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INSECT ALERT: LECANIUM SCALES

High populations of scale insects are drawing attention in yards and woodlands throughout Long Island and into New England, we have reports of this pest as far south as Maryland and as far west as Ohio. These insects, commonly called lecanium scales, feed on the sap of a variety of trees including maple, oak and many others. The lecanium scales are distributed throughout the United States. Scale insects are among the most injurious pests that attack our trees and shrubs.

As with many species of scale, these insects produce large volumes of a liquid waste called "honeydew" (the sugary excretions of scale insects and aphids) which will 'rain' down on cars parked below the trees. Deposits of this sugar-rich material gives leaves a shiny appearance. Limbs and leaves of heavily infested trees may be blackened by the growth of sooty mold fungus.

High scale populations severely reduce vitality, weaken the tree, and cause premature leaf drop, branch or crown dieback as heavily-infested trees compete with scale insects for necessary moisture & nutrients. Populations are often heavier on lower branches; dieback will be more likely to occur there. Normally, lecanium scale populations are kept in check by environmental factors and natural enemies such as parasites and predators. It appears that the weather patterns of the last several years have disturbed that balance.

Scales tend to thrive on stressed plants. Following a recommended fertility program and watering regime will promote plant health. If practical, improve plant sites to reduce stress and promote growth. Severely prune back heavily infested branches and protect new growth with insecticide applications.

Lecanium scales spend the winter on twigs and branches in an immature or nymphal stage. Development resumes in the spring and mature females produce large numbers of eggs which are protected by their soft waxy covering. Crawlers that hatch from these eggs move to leaves, settle, and feed on sap during the rest of the summer. They move back to twigs and branches prior to leaf drop and settle for the winter.

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.

Proper timing & choice of insecticide applications is a major key to success. Applications must target newly hatched scale crawlers which are active in June and July. They are very susceptible to control measures while moving over plant surfaces to find a feeding spot. With applications aimed at the

crawler stage, timing is critical. Once settled, they begin to secrete a waxy covering that shields them from sprays.

A variety of natural and synthetic insecticides are available for use as sprays to control scale crawlers on landscape trees and shrubs. Horticultural oils kill by suffocation; insecticidal soaps kill susceptible insects through direct contact. Both require thorough coverage and usually repeated applications because they have no residual. Scale insects can be attacked by a variety of lady beetles, predatory mites, and small parasitic wasps. Lady beetle adults and larvae can be seen but mites and parasitic wasps are very difficult to see. One of the ways we utilize to conserve natural enemies is by using insecticidal soaps and oils, as much as is practical, which have limited impact on beneficial species. In most cases it is not possible to gain thorough control on very large trees by spraying, here we use soil drenches or direct tree injections of control materials

The success of control efforts may not be readily apparent but here are some things to look for. Dead soft scales often fall off of the plant. Live scales will produce a liquid when mashed, dead scales will be dry and not "bleed" when crushed. New foliage of infested plants should have a healthier appearance once the scale burden has been removed. Buds should break a little earlier than when the plant was infested and expanded leaves should have normal color and thickness. Sooty mold and shiny leaves should gradually disappear from plants that were infested with soft scales.

