



Gloomy Scale in Virginia

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Introduction

Gloomy scale (*Melanaspis tenebricosa*) is a native armored scale found on the trunk and limbs of infested trees. Gloomy scale can be found in the forest, where it's less likely to have damaging populations, but it is a major pest on trees in the landscape. Urban shade trees growing beside asphalt and pavement, where radiant heat is reflected on the tree, are particularly susceptible to this scale. Gloomy scale is notorious for blending in with tree bark, and heavy densities often develop before notice (Fig. 1). Infested trees with heavy densities of this scale often appear darkened and “gloomy.”



Figure 1. Gloomy scale on tree branch (Bethany Teigen, iNaturalist, public domain).

Description

Female gloomy scales are dark gray with a black nipple in the center of their circular protective covers (Fig. 2). Sometimes, there is a concentric white ring around the black nipple. Live females are a light peach color under their top covers. Infested trees sometimes appear to have white patches on the bark where the scale insect has died and the upper cover has fallen off, exposing the snowy white inside of the bottom cover (Figs. 2 & 3).



Figure 2. A close-up of gloomy scale (Zihao Wang, CC BY 4.0 via Wikimedia Commons).



Figure 3. Heavy densities of gloomy scale on tree bark (Bethany Teigen, iNaturalist, public domain).

Gloomy scales tend to be very cryptic due to their small size (mature females measure about 1.5 mm) and dark coloration (Fig. 4). Live scales settle under the remains of older scales, and the infestation may go unnoticed until the encrusted scale populations make a tree branch or trunk look particularly dark and rough (Figs. 1 & 2), or patches of white dead scales become apparent (Fig. 3).



Figure 4. Light infestation of gloomy scale (Val, CC BY 4.0 via Wikimedia Commons).

Damage

Gloomy scale is a serious pest on red and silver maples, but it also attacks elm, hackberry, mulberry, tulip poplar, and boxelder. Both the immature and mature stages of gloomy scale pierce living cells with their needle-like mouthparts to feed on a tree's sap. Feeding removes the tree's energy stores, stunting and weakening its growth. Heavy infestations can lead to stunted growth, branch dieback and canopy thinning, and eventually tree death. Populations of red and silver maples seriously weakened by gloomy scale are common in Virginia.

Life Cycle

Gloomy scale overwinters as adult females that lay their eggs the following spring. The mobile crawlers hatch from eggs over a long period in June. They settle to feed and complete their development to the adult stage. There is one generation per year.

Reproduction by gloomy scale increases with warmer temperatures. Drought and heat benefit gloomy scale, which can develop over more extended periods of time on stressed trees. Warmer winters increase the scale's survival during the winter and may allow gloomy scale to develop in more northern locations and/or at higher altitudes.

Management

Gloomy scale may require several years of continuous management to be effective. The cost and time of treating heavily infested trees may be expensive. Replacing infested trees with a different species not susceptible to gloomy scale may be more economical than the cost of treatment. Monitor susceptible host trees in urban settings regularly and begin treatment when the scale is found.

Many contact and systemic insecticides are labeled for the control of scale insects, including gloomy scale. See the [Virginia Pest Management Guide for Home Grounds and Animals](https://www.pubs.ext.vt.edu/456/456-018/456-018.html) (https://www.pubs.ext.vt.edu/456/456-018/456-018.html) for current insecticide recommendations around homes. Control recommendations for gloomy scale in nurseries can be found in the [Virginia Pest Management Guide to Horticultural and Forestry Crops](https://www.pubs.ext.vt.edu/456/456-017/456-017.html) (https://www.pubs.ext.vt.edu/456/456-017/456-017.html)

Gloomy scale crawlers have a long emergence period, generally peaking in mid-June. Contact insecticide sprays for crawlers can help manage gloomy scale if applied properly. Apply at least 2-3 sprays at weekly intervals in mid-June. A soil drench of a systemic insecticide, such as dinotefuran or imidacloprid, following the label recommendations, will also help control feeding scales. In addition to using insecticides during the summer, apply dormant oil on infested trees in late winter before bud break. Thoroughly cover the trunk and branches to smother the overwintering scales.

Avoid planting preferred host trees near pavement or asphalt, or walls that reflect heat and don't allow sufficient rainwater to reach the tree roots. Test the soil to see if fertilizer is needed before application. Avoid excess nitrogen fertilizer as it encourages populations of scale insects and other pests.

Try using a low-powered pressure washer with no insecticides in the tank to dislodge the scales from the bark. The lower portions of the trunk can also be lightly scrubbed with a brush to remove the scales. Always avoid damaging the tree bark. Neither of these methods will completely manage gloomy scale without the additional use of insecticides.

Revision

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