



# Woody Ornamental IPM

## Euonymus Scale

(pronounced yew-on'-ih-muhss)

The euonymus scale, *Unaspis euonymi* (Comstock), is an exotic armored scale of Asian origin that feeds on the foliage and stems of woody landscape plants in Pennsylvania. It has become a major concern in many landscapes because, without treatment, heavy scale infestations will reduce photosynthesis, stunt plants, cause leaves to excise, and kill all or part of the plant.



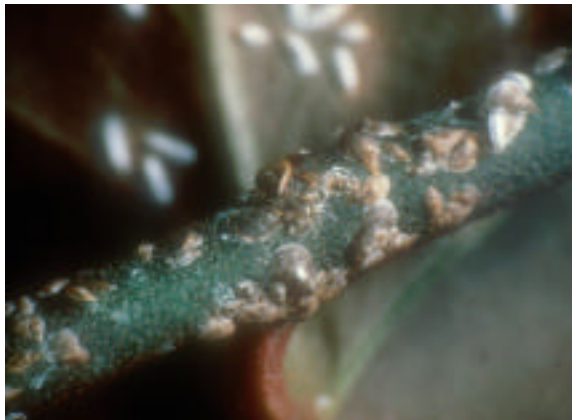
### Plants Attacked

#### Common Problem

Wintercreeper euonymus	<i>Euonymus fortunei</i>
American Bittersweet	<i>Celastrus scandens</i>
English ivy	<i>Hedera helix</i>
Japanese pachysandra	<i>Pachysandra terminalis</i>

#### Occasional Problem

Boxwood	<i>Buxus spp.</i>
Privet	<i>Ligustrum spp.</i>
Honeysuckle	<i>Lonicera spp.</i>
Canby paxistima	<i>Paxistima canbyi</i>
holly	<i>Ilex spp.</i>
stonefruits	<i>Prunus spp.</i>
Daphne	<i>Daphne spp.</i>



Female Euonymus scale



Euonymus scale nymphs and adult males (white) – photo by David Shetlar

### Insect Identification

Females are dark brown or gray, about 1/16" long and pear-shaped. They are more commonly found on the stems of host plants. Males are 1/32" long, narrow, white with a yellow cap at one end, and often more abundant than the females. They are easily seen on both the stems and leaves. Eggs are tiny and yellow, and the crawler stage is also tiny and yellow.

## Life History

- Over-winter** Fully grown, fertilized adult females.
- Spring** Eggs are laid in early spring and hatch out over a two to three week period in early June. The young nymphs crawl to other parts of the host plant before settling down to insert their mouthpart to begin feeding. Once settled, they secrete their waxy protective covering.
- Summer** Males emerge as tiny, two-winged insects, and mate with the females, which shrivel after they've laid eggs under their protective shell. A second brood hatches in late summer.
- Fall** Mature females and settled crawlers are found on stems and leaves.

## Damage Symptoms

The first visible damage is yellow spotting on the leaves. Variegated forms of euonymus sometimes exhibit a pinkish-red color in the leaves. On heavily infested plants, thousands of mature female scales encrust the stems and reduce photosynthesis. This results in stunted plants, leaf drop, and can kill all or part of the plant.



Photo by Eric Vorodi

## Management Options

<b>Biological</b>	The lady beetle <i>Chilocorus kuwanae</i> was introduced by the USDA for control of <i>Euonymus</i> scale from the early 1980's through 1995. This predator has been able to suppress heavy scale infestations to lower levels in sunny locations. Due to the reproductive ability of the scale, naturally occurring predatory insects can not always be counted on for adequate control.
<b>Mechanical</b>	Where possible, prune out and destroy infested branches.
<b>Cultural</b>	Be sure <i>Euonymus</i> plants are free from scale when you buy them.
<b>Resistant Varieties</b>	Research at Auburn University indicates that spreading euonymus, ( <i>Euonymus kiautschovicus</i> ), dwarf winged euonymus ( <i>Euonymus alatus compactus</i> ), and winter creeper euonymus ( <i>Euonymus fortunei 'Acutus'</i> ), are more resistant to heavy attacks by this pest than other varieties. Spreading euonymus, ( <i>Euonymus kiautschovicus</i> ), is marginally hardy in many parts of Pennsylvania and is listed as hardy to zone 5. The cultivar 'Paulii' is reported to have the best cold hardiness for this species.
<b>Chemical</b>	Control of euonymus scale can be achieved by applying a registered pesticide to the newly hatched crawlers. Thorough penetration of dense foliage is essential to get adequate control, particularly on scales located at the base of the plant near the ground on vining type euonymus. Horticultural spray oils kill the crawler stage that is present at the time of application if thorough coverage is achieved.

Authored by: Michael Masiuk, Commercial Horticulture Extension Agent, Allegheny County, Pennsylvania  
Last Updated: May 13, 2002

**This publication is available in alternative media on request.**

Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.