Magnolia Scale and Its Control

The magnolia scale, *Neolecanium cornuparvum* (Thro), is one of the largest and most conspicuous scale insects known to occur in Ohio. Adult females may reach nearly ½ 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 the crawlers emerge. As the name implies, this insect is primarily a pest of various species of magnolia. Saucer, star, lily, and cucumber tree magnolias are the most common trees attacked.

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 1 to 2-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 ⅛ 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 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.

Control Hints

Though there are several predators and parasites known to attack this scale, they rarely do an effective job of control, especially on smaller magnolias.

Strategy 1: Obtain Pest Free Plants - Most of the magnolia scale infestations come with the plants, so carefully inspect the branches of plants being considered for purchase. The large scale exoskeletons often remain from the previous season. Any plants with these remains should be avoided.

Strategy 2: Summer and Dormant Oils - Horticultural oils (often called summer oils) at 1.5-2% applied after the crawlers have settled in late August can be very effective in reducing the scale population. Be sure to thoroughly wet down the stems and leaves. Dormant oils can be applied in October to November and again in March to kill the overwintering nymphs located on the stems. Be sure to check the spring buds as some damage may be caused on the flower buds if they have begun to swell.

Strategy 3: Standard Chemical Control - Magnolia scale can be satisfactorily controlled with a variety of insecticides if applied when the insects are in the freshly settled crawler stage. This is usually in late August to early September. Sprays applied before the crawlers are present, or after they have become dormant in the overwintering stage will have little effect. See Bulletin 504 for currently registered insecticides.

Source: OSU Ext. David J. Shetlar