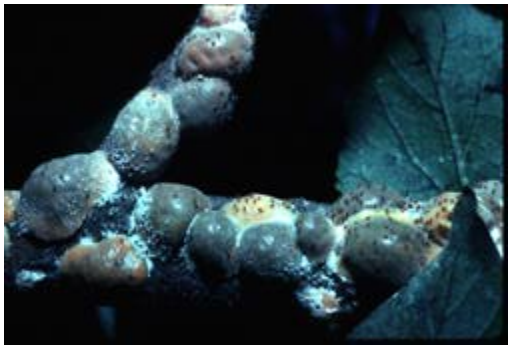
www.arborlawn.com 1-800-331-1746

At ArborLawn, one of our primary goals is to further the knowledge of our customers. This information will give you a better understanding of the needs of your trees so you will be able to make more informed decisions regarding their care.

Dormant Oil Spray

Magnolia Scale



The magnolia scale, *Neolecanium cornuparvum* (Thro), is one of the largest and most conspicuous scale insects known. Adult females may reach nearly 1/2-inch in diameter when fully grown. The scale is shiny, tan-brown and smooth. As the scales grow, they are often covered with a white mealy wax. This wax is lost at the time that the crawlers emerge.

Plants Attacked

As the name implies, this insect is primarily a pest of various species of magnolia. Saucer, star, lily and cucumbertree magnolias are the most common trees attacked. It has also been reported to feed on Daphne and Virginia creeper.

Damage

Magnolia scales have sucking mouthparts and when heavy infestations completely encrust branches, the branches often die. Badly infested branches and twigs are weakened and growth is retarded. Leaves may also be under-developed. Under a continuous and heavy attack trees may be killed. Like most soft scales, the excess plant sap is excreted as a sweet, sticky material called honeydew. The honeydew drips onto the foliage and branches. A dark fungus, called black sooty mold grows on the honeydew which results in the leaves becoming blackened. This greatly detracts from the plant's normal ornamental value. The honeydew also attracts ants, bees, wasps and flies which feed on it.

Description and Life Cycle

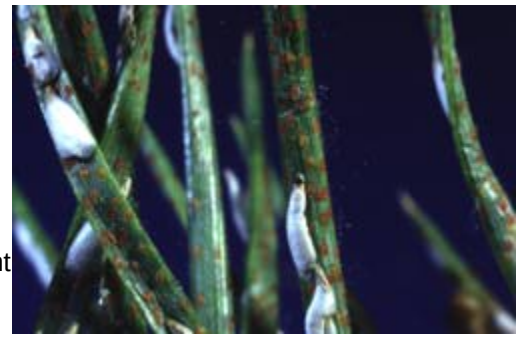
The magnolia scale spends the winter on one to two year old twigs as tiny, dark-colored nymphs. As temperatures warm in the spring, the scales begin to suck sap and have molted once by early May. At this time two distinct forms can be found, males and females. The males remain small, about 1/8-inch, and soon turn a translucent white. Soon after the males turn white, they emerge as tiny, pink to yellow gnat- like insects with two long waxy threads extending from the tip of the abdomen. The females continue to expand and by early June, they have turned a brownish-purple color. This is also the time that they produce excessive amounts of honeydew. By July the females are covered with a powdery, white waxy coating and are turning more of a yellow- tan color. By late July and August the adult females begin to give birth to their young known as crawlers. The tiny, mobile crawlers move around until they find a suitable feeding site on which they settle down, feed, and remain through the winter.

This information is provided by the Ohio State University Extension, Fact Sheets HYG-2003-94, and HYG-2553-95, Author: David J. Shetlar
The Euonymous Scale info is provided by David Keith and Rick Harper from the University of Nebraska Extension Office

Pine Needle Scale

The pine needle scale, *Chionaspis pinifoliae* (Fitch), is probably the most common armored scale found on conifers in the United States and Canada. The white, oystershell shaped scales can completely cover needles, causing plant discoloration to needle and branch death.

Plants Attacked



This pest prefers pines, especially Scotch and Mugo, but it can infest other pines, spruces, firs and Douglas fir.

Damage

Heavy infestations of pine needle scales remove considerable amounts of plant juices resulting in yellowed needles. From a distance, trees appear frosted or silvery. If heavy infestations are allowed to continue, twigs and branches may die.

Description and Life Cycle

This scale settles on the needles of its host and forms white, oyster shell-shaped wax covers. These covers or armor are about 1/16 to 1/8- inch long when the scales are fully grown and there is a yellowish spot, the exuvim, on the small end. The male scales are usually smaller and more slender. This scale overwinters as deep reddish colored eggs protected under the female's old armor. The eggs hatch in mid-May into tiny, flat nymphs called crawlers. These crawlers creep to new places on the tree in order to find suitable needles on which to feed. These clumsy crawlers often fall from the trees and may be blown onto nearby trees. Once settled on a suitable needle, the crawler inserts its hair-like mouthparts, and begins to form the new armor. After a couple of weeks, the nymph molts under the armor and continues to increase in size for about three weeks. By this time male scales are smaller and more slender than the females. The males molt into a pre-pupa for a week before emerging as winged adults. The females, however, molt into wingless nymph-like adults. After mating, the females continue to grow for a couple of weeks before laying eggs under the armor. Females produce an average of 40 eggs. Two generations of this scale occur. The overwintering eggs hatch in mid-May and the summer produced eggs hatch in late July. Unfortunately, the eggs may hatch over a period of two to three weeks.

This information is provided by the Ohio State University Extension, Fact Sheets HYG-2003-94, and HYG-2553-95, Author: David J. Shetlar
The Euonymous Scale info is provided by David Keith and Rick Harper from the University of Nebraska Extension Office

Euonymous Scale

Common Name(s): Euonymous Scale **Scientific Name:** *Unaspis euonymi* (Comstock), Homoptera: Family Diaspididae.

A common armored scale that infests a wide range of landscape plantings throughout the United States and Canada. Common hosts include Euonymous, boxwood, Eugenia, honeysuckle, Pachysandra, holly, lilac, bittersweet and English ivy.

Identifying Characteristics for Damaging Stage(s): Adult Euonymous scale females are about 2 mm long and appear grayish or pinkish in color. Developing male scales are white and elongated. The adult male is winged and white and smaller in size than the sac-like female, which remains under her scale covering. The crawler stage of this insect is pale yellow to orange and can readily be seen on the new growth after eggs begin to hatch.

Damage/Nature and Symptoms:

These insects use their mouthparts to remove sap from stems and leaves. Initial feeding appears as small, white or yellow stipples along the main leaf vein. Under persistent attack, leaves turn yellow and drop and the plants may die.

Distribution and Life Cycle

This scale has two generations per year in the northern U. S. It overwinters as mature, fertilized female scales. Eggs are deposited under the female scale in the spring and hatch about 2-3 weeks later, when small scale “crawlers” can be observed moving around on leaves and invading the new growth, where they insert their mouthparts and begin to feed on sap.

This information is provided by the Ohio State University Extension, Fact Sheets HYG-2003-94, and HYG-2553-95, Author: David J. Shetlar
The Euonymous Scale info is provided by David Keith and Rick Harper from the University of Nebraska Extension Office