

# Oystershell Scale

## *Lepidosaphes ulmi*

### Host Plants

Oystershell scale attacks 85 plant genera from 33 plant families including:

- Birch
- Boxwood
- Crabapple
- Dogwood
- Elm
- Hawthorn
- Lilac
- Linden
- Magnolia
- Maple
- Ornamental cherry
- Pear
- Redbud
- Smoketree
- Viburnum
- Willow

### Description

Oystershell scale gets its name from the oystershell appearance of its waxy coating. This armored scale insect has two forms: the brown/apple form and the lilac form. It is an economically important pest in nurseries, landscapes and orchards. The oystershell scale is mainly a northern species and is commonly found in most states except those bordering Mexico and the Gulf of Mexico.

### Life Cycle

Oystershell scale overwinter as white eggs protected beneath the waxy covering of the adult female scale. The crawlers hatch in the spring and then move a small distance from their mother before settling on the bark to feed (*live and dead crawlers and adult scale are circled above*). Crawlers form their own protective wax coating about a week later. Because of this narrow window, coordinating spray applications with crawler emergence is very important for achieving good control. Depending on the host and geographic location, oystershell scale may produce one to two generations per year.

### Monitoring

Look on the bark for the oystershell-shaped scale covers. Check beneath the scale covers for healthy, white eggs in the spring to estimate the effectiveness of previous control strategies. In late May, begin scouting for crawlers from the first-generation egg hatch, then again in late July when eggs from the second generation hatch.

Mother scale

Dead crawlers

Live crawlers

Adult scale



# Damage Symptoms

Oystershell scale feeding can lead to cracked bark, stunted foliage, leaf yellowing and wilting. Heavy infestations can cause branch dieback and an overall decline in plant vigor.



## Integrated Pest Management

### BIOLOGICAL CONTROL

Several parasitoids and predators, including the twice-stabbed ladybird beetle (*Chilocorus stigma*), attack this pest, but usually they do not appear until after damage has occurred. Predatory mites feed on the eggs and can reduce population size.

### CULTURAL CONTROL

Scale insects should be managed as soon as detected to avoid population explosions. Scale thrive on stressed plants. Proper fertilization and irrigation will promote a healthy plant. Do not over fertilize, though, because excessive fertilizer can increase scale populations, injure foliage and roots, and cause other problems.

### CHEMICAL CONTROL

Please refer to [http://eppserver.ag.utk.edu/redbook/sections/trees\\_flowers.htm](http://eppserver.ag.utk.edu/redbook/sections/trees_flowers.htm) for the most up-to-date recommendations.

## Resources

Photo credits: Amy Fulcher, University of Tennessee

William M. Ciesla, Forest Health Management International, Bugwood.org

United States National Collection of Scale Insects Photographs Archive, USDA Agricultural Research Service, Bugwood.org

USDA Forest Service - Region 2 - Rocky Mountain Region Archive, USDA Forest Service, Bugwood.org

USDA Forest Service - Ogden Archive, USDA Forest Service, Bugwood.org

Krischik, V. and J. Davidson. 2007. Oystershell scale. IPM of midwest landscapes: Pests of trees and shrubs. University of Minnesota.

<http://www.entomology.umn.edu/cues/Web/174OystershellScale.pdf>

Miller, D.R. and J.A. Davidson. 2005. Armored scale insect pests of trees and shrubs: (Hemiptera: Diaspididae). Ithaca: Comstock Publishing.

Mussey, G., D. Potter, and M. Potter. Timing control actions for landscape insect pests using flowering plants as indicators. University of Kentucky Extension publication ENT-66. <http://www.ca.uky.edu/entomology/entfacts/entfactpdf/ent66.pdf>

THE UNIVERSITY of TENNESSEE   
INSTITUTE of AGRICULTURE

Prepared by Heather Bowers, Intern, Department of Plant Sciences  
and Dr. Amy Fulcher, Assistant Professor, Department of Plant Sciences

Publication funded by USDA Extension IPM Grant in partnership with University of Kentucky Integrated Pest Management Program.  
The authors thank M. Halcomb, B. Klingeman, W. Russell and F. Hale for their careful review.

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development.  
University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating.  
UT Extension provides equal opportunities in programs and employment.