



Euonymus Scale: a Constant Threat for Ornamental Plantings

As a group, scale insects are some of the most challenging pests of household, greenhouse, and outdoor ornamental plants.

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Euonymus scale with ladybug larvae. Photo: Amy Korman, Penn State

Worldwide, there are over 20 families of scale insects; however, two of the most frequently encountered scale pests are the armored and soft scale families. While both types of scales have piercing-sucking mouthparts, soft scales are phloem feeders and excrete honeydew. Armored scales produce an unattached waxy covering over their bodies. The armored scale

mouthparts pierce the plant and feed on non-vascular cell contents.

The euonymus scale (*Unaspis euonymi*), is an armored scale that is a persistent pest in Pennsylvania landscapes. Euonymus scale attacks a variety of hosts to include its namesake, euonymus. Other hosts include pachysandra, holly, hibiscus, bittersweet, and others. Large infestations of scales on leaves and twigs can cause yellow areas on the leaves, defoliation, dieback on twigs, and disfigured bark.

Female euonymus scales are small, grayish-brown, and shaped like small drops. Male euonymus scales are easily distinguished from the female by their white waxy cover.

They are also smaller and narrower than the female scale. Mature females are wingless and stay attached to the plant. Mature males are tiny and winged. They superficially look like little wasps and have non-functioning mouthparts. They emerge, mate with the immobile females, and die.

Fertilized overwintering females lay eggs under their waxy covers in mid-spring and die. The eggs hatch into crawlers in late spring. The crawlers move around the plant briefly and establish a fixed feeding site and begin to mature. A second generation occurs in the summer.

Chemical control of the euonymus scale is targeted for the emergence of the crawler stage. Crawlers are soft-bodied and naked while the older stages of the scale are protected by their waxy covers. Numerous registered pesticides can be used to treat the crawler stage during active periods of May through early June and again in mid-summer. For the least toxic chemical answer for control, registered insecticidal soaps and horticultural oils may be effective. Select pesticides carefully and always read the label. Apply pesticides according to the label instructions.

Heavy infestation of euonymus scale should be pruned and removed. Left unmanaged, this scale can quickly cause damage to a plant and even kill it. If euonymus scale has been a problem and replacement plantings are required, scale resistant varieties of many plants are available.

Euonymus scales are attacked by lady beetles, predator mites, and parasitoids. The sole reliance of biological control agents like these organisms is usually ineffective for heavy scale infestation. Because the use of pesticides can negatively affect non-target beneficials, targeting applications when the beneficial population is low may help to control the pest while sustaining the beneficial population. A good integrated pest management program includes surveillance for the “good” populations as well as the pest in order to reap the biggest benefit in the landscape.