



Entomological Notes

Department of Entomology

OYSTERSHELL SCALE

Lepidosaphes ulmi (Linnaeus)

The oystershell scale is one of the most common armored scale insects that cause injury to shade trees and shrubs. When this scale insect was first described in Europe in 1758, it was referred to as the mussel scale. It occurs throughout the United States and is more common in northern states than southern states. This key pest species usually infests lilac, *Syringa* spp., ash, *Fraxinus* spp., dogwood, *Cornus* spp., maple, *Acer* spp., poplar, *Populus* spp., and willow, *Salix* spp., but it has been reported on more than 130 host plants.

DESCRIPTION

The waxy cover of mature specimens is about 2.5 mm long, grayish brown, and noticeably convex, resembling miniature, oyster shells (Fig. 1). This armored scale develops on the bark of host plants. Tiny white eggs are found beneath the waxy cover of the female. Eggs hatch into a life stage called a crawler. The crawler stage of this scale insect is pale yellow and less than one millimeter long. Adult males have one pair of wings. When observed closely, adult males are often misidentified as parasitoids as they walk over infested twigs.

LIFE HISTORY

This species overwinters as eggs beneath the protective waxy covering of females. The literature reports that one female may lay 20-100 eggs. These hatch in late May through early June into first instar nymphs called crawlers. This life stage wanders over the bark for a short time and then settles down to feed. They continue to feed and reach maturity in late summer or early fall. Females have three developmental life stages after the egg, and males have five. When mature, males emerge, mate with the female, and then die. Males are active from late June through early July. There is only one generation produced each year in Pennsylvania.

DAMAGE

Plants are injured by this scale insect when it removes plant fluid from non-vascular cells with its piercing-sucking mouthparts. Eventually, branches become

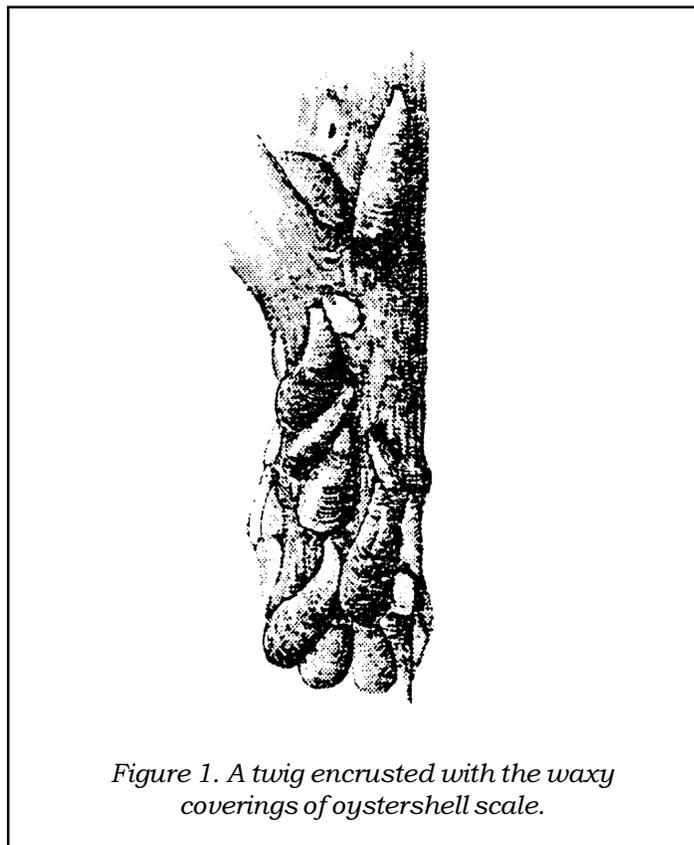


Figure 1. A twig encrusted with the waxy coverings of oystershell scale.

encrusted with this armored scale. Twig or branch dieback is common when an infestation of this insect occurs. Occasionally, a tree or shrub will die as the result of a severe infestation if it is not effectively managed.

MANAGEMENT

Prune and destroy heavily infested twigs and branches. The vulnerable life stage, called a crawler, is active from late May through early June. Crawlers may be effectively managed with the application of a registered insecticide formulation made according to label directions from late May through early June. A registered formulation of horticultural oil applied at a growing season rate according to label directions against the crawler stage will conserve natural enemies of this armored scale insect.

There are many tiny wasp parasitoids, some lady beetles, and predatory mites that feed on life stages of this scale insect. Activity by these beneficial organisms is usually more apparent when a severe population of this pest has developed on a plant.

WARNING

Pesticides are poisonous. Read and follow directions and safety precautions on labels. Handle carefully and store in original labeled containers out of the reach of children, pets, and livestock. Dispose of empty containers right away, in a safe manner and place. Do not contaminate forage, streams, or ponds.

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