate to the underside of foliage to feed on plant sap along the leaf veins; this feeding results in copious sticky excrement rich in nutrients, also known as honeydew. As summer progresses and the scales become larger, they migrate back to twigs, where they become sedentary and prepare for overwintering. There is one generation per year.

MANAGEMENT:

Because lecanium scale populations naturally fluctuate wildly from year to year, there is often no need to implement management procedures. More often than not, scales populations are sufficiently low to avoid the need for control, particularly since predators and parasites also increase in response to scale populations (Photo 1 and 4). In some situations, such as for decks or outdoor cafes and restaurants or for valuable specimen plants, scale management may be desired and warranted. There are several options available. First, target trees and shrubs may be sprayed with dormant oil before foliage emergence in the spring; this treatment suffocates overwintering scales. Second, target plants may be sprayed with various insecticides during the active crawler stage, typically in June and July. Third, plants may receive insecticides via soil treatment or trunk injections that subsequently become systemic in the plants and kill scales when they feed. Obviously, soil or trunk treatments must be performed with sufficient lead time to allow the chemical to be distributed throughout the plant in time for activity against the target pest stage. Many of these treatments can be applied or not applied based on diligent monitoring for scale populations and their life stages. Trees may also better resist any debilitating effects of the scale attack with supplemental water and nutrients. ■

For more information, please feel free to email me at robertsd@msu.edu or contact a professional plant health care provider. The author, MSU or MGIA do not endorse any particular products. If using pesticides, be sure to read and follow label directions.



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Photo 1. Typical rounded, brown appearance of adult lecanium scales, measuring about 1/8 to 1/4 inch. Scales may be so populated that branches and twigs are literally covered with them. Note white fluffy growth on one scale that may be a fungal pathogen of the scale.



Photo 2. Darkish, sooty mold appearance on these leaves is from opportunistic fungi growing on the nutrient-rich honeydew secreted by the scale.

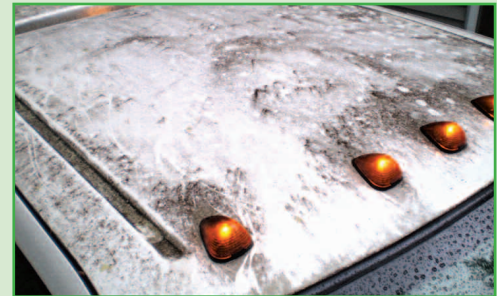


Photo 3. A typical problem associated with lecanium scales is the abundant honeydew that collects dirt and grows sooty mold fungi on various surfaces. This truck belongs to an arborist; prior to this photo, the truck had been washed in a commercial car wash, demonstrating the persistence of the objectionable honeydew and sooty mold.



Photo 4. This odd-looking insect may be a brown lacewing larva, which is a beneficial insect that feeds on lecanium crawlers.