



## JAPANESE MAPLE SCALE

*Lopholeucaspis japonica* (Cockerell)

The Japanese maple scale, *Lopholeucaspis japonica*, is a recently detected pest of a wide range of woody host plants in Pennsylvania. This armored scale insect species is a member of the family Diaspididae. It is also known as the Japanese scale or pear white scale. This scale insect probably was an unintentional introduction into the United States from Asia. This pest has been collected in Connecticut, Delaware, Georgia, Kentucky, Louisiana, Maryland, New Jersey, New York, North Carolina, Rhode Island, Tennessee, Virginia, and Washington, D. C. This species has been reported in the literature to feed on host plants in 16 genera in 13 plant families.

### DESCRIPTION

The female is described as being pupillarial. This condition means the female is covered dorsally by the thickened second shed exoskeleton, and this covering is opened beneath. The second shed exoskeleton is elongate and reddish brown. The 1-2 mm long, oystershell-shaped, waxy test (covering) of the female is grayish white (Fig. 1). The female's body color is purple (Fig. 2). The eggs beneath the waxy covering of the female are white with a purple hue. The crawler (first instar nymph) stage of this scale insect is white. The waxy covering of the male is the same color as the female, but it's smaller. This pest's ability to blend in with bark crevices and the coloration of its waxy test make it a challenge to detect at low population densities.



Figure 1. The grayish white waxy tests (covers) of females on holly.



Figure 2. Close-up of a female beneath its waxy test. Note the purple color of this life stage.

The Japanese maple scale may be confused with another group of armored scale insects on woody ornamental plants in Pennsylvania known as the white prunicola scale, *Pseudaulacaspis prunicola*, and the white peach scale, *P. pentagona*. Adult female white peach scale and white prunicola scale have a distinctive sunny side-up fried egg appearance to their rounded, white, waxy covers. The female Japanese maple scale has an elongate, grayish white, waxy cover. Additionally, the clusters of white prunicola scale and white peach scale male's waxy covers give the host plant bark a white, woolly appearance.

### LIFE HISTORY

The life history of this scale insect is not well known in the United States. Observations made on this pest in Pennsylvania indicate that it produces one generation each year. This pest overwinters as females. Adult males are on host plants from late April to late May. One female will lay an average of 25 eggs. The crawlers are active from late May through early August.

When monitoring for this species on trees and shrubs, examine the trunk, branches, and twigs particularly at the branch collar where this pest often settles and develops. This scale insect may be easier to detect in the dormant season when the foliage does not prevent a clear view of the woody regions of a deciduous plant.

## DAMAGE

Armored scales injure host plants by inserting their threadlike, piercing-sucking mouthparts into non-vascular plant cells and withdraw vital nutrients necessary for plant growth from mesophyll cells. Excessive loss of plant fluid reduces the growth and health of the plant. Feeding injury may cause foliage to drop prematurely giving the crown of an infested plant a thin appearance.

This species has been identified feeding on red maple, *Acer rubrum*; Japanese maple, *Acer palmatum*; kousa dogwood, *Cornus kousa*; Euonymus sp.; privet, *Ligustrum* sp.; crabapple, *Malus* sp.; *Cotoneaster* sp.; Japanese zelkova, *Zelkova serrata*; holly, *Ilex* sp.; *Pyracantha* sp.; and ornamental pear, *Pyrus* sp. in both landscapes and nurseries in Pennsylvania.

Infestations of this pest will cause dieback on host plants and may cause death of small twigs. This scale insect is considered a serious pest of citrus and ornamental plants worldwide.

## MANAGEMENT

Maintaining healthy trees and shrubs may reduce the possibility of an increase in the population of this scale insect. Prune and destroy heavily infested branches or twigs when indicated. This pest is difficult to effectively manage. Soil-applied, systemic insecticides may not be as effective in managing this species since it develops mostly on the twigs, branches, and trunks of host plants. Treat infested host plants when the crawlers are active from late May through mid-August. Be sure to apply any registered insecticide you select according to all label directions.

## 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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