



# Entomological Notes

Department of Entomology

## OBSCURE SCALE

*Melanaspis obscura* (Comstock)

Obscure scale is a key pest of oak, *Quercus* spp. in Pennsylvania. This armored scale insect attacks a wide variety of other woody host plants such as beech, *Fagus* spp.; dogwood, *Cornus* spp; hickory, *Carya* spp.; maple, *Acer* spp.; and willow, *Salix* spp. This insect is not a pest of these trees when they're growing in the forest.

### DESCRIPTION

The female's waxy covering is flat, about 3 mm in diameter, dirty gray on the top side, with a black cap that is slightly off center. The underside of the waxy covering is black except for a white, silk-like coating in the center.

### LIFE HISTORY

This pest overwinters as nymphs on host twigs and branches. Females mature during late April through early May, while males mature during mid- to late May. Infestations are most easily recognized by layers of dead scales encrusted on branches (Fig. 1). Males emerge from beneath their waxy cover, mate with the female, and then die. Females lay about 50 light pink eggs over several months. Crawlers are active for several weeks. Due to an extended hatching period, crawlers may be found from mid-July through September. Early hatched crawlers usually settle beneath the waxy cover of dead scales to feed, while those that hatch later usually seek uninfested areas. The second nymphal stage of this pest secretes a protective waxy cover over its body during early fall. Only one generation is produced each year in Pennsylvania.

### DAMAGE

This species removes plant fluid from twigs and branches with its piercing-sucking mouthparts, causing infested host plants to drop leaves prematurely and dieback. Numerous sunken areas appear on the bark where this pest has been feeding, producing a roughened appearance. Infested branches appear to be sprinkled with wood ashes or small pieces of silver glitter. Severely infested trees may have three to four layers of the waxy coverings of this pest on the bark. In some cases the trunk of small host trees or branches will be disfigured due to a severe infestation.

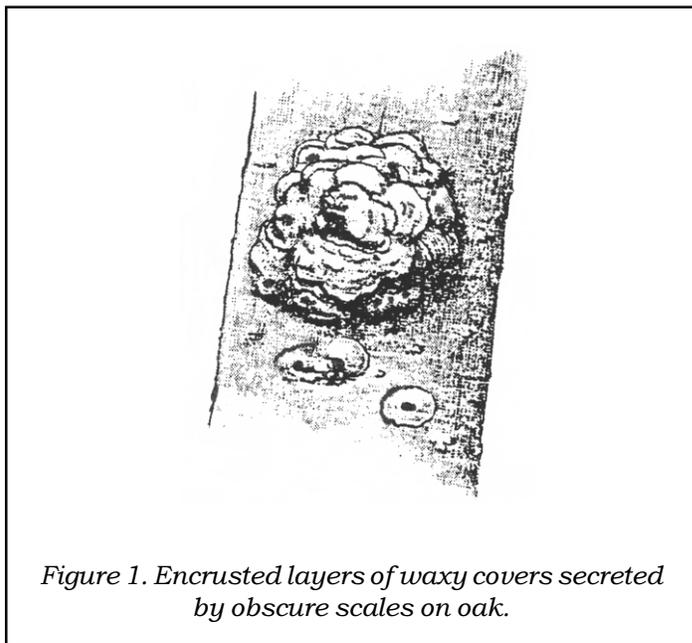


Figure 1. Encrusted layers of waxy covers secreted by obscure scales on oak.

### MANAGEMENT

Three factors make reduction of this pest a difficult task. First, egg laying occurs over a relatively long period of time, resulting in an extended crawler period. Second, crawlers often settle beneath old clusters of waxy covers from previous generations and, therefore, are protected from exposure to contact insecticides. Third, the waxy cover over a developing life stage of this armored scale provides protection against insecticide penetration.

Monitor three- to four-year old twigs, especially on pin oak, *Q. palustris*, for the presence of the gray waxy covers of this scale insect. Early detection of an infested tree is critical for effective management. Prune heavily infested twigs and branches to reduce the spread of this pest. Effective scale insect management should target the crawler stage. Infested oaks belonging to the red oak group should be treated in late July; oaks in the white oak group should be sprayed during mid-August. During these times crawlers are most abundant and parasitoid adults are least active. To reduce heavy crawler populations, two applications should be made according to insecticide label directions 14 days apart. There are four species of wasp parasitoids, one mite predator, and three species of

lady beetles that feed on this armored scale insect. The use of short residual insecticides will conserve these natural enemies.

## **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.

Gregory A. Hoover  
Sr. Extension Associate  
Dept. of Entomology  
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