

DEFOLIATION by Oystershell Scale

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This bizarre looking animal belongs to a group of insects known as the “hard” scales, the general biology and description of which appeared in the March/April 1997 issue of the *Forest Owner*. In that article, oystershell scale was depicted as a sucking insect found on the bark of the host. Indeed, this is its usual habitat on a variety of broadleaved trees and shrubs throughout the northern two-thirds of North America.

Principle Hosts

Northeastern forests include maples, beech, ash, elm, linden, poplar, and willow. Oystershell scale first gained notoriety as a major pest in fruit

growing regions where heavy infestations often reduced the quantity and quality of produce, reduced leaf size, discolored foliage, and often killed the plant.

Damage to Bark

Severe damage to bark of favored hosts such as apple, pear, plum, and ash occurs when scale populations are so high they completely encrust the bark with their waxy excretions. An individual scale’s thread-like, sucking mouthparts are very small. Even so, during the feeding process cells are killed in the immediate vicinity of the feeding site. At high population densities, feeding sites eventually coalesce causing the bark to dry, crack and eventually it sloughs away.

The Scale

The scale is approximately 1/8 inch long, narrow at the anterior end with a broad, round posterior (Fig. 1). The grayish to polished brown appearance is

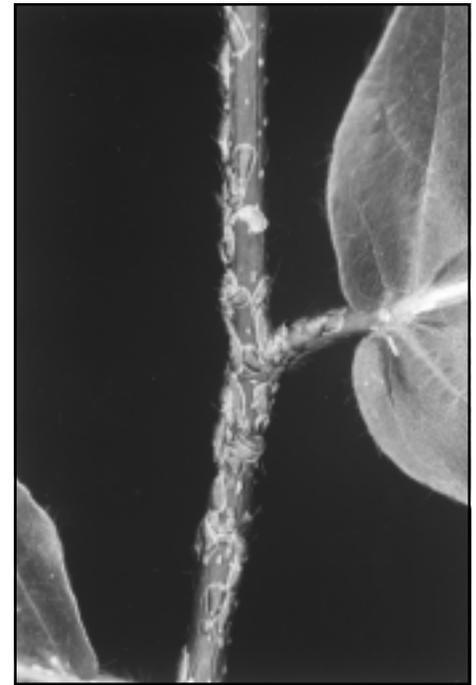


Figure 2 Beech twig and leaf petiole encrusted with scale.

due mainly to the waxy excretion produced by the scale which becomes matted and fuses with cast skins of the immature stages. The scale’s eggs overwinter beneath this covering.

Defoliation

Unusual damage by oystershell scale in the form of defoliation occurred last summer in the central Adirondacks. Over the past several years, I have



Figure 1 Twig of American beech infested with oystershell scale.

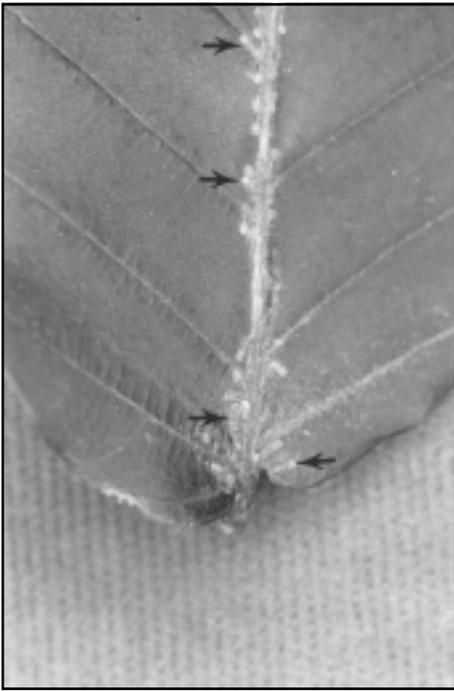


Figure 3 Scales on a beech leaf.

noticed this in other areas of central and northern New York state. Each time the host was either American beech or sugar maple. In addition to infesting twigs, the scale attacked leaves and leaf petioles (Figures 2 & 3). Feeding eventually caused leaves to drop, leaving a very thin crown. The ground beneath infested trees was covered with green to yellow-green leaves which eventually turn brown, and curl. Some brown, curled leaves may remain attached to branches. Other than discoloration, however, foliage appears undamaged; that is, there are no signs of feeding by a typical defoliator.

As yet, this has not become a wide spread problem, but observant forest owners may encounter defoliation of this nature in late June or early July. 📌

This is the 46th in the series of articles contributed by Dr. Allen, Professor of Entomology at SUNY-ESF. Reprints of this and the complete series are available from NYFOA. It is also possible to download this collection from the DEC Web page at: <http://www.dec.state.ny.us/website/dlf/privland/linkspag.htm>.